S. HRG. 111–179

REGULATION AND RESOLVING INSTITUTIONS CONSIDERED "TOO BIG TO FAIL"

HEARING

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

ON

REGULATING AND RESOLVING INSTITUTIONS WHOSE FAILURE WOULD POSE A RISK TO THE FINANCIAL SECTOR AND UNDERLYING ECONOMY IN THE UNITED STATES

MAY 6, 2009

Printed for the use of the Committee on Banking, Housing, and Urban Affairs

Available at: http://www.access.gpo.gov/congress/senate/senate05sh.html

U.S. GOVERNMENT PRINTING OFFICE

53–822 PDF WASHINGTON : 2010

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

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WEDNESDAY, MAY 6, 2009

WITNESSES

REGULATION AND RESOLVING INSTITUTIONS CONSIDERED "TOO BIG TO FAIL"

WEDNESDAY, MAY 6, 2009

UNITED STATES SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, D.C.

The Committee met, pursuant to notice, at 9:05 a.m., in room SD–538, Dirksen Senate Office Building, Senator Christopher J. Dodd (Chairman of the Committee) presiding.

OPENING STATEMENT OF CHAIRMAN CHRISTOPHER J. DODD

Chairman DODD. The Committee will come to order.

Let me apologize to my colleagues and the witnesses as well. It was a late hour last night when we changed the schedule, but as I am sure my colleagues are aware, anyway, we are going to have about six votes beginning around 10:30 to try and finish up the housing bill. And, therefore, I thought we would try to move this up a half an hour so we could have at least a good hour and a half with you.

I am going to ask my colleagues to restrain themselves, if they can, in opening statements so we can get right to the witnesses and hear their thoughts.

Sheila, welcome. Nice to have you back before the Committee.

Let me just share some opening comments. Senator Shelby has a meeting. He will be here shortly. He had something around 9:10, so he will be coming along. I am going to begin. Normally, of course, I would wait for my colleague from Alabama, but in light of the fact of the change in the time here, we are going to begin, anyway, on this. So let me share some opening thoughts on this subject matter, and then we will go right to the witnesses.

This morning is the 13th in a series of hearings since January to identify causes of the financial crisis and specific responses that will guide the Committee's formulation of the new architecture for 21st century financial services regulation. I welcome all of our witnesses.

This morning, we are going to discuss regulating and resolving institutions whose failure would pose a risk to the financial sector and our underlying economy. To be sure, we meet at a moment when many of these so-called "too-big-to-fail" institutions are under a microscope, and for good reason. Consider for a moment the following financial institutions: Bear Stearns, Fannie and Freddie, Lehman Brothers, AIG, Washington Mutual, Wachovia, Citigroup, Bank of America. Inside of 14 months, every one of these institutions either failed or posed a risk of failing absent Government intervention. Some were sold under duress; others failed outright. Many were saved because the Government resorted to an array of loans, guarantees, and capital injections to keep these large, complex financial firms afloat.

But, regardless, the result of this turmoil is clear, with 20,000 layoffs and 10,000 homeowners entering into foreclosure each and every day. As this Committee works to modernize our financial architecture, I believe it is essential that we identify ways to give the Government the tools it needs to unwind troubled, systemically important institutions in an orderly way that will put adequate safeguards in place to prevent unwarranted risky behavior on the part of the largest market actors and puts our economy at risk. And I would commend the administration again for sharing my belief that the resolution authority be given to the FDIC, with whom the expertise of unwinding failed institutions clearly lies.

To be sure, we have seen unprecedented consolidation in the banking industry over the last few decades. In 1992, the 25 largest insured depository institutions accounted for a quarter of banking industry assets. As of 2008, the top 25 held over 60 percent of industry assets. Four U.S. bank holding companies now have over $1 trillion each in banking assets.

At the same time the industry became increasingly consolidated, the institutions themselves became more interconnected, and as many of these failures have illustrated, their relationships with one another even more complex. The growth of the largely unregulated credit derivatives market and the ability to process transactions with increasing speed added to the unprecedented level of complexity as well.

But it was the performance of our regulators, in my view, that spun this all out of control, allowing these financial institutions to take on more and more risk, more and more leverage, with far too much autonomy and far too little accountability. Essentially, regulators took our largest financial institutions at their word that they understood what they were doing, and clearly they did not. In fact, some had no idea at all.

The question before this Committee today is how to prevent this from happening again and how do we create an architecture to allow for wealth creation and for productivity to be restored.

Some have looked at the failure of many large, complex financial firms to manage their risks and the failure of regulators to adequately supervise them. They concluded that we can no longer afford to let institutions grow to a point where they put our financial system at risk. As economist Joseph Stiglitz has put it, many of these institutions became not just "too big to fail," but also too big to save and too big to manage.

Some would strictly limit the size of balance sheets or restore some of the restrictions on business line affiliations lifted a decade ago. Another option would be to impose more stringent capital requirements, deposit insurance assessments, and other costs to provide disincentives to becoming either too big or to complex. And still others suggest that it is unrealistic to believe that we could somehow abolish large, complex financial organizations. They suggest designing a regulatory framework that would make sure that taxpayers are not on the hook each time one of these companies gets in trouble. That would mean finding ways to ensure that the creditors as well as the shareholders can suffer losses when these companies get in trouble.

As Warren Buffett said last week, the key to ensuring large financial institutions are run well is not only proper incentives for success, but also severe disincentives for failure.

The truth is, unlike the average family in my State or my colleagues' States who has no choice but to live within their means, the large institutions throughout the crisis were always able to borrow more, draw down more, and relax their underwriting standards as their regulators stood by. Whatever else we do, that has to stop, in my view. Large financial companies may well need a different set of capital rules to ensure that they will have sufficient funds to absorb large, unprecedented losses. They may need new disclosure and responding requirements that would enable regulators to close them in an orderly way if they become troubled. If the AIG contemporary mess that this Committee helped to expose has taught us anything, it is that regulators need a much clearer picture of the arrangement that these firms get themselves into, not only to regulate them better but to extricate them from those arrangements if need be.

Each of these approaches that I have mentioned this morning has merit, and it is my hope that today's hearing will offer an opportunity to fully explore each of these options.

I will say again that I believe there is a need for systemic risk regulation to ensure that we no longer need to treat any institution as "too big to fail." It is my preference that that authority not lie in one body. We cannot afford to replace Citi-sized financial institutions with Citi-sized regulators. The goals of our financial modernization efforts must be more transparency, more accountability, and more checks and balances. Today's witnesses I think will help us become better informed as to these steps.

With that, I thank again everyone for being here, and, Sheila, we will begin with you.

STATEMENT OF SHEILA C. BAIR, CHAIRMAN, FEDERAL DEPOSIT INSURANCE CORPORATION

Ms. BAIR. Good morning, Chairman Dodd, members of the Committee. Thank you for the opportunity to testify on the need to address the issue of systemic risk and the existence of financial firms that are deemed "too big to fail."

The financial crisis has taught us that too many financial organizations have grown in both size and complexity to the point that they pose systemic risk to the broader financial system. In a properly functioning market economy, there will be winners and losers. When firms are no longer viable, they should fail. Unfortunately, the actions taken during the recent crisis have reinforced the idea that some financial organizations are "too big to fail." The most important challenge now is to find ways to impose greater market discipline on systemically important financial organizations. Taxpayers have a right to question how extensive their exposure should be to such entities.

A strong case can be made for creating incentives that reduce the size and complexity of financial institutions. A financial system characterized by a handful of giant institutions with global reach, even with a single systemic regulator, is making a huge bet that they will always make the right decisions at the right time.

There are three key elements to addressing the problem of "too big to fail." First, financial firms that pose systemic risks should be subject to regulatory and economic incentives that require these institutions to hold larger capital and liquidity buffers to mirror the heightened risk they pose to the financial system. In addition, restrictions on leverage and the imposition of risk-based assessments on institutions and their activities would act as disincentives to the types of growth and complexity that raise systemic concerns.

The second important element in addressing "too big to fail" is an enhanced structure for the supervision of systemically important institutions. This structure should include both the direct supervision of systemically significant financial firms and the oversight of developing risks that may pose risks to the overall U.S. financial system.

Centralizing the responsibility for supervising these institutions in a single systemic risk regulator would bring clarity and accountability to the efforts needed to identify and mitigate the build-up of risk at individual institutions. In addition, a systemic risk council could be created to address issues that pose risks to the broader financial system by identifying cross-cutting practices and products that create potential systemic risk.

The third element to address systemic risk is the establishment of a legal mechanism for quick and orderly resolution of these institutions similar to that which we use for the FDIC-insured banks. Over the years we have used this to resolve thousands of failed banks and thrifts. The purpose of the resolution authority should not be to prop up a failed entity indefinitely or to insure our liabilities, but to permit a timely and orderly resolution and the reabsorption of assets by the private sector as quickly as possible. Done correctly, the effect of the resolution authority will be to increase market discipline and protect taxpayers.

For example, our good bank/bad bank model would allow the Government to spin off the healthy parts of an organization while retaining the bad assets that we could work out over time. To be credible, the resolution authority must be exercised by an independent entity with powers similar to those available to the FDIC to resolve banks and clear direction to resolve firms as quickly and inexpensively as possible.

To enable the resolution authority to be exercised effectively, there should be a resolution fund paid for by fees or assessments on large, complex financial organizations. To ensure fairness, there should be a clear priority system for stockholders, creditors, and other claimants to distribute the losses when a financial company fails.

Finally, separate and apart from establishing a resolution structure to handle systemically important institutions, our ability to resolve non-systemic bank failures would be greatly enhanced if Congress provided the FDIC with the authority to resolve bank and thrift holding companies affiliated with a failed institution. By giving the FDIC authority to resolve a failing bank's holding company, Congress would provide the FDIC with a vital tool to deal with the increasingly complicated and highly symbiotic business structures in which banks currently operate.

The choices facing Congress in addressing "too big to fail" are complex, made more so by the fact that we are trying to address problems while dealing with one of the greatest economic challenges we have seen in decades. The FDIC stands ready to work with Congress to ensure that the appropriate steps are taken to strengthen our supervision and regulation of all financial institutions—especially those that pose systemic risk.

Thank you.

Chairman DODD. Thank you very much.

Mr. Stern, who is the President, I should point out, of the Federal Reserve Bank of Minneapolis, welcome to the Committee this morning, and thank you for accommodating the change in time as well.

STATEMENT OF GARY H. STERN, PRESIDENT AND CHIEF EXECUTIVE OFFICER, FEDERAL RESERVE BANK OF MINNEAPOLIS

Mr. STERN. Chairman Dodd, members of the Committee, thank you for the opportunity to review the "too-big-to-fail" problem with you today. The key to addressing "too big to fail" is to reduce substantially the negative spillover effects stemming from the failure of a systemically important financial institution. Before briefly going into specifics, I want to emphasize that these remarks reflect my views and not necessarily those of the Federal Reserve.

To address the "too-big-to-fail" problem, we must understand the incentives of uninsured creditors of systemically important financial institutions, the incentives of the management of such institutions, and the incentives of policymakers responsible for economic and financial stability. We have a "too-big-to-fail" problem because creditors of such financial institutions expected, on the basis of relatively well-established precedents and on an understanding of policymakers' motivations, that protection would be provided if failure threatened. As a consequence, they had a most modest incentive to monitor the condition and prospects of these large institutions, leading to underpricing of risk taking. With risk underprices, and for a variety of other reasons as well, these institutions took on excessive amounts of it, leading eventually to the precarious position of some of them. And policymakers, fearing massive negative spillover effects to other institutions, financial markets more generally, and the economy itself, provided protection and validated creditor expectations.

Just as incentives are at the heart of the "too-big-to-fail" problem, they necessarily must be at the heart of the solution. To address incentives, policymakers must deal with them at their core. Creditors must be put at risk of loss.

Once uninsured creditors face appropriate incentives and change their behavior, the risk taking of systemically important institutions should diminish, reducing policymakers' concerns about spillovers. I have long maintained that "too-big-to-fail" bailouts are driven by concerns about potentially serious spillover effects. As a result, I recommend reforms that reduce the perceived or real threat of the spillovers that motivate after-the-fact protection of uninsured creditors, recognizing that policymakers first need to address the short-term problems in the financial system.

I would start with three reforms that combined I call "systemically focused supervision."

First, I would increase supervisory focus on preparation for the potential failure of a large financial institution. This preparation will reveal the interconnections between firms and markets that may produce serious spillovers and identify the steps policymakers must take to address them.

Second, I would enhance the existing prompt correct action regime by including forward-looking market data. This would help identify weak institutions that need early closure, which should reduce the losses and spillovers such institutions impose on others.

Finally, I would advocate forthright communication of efforts to put creditors of systemically important firms at risk of loss. Creditors are not mind readers, and policymakers cannot expect them to divine the intention to put them at risk absent clear communication to that effect.

I also support Government pricing through insurance premiums, for example, of the activities of systemically important financial institutions that potentially create significant negative spillovers. This seems like an efficient method for taking costs imposed on society and putting them rightly back on the firms to influence their behavior. I have considered other options as well for taking on "too big to fail" and discuss them in the written testimony.

In contrast to these proposals, increasing the intensity of traditional supervision and regulation of large institutions has no clear ability to improve incentives and ultimately imposes losses on creditors. While I support efforts to improve it, I recognize that the recent record of traditional supervision and regulation in preventing excessive risk taking by systemically important firms is not encouraging.

I have the same general reaction to proposals to reduce the size of large financial institutions. I have no particular empathy for managers and equity holders of large firms, but think efforts to break up these organizations will result in a focus on a very small number, thereby leaving many systemically important firms as is. Moreover, I am skeptical for the reasons noted previously that policymakers will effectively prevent the newly constituted smaller firms from taking on risks that can bring down others. In short, this reform does not seem to alter incentives sufficiently.

I am more supportive of efforts to bring bank-like resolution regimes to non-bank but systemically important financial institutions. These proposals address some important spillovers and likely would work best if combined with the reforms I have already advocated.

In closing, maintaining the status quo with regard to "too big to fail" could impose large costs on the U.S. economy. The economy cannot afford and does not have to ensure such costs. I encourage you to focus on proposals that address the underlying reason for protection of creditors of 'too-big-to-fail" financial institutions, namely, policymaker concerns about financial spillovers. I have offered a plan to address this crucial point. Absent this or a similar approach, I am concerned that we will not make significant progress against "too big to fail."

Thank you.

Chairman DODD. Thank you very much, Mr. Stern. We appreciate it. We appreciate both of you being with us.

I will have the clerk turn on the clock. We will take about 5 minutes apiece or so as we move along here. I will not be rigid about it, but I will try to make sure everyone here—we have only a few members here this morning.

Let me begin with you, Mr. Stern. You addressed this at least in your opening comments, and I wonder if you might be a bit more specific about it, and that is, this resolution mechanism we are talking about. I mentioned in my opening comments about the Treasury sort of embracing the idea that the FDIC probably has, of the existing regulatory agencies, the expertise and the background given their experience in dealing with banks to move in this direction. I wonder how you might react to it. Is there some idea of a bankruptcy court idea that may be more appealing? Can the FDIC, in your view, fill this function? What are your more specific——

Mr. STERN. Well, I am in favor of a bank-like resolution process for systemically important non-bank financial firms. I have been giving more thought, rather than to who, to how, and what I mean by that is it seems to me it is important that the resolution regime be established in a way that losses can, in fact, be put on uninsured creditors. And that requires, it seems to me, preparation in advance. That is, it gets to the spillover question I alluded to in my testimony.

Policymakers will be unwilling to impose losses on creditors if they think the spillovers are going to do significant damage to other financial institutions, markets more generally, and the economy. So you want to prepare in the sense of both identifying, limiting, containing, and other ways of constraining the potential for spillovers. That has to be part of the preparation, in my judgment, for the effectiveness of that kind of resolution regime.

Chairman DODD. Okay. Let me raise this with both of you, if I can. Peter Wallison is going to testify in our second panel, be a witness in the second panel, and he raises an interesting concern: that a new system that tries to identify, regulate, resolve systemically important financial institutions may create a new class of protected companies that enjoy lower funding costs due to perceived Government backing and the like. I find that idea he has is intriguing, one that needs to be addressed. He sees this framework as expanding the safety net and adding moral hazard to the financial system in a way.

Sheila, how do you react to that?

Ms. BAIR. I think the concern relates to what we are talking about. We are talking about a resolution mechanism, not a bailout mechanism, and we think if you are going to create a new systemic risk regulator and identify it, particularly if that will involve identifying in advance institutions that could be systemic, that to do that without a separate resolution mechanism would dramatically increase moral hazard, because then you would be anointing institutions as those that the Government would continue to step in and support.

So we think there needs to be a resolution mechanism that takes care of that, but we would certainly hope that Congress, if you took this step, would clearly set out a claims priority and say that the private stakeholders—the shareholders, and the unsecured creditors—would take losses and the priority for collateralized counterparties, *et cetera*. Also, the direction should be to resolve the institution promptly, not to just keep it going, but to break it up. I think a good bank/bad bank model would be a good one. We are set up already with our bridge bank authority to do that type of model.

There was a good op-ed in the Wall Street Journal yesterday by Glenn Hubbard outlining that type of approach. Others have talked about it as well. But I think we need to be very clear that we are talking about a resolution mechanism, not a bailout mechanism, if we do that.

Chairman DODD. Mr. Stern, do you want to comment on that?

Mr. STERN. Sure. I think that the issue that Peter Wallison identified is a serious and potential concern, and that is why I put my emphasis on imposing losses on creditors and making it known well in advance not only that you intend to do it, but you have put yourself in a position where you are, in fact, able to do it. So I——

Chairman DODD. Yes, is this sort of the Warren Buffett disincentives, the thing he talked about, having the serious—there are incentives to do things, and then there ought to be disincentives.

Mr. STERN. Sure.

Chairman DODD. Go ahead. I did not mean to interrupt.

Mr. STERN. No. That was the sum and substance of my comment.

Chairman DODD. Okay. Let me, if I can—by the way, I want to raise, Sheila, with you the issue of the idea of looking at—we are having a lot of conversations among ourselves and others about this structure and architecture. Nothing has been decided firmly, but there is a lot of conversation, obviously, about how to approach this.

One of the conversations that we are having among ourselves is this systemic risk regulator and the idea of having maybe more of a council idea rather than a single regulator. And, again, the single regulator idea has a certain amount of appeal because there is an existing structure. It is the known. If we start talking about a council or a collegial approach, you are talking about something new. And, obviously, when you start talking about things new and how does it work—without trying to express the views of all of my colleagues, those who are sort of attracted to this idea, it is a multiple set of eyes looking at something, rather than a single set of eyes. I wonder if you might share some thoughts on that.

Ms. BAIR. Well, yes. We make a distinction between the potential oversight of systemic institutions, and the broader need for a coordinating body to be looking at the system for risk, for interrelationships among securities firms, banks, hedge funds and insurance companies. That is really where we saw some serious shortcomings.

So we think for that latter issue, a council is much better equipped to deal with those types of systemwide issues that cross markets and cross different types of institutions. We think that would work, and the President's working group could transition into something like that. But it should be a real authority with the ability to set rules, for instance, set capital standards that might be across markets to make sure there is no arbitrage of capital standards, which we have had. The council should have the ability to write rules and collect data—those types of legal authorities. Yes, we think a council is much better suited for addressing that type of risk.

Chairman DODD. Do you have any quick comments on that, Mr. Stern? I do not know if you have heard——

Mr. STERN. I think if we established a systemic risk regulator, it would be very important what we ask them to do, and I would put at least a good deal of emphasis on making sure that we identified and understood the interconnections, the large exposures among important firms, large reliance on particular markets, what happens if a particular market were, for whatever combination of reasons, to shut down and so on and so forth.

Exactly who ought to do it, I might have a preference for having only one or two institutions do it as opposed to a council because of accountability. But I must admit I do not have a firm conviction about that.

Chairman DODD. Thank you.

Senator Johanns?

Senator JOHANNS. Thank you, Mr. Chairman.

Let me, if I could, think out loud for a second, and then I would like your reaction to this. As I have sat through these hearings, there are dozens of complicated issues. You mentioned holding companies, for example. That in itself you could spend weeks on trying to figure that out. But I agree with you there needs to be something done here. There seems to be a real lack of ability to deal with that issue.

But, in my mind, when I kind of think about what we are trying to figure out here, I am thinking about three areas, kind of three umbrella areas. The first one is oversight. When you are dealing with systemic risk, how do you put in place the oversight to deal with that?

The second piece of this is the bailout piece. I would like to be able to sit here today and say to the American public this is never going to happen again, thank goodness that is behind us. But the reality is we have to have something in place because the oversight will not be effective if you do not have the next step.

And then the third piece of this or the third umbrella is exit strategy. Once you are entangled in oversight bailout, how do you get yourself out of it? I would tell you personally I am personally appalled by this discussion by the Treasury Secretary, even the President has acknowledged, well, there may be other CEOs that get fired, and I am using my own words there. I never thought I would live long enough to see the day that somebody walked into the White House, a CEO in a private company, and left without their job. I just find that very, very troubling in terms of governmental intervention.

Now, the first question about the first umbrella, the oversight. I like this idea of the panel, a group versus a person. Let me ask you this: Is there a governmental structure in place where that panel would fit? And I must admit I have the FDIC in my mind, and so, Sheila, I am just going to ask you directly: Is that something that fits within the FDIC?

Ms. BAIR. It could fit within the FDIC. We already have two other principals on our board. The head of the OCC and the OTS are, by statute, on our board. We already have all but one of the banking regulators represented on our board, so it could be modeled along those lines.

We think the President's Working Group may be another model. That is an informal group that was set up by Executive Order after the 1987 market breakdown, and it has been a more informal way for regulators to have discussions and information sharing. That might be another model.

Gary is right, it creates a little more complexity if you have a number of different people involved. But, this is so important, especially rearding the decision to resolve a systemically important institution. If you have the resolution authority, too, having multiple players involved in that decision is key. I am assuming that there will be some consolidation among banking regulators. So we suggest in the testimony that the Federal Reserve Board, the U.S. Treasury, the FDIC, and the SEC would be a good starting point. But, yes, the FDIC Board currently has the principals of other agencies on it, and it works pretty well.

Senator JOHANNS. The FDIC seems to work very well. You go in and you make very tough decisions, and yet it does not disrupt our economy.

Ms. BAIR. Right. Well, we think so. It is a painful process to close a bank, there is no doubt about it. And, we kind of joke internally about who else would want this responsibility. Who would you give it to? It is hard. You do get rid of management, and sometimes the lower-level employees lose their jobs, too. For the smaller banks, we always try to sell the whole bank to another local institution to provide that continuity of customer services and employees.

But, it is a painful process. It does involve some specialized expertise, some specialized public relations in dealing with the communities that are impacted. But, we are well equipped. We have contractors in place that deal with asset management and auctioning assets or auctioning whole banks. I think we already have much of the talent that is out there now to deal with troubled institutions. We have been doing this for 75 years. We have resolved thousands of institutions.

Senator JOHANNS. Gary, now if I could turn to you, and I am just about out of time, so I will have to urge you to answer a very complex question very, very quickly. But on the bailout and exit, what role do you see for the Federal Reserve in those areas? For example, yesterday Chairman Bernanke provided us with the balance sheets showing the various things that had been done. Is this a matter where in these two areas if we work to clean up their authority and deal with those kinds of issues, is that a workable approach?

Mr. STERN. Well, let me be brief and just make two comments.

I think one of the objectives should be to reduce the probability and magnitude of bailouts going forward.

Senator JOHANNS. I agree.

Mr. STERN. And I think we can reduce the probability. I think we can reduce the extent of coverage, both who is covered and the amount of coverage. But it is going to take preparation and some of the steps I mentioned at the outset in terms of dealing with the incentives that uninsured creditors and policymakers confront. That is really all about preparation at the end of the day. It needs to be done in stable, relatively tranquil times. Obviously, in the midst of the crisis, it is very hard to work on those kinds of things.

As far as exit strategy, I guess I would make one comment, and that is, I think that is mostly about credibility, and what I mean by that is we have to try to put ourselves in a position so that even if you do have to bail somebody out because the cost/benefit calculation suggests that is the right thing to do for the economy as a whole, so even if you do that, you want to make sure that the next steps you take reduce the probability that you will have to do it again.

Senator JOHANNS. Thank you.

Thank you, Mr. Chairman.

Chairman DODD. Thank you, Senator, very much.

Senator Bennet.

Senator BENNET. Thank you, Mr. Chairman. Thank you for holding the hearing, and thank you for your testimony.

Mr. Stern, I wanted to come back to something you said a minute ago; when we think about the systemic risk regulator, that it is important that we think about what we are asking them to do. One of the things that I have been struck by in my conversations with people in the financial industry is not just that this is a leverage problem, a "too-big-to-fail" problem, but it may also be a complexity problem, particularly in a rising market, the tendency to create more and more complex instruments that people cannot necessarily keep track of, either in their scope or in their relationships among various financial institutions.

I wonder in the context of thinking about—and I guess the other thing I would say is it makes a person somewhat skeptical that an incentive and disincentive regime is ever going to be strong enough to counteract those temptations.

I guess my question to you is how do we manage to keep up with that level of complexity without diminishing the innovation that all of us need to see in our financial markets, but at the same time prospectively protect us from the kind of collapse that we have just faced?

Mr. STERN. Well, I think there are several aspects to that. One is, certainly, I am not trying to curtail appropriate innovation in the financial markets. I think, to the extent that we get the incentive—improve the incentives, we will get better pricing of risk. And that will deal directly with some of the concerns you have and the development of some of these instruments that, obviously, with the benefit of hindsight anyway, contained a good deal more risk than was appreciated at the outset. So I think that is one way to go.

I think something we can also probably do in the supervisory area is where we see a very complex structure of an organization, ask about the economic rationale for that structure. And it is very good economic rationale for having X-hundred subsidiaries, for example. And if not, we could ask for streamlining of that kind of structure. So I think that is something else that could be done to help clarify the situation.

I should also add—and this will be my final comment right now on this—is I think it is not just a question of incentives. I think "too big to fail" is a big, challenging problem. We need to improve incentives where we can. We also need to improve capital where we can. We should charge institutions some kind of insurance premiums, as I commented, where they are of systemic importance and pose systemic risks. I think we really need to address this on a number of fronts.

Senator BENNET. Chairwoman Bair, I do not know if you would like to add anything to that. As I have puzzled through the news accounts of this, one of the things you are really struck by is how evolutionary all of this is. You start out with credit default swaps that are based on one set of assets, and then you move over time to another set of assets, mortgages. And people lose track; the risk gets higher.

I just wonder how we are going to write those rules in such a way that we are going to stay ahead of the curve rather than following behind.

Ms. BAIR. Well, it is a challenge. And that is why we think there is a need to have greater market discipline. Too big to fail has diluted market discipline. There is only so much regulators can do, and you really need the market. You need people who want to invest or extend credit to these institutions, looking at their balance sheet, looking at their management, looking at the sophistication of their management and the risk management systems. What are their off-balance sheet exposures—are they done with proprietary trading, structured finance? All the things that we have seen have posed heightened risks for these larger institutions.

You want the private sector in there looking at that as well. If they think the institution is "too big to fail," you are going to dilute market discipline. And that is why we think it is particularly important to have a resolution authority.

We also think that an assessment system can complement and enhance regulation. We have risk-based insurance assessments now for depository institutions. So there are certain categories of higher risk activity where we charge them a higher insurance assessment, for instance, for excessive reliance on broker deposits. This can also influence behavior, and I think this would be another tool that should be used for the systemic institutions.

Senator BENNET. I am going to ask the Chairman's indulgence because while I have got you here, I want to ask a slightly unrelated question about New Frontier Bank in Greeley, Colorado, which I know you are aware of. I wonder if you might say a word about where we are with that; and, also, more broadly, in the context of a region like that, a rural part of my state, where the local economy is heavily reliant on one institution, namely that one. That carries with it its own systemic risk for that little corner of the world.

I wonder if you might talk a little about that situation; also, more broadly, the FDIC's approach in an area like that versus one where there are many other options.

Ms. BAIR. Well, we did. We had a nice chat with Congresswoman Markey yesterday, too, about this.

For the depositors, we have arranged for another bank to take over their accounts and help them transition into a new deposit account relationship. And for the loans, we are trying very hard to find other lenders to refinance those loans or to purchase them.

I think one of the things where we engaged Congresswoman Markey, and I will take the opportunity to engage you as well, is to encourage other local lenders in the area to work with us and help these borrowers find new lending relationships. We are working very hard on that, and have been providing some additional financing out of the receivership to borrowers as we seek to transition them to lenders that are stronger.

But we would love to work with your office. We talked with her about maybe having a town hall meeting. So we would be happy to work with you on that.

Senator BENNET. Thank you. I would appreciate that.

Mr. Chairman, thank you very much.

Chairman DODD. Thank you, Senator.

Senator Bunning?

Senator BUNNING. Thank you, Mr. Chairman.

Mr. Stern, do you think the market disruption, following Bear Stearns' bailout and Lehman Brothers' failure, in other words, the government picking a winner and a loser, was because of the bankruptcy itself or because everybody expected the creditors would be saved and the market had to adjust their expectations when they let Lehman go?

Mr. STERN. I do think that when Lehman was let go, that probably came as a surprise to at least some of the creditors of Lehman, even though, of course, I think it was widely known in the financial marketplace that Lehman was experiencing some funding and other difficulties.

Having said that, I think it is worth adding that, clearly, in the wake of Lehman, AIG and—the difficulties of AIG were revealed, and Merrill Lynch was purchased by Bank of America. So I think the——

Senator BUNNING. Under the gun.

Mr. STERN. So I think the whole scale of the problem turned out to be much greater than anticipated by people in the markets. And AIG was a AAA rated company. I think that came as a genuine and sizable shock.

Senator BUNNING. But the AIG was rated a AAA company with the hedge fund in England not being attached. They are insurance companies.

Mr. STERN. You will have to ask AAA. You will have to ask the rating agencies.

Senator BUNNING. Yeah, the rating—that is who I really need to ask, is the rating agencies.

Mr. Stern, you mentioned that regulators needed to be better understood, the connection between firms.

Do you think there are some types of connections or products that should be limited or banned?

Mr. STERN. I am not knowledgeable enough *a priori* to say that we ought to ban some interconnections or some products. What I would say is if we identified interconnections and exposures and potential vulnerabilities that looked like they would lead to serious problems at a number of institutions—that is, if one institution got into serious difficulty, it would spread in substantial ways to others—then it is an opportunity to do one or both of two things; either to push to reduce those exposures as a regulator and/or to figure out how you are going to deal with the spill-over effect should problems arise. That is, how are you going to contain the problems.

So I do think that would be a very valuable, important exercise. That is part of my proposal when I talk about——

Senator BUNNING. I complimented you in my opening statement, but I did not get to make it.

Mr. STERN.——preparing for these kinds of problems. Thank you.

Senator BUNNING. That is all right.

For either of the witnesses, what specifically in the bankruptcy laws is not sufficient for resolving financial institutions?

Ms. BAIR. Well, I go into that in a little more detail in my testimony. I think there are a couple of things. First, there is the ability to set up a bridge bank. I think continuity of operations, especially for the systemic functions, is important to a resolution mechanism. We have it now with banks. We think that works well.

Another key difference is how derivative contracts are treated. In a bankruptcy, the derivatives counterparties have the immediate right to close out their position. With Lehman Brothers, you saw a situation where everyone was doing that, grabbing the collateral, selling it off and going out and re-hedging.

Senator BUNNING. Can I just interrupt you a second?

Ms. BAIR. Sure.

Senator BUNNING. Because we had testimony from the Secretary of the Treasury, past and present, and the head of the Federal Reserve, both present and past, that we should not involve ourselves in overseeing derivatives and credit-default swaps.

Ms. BAIR. Well, yes.

Senator BUNNING. I mean, sitting right where you sat——

Ms. BAIR. You never heard that from me, Senator. No. And I would say, high on the priority of this body should be to review the Commodity Futures Modernization Act. I think that has shackled the ability of regulators to provide greater oversight of those markets. I do not know what they said, but I feel strongly we need greater oversight of those markets.

Senator BUNNING. So do I.

Ms. BAIR. Okay. But our resolution mechanism allows us to accept or reject those contracts. We can require the counterparties to continue to perform in those contracts instead of grabbing the collateral. I think that is another key advantage of our process.

Senator BUNNING. Mr. Sterns, just hold on just a second, while I have Sheila.

When do you expect to end the TLGP, and can all banks survive without it?

Ms. BAIR. We have been trying to ease out of that program. We have put surcharges on the program, and are putting those surcharges into the Deposit Insurance Fund to try to reduce pressure on the special assessment.

Senator BUNNING. To other banks.

Ms. BAIR. Yes, exactly, the smaller institutions.

We are working to stabilize the situation. We very much want to end it on October 31st.

Senator BUNNING. Are you going to be able to do that?

Ms. BAIR. I am optimistic that we will. We will have to wait and see where we are, but I am optimistic that we will.

Mr. Sterns, would you like to say something about bankruptcy?

Mr. STERN. No. The only thing I would add to Chairman Bair's comments is with regard to some of the derivatives and credit-default swaps, obviously, we are moving to central counterparties' clearinghouses. I think that is a very important step. I think that will help to standardize the products. It will take a good deal of risk out of the business. And I am cautiously optimistic that that will turn out to be a way to effectively address at least some of your concerns.

Senator BUNNING. In other words, we were just a little behind the curve in regulatory oversight by the advice of the Federal Reserve chief, both Chairman Greenspan and Chairman Bernanke. And both Treasury secretaries said they did not need those oversights.

Senator BUNNING. Well, you know, all I can say at this point is it has been a difficult lesson.

Mr. STERN. It certainly has, and an expensive one. Thank you.

Chairman DODD. Thank you very much.

By the way, on that clearinghouse idea, I know of no dissenting voices, at least on this Committee or others I have talked to about it. It is going to be very much a part of that architecture we are talking about.

Senator Warner?

Senator WARNER. Thank you, Mr. Chairman. Thank you for the hearing.

Let me move to a slightly different subject as well. I want to come back to systemic regulator, but I would like to hear Ms. Bair and Mr. Stern—we all have been waiting for some time for the release of the so-called stress test results. And we have heard Treasury say that none of the 19 banks are going to "fail."

One, I would like to get your evaluation of have these tests been rigorous enough, number one. Two, what additional steps can you or we take to give confidence to the markets the analysis has been rigorous enough? And, three, what else can we do to encourage these institutions that need additional capital to push and prod them into hopefully finding that in the private sector?

Ms. BAIR. All of these institutions that exceed regulatory standards are well capitalized. The stress test really was to determine, if we have a more adverse economic scenario over the next couple of years, will the banks have adequate capital buffers now to withstand that more adverse economic scenario. So in that sense, the stress test is more rigorous than the current regulatory standards for being well capitalized.

Senator WARNER. Although, again, we are rapidly approaching the outer reaches of——

Ms. BAIR. Well, that is true.

Senator WARNER.——the downside.

Ms. BAIR. I think that is right. This is something that needs to continue to be monitored. And we do this all the time, and we will continue to do so.

But I think even though the unemployment rate used in the more adverse scenario could have been a little bit higher, I think on home price declines, we have been pretty aggressive. So I am hoping that all nets out. But, clearly, it needs to continue to be monitored. I think this will be a confidence-instilling announcement. There will be additional needs for capital buffers for some institutions, but I think there will be mechanisms to do that within the next six months.

And, yes, certainly I would agree, those institutions need to look to non-government sources first. The Treasury can be there as a backstop, but they should look to non-government sources, first and foremost to raise new equity, if possible. If they cannot do that, or in conjunction with that, banks can consider converting some of their other securities in their capital structure into common stock to increase the level of tier 1 common equity, which is very important for market perception right now.

Senator WARNER. And you are confident that there will be enough data released that will result in a confidence building rather than a confidence weakening?

Ms. BAIR. Well, I hope so. This is an interagency process, and it is a holding company process. It has been led by the Federal Reserve as it should be. They are the holding company regulator. I think they have done an outstanding job. They have a great staff. And so I think that it will be confidence instilling.

Obviously, there are judgment calls that have to be made on all of this, and I am sure there will be some that say we are being too tough, and there will be analysts that say we are not being tough enough. But, hopefully, we are in the middle there, at the right place. But a lot of it is just judgment.

Senator WARNER. Mr. Stern, do you have a comment?

Mr. STERN. I think Chairman Bair covered it thoroughly. And I would prefer not—until the results are out, I would prefer not to go further.

Senator WARNER. I would like to go back, on my own remaining time, to the notion that the Chairman raised in terms of systemic risk and the idea of a council, which I think has some attractiveness but also some challenges.

What guidance/advice would you have if we were to, at least, continue to pursue the possibilities of this option, of how we would make sure that information would actually be forced up and truly shared? Number one.

Two, how would we ensure, and what structural advice could you give us to ensure that this council would not end up becoming simply a debating society?

And number three, when this council or group reach some conclusion, how could we ensure that it could act with some force?

I would love you to comment on all three.

Ms. BAIR. Well, I think accountability will be key. The statute needs to put accountability for systemic risk with this council. It needs to be given real authority to write rules, to set capital standards, to collect information, and make sure it is shared with the other regulators.

If you provide that mandate and that accountability, as well as real legal authority, I think you will get the result that you want. There is nothing perfect about supervision, and this is why we have also suggested a resolution mechanism to enhance market discipline as well as protect taxpayers. In addition, we have suggested an assessment system that the resolution authority would have as well to provide disincentives for higher risk behavior. I think with those three steps in combination, you would dramatically improve the situation.

Part of the problem is nobody really has the mandate right now for the entire system. There were problems. For instance, capital arbitrage between investment banks and commercial banks—different capital standards. That is exactly the kind of issue this type of council could have not only identified but also addressed.

Senator WARNER. But one of the things we need to do is make sure that that information that may currently reside in the day-to-day prudential regulator actually would get pushed up and actually shared, which——

Ms. BAIR. That is right.

Senator WARNER.——seems in the past that some of this information has been out there, but it has not been——

Ms. BAIR. That is exactly right. There needs to be clear authority to collect and to force the sharing of the information. We give the SEC our bank data; they give us their trading data. You need a mechanism to do that.

Right now, sometimes it eventually happens, but it can be a long process, and it is not a coordinated, systematic process. Establishing a council with the mandate and the legal authority to carry out that mandate would dramatically improve the situation.

Senator WARNER. Mr. Chairman, I know I have gone beyond my time, but if I could have Mr. Stern answer the question, too, sir?

Mr. STERN. Yes. Well, I think two things are going to be very important in that regard. One is authority to act. And I would add that working with the supervisors is very important because they have a lot of on-the-ground information that would be valuable in this process.

But I also would think that for systemic supervision to be effective, this group, whether it is an institution or whether it is a council, or whatever it is, would have to have the ability, under the right circumstances, to intervene if they thought that the consolidated supervisor, whether it was a bank supervisor or an insurance company supervisor or whatever, was not doing an adequate, sufficient job.

So from their judgment, if the job that was being done by the principal supervisor just was not adequate, they could step in and ask for more forceful action, and I think that would be important.

Senator WARNER. Thank you, Mr. Chairman.

Chairman DODD. That is a very important point because that gets central to the debate, in a sense, whether or not you have sort of the corporate model or you have a risk assessment officer that is watching everything and advises the corporation when they think things are straying off or actually has the authority to reach in and stop something from happening. And that debate is one we have not resolved.

That is a very critical moment, as to what kind of authority you actually invest, whether it is the individual or whether it is the council. And I am more attracted to the council idea.

Senator Corker?

Senator CORKER. Mr. Chairman, thank you. Thanks for having this hearing. I appreciate our witnesses coming in and thank them for their testimony, which I read this morning early. I have to tell you that I especially——

Excuse me, Gary. But I especially liked the testimony by our FDIC leader. And I find it to be just an absolute stunning rejection of the policies that have been put forth by our Treasury Secretary. And I very much like what you had to say. There might be some details.

But I find it amazing that your embrace of the free market is so different from our Treasury Secretary, who, in essence, has come up here talking about wanting the powers, in perpetuity, to invest taxpayer money in entities that pose systemic risks, forever. In essence, creating another Fannie or a Freddie in the process. So it is an amazing thing to me. And, also, by the way, sharing with the public who those entities are by causing them to pay higher premiums so that everybody understands that they are never going to fail.

So I just want to thank you for bringing sanity into this discussion. I very much appreciate your presentation, and very much appreciate your willingness to take something that is more the American way into your thinking here and certainly presenting to us.

Now, let me ask you a question. Timing. We have had—I actually appreciate the way our chairman has handled this in that he has not tried to rush through this. I know that he and the ranking member agree on that. I know that this resolution authority, though, is important right now. Okay?

The other pieces of it do not have to come into play necessarily. We are not going to solve this problem through regulation we put in place today. But I would love to hear about the resolution authority piece, number one, if you feel it can be done separately and what the timing of that should be.

Ms. BAIR. Well, I think that just giving us the authority to resolve bank and thrift holding companies could be done more quickly. You do not need to decide what is systemic and what is not, nor who is going to be providing the broader systemic regulation. That would be a huge contribution to the tools that we have in dealing with the current situation. So I think that this could be addressed separately, and it would be very helpful to have.

Senator CORKER. I do hope there is some—that you will coach us and help us figure out a way to maybe deal with the resolution issue and let the other be dealt with when there is not a crisis; otherwise, we will probably not end up with a cause-neutral solution. Okay? We will be focused on CDS's and everything else. But thank you.

Let me ask you this. Many of our institutions have talked about wanting to leave the TARP program, but one of the most beneficial pieces of what we have done is the TGLP program, TLGP program, where, in essence, they are able, through government guarantees, to borrow money.

If we cause these folks—if we allow these folks to leave the TARP program, should we also make them leave this other thing that is actually a greater benefit to them, a government guarantee for their debt? Should we also cause them to leave at the same time?

Ms. BAIR. I would point out that the TLGP program has been a moneymaker for us. We have collected over $7 billion in premiums from it, and we have had no losses. That has helped. Some of the surcharges on that program are now helping to replenish the Deposit Insurance Fund, where we have losses through our normal resolution activity. So I think there have been some benefits to the government and the FDIC for that program.

Senator CORKER. So now you are moving the free enterprise into government and we are making money——

Ms. BAIR. I do not. We would like to get out of that program October 31st, and that is the plan right now. We had an opt-in or opt-out procedure when we instituted the program. I was worried about adverse selection.

So I think we would like the institutions that are in the TLGP now to stay in it until October 31st under the current terms. But then after that, we would like to end the program.

Senator CORKER. Is that possible?

Ms. BAIR. I sure hope so, Senator. I think we will know more in the third quarter. But that is the current strategy. I will guarantee you that if we cannot end the TLGP for everybody, the fees will go up.

Something we had originally talked about, which we did not do because the markets were under such stress, would be to only guarantee a percentage, say 90 percent or 80 percent, to start weaning the private markets off of this and take some percentage of the risk. So there are different ways we can exit if we cannot by October 31st. But our strong preference is just to get out on October 31st.

Senator CORKER. This is, apparently, going to be my last question.

If we end the program on October 31st, my sense is that we, potentially, may need this resolution ability in place prior to then because it would be my sense that there are a lot of institutions in this country that cannot survive without that program being in place. I am just wondering if you might respond to that.

Ms. BAIR. I think that is a valid observation. The flexibility and the tools we have to deal with this, have been hampered by our lack of ability to deal with structures at the holding company level. So a lot of this open institution assistance has been needed because we do not have other tools available. It would be helpful to give us flexibility. It is the kind of thing you hope you will never have to use. But I think having it now would be extremely helpful.

Also, we find with the smaller institutions that just a thread of resolution authority can trigger actions that might not otherwise take place. And so, for a variety of reasons, it will be a helpful tool to have.

Senator CORKER. We appreciate your willingness to talk with us on the telephone from time to time, and I hope that will continue. And, again, I know that you have spent most of your life in government. I thank you for proposing something that is sane, that actually alleviates the moral hazards that our Treasury Secretary has tried to lay out.

I would love to hear of you-all's interpersonal conversation some time, but I will not ask for that now. Thank you very much.

Chairman DODD. You are really treading on thin ice there. Thank you.

By the way, the resolution mechanism is something we all feel pretty strongly about, and whether or not we are able to move forward with a larger proposal, including the resolution mechanism, is a good point. And this is something I have to take the temperature of my colleagues on as to how they feel about it. But I hear what you are saying, and I do not disagree with my friend and colleague from Tennessee about the importance of that issue, having a mechanism in place. I regret we do not now. It would have been a very different situation, in many ways, if we had such.

So I will be in conversations with my colleagues, certainly Senator Shelby, about the best way to proceed on that. And I invite the comments of my colleagues and thoughts on this matter as well, as to whether or not we ought to proceed with that or whether or not we will be in a position where we can actually accommodate that as part of a larger proposal.

With that, Senator Menendez.

Senator MENENDEZ. Thank you, Mr. Chairman.

Chairlady Bair, let me thank you for all your work. I think it has been extraordinary. And I was listening to my dear friend and colleague, Senator Corker, laud your proclivities to the free market, which we share. But you are not for a free-for-all market, are you?

Ms. BAIR. No, no.

Senator MENENDEZ. That is what I thought. So let me ask you a couple of questions. One of the fundamental questions—I know we have talked about how we regulate and how we look at systemic risk and systemic regulators. I would like to take a step back from that because I think you have some testimony that maybe you did not do in your oral presentation that is very important for the Committee to be considering as well, and that is, if we have gotten to the point that an institution is "too big to fail," haven't we in some respects already failed?

Ms. BAIR. I think that is right. It has diluted market discipline and helped contribute to getting us into this situation, and we need to end it. I think that is true.

Senator MENENDEZ. So in that respect, because it poses potentially such risk to the overall system and the economy, how do we—I think you had some very interesting suggestions. One is that in your testimony on page 4, you say that "the academic evidence suggests that benefits from economies of scale are exhausted at levels far below the size of today's largest financial institutions." And then you went on, on page 6, to talk about some of those things that we might do prospectively and preventively to not only regulate the system, but to create, I would say, safeguards from maybe getting to that point where we might be "too big to fail." Can you talk about some of those?

Ms. BAIR. Right. We charge premiums for deposit insurance on a, risk-adjusted basis. We charge a higher assessment for institutions that engage in behaviors that we know are higher risk and that can increase our resolution costs.

I think you could have an assessment system that would help build up a fund so that if a very large, complex organization got itself into trouble, you could put it into a resolution process. If the Government had to absorb losses as part of that resolution, you could fall back on this fund as opposed to going to the taxpayer, which is what is happening now.

I think that type of process could provide economic disincentives for higher-risk behavior. That might be preferable to just trying to say you cannot do this or you cannot do that. Frequently, when you try to just ban certain products or practices, people find a way around the ban, or you can create an arbitrage in an unintended fashion. So I think creating the economic disincentives so banks pay a much higher assessment for actions that post more systemic risk would be a powerful tool.

There are certain areas where it is quite obvious that the activities were higher risk—for example, structured finance, and credit dafault swaps. This would be one additional tool that could be used.

Senator MENENDEZ. How about graduated capital reserve requirements?

Ms. BAIR. Yes, absolutely. There is broad consensus on having countercyclical capital requirements. During good times, the larger institutions in particular must build up their capital so that they can draw down upon those in bad times. That is absolutely essential. I think there is broad international consensus on that point.

Senator MENENDEZ. You also said here, "there firms"— referring to the ones who create some higher risk—"should be subject to higher Prompt Corrective Action . . . limits under U.S. laws."

Ms. BAIR. Right.

Senator MENENDEZ. "Regulators also should take into account off-balance-sheet assets and conduits as if these risks were on-balance-sheet."

Ms. BAIR. Yes. That is right.

MENENDEZ. Something that you promote as well.

Ms. BAIR. Yes, absolutely. The off-balance-sheet exposures where institutions were not required to maintain capital against those exposures were found very quickly when those off-balance-sheet vehicles got into trouble. They came back on-balance-sheet pretty fast. I think the accounting industry is moving in that direction as well. Those exposures should be reflected on-balance-sheet and capital should be held against them.

Senator MENENDEZ. Let me ask you one question that is not per se on topic, but since you are here: Since we seem like we are moving in the direction of giving you the higher borrowing authority, and I continue to hear from all those community banks who were not really part of our challenge in this economy, how quickly, assuming that it is signed into law, do you anticipate that the FDIC will be able to stabilize or lower the fees it is charging these banks?

Ms. BAIR. I think we will do it very quickly, certainly before the end of the month, assuming this authority goes through, and it looks like it will. And thank you all for your leadership in getting this done. It will be before the end of the month. We will make an announcement on that.

Senator MENENDEZ. Thank you, Mr. Chairman.

Chairman DODD. Thank you very much. And let me say just on that point, we thank you, Ms. Bair, for the work of the FDIC and the communication with the Committee. We have had a good debate this week on the subject matter and have expanded the legislation, but I think on the central points regarding the deposit insurance and the lending authority, borrowing authority, there is pretty much consensus—not everyone, but pretty much consensus on this. But there has been some debate about other matters before the floor, but we have resolved at least some of those and are moving forward.

Senator Shelby.

Senator SHELBY. Thank you. Thank you, Mr. Chairman.

I would like to ask—this may have been asked earlier. I was not here early this morning. A threshold question comes to me: What constitutes "too big to fail"? What constitutes that?

Ms. BAIR. Right.

Senator SHELBY. How do you define that?

Ms. BAIR. It is difficult to define. I think it is market perception as much as a precise definition. It is not just a function of size, it is really a function of interrelationship. In general, an institution would be "too big to fail" if, in a situation where it did fail and repudiated all its various obligations, there would be collateral systemic impact so that other firms would start being brought down because of that. That is how I look at it, and I think that is why we found ourselves in a box with some of these financial institutions. Because of the potential domino effect, that Government intervention was deemed necessary.

Senator SHELBY. Mr. Stern, President Stern.

Mr. STERN. My definition would be similar. I think of it in terms of an institution who, if it ran into substantial difficulty, would impose significant spillover effects on other significant institutions and/or a range of financial markets as well. So I would define it in that kind of very practical, operational way having to do with significant spillovers.

Senator SHELBY. Could a hands-on regulator or regulators—hands-on—help prevent this, in other words, from becoming too interconnected, see what is going to happen or could happen down the road? Because if you can prevent something, it is a lot better than picking up the pieces, is it not?

Mr. STERN. Yes, I would say two things about that. I think it would take a reorientation of traditional supervision and regulation. Rather than worrying principally about the safety and soundness of the institution per se, you have to broaden your perspective to think about who would be affected and to what magnitude if the institution got into serious difficulty. But even if you did that, I would be concerned that that by itself would not be sufficient without going the next step and preparing, one way or the other, to limit, to diminish the potential for spillovers.

Senator SHELBY. Mr. Stern, the idea of imposing higher capital requirements—this has been talked about here, alluded to this morning—on "too-big-to-fail" institutions has some appeal. Your testimony advocates, as I understand it, capital tools that create capital when firms need it most. You need it most, it seems to me, when you do not have it, so to speak, when you are in a downturn.

What type of capital tools were you referring to in your testimony? And how would these additional tools be put in place? And could regulators take action under existing authority to require those types of tools? Or will it be something we will have to address in legislation?

Mr. STERN. Well, one suggestion that has a lot of appeal to me is something called "contingent capital," where a firm would issue a debt instrument which would have, as its capital diminished at some point, with a formal trigger or perhaps under regulatory instructions, that debt instrument would convert to equity. That is why it is called "contingent capital." So you would have additional capital, in fact, when you needed it most, when your capital was diminishing and your position was deteriorating. And I think that is an attractive idea, and I would certainly advocate and support it.

Senator SHELBY. In your tenure as President of the Reserve Bank there, have you known any banks in the area to fail that were well capitalized, well managed, and well regulated?

Mr. STERN. Well, I think with the benefit of hindsight, the answer to that is no. But, occasionally—usually I think it is fair to say, especially if it is a relatively small, straightforward institution, the problems are well recognized in a timely way. I think the problem is with large, complex institutions that is a much more significant challenge, especially to do it in a timely way. And even if you identify the problems in a timely way, taking corrective action in a timely way is a very significant challenge, in my judgment.

Senator SHELBY. To both of you, is there really in the banking business any substitute for capital, real capital?

Ms. BAIR. Well, I think capital is absolutely central in its importance, and we need more capital now and in the future. And we need countercyclical capital requirements, and I like the contingent debt concept. It is a good idea as well.

I think you need market discipline, too. If an institution is undertaking very high risk activities, even at a 20-percent capital level—and we have seen this in smaller institutions—it can go pretty fast. So I think you need good, common-sense oversight, but you also need that complemented by market discipline, which, again, "too big to fail" has diluted.

Mr. STERN. Yes, market discipline and capital are complements, not substitutes. I think they are both critical here.

Senator SHELBY. They work together.

Thank you, Mr. Chairman.

Chairman DODD. Thank you. I am glad you made that point, Sheila, because I can think of several institutions today that have very high capital standards but are in trouble. And the assumption because they have a lot of capital that they are not in trouble is the conclusion, and that is not the case. But I agree with my friend from Alabama that is an important—capital standards are critically important, but I am glad you mentioned the market discipline as well in all of that.

Senator Reed.

Senator REED. Thank you, Mr. Chairman.

Thank you both not only for your testimony but particularly, Chairwoman Bair, for your very effective leadership. Do you think we should return to something much closer to Basel I capital standards rather than continue the Basel II regime?

Ms. BAIR. Well, I absolutely think that the structure of Basel II, the Advanced Approaches, continues to be highly problematic. There has been a lot of work to try to fix it. At some point you wonder, well, should we just start over as opposed to trying to fix it? Thank goodness we have always maintained the leverage ratio in the United States, and that we are still under Basel I.

I think there is increasing international agreement that we need an international leverage ratio. We are calling it a "supplemental capital standard" now, but that is in essence what we are talking about. And, in terms of the capital standard based on risk-weighted assets, it could be made more nuanced and more granular. But we can do that by building on the Basel I framework of buckets of different asset categories with hard and fast risk weights and capital requirements as opposed to this more subjective model-based regimen that we had with the Advanced Approaches under Basel II.

The basic approach under Basel I is workable. It needs to be improved. It needs to be more granular. But, making enhancements to Basel I might be more productive at this point than continuing to try to work with Basel II.

Senator REED. We have operated under Basel I. It is a known entity. Rather than inventing a new third approach, it might be better to return back to something that we have operated under.

Ms. BAIR. I think that would be a very viable path. It is just one opinion. Obviously, there are a lot of voices on capital standards. But I think that would be faster and get us to a stronger capital regime. Yes, I do.

Senator REED. Mr. Stern, do you have any views?

Mr. STERN. Yes, I think it is very important that we get capital right, and I certainly think that Basel II ought to undergo a very thorough review, and we should ask ourselves if that is going to take us where we want to go. And as I have already suggested, I think while we need to get the capital right, I think that the "too-big-to-fail" problem is sufficiently challenging, that capital by itself is not likely to be the entire solution. And so that is the reason I have suggested a number of other initiatives as well.

Senator REED. Do you believe that the Federal Reserve has the authority to require a regulated entity to divest itself of an operation or enterprise because they do not have the managerial capacity to do it correctly?

Mr. STERN. As a legal matter, I do not know if we have the authority for that. As a practical matter, I think that is a very difficult thing to do. You might prevail. But, obviously, if the organization thought it was integral to its operations and to its profit-making opportunities, it would undoubtedly want to resist such action.

Senator REED. Well, if you are the authority and you have the—since I am continually impressed with the authority of the Federal Reserve over the last few weeks and months to do things, I think you are not giving yourself enough credit for the leverage you might have. But one of the issues of not only correcting a situation but preventing a situation is having perhaps the authority to step in and say these activities are great, but they are just—you are not managing them well—which would send a stronger signal to management than simply saying we know we cannot do anything, but we wish you were better managers.

Mr. STERN. Yes, and, you know, as I commented a little bit earlier, I do think that identifying those situations is an important responsibility and a challenging one. But as I commented, even when you identify those things, taking timely action is very challenging, especially in good times, by the way, when it looks as if everything is operating smoothly, and the rationale for such a divestiture, for example, would not be immediately accepted.

Senator REED. I think you are absolutely right. I mean, I think that the irony here is it is the good times where the seeds are sown for the bigger harvest of the future, and it is hard in practice.

Let me ask just a final point. One of the problems we have is we have talked about the leverage and the capital ratios of regulated entities. But what about the embedded leverage of some of their counterparties, the hedge funds, so that what looks like an appropriate loan based on the capital of the regulated entity becomes, you know, much less acceptable? How do we deal with that?

Ms. BAIR. Hopefully, if it is a regulated bank, they should be looking at their counterparty exposure. If their counterparty is overleveraged, then that might not be a transaction they should do.

One area that a systemic risk council, with the regulators coming together, should look at is how leverage constraints apply across the board. It is very difficult to have even higher capital standards than we have now for banks. If there are other major parts of the banking sector that can lever up much higher, you are going to be creating incentives to drive activity into less regulated venues.

We need some minimal standards that apply across markets, and leverage is probably one area we need to review.

Senator REED. Let me just follow up quickly. This systemic council of regulators I think—well, let me ask you: Should they also have sort of the responsibility to have an analytical staff that would try to anticipate issues? Coming from my other Committee, the Armed Services Committee, we spend a lot of time and a lot of money gaming what could happen, what might not happen, what are the pressures on systems? That I do not believe exists in any sort of consistent way within financial regulation.

Ms. BAIR. We do it within our respective spheres. We do that internally at the FDIC with insured depository institutions. So I absolutely think that there should be an analytical staff. That would be a key part of the council to enable it to collect the data and analyze it and identify issues to try to get ahead of them.

Senator REED. Thank you very much.

Thank you, Mr. Chairman.

Chairman DODD. Just on that point, that is a very good point. I was thinking when you were defining it, giving your definition of "systemic risk," and I agree with you, size alone is—if we gravitate on that, we are going to miss an awful lot. But one thing I did not hear you say, and that is, products. What is maybe a relatively small product can migrate very quickly through the system, and that product can become a source of tremendous systemic risk. And so in addition to the entity itself having tentacles that reach out that cause problems, we need to be looking—I think Jack's point is a good one—an analytical staff that is looking at what products are and can that product pose systemic risks.

Ms. BAIR. I agree.

Chairman DODD. While it may be innocent enough or small enough, at some juncture the analysis that that product could create problems I think is a very important issue as well.

Ms. BAIR. I agree.

Chairman DODD. Senator Merkley.

Senator MERKLEY. Thank you very much, Mr. Chair.

I want to ask—and this question is more directed to Mr. Stern, but, Sheila, please feel free to chime in here.

Mr. Stern, in your writings, you have noted the unintended side effects of stepped-up prudential capital requirements may encourage banks with those stepped-up requirements to actually increase their risk to gain the same returns, and this raised kind of an inherent dilemma, if you will, of that strategy. And how does that play out in terms of the pros and cons of public policy?

Mr. STERN. Well, I think that is a potential reaction and something of potential concern, and that is why I have advocated not relying just on capital or just on one or two approaches to dealing with "too big to fail." I think this has to be a multifaceted approach with a number of initiatives that straighten out the best we can the incentives and improved market discipline as well as doing things like improving capital and so forth, because this is a difficult issue to address. Its consequences are potentially very serious, and so I think we need to address it across a number of fronts.

Senator MERKLEY. Do you wish to add anything on that?

Ms. BAIR. Well, I think that is a risk. We have capital standards based on the riskiness of assets in addition to the leverage ratio, which is core capital to total assets. So through our risk-based capital system, we try to address that problem. But it is imprecise, necessarily imprecise, and so it is something that supervisors have to be constantly vigilant of.

Senator MERKLEY. To follow on, Mr. Stern, I think another point you have made is that we in some degree already have a systematic risk regulator in the Fed. But can the Fed really balance its various requirements and play that role?

Mr. STERN I do not think I have suggested that the Fed is the systemic risk regulator. Obviously, that is an issue that is under discussion and consideration at the moment.

I do think the Federal Reserve, because we have longstanding responsibilities in holding computer and bank supervision, as well as experience in payment systems and because we are ultimately the last provider of liquidity in the system, have a role to play in this, clearly. But I have not tried to weigh in exactly on what the exact structure of the systemic risk regulator ought to be.

Senator MERKLEY. And I apologize if you have already been asked this question before, but I think you have emphasized—and correct me if I am wrong—that policymakers should focus on counterparty risk and not risking shareholders, but that one of our challenges is to convince uninsured creditors that they will bear losses when their financial institution gets into trouble.

Do we need to do that in a statutory sense to address the moral hazard, if you will, of expectations that shareholders will be bailed out?

Mr. STERN. Well, shareholders, of course, in some of these cases have lost a lot of money, and that has been appropriate, but it is not sufficient to address moral hazard. It is the creditors, the uninsured creditors, that need to take some losses going forward—not in the middle of a crisis like this, I will hasten to add, but going forward. And so we want to put ourselves in a position to do that.

The legislation is not up to me, but, obviously, if it is going to contain, as it may well appropriately contain, a systemic risk exception so that, you know, if there really is the threat of systemic difficulties that would threaten not only the functioning of the financial system but maybe parts of the economy as well, clearly policymakers ought to be able to deal with those.

What you want to put yourself in the position to do is to invoke that systemic risk exception as infrequently with as low a probability as possible. So it seems to me that legislation can help, but it is not going to get you the entire way, assuming it has that systemic risk exception—and, indeed, it seems appropriate to have such a thing.

Senator MERKLEY. Sheila, do you wish to add at all to that?

Ms. BAIR. No. I would agree with that. With the bank resolution process we have now, Congress has laid out a very clear claims priority for us. One of the benefits of having a resolution authority for holding companies and perhaps non-bank financial institutions is that Congress would lay out what the rules of the game are so market participants could understand in advance what their losses will be if an institution gets into trouble. I think that increases the market discipline, which is what we are all trying to get back into the system.

Senator MERKLEY. Well, thank you very much to both of you for your testimony and for helping us wrestle with this pretty sizable issue.

Chairman DODD. Thank you very much, Senator.

Before I turn to Senator Bennett, just to inform my colleagues and others who are gathered here today, there has been a little change in the order on the floor of the Senate. Several of our colleagues have to be at the White House for a meeting. We are going to begin at 10:40 having three votes regarding the housing bill. And then there will be a break, and they are going to bring up the defense procurement bill for opening statements for an hour. And then we will come back to finish up the remaining votes and final passage on the housing bill sometime after 11:30, in which case what I am going to suggest is that Senator Warner has graciously agreed to take over the chair and the gavel—which means you can only conduct a hearing. You cannot pass any bills, Mark. Then we will start the second panel—obviously complete with this panel, and we thank both of our witnesses. We will recess and then come back for the second panel. And I apologize to them, but I cannot control the order of business on the floor of the Senate. So we will come back and have to finish up. But we can get started, anyway, with the second panel, if that is appropriate, Mark.

Senator Bennett.

Senator BENNETT. Thank you very much, Mr. Chairman, and thanks to the two witnesses. I apologize for not having been here for your testimony. I had other assignments.

One of the things that has come out of this experience we are going through that I had not realized before—maybe both of you did—is that, in addition to bank and traditional kinds of banking activities, at least Citi performs a series of functions that are very profitable and are systemically absolutely essential—that is, the evening sweeps, the transactions that go on, *et cetera*.

I understand that as much as 80 percent of some of these almost clerical functions worldwide run through Citi in one way or another. And if City were allowed to fail as a bank, it would be unable to perform these services that it performs for the system as a whole, and I have been pondering that ever since I found out about it as to how that impacts this whole question of what we do with City or any other organization.

Now, as I have talked with some people outside of Citi about it, they have said, "Senator, that is a very profitable business, and there would be plenty of people who would step forward and say we will be happy to perform it." Well, it is one thing for them to say, "Yes, we will be happy to perform it," and it is another thing mechanically for them to be able to perform it in a seamless fashion that does not create tremendous difficulties. So I would like your response to that.

Then the other thing that occurs to me that I have learned about all of this, I will not quote the numbers because I will get them wrong, but during this period of time, again picking on City, where they have taken enormous losses, they have at the same time paid a very significant amount of taxes, because the IRS rules are different from the accounting rules, and when you have an enormous loss that comes from mark-to-market, the IRS says, no, we will not allow that to happen until the assets are actually sold; so that we have had, to me, the enormous anomaly of having tremendous injections of cash into City to keep them viable, at the same time that Citi is making tremendous contributions or payments into the Treasury in the form of taxes. And I have a little bit of a hard time understanding why that makes much sense.

So I would appreciate your responses to those two issues that have come up as we have deal with the realities of the meltdown that we have experienced.

Ms. BAIR. Well, I never comment on open, operating institutions, so I will try to address some of the issues in a generic way.

Senator BENNETT. Yes, put them in a generic way.

Ms. BAIR. Where an institution performs activities that have systemic significance so that if they just ceased and repudiated those obligations you would have a systemic situation. Congress long ago gave us the authority to set up a bridge bank to maintain functions that are perhaps profitable and have value, but also need to be continued to avoid systemic risk. This mechanism allows us to move good parts of an institution into a bridge bank, which then can be sold back to the private sector. The problem assets or other loans or securities that may be causing losses are retained in the receivership.

This kind of generic situation is why bankruptcy does not work, because you do not have that bridge bank process. You do not have a way to continue these types of important systemic functions as you try to wind down and resolve the institution. We do not have this authority for holding companies. But we do have that kind of mechanism that we use now for banks.

Mr. STERN. You are clearly right that there are several major financial institutions that are relied upon in financial markets for clearing and settlement, sort of the back-office plumbing. And if they were to get into various serious difficulty, that could be very disruptive, and so it could have certainly systemic repercussions. That has been a difficult issue to build an adequate response for in advance, although I would note that—gee, this was probably at least 15 years or so ago now—one of these institutions experienced a very serious computer glitch that threatened— it threatened operations and threatened its liquidity position, and as I recall, the Federal Reserve Bank of New York loaned something like $20-some billion to it overnight to address that problem, and it was addressed effectively.

But you are clearly right that this would be something that a systemic risk supervisor would want to take a careful look at.

Senator BENNETT. Can you comment on the disparity between accounting mark-to-market and taxes?

[Laughter.]

Mr. STERN. I am not knowledgeable about the tax situation, and like Chairman Bair, I am more than reluctant to comment about a particular institution.

I would say that as far as mark-to-market accounting is concerned, it is not perfect; although, obviously, in more normal times, I think it works reasonably well. When some markets are not functioning, it is difficult to price assets, of course. But it is not clear that there is a preferable alternative, and it may be better to, on the margin at least, run the risk of overstating the problems rather than understating them.

Ms. BAIR. I think just, generally, having worked at Treasury, the inconsistency between tax rules and GAAP accounting rules and regulatory treatment has arisen in a lot of contexts. I am uncomfortable with commenting on tax policy. Those laws are out of my bailiwick.

If I could go back to your first question, though, we had a bank closing on Friday, Silverton Bank. It was a banker's bank. It had a lot of correspondent accounts with many other banking institutions. It was systemic in its functions for those other institutions, so we set up a bridge to preserve those relationships as we try to market and unwind them over time. It is a good, real-life example of how the bridge bank mechanism works. If you would like a more detailed briefing, our staff would be happy to give it to you.

Senator BENNETT. Well, yeah. I would appreciate it. But there is no question, as I think you have said, that there is a systemic risk beyond just the safety and soundness of the bank, the function the bank performs.

Mr. Chairman, I still am baffled, the idea that the federal government is injecting money into an institution to help keep it solvent, and at the same time, the federal government is taking money out of the same institution in the form of taxes to make sure they do not make a profit. Somehow that picture just does not compute for me.

Senator WARNER. [Presiding.] Senator, we have all heard the death and taxes, the comments, and I think it is one more time being proven out. I am sorry.

Ms. Bair?

Ms. BAIR. Going forward—the situation is what it is, and I think steps were taken because there were no good alternatives going forward. I think, again, a resolution mechanism will get you out of this. So it would provide an orderly way, providing what we call open bank or open institution assistance. It would give you a mechanism where you do not have this kind of incongruity.

Senator BENNETT. If I could, Mr. Chairman.

Do you ever consider or run in to a situation where a tax forgiveness would keep the institutions solvent so that you do not have to seize it? And if you did, would you have the authority to——

Ms. BAIR. We do not. Our statute is very strict. In determining what is the least cost resolution, we may not consider tax benefits. So Congress has constrained us somewhat in that capacity. I can check and see if, prior to that, there were instances in the past where a change in tax policy would have kept the institution viable. But I will have to get back to you on that.

Senator BENNETT. Thank you.

Senator WARNER. I know we have a second panel, but I have one more question for this panel, and I will ask my colleagues if they have any more questions, and we can move to the second panel.

Interesting discussion earlier on resolution authority, and, clearly, I cannot speak for all the colleagues, I have seen a great deal of interest in expanding the FDIC's authority to look at bank holding companies. I guess two quick questions.

One. Mr. Stern, if we were to move on that action independent of the overall financial modernization activities, what would be the push back, and would there be reluctance from the Fed of turning over a bank holding company's resolution authority to the FDIC? And are there other early warning signs that seems kind of, at least to me, logical that we take that step?

Secondarily, perhaps for both Mr. Stern and Ms. Bair, if we were to expedite that independently of the overall financial modernization, would it have any—even before passage of such legislation, if we were to advance that, could it have any effect on the current crisis?

Mr. STERN. Well, I will try to be succinct about that. I, obviously, will not speak for the Federal Reserve as a whole. I think it could be constructive to accelerate that effort with regard to resolution authority, staying away from exactly who has responsibility for what, for the reasons that have already been covered here.

The one thing that would concern me about that is it might reduce the urgency of taking other steps that might be appropriate and important and necessary as well. And I would be concerned that we might think that, well, that addresses the problem and we do not need to take actions down the road. And so, there may be a value in trying to put together a more comprehensive package that would attack the issues that are of concern here and achieve the objectives that we have been talking about today in a comprehensive way.

Senator WARNER. There is a great deal of interest in taking on the comprehensive. I wonder if there were any, though, in this moment, at this moment of the crisis, an expedited effort to expand to at least the bank holding companies.

Mr. STERN. Yes. As I said, I think that would be constructive.

Senator WARNER. Could there be even the advancement of that type of legislation? Could that have any short-term, positive——

Ms. BAIR. I think it could be an important catalyst, perhaps, for more fundamental restructurings or assets sales. It could serve as a wake-up call, to perhaps move things along a little faster.

Senator WARNER. It might force some of our banks to move quicker into which assets they might be willing to dispose of.

Ms. BAIR. Right. Well, in these smaller institutions, we find that it is a viable mechanism to use. Just having that there is a good catalyst to take more aggressive action, whether it is major changes or restructurings, or asset sales or just selling the whole institution, which is more practical with the small institution. I think, absolutely, just having the lever there can contribute to some very constructive activity.

Senator WARNER. Well, I hope Chairman Dodd and Ranking Member Shelby get a chance to weigh in on that. I would love to see their sense of whether expedited on that would make some sense.

Again, we will go very quickly, if any other member wants to ask this panel.

Senator Merkley?

Okay. Then I would then thank the panel for their very productive testimony and, always, your good work.

Thank you. And we will move now to the second panel.

Recognizing we have some votes, I will go ahead, and as the panel is setting up, I will go through a few introductory comments.

For our second panel, we will hear from Peter J. Wallison, the Arthur F. Burns Fellow in Financial Policy Studies at the American Enterprise Institute for Public Policy Research, where his research focuses on banking, insurance and Wall Street regulation. Previously, Mr. Wallison served as general counsel to the U.S. Treasury, the depository institution's Deregulation Committee, and as White House counsel to President Ronald Reagan.

After Mr. Wallison, we will hear from the Honorable Martin Baily, Senior Fellow in Economics Studies at the Brookings Institution. Mr. Baily served as chairman of the Council of Economic Advisors during the Clinton Administration.

Finally, we will hear from Mr. Raghuram R.J. Rajan, the Eric J. Gleacher Distinguished Service Professor of Finance, University of Chicago, Booth School of Business. He served as chief economist at the International Monetary Fund. His major research focuses in the role of finance, planning and economic growth.

We were asked for Mr. Wallison to testify first, but we seem to be missing Mr. Wallison.

Mr. BAILY. He was here a minute ago.

Senator WARNER. Mr. Wallison, you are up first. You have been appropriately introduced, and we have said great things about you in your absence, and we are anxious to hear your testimony.

STATEMENT OF PETER J. WALLISON, ARTHUR F. BURNS FELLOW IN FINANCIAL POLICY STUDIES, AMERICAN ENTERPRISE INSTITUTE FOR PUBLIC POLICY RESEARCH

Mr. WALLISON. I appreciate it very much, Mr. Chairman.

I am very pleased to have this opportunity to appear before the Committee. The chairman's letter of invitation asked four questions, and I have attempted to answer them in detail in my prepared testimony. I will try to summarize both the questions and my responses as follows.

First, is it desirable or feasible to prevent institutions from becoming "too big to fail"? I do not believe it is possible to identify in advance those institutions that are "too big to fail" because they pose systemic risk. Even if we could do that, the current condition of the heavily regulated banking sector shows that regulation is not an effective way to control growth or risk taking. Only the failure of a large commercial bank is likely to create the kind of systemic breakdown that we fear.

Banks are special. Businesses and individuals rely on them for ready cash, necessary to meet payrolls, provide working capital, and pay daily bills. Small banks deposit funds in large banks. If a large bank should fail, that could cause a cascade of losses through the economy, and that is the definition, really, of systemic risk or a systemic breakdown.

I doubt, however, that other kinds of financial institutions, insurance companies, securities firms, hedge funds, no matter what their size, can cause a systemic breakdown if they fail. This is because creditors of these firms do not expect to have immediate access to the funds that they have lent.

If a large, non-bank financial firm should fail, its creditors suffer its losses over time with no immediate cascade of losses through the economy. The turmoil in the markets after Lehman's bankruptcy was the result of the extreme fragility of the world's financial system at that time and not the result of any losses actually caused by Lehman.

The failure of a non-bank financial firm is not much different, in my view, from the failure of a large operating firm like General Motors. If General Motors fails, it will cause many losses throughout our economy, but not even the administration is contending that GM is "too big to fail." The Committee should consider why if GM is not "too big to fail," a large non-bank, financial firm might be; or if GM is "too big to fail," whether we need a government agency that will resolve big operating firms, as some are proposing to resolve big financial firms.

Second. Should firms that are "too big to fail" be broken up? This would not be good policy. Our large operating companies need large banks and other financial institutions for loans, for insurance, for funds transfers, and for selling their securities. If we broke up large financial institutions on the mere supposition that they might cause a systemic event, we would be depriving our economy of something it needs without getting anything certain in return.

Third. What regulatory steps should be taken to address the "too-big-to-fail" problem? Since I do not think that non-bank financial institutions can create systemic risk, I would not propose new regulation for them at all. However, regulation of banks can be improved. We should require higher minimum capital levels. Capital should be increased during profitable periods when banks are growing in size. Regulators should develop indicators of risk taking and require banks to publish them regularly. This would assist market discipline.

Fourth. How can we improve the current framework for resolving systemically important non-bank financial firms? There is no need to set up a government-run system for resolving non-bank financial institutions the way we resolve banks. They do not pose the risks that banks do. Giving an agency the power to take them over would virtually guarantee more bailouts like AIG with the taxpayers paying the bill.

The bankruptcy system is likely to work better with greater certainty and with fewer losses. Within two weeks after its bankruptcy filing, Lehman had sold its investment banking, brokerage and investment advisory businesses to four different buyers. And unlike the $200 billion disaster at AIG, all Lehman's bankruptcy costs are being paid by the shareholders and the creditors of Lehman, not the taxpayers. Because of their special role in the economy, banks must have a special resolution system. I agree with that. But there is no reason to do the same thing for the creditors of non-bank financial institutions.

Thank you, Mr. Chairman.

Senator WARNER. Thank you, Mr. Wallison. Some interesting comments. I am anxious to ask a couple of questions.

Mr. Baily?

STATEMENT OF MARTIN NEIL BAILY, SENIOR FELLOW, ECONOMIC STUDIES, THE BROOKINGS INSTITUTION

Mr. BAILY. Thank you, Senator, and members of the Committee for giving me this opportunity. I am going to make a quick preamble and then get to the same questions that Peter was referring to.

The U.S. economy has been in free-fall. Hopefully, the pace of decline is easing. But in order to get a transition back to sustained economic growth, that will not be possible without a restoration of the financial sector to health. In this situation, policymakers must deal with "too-big-to-fail" institutions because, at this time, we cannot afford to see the disorderly failure of another major financial institution that would exacerbate systemic risks and threaten economic recovery.

The stress tests are being completed and some banks are being told how much extra capital they will need. However, I think there is a lot more to be done after that because large volumes of troubled or toxic acids remain on the books of the banks, and more such acids are being created as the recession continues.

It is possible that one or more banks will become insolvent and will have to be taken over by the authorities. I think it would be a terrible mistake, however, any kind of preemptive nationalization of other banks. At the same time, getting the U.S. financial sector up and running is essential, will be very expensive, and is deeply unpopular with the electorate. If Americans want a growing economy next year with an improving labor market, I think Congress will have to provide more Treasury TARP funds maybe on a large scale. The cost of taxpayers in the country will be lower than a deeper recession and lower than nationalization.

Let me turn now, specifically, to the questions that were asked.

Should regulation prevent financial institutions from becoming "too big to fail"? I tend to agree with Peter on this one. I think we actually need very large financial institutions. New York is really the center of the financial world, New York and London, and we need large-scale institutions to continue and sustain the process of globalization that I think contributes to global prosperity. Well, some of the institutions are going to end up being "too big to fail," really, whether we like it or not.

I do think "too-big-to-fail" institutions, or too interconnected institutions, can be regulated in a way that at least partially offsets the risks they pose to the rest of the financial system because of their status. We need better capital standards. They need to be increased progressively as a bank increases in size or another financial institution. And I think financial regulators should have special ability to look at these institutions to make sure that their portfolios are not unduly taking on too much risk. And I think there should also be some restrictions on bank mergers so that we are not creating more "too-big-to-fail" institutions than we need to have. In other words, "too big to fail" is sort of a necessary evil but not something that we should really like.

Should the existing institutions be broken up? No, I do not think so, particularly if they have grown organically. If they have become efficient and grown, performing services for the U.S. and the global economy, I do not think there is a case for breaking them up. On the other hand, if we are—for example, if Sheila Bair is dealing with another bank failure, I think it certainly should be part of her mandate not to end up with creating a "too-big-to-fail" bank. Again, like the previous answer, we are stuck with "too big to fail," but we certainly do not want more of them than we have to.

Now, what requirements should be imposed on "too-big-to-fail" institutions? The one thing I would say about that is that if you are a "too-big-to-fail" institution, you have an advantage. Your borrowing costs are lower than they would be otherwise. Alan Greenspan at a meeting at Brookings suggested that that number was about 50 basis points. I think we need to take a good, hard look at what that number is because I think it actually gives us some room to impose on large banks certain additional regulations, additional capital requirements, additional supervision of their portfolios, certain things that we can do.

You see, there is a concern that if you impose extra regulations on large banks, then they become uncompetitive, and then all of a sudden, activities migrate out of those banks. They go to the Caribbean or something like that. So we want these big banks to be carefully regulated, but at the same time not to have to pay an undue penalty that makes them uncompetitive.

We do need improved resolution procedures. I would be happy to talk about that more. I know my colleague is going to say something about that.

The final point I want to make in this—I will just say I endorse, by the way, the idea of this convertible debt. I think that is a good way of increasing the capital requirements for some of these large banks.

The last point I want to make in my last second is essentially that this crisis, I believe, was a market failure and regulatory failure. And if we try to brand it one or the other, we are not going to find the right answer to the problem. Markets fail. People who had their own money at risk did stupid things and lost the money. So market incentives did not work the way we hoped they would. At the same time, we had rooms full of regulators regulating some of these banks, and they did not do their job either.

So what we have to find going forward is a way of combining good, well-paid, well-trained regulators with good market incentives to try to improve this system in the future. Thank you.

Senator WARNER. Thank you, Mr. BAILY.

Professor Rajan?

STATEMENT OF RAGHURAM G. RAJAN, ERIC J. GLEACHER DISTINGUISHED SERVICE PROFESSOR OF FINANCE, UNIVERSITY OF CHICAGO, BOOTH SCHOOL OF BUSINESS

Mr. RAJAN. Thank you. Mr. Chairman, Senators, there is, in my view, a more important concern arising from this financial crisis than when private institutions are deemed "too big to fail." Other than the reasons that have already been laid out, let me add one more.

When systemically important institutions are bailed out, it is very hard for the authorities to refute allegations of crony capitalism, for the outcomes are observationally equivalent; after all, the difference is only one of intent. In this kind of system, the authorities do not want to bail out the systemically important institutions but are forced to, while in crony capitalism they do so willingly.

The collateral damage in this system to public faith and free enterprise is enormous, especially when the public senses two sets of rules, one for the systemically important and another one for the rest of us. I have avoided saying "too big to fail." That is because size, in my view, is neither necessary nor sufficient for an institution to be deemed too systemic to fail.

Given my limited time, let me focus on how we can overcome the problems of too systemic to fail institutions in some measure. The three obvious possibilities: one, prevent institutions from becoming too systemic in the first place; second, create additional private sector buffers that keep them from failing; and, third, make it easier for the authorities to fail them when they do become truly distressed.

Let me explain each in turn.

I personally believe, like Mr. Baily does, that proposals to prevent institutions from expanding beyond a certain size or to significantly limit the activities of some institutions may be very costly without achieving their intent.

Consider some economic costs. Some institutions get large not through unwise acquisitions but through organic growth based on superior efficiency. A crude size limit applied across the board will prevent the economy from benefiting from such institutions. Furthermore, size can imply greater diversification, which can reduce risk. Moreover, the threshold size can vary across activities and across time. A trillion dollar mutual fund family may not be a concern, while a $25 billion mortgage guarantor might well be.

Finally, size itself is hard to define. Do we mean assets, gross derivative positions, net derivative positions, transactions or profitability? Given these difficulties, any legislation on size limits will have to give regulators substantial discretion. That creates its own problems.

Similar issues arise with activity limits. What activities will be prohibited? Some suggest banning banks from proprietary trading, that is trading for their own account. But how would the law distinguish between illegitimate proprietary trading and legitimate risk-reducing hedging?

Many of the activities that were prohibited to commercial banks under Glass-Steagall were peripheral to this crisis, and activities that did get banks into trouble, such as holding sub-prime mortgage-backed securities, would have been permissible under Glass-Steagall.

Finally, regulating size or activity limits would be a nightmare because the regulator would be strongly tempted to arbitrage the regulations. I would suggest rather than focusing on these limits, we focus on creating stronger private-sector buffers in making institutions easier to fail.

Now, the traditional buffer is capital, and I do agree that raising capital might be a good thing, but one should not put too much weight for reasons that have already been stated; in particular, that banks will tend to take more risks when they are asked to hold more capital. In some ways, I would rather advocate a more contingent buffer where systemically important institutions arrange for capital to be infused when the institution or the system is in trouble. And the difference between the two is quite important.

As an analogy, additional capital is like keeping buckets full of water ready to douse a potential fire. As the years go by and the fire does not appear, the temptation is to use up the water. My contrast, contingent capital is like installing sprinklers. There is no water to use up, and when the fire threatens, the sprinklers actually turn on.

One version of contingent capital, proposed by the nonpartisan Squam Lake Group, is for a portion of a bank's debt to be automatically converted to equity when two conditions are met: one, the system is deemed in crisis either based on regulatory assessments or based on objective indicators like the size of losses of the system; and, second, the bank's capital ratio falls below a certain value.

There are other versions of contingent capital, such as requiring banks to purchase fail-safe insurance policies from unlevered institutions that will provide them an insurance payment when they are in trouble, and there are ways of structuring this that I would be happy to go into.

Let me turn to the other possible remedy, making them easier to fail. And here I think that there are a number of issues that have been talked about, which makes banks hard to fail. I would suggest we also want to recruit banks in the process of making themselves easier to fail. And this is why I would suggest that banks also be subject to a requirement where they focus on creating a shelf bankruptcy plan, which would focus on how they themselves could be made easier to fail. For example, over time, the amount of time it will take to fail a bank could be reduced to such time as we could actually fail some of these large institutions, over a weekend.

By putting this requirement and stress testing it at regular intervals, I think you would give banks an incentive to become less complicated, not to add layers of complexity in the capital structure or in the organization structure, and we could well get easier resolution.

Senator WARNER. Thank you, sir.

The vote has started, I think, about 10:56. I will try to ask two to three minutes worth, and then if Senator Bennett or Senator Merkley want to try to get it in before the vote. If not, we will go into recess. And I am not sure how many votes there are going to be, so we will have to have a little flexibility.

Very quickly, without lots of extra commentary, Peter, I would love to hear your comment about not having the need in terms of a non-bank financial systemic risk regulator, where we deal with the AIGs of the world.

For all of the panel, perhaps very briefly, Mr. Baily, Mr. Wallison, you both said we do not want to make a line in the sand about "too big to fail," but, in effect, what we want to do is we want to try and stop more institutions from becoming "too big to fail." At some point, if we are going to have additional capital requirements, or if we are going to have added insurance fees or other kinds of resolution fees, we are going to have make some definition. We are still going to be backed into a definition, are we not?

Third, questions where we are saying we ought to allow these to grow organically. But some of the actions of, for example, the combination of Merrill and Bank of America, and some of the other things that have taken place in the last six months, I am not sure these would have all have been in the normal course of organic growth. And does that mean because of the crisis, we have to then live with these institutions that were, in effect, created out of the crisis?

I know that is a lot. If you could keep your comments or answers fairly short, so, again, my colleagues may get a word in before we go to vote.

Mr. WALLISON. Okay. Well, let me try first. I will go first, and let me just talk about two things. First, the idea of being backed into a definition, I think it is very dangerous for Congress to say to a regulatory agency, "You make this choice," because the inclination of the regulatory agency under all circumstances will be to be very liberal—small "L" here—in choosing because they will get into trouble if some of that occurs and they have not put an institution within the charmed circle that would be regarded as a systemically important or a “too-big-to-fail” institution.

So Congress has to be very specific, it seems to me, about what constitutes systemic risk, what is “too big to fail,” and under what circumstances it is possible for an agency to take them over in that sense.

Now, AIG is a really great example of a lot of things, and we do not really have time to talk about it all. But AIG probably should have gone into bankruptcy, and if they had gone into bankruptcy—and I cover this in detail in my prepared statement. If they had gone into bankruptcy, there would not have been any substantial impacts throughout the rest of the economy.

We also saw that Lehman did go into bankruptcy, and right after that, there was turmoil, but the reason for that is that the market was unprecedentedly fragile. I do not think we have ever seen, at least certainly in my lifetime, probably not since the Great Depression, a market where almost all of the financial institutions in the world were regarded as unstable and possibly insolvent. And when—and I think Gary Stern said this. When that institution failed, when Lehman was allowed to fail, suddenly everyone said, “Oh, there is a different world out here because I had assumed,” they said to themselves, “after Bear Stearns that no large institution would be allowed to fail. I now have to look at all of the institutions I deal with.” And that is why all the lending came to a halt. That was a classic case of moral hazard.

And if we allow ourselves to get into a position where we are bailing out institutions like an AIG on a regular basis—and if we give regulators the power to do it, they will do it—then we will bring much more moral hazard into our economy.

Thank you.

Mr. BAILY. The Volcker Commission used this with SIFIs, or “systemically important financial institutions,” maybe that is a better word than “too big too fail,” but, anyway, certainly institutions in which there is a danger that the whole system will come down. How do you define that? I do not know the answer to that. I think it has to be done through guidelines provided by Congress with some discretion for the regulators.

In terms of AIG going down and Lehman going down, I disagree with Peter fundamentally. I think we had to do what was done with AIG to prevent further repercussions. I do think that the failure of Lehman was a mistake, and I think most people looking back would agree that it would not have taken that much to prevent the disorderly collapse of Lehman, which had substantial impacts in London and other parts of the world. So I do think we do need to make sure not that shareholders benefits—because shareholders go down, as they should, but that some of the fallout from those institutions is prevented.

You mentioned that we have sort of created these monsters now by putting together some of the banks. I think the Treasury and the Federal Reserve were acting quickly to try to deal with a very difficult crisis. I think with the benefit of hindsight, maybe it would not have been such a great idea to make Bank of America take over Merrill, or whatever. I think some of those mistakes—or some of those decisions that were made rather quickly were not always—

may not have been the best ones. But in point of fact, we are now stuck with those institutions. They are SIFIs, and they have to be regulated with additional capital requirements and some of the additional requirements so that they do not pose systemic dangers.

Senator WARNER. We are down to 7 minutes, and we have got to get over to the capital, so, Professor, briefly.

Mr. RAJAN. Very quickly, I think it is a mistake to identify systemically important institutions. Then you make the market actually treat them as systemically important and act accordingly. That is a problem.

I think you can talk about systemically important. You can sort of have a broad definition. But, in general, regulations should not identify them and create a difference between systemically important and others.

Perhaps you can have increasing capital requirements based on size, but it would not have to be capital requirements which suddenly change when you move from being an ordinary bank to becoming a systemically important bank. I think that will be the challenge that Congress has in devising regulations, how to deal with systemically important without actually identifying the specific institutions that are systemically important.

Senator WARNER. If I heard correctly, I think you have all said, you know, this is very challenging, do not leave it to the regulator, and you better not mess up, Congress.

Thank you. I think the Committee will stand in recess until we are finished voting.

[Recess.]

Senator AKAKA. [Presiding.] This hearing, Martin Baily, Raghuram Rajan and Peter Wallison, I will begin with you on questions to all of you.

It is pretty clear that our current regulatory system failed to address the risks taken by many large financial organizations that resulted in the current economic crisis. It is equally clear that these companies grossly failed to manage their risks. And with all of this, we have been making every effort to deal with the problems they face and to try to stabilize the problems that we have.

So, the second panel, I would like to ask you, should Congress impose a new regime that would simply not allow financial organizations to become too large or too complex, perhaps, by imposing strict size or activity restrictions?

So let me first all on Mr. Wallison for your response.

Mr. WALLISON. Yes. In my prepared testimony, Mr. Chairman, I said that that would not be a good policy to keep institutions from growing. My colleagues here, in answer to questions from the first part of this panel before we recessed, took fundamentally the same point, saying that, well, if an institution has gotten very large because it is very efficient and a good competitor, then it ought not to be penalized and broken up for that reason.

I want to go just a little bit further and say that we have very large operating companies in this country. We are continuing to grow these operating companies. And large operating companies need—especially if they are operating globally, need large, globally operating banks. And if you try to imagine an oil company trying to pay all of its employees around the world on the same day, without a bank that can do all of that in every major area, you can see the kind of problem that arises.

So I do not think it would be good policy to break up companies or keep them from getting larger if they are getting larger because they are competing well.

Senator AKAKA. Thank you.

Mr. Baily?

Mr. BAILY. Thank you. First of all, I agree with you very much that we failed to address the risks and companies failed to manage their risks.

One of the most interesting and revealing documents that I read in all of this was written by UBS, the Swiss Bank, at the insistence of the Swiss Central Bank, that described its own risk management procedures and how they had failed. And it is an extraordinary document of how they did not follow their own internal risk management. They jeopardized their own company. They subsequently had to be supported by the Swiss Central Bank, which in turn has had to rely, to some extent, on our federal reserve. It is an extraordinary story, which goes to the point that you mentioned.

I agree with Peter, generally, in the remarks that he made, that we require these very large banks. When the crisis hit, for example, there was a huge collapse in global trade. Traders in India could not import and export because they had relied on financing coming through New York. So I agree with him very much that we need these large banks, particularly if they are growing and providing services to the U.S. and the global economy and are doing it efficiently.

At the same time—and I think, again, we have some not complete agreement, but some broad agreement, that as banks become bigger or more interconnected—it is not always size, obviously—that we need special supervision, either increased cap requirements, increased supervision of their portfolios, or some mechanism to make sure that we do not get a repeat of what happened to UBS.

Now, I do not think we are going to get that next year because I think a lot of people have learned their lesson. But we have to have in place a system that 10 years from now, 20 years from now, when some of these lessons have been forgotten, that we have in place a better regulatory regime.

I would say one more thing about that regulatory regime. We cannot, probably in this country, ever pay regulators what people earn on Wall Street. Some countries pay their regulators very high salaries. There are limits to what we can do here. But I do think it would make a difference if we could pay reasonably competitive salaries, more than they are currently making. We should insist on training regulators so we give ourselves the best chance of avoiding some of the regulatory failures that happened in the course of this crisis. Thank you.

Senator AKAKA. Thank you very much, Mr. Baily.

Mr. Rajan.

Mr. RAJAN. Thank you, Mr. Chairman. I agree substantially with my co-panelists that size limits are relatively crude, very hard to enforce, because there are also ways around it; very hard to determine *ex ante* for Congress through legislation.

Similarly, with activities; again, activity limits, which products are you going to limit? The same product can be used in a good and purposeful way, and the same product can be used for taking on speculative risks of extraordinary levels. And so, given that intent is often what distinguishes a product used appropriately and a product used inappropriately, it is very hard to have legislation governing that.

So anytime you go into size limits or activity limits, you are going to have to give a lot of discretion to regulators. And I think, as Mr. Baily pointed out earlier, regulators have to also cover themselves with a lot of glory during this crisis, and do we really want to put a lot of weight on their judgment.

I think there is no magic bullet to this problem. I think it is a very serious problem. It is a problem we have to deal with. And there have been a number of suggestions that have been made by this panel. One I would re-emphasize is that in addition to trying to find ways to, perhaps, make activities a little safer and create some buffers, I think we should also make these institutions easier to fail. And that is a focus that is not present in much of the debate; that if we could make these institutions less complex, make their capital structures a little easier to resolve, I think that would go a long way in reducing the problem.

One of the suggestions that I would like to emphasize is that if we try and enlist these institutions in preparing their own funeral plans, get them to talk about business termination, if the authorities had to close them down, how would the authorities go about it, and try and get them to start preparing these plans so that, in fact, when the authorities intervene, there is already a ready-made process.

I think that would help us also in this. It would also force these institutions to stay away from excessively complicated structures or excessive derivative positions. And so, that could be part of the legislative agenda, prepare your own business termination plans or pre-packaged bankruptcy, which you have to negotiate and discuss with regulators on a periodic basis.

Senator AKAKA. Thank you very much for that.

Let me give some time back to the panel to make any further comments that you would like to make on this.

Mr. Wallison?

Mr. WALLISON. Yes. I would like to just address one point that I think is fundamental here. And that is, we have to put some boundaries around what we mean by "too big to fail." We have to make—Congress has to do something to give guidance to the regulatory agency.

One of the worst things that could happen here, if legislation is adopted, is that we create a system in which companies that should fail are bailed out because the regulators decide that they are "too big to fail." And since we do not know what is "too big to fail," we have not really got a definition of that, we cannot even—we know that it is out there somewhere, but we cannot define it well. By giving regulatory agencies the opportunity to resolve, it is said, these institutions, they will say, in many cases, that the institution is "too big to fail." And they will bail out that institution when it should have been allowed to fail.

The result of that, I am afraid, is that whenever an institution that should have been allowed to fail continues in life a bad business model and a bad management, is there to continue operating, when if it had disappeared, better management and better business models would have come up to replace it. So we weaken our entire competitive system if we do not allow institutions that should fail to fail.

Senator AKAKA. Thank you.

Mr. Baily?

Mr. BAILY. Thank you. First of all, let me talk about the context under which an institution becomes "too big to fail" or where we decide that it cannot be just allowed to fail.

I have studied the automobile industry over a number of years, and if you had asked me a few years ago if one of our big automobile companies gets into trouble, should we let it fail, I would have said let it go down. I am not going to name names, but I think there were a lot of failures of management, of workers, of technology. So, you know, let the market work.

When that same question came up in the last year, with great reluctance, when I was asked that question, I said, no, I do not think we can allow a disorderly bankruptcy of some of our largest automobile companies. And it is not because I wanted to do that; it is because we are in a time of economic crisis, and I felt that such a bankruptcy at that time would have brought the economy down.

So, again, in the case of banks, there may be circumstances under which even quite large banks can be allowed to fail. And so I agree very much with the sentiment that we would like to have kind of plans in place for how we resolve large banks, allow them to fail. I do not think they can go through the normal bankruptcy process, but they go through a process in which they either go to the FDIC or resolved if they are bank holding companies.

Now, Raghuram has made the suggestion, which he did in a very interesting article in The Economist, that we should have these funeral plans, that the banks should set up their own funeral plans. So they should be required to say, if we go broke, here is how you should go about regulating us.

I have to say I was a bit skeptical in a comment that I made on that. It is sort of not the way businesses really work. Maybe you could do it, but I think it is probably more up to the regulators, maybe with some insistence from the banks, in figuring out if you do have these very large institutions, how interconnected are they, what are the counterparties to some of their positions, and what would be necessary; can we, in fact, let them go down under normal times without getting lots of taxpayer money caught up in this.

Senator AKAKA. Mr. Rajan?

Mr. RAJAN. Yes. The one comment I will make is it seems to me that the one concern is that a number of institutions, and the way they structure their activities, essentially make themselves "too big to fail." And that is why I think you want to give them incentives not to become that way.

Let me give an example. One of the reasons we worried about these large banks is the destruction of the payment and settlement system that happens when we fail these banks. Well, there are intricate ways in which the liability system of these banks is tied to the payment and settlement system. Right?

One example is derivative contracts, which come due and have to be replaced if, in fact, the bank cannot make good on its debt. When you reduce the value of the debt, immediately, there is a consequence to the derivative contracts that the bank is involved in.

These kinds of connections, interconnections, actually make the bank essentially too complicated, "too big to fail." And my suggestion of forcing them to think about their own demise and proving to regulators that they could be closed in a relatively short time period—a weekend was just a number out of the box; but in a week, I think the rationale for that is you want to give these banks an incentive to think about not making themselves excessively complicated. And one way to do it is to put the onus on them to make their structures more simple, their liability structures, their organizational structures, so that when the regulator actually comes to unwind this bank, they have a less complicated entity to deal with.

It is not going to be the answer by itself, and I think we need a lot of proposals on the table to do it, but it could be one piece of what we need.

Senator AKAKA. Thank you.

This next question is for the panel, again, and has to do with about setting standards.

A lot of commentators criticize our capital standards as being pro-cyclical, demanding that financial companies raise expensive capital at the worst possible times and too little capital in good times.

What are your views on having regulators set standards that require banks and other financial companies to build capital when the economy is strong as a cushion to weather the downturns?

Mr. Wallison?

Mr. WALLISON. I will take that first, I think. My view is—first of all, I do not—in my prepared testimony and in my oral testimony, I said that I thought that banks were the only organizations that really required serious regulation for a variety of reasons. They can create systemic risk, but I do not think others can.

On the question of this capital, what we do about banks that are growing and yet they still have the same amount of capital, which increases their leverage, I am one who does believe that we ought to increase capital requirements as growth occurs. As profitability and growth occurs, capital should go up so that it can perform the function that it was supposed to perform, which is as a buffer for the bad times.

I think we are seeing today that the 10 percent risk-based capital requirement that was imposed in the United States under Basel I and Basel II, for well capitalized, was insufficient. Banks should have had more capital. But in addition, they should have added to their capital positions as a percentage, as they have grown larger and larger, and as they have more and more profits.

That is something that we could very profitably do. And as a matter of fact, it would also go some distance to addressing this question of institutions getting too large and complex, because if additional capital requirements are imposed on them as they get larger and more complex, they will not get larger and more complex. They will make a judgment about what they have to do to be profitable rather than just getting larger.

Senator AKAKA. Mr. Baily?

Mr. BAILY. I agree with much of what Peter said. I think we do need to increase capital requirements, and capital needs to play its role as a buffer. When there is a loss of assets, then the capital goes down, and now the capital that is left should be enough still to satisfy, certainly, the markets and the regulators, who are taking the appropriate cyclical view of capital that the bank is still an adequate position. So I think we do need to raise capital requirements and allow it to work appropriately as a buffer.

One concern about capital is that many of our banks are competing internationally. Even before this crisis, there were many complaints that I heard, I think correctly, that U.S. banks were required—not the investment banks, that U.S. banks were required to hold more capital than European or other banks, and were having difficulty competing globally. So I think this is something that needs to be done with some degree of level cooperation.

I say that cautiously because global cooperation on financial regulation has been difficult to do and has not worked very well. But I think this is an area we need to at least try to keep the playing field level in terms of capital. So higher capital requirements.

It is not just capital requirements, though, obviously, because—so you had 20 percent capital requirement, but you had all these sub-prime mortgages, and that probably might not well have saved you. So I think it is a matter of—and in other cases where there was people borrowing—well, banks were borrowing at overnight rates or one-week rates and issuing mortgages on the other side of that, as Northern Rock in the UK did, for example.

So it is a combination of more capital, some reasonable level of match so that there is not too much of a mismatch on the balance sheet, and the quality of the portfolio. So those combinations of things I think we need to do.

Senator AKAKA. Mr. Rajan?

Mr. RAJAN. This is probably where I part a little with my fellow panelists. I think that capital can do a little bit. I would be skeptical about putting too much weight on it. And the reason is simply that the market in good times is very tolerant of institutions that have very high levels of leverage. As you know, some banks had 30, 40 to 1 leverage. Some investment banks had that kind of leverage.

The market was willing to tolerate very low levels of capital. When the market is willing to tolerate those very low levels of capital, somebody who is sitting on a lot of capital has an incentive to undertake actions, which will reduce that level of capital relative to the activities they are taking.

One example of such actions include creating off-balance sheet vehicles, which banks did a lot of. The SIVs and the conduits are examples. A second example of that kind of activity is for banks to take up risks, which is not penalized. UBS did that when it took on all these sub-prime mortgages on its balance sheet.

So I think capital can help a little, but I think that banks, if the market does not require them to hold a lot of capital, banks are going to offset the capital requirement in ways that the regulator will not see.

Moreover, this notion that in down times, banks can reduce the level of capital because the regulator allows them to, I am skeptical about that also because in times like these, this is when the market has taken fright. This is when the market wants banks to hold much higher levels of capital. Whatever the regulators say, the markets are going to dominate. And so, banks are going to raise their capital levels at this point, which is why you see this extreme level of de-leveraging taking place in the market, in the banking sector.

So my sense is capital requirements which go against what the market wants are going to have limited effect. They will have some effect, no doubt, but let's not be overly convinced about the effect it will have.

Senator AKAKA. Thank you.

Mr. BAILY. Can you allow me just to respond to that? Because I think it is a very interesting question, and I do not think I have all the answers by any means.

But, presumably, if you set a high enough level of capital in the good times, then when the losses come in, the bank capital goes down. But if you have started high enough, you still have enough capital left to satisfy the market that you are still sold on. That is the idea of having high capital levels in good times.

By the way, I agree with you, you need other things besides capital.

Senator AKAKA. Mr. Rajan?

Mr. RAJAN. I agree that they could have some effect. But my point is when you set capital requirements at 20 percent of bank assets, they are going to do a lot of things, which you will be surprised about in bad times because those SIVs, they have created the conduits. It will all come back on balance sheets at that point, and you will find that even the 20 percent is not enough. That is one.

The second is we also have to worry about costs. When you ask banks, which are naturally funded with debt, to take on a lot of capital, intermediation is also going to suffer. I mean, I agree with you. You could have some benefits, but maybe not that much.

Senator AKAKA. Thank you.

Speaking about capital and ensuring adequate capital, Mr. Rajan raises the idea of having large, complex financial companies buy capital insurance plans or issue bonds that will convert to equity if capital deteriorates as a way to guard against the failure of these institutions.

Mr. Rajan, can you elaborate on this idea?

Mr. RAJAN. Well, this follows on the comments I just made, which is that if capital on the balance sheet is not going to work that well because banks will find ways to offset it, maybe the idea is to get capital which comes only in bad times. It might be cheaper to arrange for that kind of capital rather than have capital sitting on balance sheets through good times and bad times. And if you can do it in a clever enough way, banks will not be able to exploit that capital and take on more risks *a priori,* given that they know that capital will come in.

So two examples of how this could be done. One, which Mr. Baily has also talked about, which comes from a common group that we work in, is this idea of what is called reversed convertible debt. And this convertible debt is debt which will convert into equity in times like the current ones. So it is a pre-assured source of buffer which will protect the taxpayer from having to fund these institutions. And that debt will convert, provided the bank's capital ratio goes below a certain level. That is one condition.

The second condition is that this be a systemic crisis so that banks do not sort of willfully convert this debt and get additional buffers. Another variant of this would be what we call the capital insurance plan, which is you issue bonds, which are called capital insurance bonds. The bank issues these bonds. The proceeds from the bonds are taken and invested in Treasuries. And the holders of these bonds get the Treasury rate of return plus an insurance premium, which the banks pays. In bad times, when the bank's capital goes below a certain level and there is a systemic crisis, the bonds will start, essentially, paying out to the bank. It would be equity at that point for the bank, and the bank would be recapitalized.

So the main difference is, in one, the bonds convert to equity; in the other, the bonds just pay in. There is no commensurate equity, which is issued. Both have the effect of recapitalizing the bank in bad times.

Senator AKAKA. Thank you.

Further comment, Mr. Wallison?

Mr. WALLISON. I think what Raghu has said is a very interesting proposal. I have this concern, however. And if we keep our eye on the ball, we are talking about systemic risk. And what is systemic risk? Systemic risk is the risk that when a large financial institution fails, a large bank fails, it has effects on all others throughout the economy, or many others, a contagion, if you will, a cascading of losses.

The idea that we would convert debt into equity is good for the bank, but you have to consider what it does to the holders who previously had debt and now have equity; what it does to their balance sheets and what it does to their risk profiles. And what it does, of course, it make them much more risky.

So in other words, in a time when we are talking about trying to prevent systemic risk, we are also thinking favorably about an idea that, actually, encourages, increases the possibility of contagion from a failed institution or a failing institution, to institutions that might otherwise be healthy.

Mr. RAJAN. Could I respond?

Senator AKAKA. Mr. Rajan?

Mr. RAJAN. The quick response is this is a clear problem that Mr. Wallison has pointed out. And the answer is that the holders of this debt should not be levered financial institutions. It should not be other banks. It should not be insurance companies.

So who would hold? It would be un-levered financial institutions, such as pension funds, mutual funds, sovereign wealth funds.

Now, the immediate question, then, is, well, is there any evidence that there are people who buy this kind of instrument? And the answer is yes. There is a very liquid market in credit-default swaps on bank debt. That credit-default swap on bank debt has exactly the properties of the kind of insurance we are talking about. That is, it pays out when the bank is doing really badly, which typically is when the economy is in trouble. And there are people who are willing to buy this instrument, so much so, that this market has gone beyond bounds. It has become extremely large and we are trying to contain it.

But it is suggesting demand is not going to be a problem if we do this right. And we can try and regulate so that the costs are borne by financial institutions that are not levered. And the costs are not forced to be borne by the taxpayer, which, to my mind, is worse than getting some people who bear it, knowing that they have been paid for bearing that risk.

Senator AKAKA. Mr. Baily?

Mr. BAILY. I like this proposal. Obviously, we have jointly put our names to it. I think it is possible that there could be more severe kinds of systemic crises in which the convertible capital would not be adequate, in which case we do need to go to other procedures, processes, for orderly resolution of some of these institutions. But I think having this kind of capital would make that less likely and make the system more stable.

Senator AKAKA. Well, I want to thank you so much. This has been stimulating to hear from you. And it, certainly, without question, will help the Committee in its legislative efforts here.

I want to thank our witnesses for joining us today. I want you to know that the hearing record will remain open for a week for statements from members or questions that members may have.

Thank you again. This hearing is adjourned.

[Whereupon, at 12:11 p.m., the hearing was adjourned.]

[Prepared statements and responses to written questions follow:]

PREPARED STATEMENT OF SHEILA C. BAIR

CHAIRMAN, FEDERAL DEPOSIT INSURANCE CORPORATION

MAY 6, 2009

Chairman Dodd, Ranking Member Shelby and members of the Committee, I appreciate the opportunity to testify on behalf of the Federal Deposit Insurance Corporation (FDIC) on the need to address the issue of systemic risk and the existence of financial firms that are deemed "too big to fail."

It has been a difficult 18 months since the financial crisis began, but despite some long weekends and tense moments, government and industry have worked together to take extraordinary measures to maintain the stability of our financial system. The FDIC has been working with other federal agencies, Congress, and the White House to protect insured depositors and preserve the stability of our banking system. We have sought input from the public and the financial industry about our programs and how to structure them to produce the best results to turn this crisis around. There are indications that progress is being made in the availability of credit and the profitability of financial institutions. As we move beyond the liquidity crisis of last year, we must examine how we can improve our financial system for the future.

The financial crisis has taught us that many financial organizations have grown in both size and complexity to the point that, should one of them become distressed, it may pose systemic risk to the broader financial system. The managers, directors and supervisors of these firms ultimately placed too much reliance in risk management systems that proved flawed in their operations and assumptions. Meanwhile, the markets have funded these organizations at rates that implied they were simply "too big to fail." In addition, the difficulty in supervising these firms was compounded by the lack of an effective mechanism to resolve them when they became troubled in a way that controlled the potential damage their failure could bring to the broader financial system.

In a properly functioning market economy there will be winners and losers, and some firms will become insolvent and should fail. Actions that prevent firms from failing ultimately distort market mechanisms, including the market's incentive to monitor the actions of similarly situated firms. Unfortunately, the actions taken during the past crisis have reinforced the idea that some financial organizations are "too big to fail." The most important challenge now is to find ways to impose greater market discipline on systemically important financial organizations.

My testimony will examine whether large institutions posing systemic risk are necessary for the efficient functioning of our financial system—that is, whether they promote or hinder competition and innovation among financial firms. I also will focus on some specific changes that should be undertaken to limit the potential for excessive risk in the system, including identifying systemically important institutions, creating incentives to reduce the size of systemically important firms and ensuring that all portions of the financial system are under some baseline standards to constrain excessive risk taking.

In addition, I will explain why an independent, special failure resolution authority is needed for financial firms that pose systemic risk and describe the essential features of such an authority. Finally, independent of the systemic risk issue, I will discuss the benefits of providing the FDIC with a statutory structure under which we would have authority to resolve a non-systemic failing or failed bank or thrift holding company, and how this authority would improve the ability to effect a least cost resolution for the depository institution or institutions it controls.

Do We Need Financial Firms That Are Too Big to Fail?

Before policymakers can address the issue of "too big to fail," it is important to analyze the fundamental issue of whether there are economic benefits to having institutions that are so large and complex that their failure can result in systemic issues for the economy. Because of their concentration of economic power and interconnections through the financial system, the management and supervision of institutions that are large and complex has proven to be problematic. Unless there are clear benefits to the financial system that offset the risks created by systemically important institutions, taxpayers have a right to question how extensive their exposure should be to such entities.

Over the past two decades, a number of arguments have been advanced about why financial organizations should be allowed to become larger and more complex. These reasons include being able to take advantage of economies of scale and scope, diversifying risk across a broad range of markets and products, and gaining access to global capital markets. It was alleged that the increased size and complexity of these organizations could be effectively managed using new innovations in quantitative risk management techniques. Not only did institutions claim that they could manage these new risks, they also argued that often the combination of diversification and advanced risk management practices would allow them to operate with markedly lower capital buffers than were necessary in smaller, less-sophisticated institutions.

Indeed many of these concepts were inherent in the Basel II Advanced Approaches, resulting in reduced capital requirements. In hindsight, it is now clear that the international regulatory community over-estimated the risk mitigation benefits of diversification and risk management when they set minimum regulatory capital requirements for large, complex financial institutions.

Notwithstanding expectations and industry projections for gains in financial efficiency, the academic evidence suggests that benefits from economies of scale are exhausted at levels far below the size of today's largest financial institutions. Also, efforts designed to realize economies of scope have not lived up to their promise. In some instances, the complex institutional combinations permitted by the Gramm-Leach-Bliley (GLB) Act were unwound because they failed to realize anticipated economies of scope. Studies that assess the benefits produced by increased scale and scope find that most banks could improve their cost efficiency more by concentrating their efforts on improving core operational efficiency.

There also are practical limits on an institution's ability to diversify risk using securitization, structured financial products and derivatives. Over-reliance on financial engineering and model-based hedging strategies increases an institution's exposure to operational, model and counterparty risks.

Clearly, there are benefits to diversification for smaller and less complex institutions, but the ability to diversify risk is diminished as market concentration rises and institutions become larger and more complex. When a financial system includes a small number of very large, complex organizations, the system cannot be well-diversified. As institutions grow in size and importance, they not only take on a risk profile that mirrors the risk of the market and general economic conditions, but they also concentrate risk as they become the only important counterparties to many transactions that facilitate financial intermediation in the economy. These flaws in the diversification argument become apparent in the midst of financial crisis when large, complex financial organizations—because they are so interconnected—reveal themselves as a source of risk to the system.

Creating a Safer Financial System

A strong case can be made for creating incentives that reduce the size and complexity of financial institutions as being bigger is not necessarily better. A financial system characterized by a handful of giant institutions with global reach and a single regulator is making a huge bet that those few banks and their regulator over a long period of time will always make the right decisions at the right time.

Reliance solely on the supervision of these institutions is not enough. We also need a "fail-safe" system where if any one large institution fails, the system carries on without breaking down. Financial firms that pose systemic risks should be subject to regulatory and economic incentives that require these institutions to hold larger capital and liquidity buffers to mirror the heightened risk they pose to the financial system. In addition, restrictions on leverage and the imposition of risk-based premiums on institutions and their activities would act as disincentives to growth and complexity that raise systemic concerns.

In contrast to the standards implied in the Basel II Accord, systemically important firms should face additional capital charges based on both their size and complexity. To address pro-cyclicality, the capital standards should provide for higher capital buffers that increase during expansions and are drawn down during contractions. In addition, these firms should be subject to higher Prompt Corrective Action (PCA) limits under U.S. laws. Regulators also should take into account off-balance-sheet assets and conduits as if these risks were on-balance-sheet.

One existing example of statutory limitations placed on institutions is the 10 percent nationwide cap on domestic deposits imposed in the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994. While this regulatory limitation has been somewhat effective in preventing concentration in the U.S. system, the Riegle-Neal constraints have some significant limitations. First, these limits only apply to interstate bank mergers. Also, deposits in savings and loan institutions generally are not counted against legal limits. In addition, the law restricts only domestic deposit concentration and is silent on asset concentration, risk concentration or product concentration. The four largest banking organizations have slightly less than 35 percent of the domestic deposit market, but have over 45 percent of total industry assets.[1] As we have seen, even with these deposit limits, banking organizations have become so large and interconnected that the failure of even one can threaten the financial system.

In addition to establishing disincentives to unchecked growth and increased complexity of institutions, two additional fundamental approaches could reduce the likelihood that an institution will be "too big to fail." One action is to create or designate a supervisory framework for regulating systemic risk. Another critical aspect to ending "too big to fail" is to establish a comprehensive resolution authority for systemically significant financial companies that makes the failure of any systemically important institution both credible and feasible. A realistic resolution regime would send a message that no institution is really too big to ultimately fail.

Regulating Systemic Risk

Our current system has clearly failed in many instances to manage risk properly and to provide stability. While U.S. regulators have broad powers to supervise financial institutions and markets and to limit many of the activities that undermined our financial system, there are significant gaps that led to the current crisis. First, there were gaps in the regulation of specific financial institutions that posed significant systemic risk—most notably very large insurance companies, private equity and hedge funds, and differences in regulatory leverage standards for commercial and investment banks. Second, there were gaps in the oversight of certain types of risk that cut across many different financial institutions. A prime example of this was the credit default swap (CDS) market which was used to both hedge and leverage risk in the structured mortgage finance market. Both of these aspects of oversight and regulation need to be addressed.

A distinction should be drawn between the direct supervision of systemically-significant financial firms and the macro-prudential oversight of developing risks that may pose systemic risks to the U.S. financial system. The former appropriately calls for a single regulator for the largest, most systemically-significant firms, including large bank holding companies. The macro-prudential oversight of system-wide risks requires the integration of insights from a number of different regulatory perspectives—banks, securities firms, holding companies, and perhaps others. Only through these differing perspectives can there be a holistic view of developing risks to our system. As a result, for this latter role, the FDIC would suggest creation of a systemic risk council (SRC) to provide analytical support, develop needed prudential policies, and have the power to mitigate developing risks.

Systemic Risk Regulator

With regard to the regulation of systemically important entities, a systemic risk regulator (SRR) should be responsible for monitoring and regulating their activities. Centralizing the responsibility for supervising institutions that are deemed to be systemically important would bring clarity and focus to the efforts needed to identify and mitigate the buildup of risk at individual institutions. The SRR could focus on the adequacy of complex institutions' risk measurement and management capabilities, including the mathematical models that drive risk management decisions. With a few additions to their existing holding company authority, the Federal Reserve would seem well positioned for this important role.

While the creation of a SRR would be a significant improvement over the current system, risks that resulted in the current crisis grew across the financial system and supervisors were slow to identify them and limited in our ability to address these issues. This underscores the weakness of monitoring systemic risk through the lens of individual financial institutions, and argues for the need to assess emerging risks using a system-wide perspective.

Systemic Risk Council

One way to organize a system-wide regulatory monitoring effort is through the creation of a systemic risk council (SRC) to address issues that pose risks to the broader financial system. Based on the key roles that they currently play in determining and addressing systemic risk, positions on this council should be held by the U.S. Treasury, the FDIC, the Federal Reserve Board and the Securities and Exchange Commission. It may be appropriate to add other prudential supervisors as well.

The SRC would be responsible for identifying institutions, practices, and markets that create potential systemic risks, implementing actions to address those risks, ensuring effective information flow, completing analyses and making recommendations on potential systemic risks, setting capital and other standards and ensuring

[1] FDIC, Call Report data, 4th Quarter 2008.

that the key supervisors with responsibility for direct supervision apply those standards. The standards would be designed to provide incentives to reduce or eliminate potential systemic risks created by the size or complexity of individual entities, concentrations of risk or market practices, and other interconnections between entities and markets.

The SRC could take a more macro perspective and have the authority to overrule or force actions on behalf of other regulatory entities. In order to monitor risk in the financial system, the SRC should also have the authority to demand better information from systemically important entities and to ensure that information is shared more readily.

The creation of a comprehensive systemic risk regulatory regime will not be a panacea. Regulation can only accomplish so much. Once the government formally establishes a systemic risk regulatory regime, market participants may assume that the likelihood of systemic events will be diminished. Market participants may incorrectly discount the possibility of sector-wide disturbances and avoid expending private resources to safeguard their capital positions. They also may arrive at distorted valuations in part because they assume (correctly or incorrectly) that the regulatory regime will reduce the probability of sector-wide losses or other extreme events.

To truly address the risks posed by systemically important institutions, it will be necessary to utilize mechanisms that once again impose market discipline on these institutions and their activities. For this reason, improvements in the supervision of systemically important entities must be coupled with disincentives for growth and complexity, as well as a credible and efficient structure that permits the resolution of these entities if they fail while protecting taxpayers from exposure.

Resolution Authority

The most important challenge in addressing the issue of "too big to fail" is to find ways to impose greater market discipline on systemically important institutions. The solution must involve, first and foremost, a legal mechanism for the orderly resolution of these institutions similar to that which exists for FDIC insured banks. The purpose of the resolution authority should not be to prop up a failed entity indefinitely, but to permit the swift and orderly dissolution of the entity and the absorption of its assets by the private sector as quickly as possible. Creating a resolution regime that applies to any financial institution that becomes a source of systemic risk should be an urgent priority.

The ad-hoc response to the current banking crisis was inevitable because no playbook existed for taking over an entire complex financial organization. There were important differences in the subsequent outcomes of the Bear Stearns and Lehman Brothers cases, and these difference are due, in part, to issues that arise when large complex financial institutions are subjected to the bankruptcy process. Bankruptcy is a very messy process for financial organizations and, as was demonstrated in the Lehman Brothers case, markets can react badly. Following the Lehman Brothers filing, the commercial paper market stopped functioning and the resulting decrease in liquidity threatened other financial institutions.

One explanation for the freeze in markets was that the Lehman failure shocked investors because, following Bear Stearns, they had assumed Lehman was too big too fail and its creditors would garner government support. In addition, many feel that the bankruptcy process itself had a destabilizing effect on markets and investor confidence. While the underlying causes of the market disruption that followed the Lehman failure will likely be debated for years to come, both explanations point to the need for a new resolutions scheme for systemically important non-bank financial institutions which will provide clear, consistent rules for all systemically important financial institutions, as well as a mechanism to maintain key systemic functions during an orderly wind down of those institutions.

Under the first explanation, investors found it incredible that the government would allow Lehman, or firms similar to Lehman, to declare bankruptcy. Because the protracted proceedings of a Chapter 11 bankruptcy were not viewed as credible prior to the bankruptcy filing, investors were willing to make "moral hazard" investments in the high-yielding commercial paper of large systemic institutions. Had a credible resolution mechanism been in place prior to the Lehman bankruptcy, investors would not have made these bets, and markets would not have reacted so negatively to the shock of a bankruptcy filing.

Under the second explanation, the legal features of a bankruptcy filing itself triggered asset fire sales and destroyed the liquidity of a large share of claims against Lehman. In this explanation, the liquidity and asset fire sale shock from the Lehman bankruptcy caused a market-wide liquidity shortage.

Under both explanations, we are left with the same conclusion—that we need to develop a new credible and efficient means for resolving a distressed large complex non-bank institution. When the public interest is at stake, as in the case of systemically important entities, the resolution process should support an orderly unwinding of the institution in a way that protects the broader economic and taxpayer interests, not just private financial interests, and imposes losses on stakeholders in the institution.

Unlike the clearly defined and proven statutory powers that exist for resolving insured depository institutions, the current bankruptcy framework available to resolve large, complex non-bank financial entities and financial holding companies was not designed to protect the stability of the financial system. This is important because, in the current crisis, bank holding companies and large non-bank entities have come to depend on the banks within their organizations as a source of strength. Where previously the holding company may have served as a source of strength to the insured institution, these entities now often rely on a subsidiary depository institution for funding and liquidity, but carry on many systemically important activities outside of the bank that are managed at a holding company level or non-bank affiliate level.

In the case of a bank holding company, whether systemically significant or not, the FDIC has the authority to take control of only the failing bank subsidiary, thereby protecting the insured depositors. However, in some cases, many of the essential services for the bank's operations lie in other portions of the holding company and are left outside of the FDIC's control, making it difficult to operate and resolve the bank. When the bank fails, the holding company and its subsidiaries typically find themselves too operationally and financially unbalanced to continue to fund ongoing commitments. In such a situation, where the holding company structure includes many bank and non-bank subsidiaries, taking control of just the bank is not a practical solution.

While the depository institution could be resolved under existing authorities, the resolution would likely cause the holding company to fail and its activities would then be unwound through the normal corporate bankruptcy process. Putting the holding company through the normal corporate bankruptcy process may create additional instability as claims outside the depository institution become completely illiquid under the current system. Without a system that provides for the orderly resolution of activities outside of the depository institution, the failure of a large, complex financial institution includes the risk that it will become a systemically important event.

If a bank-holding company or non-bank financial holding company is forced into, or chooses to enter, bankruptcy for any reason, the following is likely to occur. In a Chapter 11 bankruptcy, there is an automatic stay on most creditor claims—with the exception of specified financial contracts (futures and options contracts and certain types of derivatives) that are subject to immediate termination and netting provisions. The automatic stay renders illiquid the entire balance of outstanding creditor claims. There are no alternative funding mechanisms, other than debtor-in-possession financing, available to remedy this problem. On the other hand, the bankrupt's financial market contracts are subject to immediate termination—and cannot be transferred to another existing institution or a temporary institution, such as a bridge bank. In bankruptcy, without a bridge bank or similar type of option, there is really no practical way to provide continuity for the holding company's or its subsidiaries' operations. Those operations are based principally on financial agreements dependent on market confidence and require continuity through a bridge bank mechanism to allow the type of quick, flexible action needed. The automatic stay and the uncertainties inherent in the judicially-based bankruptcy proceedings further impair the ability to maintain these key functions. As a result, the current bankruptcy resolution options available—taking control of the banking subsidiary or a bankruptcy filing of the parent organization—make the effective resolution of a large, systemically important financial institution, such as a bank holding company, virtually impossible. This has forced the government to improvise actions to address individual situations, making it difficult to address systemic problems in a coordinated manner and raising serious issues of fairness.

Addressing Risks Posed By the Derivatives Markets

One of the major risks demonstrated in the current crisis is the tremendous expansion in the size, concentration, and complexity of the derivatives markets. While these markets perform important risk mitigation functions, financial firms that rely on market funding can see it dry up overnight. If the market decides the firm is weakening, other market participants can demand more and more collateral to protect their claims. At some point, the firm cannot meet these additional demands and it collapses. In bankruptcy, current law allows market participants to terminate and net out derivatives and sell any pledged collateral to pay off the resulting net claim.

During periods of market instability—such as during the fall of 2008—the exercise of these netting and collateral rights can increase systemic risks. At such times, the resulting fire sale of collateral can depress prices, freeze market liquidity as investors pull back, and create risks of collapse for many other firms.

In effect, financial firms are more prone to sudden market runs because of the cycle of increasing collateral demands before a firm fails and collateral dumping after it fails. Their counterparties have every interest to demand more collateral and sell it as quickly as possible before market prices decline. This can become a self-fulfilling prophecy—and mimics the depositor runs of the past.

One way to reduce these risks while retaining market discipline is to make derivative counterparties keep some "skin in the game" throughout the cycle. The policy argument for such an approach is even stronger if the firm's failure would expose the taxpayer or a resolution fund to losses. One approach to addressing these risks would be to haircut up to 20 percent of the secured claim for companies with derivatives claims against the failed firm if the taxpayer or a resolution fund is expected to suffer losses. This would ensure that market participants always have an interest in monitoring the financial health of their counterparties. It also would limit the sudden demand for more collateral because the protection could be capped and also help to protect the taxpayer and the resolution fund from losses.

Powers

The new resolution entity should be independent of the institutional regulator. In creating a new resolution regime, we must clearly define roles and responsibilities and guard against creating new conflicts of interest. No single entity should be able to make the determination to resolve a systemically important institution. The resolution entity should be able to initiate action, but the final decision should involve other affected regulators. For example, the current statute requires that decisions to exercise the systemic risk authorities for banks must have the concurrence of several parties. Yet, Congress also gave the FDIC backup supervisory authority, recognizing there might be conflicts between a primary regulator's prudential responsibilities and its willingness to recognize when an institution it supervises needs to be closed. Once the decision to resolve a systemically important institution is made, the resolution entity must have the flexibility to implement this decision in the way that protects the public interest and limits costs.

This new resolution authority should also be designed to limit subsidies to private investors by assisting a troubled institution. If financial assistance outside of the resolution process is granted to systemically important firms, the process should be open, transparent and subject to a system of checks and balances that are similar to the systemic-risk exception to the least-cost test that applies to insured depository institutions. No single government entity should be able to unilaterally trigger a resolution strategy outside the defined parameters of the established resolution process.

Clear guidelines for this process are needed and must be adhered to in order to gain investor confidence and protect public and private interests. First, there should be a clearly defined priority structure for settling claims, depending on the type of firm. Any resolution should be subject to a cost test to minimize any public loss and impose losses according to the established claims priority. Second, the process must allow continuation of any systemically significant operations. Third, the rules that govern the process, and set priorities for the imposition of losses on shareholders and creditors should be clearly articulated and closely adhered to so that the markets can understand the resolution process with predicable outcomes.

The FDIC's authority to act as receiver and to establish a bridge bank to maintain key functions and sell assets offers a good model. A temporary bridge bank allows the government to prevent a disorderly collapse by preserving systemically significant functions. The FDIC has the power to transfer needed contracts to the bridge bank, including the financial market contracts, known as QFCs, which can be crucial to stemming contagion. It enables losses to be imposed on market players who should appropriately bear the risk. It also creates the possibility of multiple bidders for the bank and its assets, which can reduce losses to the receivership. The FDIC has the authority to terminate contracts upon an insured depository institution's failure, including contracts with senior management whose services are no longer required. Through its repudiation powers, as well as enforcement powers, termination of such management contracts can often be accomplished at little cost to the FDIC. Moreover, when the FDIC establishes a bridge institution, it is able to contract with individuals to serve in senior management positions at the bridge institution subject to the oversight of the FDIC. The new resolution entity should be granted similar statutory authority as in the current resolution of financial institutions.

These additional powers would enable the resolution authority to employ what many have referred to as a "good bank-bad bank" model in resolving failed systemically significant institutions. Under this scenario, the resolution authority would take over the troubled firm, imposing losses on stockholders and unsecured creditors. Viable portions of the firm would be placed in the good bank, using a structure similar to the FDIC's bridge bank authority. The nonviable or troubled portions of the firms would remain behind in a bad bank and would be unwound or sold over time. Even in the case of creditor claims transferred to the bad bank, these claims could be made partially liquid very quickly using a system of "haircuts" tied to FDIC estimates of potential losses on the disposition of assets.

Who Should Resolve Systemically Significant Entities?

As the only government entity regularly involved in the resolution of financial institutions, the FDIC can testify to what a difficult and contentious business it is. Resolution work involves making hard choices between competing interests with very few good options. It can be delicate work and requires special expertise.

In deciding whether to create a new government entity to resolve systemically important institutions, Congress should recognize that it would be difficult to maintain an expert and motivated workforce when there could be decades between systemic events. The FDIC experienced a similar challenge in the period before the recent crisis when very few banks failed during the years prior to the current crisis. While no existing government agency, including the FDIC, has experience with resolving systemically important entities, probably no agency other than the FDIC currently has the kinds of skill sets necessary to perform resolution activities of this nature.

In determining how to resolve systemically important institutions, Congress should only designate one entity to perform this role. Assigning resolution responsibilities to multiple regulators creates the potential for inconsistent resolution results and arbitrage. While the resolution entity should draw from the expertise and consult closely with other primary regulators, spreading the responsibility beyond a single entity would create inefficiencies in the resolution process. In addition, establishing multiple resolution entities would create significant practical difficulties in the effective administration of an industry funded resolution fund designed to protect taxpayers.

Funding

Obviously, many details of a special resolution authority for systemically significant financial firms would have to be worked out. To be truly credible, a new systemic resolution regime should be funded by fees or assessments charged to systemically important firms. Fees imposed on these firms could be imposed either before failures, to pre-fund a resolution fund, or fees could be assessed after a systemic resolution.

The FDIC would recommend pre-funding the special resolution authority. One approach to doing this would be to establish assessments on systemically significant financial companies that would be placed in a "Financial Companies Resolution Fund" (FCRF). A FCRF would not be funded to provide a guarantee to the creditors of systemically important institutions, but rather to cover the administrative costs of the resolution and the costs of any debtor-in-possession lending that would be necessary to ensure an orderly unwinding of a financial company's affairs. Any administrative costs and/or debtor-in-possession lending that could not be recovered from the estate of the resolved firm would be covered by the FCRF.

The FDIC's experience strongly suggests that there are significant benefits to an industry funded resolution fund. First, and foremost, such a fund reduces taxpayer exposure for the failure of systemically important institutions. The ability to draw on the accumulated reserves of the fund also ensures adequate resources and the credibility of the resolution structure. The taxpayer confidence in the Deposit Insurance Fund (DIF) with regard to the resolution of banks is a direct result of the respect engendered by its funding structure and conservative management. The FCRF would be funded by financial companies whose size, complexity or interconnections potentially could pose a systemic risk to the financial system at some point in time (perhaps the beginning of each year). Those systemically important firms that have an insured depository subsidiary or other financial entity whose claimants are insured through a federal or state guarantee fund could receive a credit for the amount of their assessment to cover those institutions.

It is anticipated that the number of companies covered by the FCRF would be fluid, changing periodically depending upon the activities of the company and the market's ability to develop mechanisms to ameliorate systemic risk. Theoretically, as companies fall below the threshold for being potentially systemically important, they would no longer be assessed for coverage by the FCRF. Similarly, as companies undertake activities or provide products/services that make them potentially more systemically important, they would fall under the purview of the FCRF and be subject to assessment.

Assessing institutions based on the risk they pose to the financial systems serves two important purposes. A strong resolution fund ensures that resolving systemically important institutions is a credible option which enhances market discipline. At the same time, risk-based assessments are an important tool to affect the behavior of these institutions. Assessments could be imposed on a sliding scale based on the increasing level of systemic risk posed by an entity's size or complexity.

Resolution of Non-Systemic Holding Companies

Separate and apart from establishing a resolution structure to handle systemically important institutions, the ability to resolve non-systemic bank failures would be greatly enhanced if Congress provided the FDIC the authority to resolve bank and thrift holding companies affiliated with a failed institution. The corporate structure of bank and thrift holding companies, with their insured depositories and other subsidiaries, has become increasingly complex and inter-reliant. The insured depository is likely to be dependent on affiliates that are subsidiaries of its holding company for critical services, such as loan and deposit processing, loan servicing, auditing, risk management and wealth management. Moreover, in many cases the non-bank affiliates themselves are dependent on the bank for their continued viability. It is not unusual for many business lines of these corporate enterprises to be conducted in both insured and non-insured affiliates without regard to the confines of a particular entity. Examples of such multi-entity operations often include retail and mortgage banking and capital markets.

Atop this network of corporate relationships, the holding company exercises critical control of its subsidiaries and their mutually dependent business activities. The bank may be so dependent on its holding company that it literally cannot operate without holding company cooperation. The most egregious example of this problem emerged with the failure of NextBank in northern California in 2002. When the bank was closed, the FDIC ascertained that virtually the entire infrastructure of the bank was controlled by the holding company. All of the bank personnel were holding company employees and all of the premises used by the bank were owned by the holding company. Moreover, NextBank was heavily involved in credit card securitizations and the holding company threatened to file for bankruptcy, a strategy that would have significantly impaired the value of the bank and the securitizations. To avert this adverse impact on the DIF, the FDIC was forced to expend significant funds to avoid the bankruptcy filing.

As long as the threats exists that a bank or thrift holding company can file for bankruptcy, as well as affect the business relationships between its bank and other subsidiaries, the FDIC faces great difficulty in effectuating a resolution strategy that preserves the franchise value of the failed bank and so protects the DIF. Bankruptcy proceedings, involving the parent or affiliate of a bank, are time-consuming, unwieldy, and expensive. The FDIC as receiver or conservator occupies a position no better than any other creditor and so lacks the ability to protect the receivership estate and the DIF. The threat of bankruptcy by the BHC or its affiliates is such that the Corporation may be forced to expend considerable sums propping up the holding company or entering into disadvantageous transactions with the holding company or its subsidiaries in order to proceed with a bank's resolution. The difficulties are particularly egregious where the Corporation has established a bridge bank to preserve franchise value, protect creditors (including uninsured depositors), and facilitate disposition of the failed institution's assets and liabilities. By giving the FDIC authority to resolve a failing or failed bank's holding company, Congress would provide the FDIC with a vital tool to deal with the increasingly complicated and highly symbiotic business structures in which banks operate in order to develop an efficient and economical resolution.

The purpose of the authority to resolve non-systemic holding companies would be to achieve the least cost resolution of a failed insured depository institution. It would be used to reduce costs to the DIF through a more orderly and comprehensive resolution of the entire financial entity. If the current bifurcated resolution structure involving resolution of the insured institution by the FDIC and bankruptcy for the holding company would produce the least costly resolution, the FDIC should retain the ability to use that structure as well. Enhanced authorities that allow the FDIC to efficiently resolve failed depository institutions that are part of a complex holding company structure will provide immediate efficiencies in bank resolutions result in reduced losses to the DIF and not require any additional funding.

Conclusion

The current financial crisis demonstrates the need for changes in the supervision and resolution of financial institutions, especially changes relative to large, complex organizations that are systemically important to the financial system. The choices facing Congress in this task are complex, made more so by the fact that we are trying to address problems while dealing with one of the greatest economic challenges we've seen in decades. While the need for some reforms is obvious, such as a legal framework for resolving systemically important institutions, others are less clear and we would encourage a thoughtful, deliberative approach. The FDIC stands ready to work with Congress to ensure that the appropriate steps are taken to strengthen our supervision and regulation of all financial institutions—especially those that pose a systemic risk to the financial system.

I would be pleased to answer any questions from the Committee.

PREPARED STATEMENT OF GARY H. STERN*

PRESIDENT AND CHIEF EXECUTIVE OFFICER,
FEDERAL RESERVE BANK OF MINNEAPOLIS

MAY 6, 2009

Chairman Dodd, Ranking Member Shelby, and members of the Committee, thank you for the opportunity to review the "too-big-to-fail" (TBTF) problem with you today. I will develop a simple conclusion in this testimony: The key to addressing TBTF is to reduce substantially the negative spillover effects stemming from the failure of a systemically important financial institution. Let me explain how I have come to that conclusion.

The TBTF problem is one of undesirable incentives which we need to address if we hope to fix the problem. TBTF arises, by definition, when the uninsured creditors of systemically important financial institutions expect government protection from loss when these financial institutions get into financial or operational trouble. The key to addressing this problem and changing incentives, therefore, is to convince these creditors that they are at risk of loss. If creditors continue to expect special protection, the moral hazard of government protection will continue. That is, the creditors will continue to underprice the risk-taking of these financial institutions, overfund them, and fail to provide effective market discipline Facing prices that are too low, systemically important firms will take on too much risk. Excessive risk-taking squanders valuable economic resources and, in the extreme, leads to financial crises that impose substantial losses on taxpayers. Put another way, if policymakers do not address TBTF, the United States likely will endure an inefficient financial system, slower economic growth, and lower living standards than otherwise would be the case.

To address TBTF, policymakers must change these incentives, and I recommend the following steps to achieve that goal. And let me emphasize that these are my personal views.

First, identify why policymakers provide protection to uninsured creditors. If we do not address the underlying rationale for providing protection, we will not credibly put creditors of systemically important firms at risk of loss. The threat of financial spillovers leads policymakers to provide such protection.[1] Indeed, I would define systemically important financial institutions by the potential that their financial and operational weaknesses can spill over to other financial institutions, capital markets, and the rest of the economy. As a result, my recommendations to address the TBTF problem focus on mitigating the perceived and real fallout from financial spillovers.

Second, enact reforms to reduce the perceived or real threat of the spillovers that motivate after-the-fact protection of uninsured creditors. These reforms include, but are not limited to, increased supervisory focus on preparation for the potential failure of a large financial institution, enhanced prompt corrective action, and better communication of efforts to put creditors of systemically important firms at risk of loss. I call this combination of reforms systemic focused supervision (SFS). Other reforms outside of SFS will help address TBTF as well. I also recommend, for example, capital regimes that automatically provide increased protection against loss during bad times and insurance premiums that raise the cost for financial institution

* These remarks reflect my views and not necessarily those of others in the Federal Reserve.

[1] We discuss other potential motivations that could lead to TBTF support and why we think spillovers are the most important motivation in Gary H. Stern and Ron J. Feldman, 2009, *Too Big To Fail: The Hazards of Bank Bailouts,* chapter 5.

activities that create spillovers. I recognize the substantial benefits of highlighting a single reform that would fix TBTF, but I believe a variety of steps are required to credibly take on TBTF.[2]

Third, be careful about relying heavily on reforms that do not materially reduce spillovers. In particular,

I do not think that intensification of traditional supervision and regulation of large financial firms will effectively address the TBTF problem. In a similar vein, while I support the creation of a new resolution regime for systemically important nonbank financial institutions, I would augment the new resolution regime with the types of reforms I just noted.

I will now discuss these points quite briefly. I will provide additional detail in the appendix to this testimony.[3]

Spillovers Produce the TBTF Problem

Uninsured creditors of systemically important firms come to expect protection because they understand the motivation of policymakers. Policymakers provide protection, in my experience, believing that such protection will contain costly financial spillovers. Policymakers understand that protecting creditors reduces market discipline, but they judge the costs of such a reduction to be smaller than the fallout from the collapse of a major institution. Policymakers worry about spillovers—for example, the failure of other large financial firms due to their direct exposure to a weak firm or because of a more general panic—and the potential impact they may have on the rest of the economy.

I see three general approaches to addressing concerns over spillovers and thus increasing market discipline (and reducing moral hazard). First, enact reforms that make policymakers more confident that they can impose losses on creditors without creating spillovers that would justify government protection. Second, reduce the losses that failing firms can impose on other firms or markets, which helps reduce spillovers. Third, alter payments systems to reduce their transmission of losses suffered by one firm to others.

Policymakers cannot eliminate spillovers entirely, nor can they credibly commit to never providing protection to creditors of systemically important firms. But they can make significant progress in reducing the probability of providing protection, reducing the number of creditors who might receive protection, and reducing the amount of coverage that creditors receive. These are all valuable results.

I will now provide several specific examples of approaches to deal with spillovers.

Examples of Reforms That Credibly Address TBTF by Taking on Spillovers

To take on spillovers, I recommend starting with SFS, a combination of reforms that would identify and better manage spillovers, reduce losses from the failure of systemically important financial institutions, and alter uninsured creditor expectations so that they better price risk-taking. To provide a sense for additional reforms I have endorsed, I will provide two other examples of reforms you might consider beyond SFS. Others have begun endorsing reforms of this type, which indicates that attacking spillovers is not considered impossible.

Systemic Focused Supervision.

This approach to addressing spillovers has three components.

Engage in Early Identification. I would focus financial institution oversight, defined broadly, on identifying potential spillovers both in general and for specific firms, and offering recommendations to mitigate them. To my mind, this is conceptually similar to the macroprudential or systemic-risk supervision others have supported. I would concentrate such efforts, which would require significant input from bank supervisors and others, on carefully mapping out the exposures that systemically important firms have with each other and other basic sources of spillovers. Once the responsible supervisory entity documents where and how spillovers might arise, it would take the lead in offering recommendations to address them. This effort either would assure policymakers that a perceived spillover did not in fact pose a significant threat or would direct resources to fix the vulnerability and generate such comfort.

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[2] More generally, see the testimony of Daniel K. Tarullo on March 19, 2009, before the U.S. Senate Committee on Banking, Housing, and Urban Affairs for options for modernizing bank supervision and regulation, including many that seek to foster financial stability.

[3] The appendix includes summaries of the key arguments in our book on TBTF, more recent analysis applying the recommendations in the book to the current crisis, and an initial analysis of proposals to address TBTF by making large financial institutions smaller. Our writings on TBTF can be found at *http://www.minneapolisfed.org/publications_papers/studies/tbtf/index.cfm.*

Lest such an exercise sound like it would be unproductive, I believe that fairly simple failure simulation exercises over the years confirmed the potential spillovers, created by the overseas and derivative operations of some large financial firms, that now bedevil us. I would also note that macroprudential supervision can and should put some of the burden of early identification on the systemically important firms themselves by, for example, requiring them to prepare for and explain the challenges of entering what would amount to a prepackaged bankruptcy.[4]

Enhanced Prompt Corrective Action (PCA). To focus supervisors on closing weak institutions early, which reduces the losses they can impose on others, I recommend incorporating market signals of firm risk into the current PCA regime. The incorporation would require care. Market signals contain noise, but such signals also offer forward-looking measures of firm specific-risk with valuable information for bank and other supervisors.

Improve Communication. The goals here are to establish the credibility of efforts to put creditors at risk of loss and to give creditors the opportunity to alter their behavior. As a result, I recommend that supervisory and other stability-focused agencies clearly communicate the steps in process to avoid full protection. Simply put, creditors cannot read minds and will not alter their expectations and behavior unless they understand the policy changes under way.

SFS is not the only approach to addressing spillovers. Let me highlight two other reforms by way of example.

Develop Capital Instruments to Absorb Losses When Problems Arise. Requiring firms to hold substantially more capital offers a path to absorb losses before they spill over and directly affect other firms. But having to raise expensive capital can either encourage firms to avoid socially beneficial lending or to take on more risk to generate targeted returns. I urge policymakers to examine capital tools that effectively create capital when firms need it most, which reduces their cost and avoids fueling downcycles.[5]

Price for Spillover Creation. A direct way to discourage the types of activities that generate spillovers is to put a price on them because, after all, spillovers impose costs on all of us. Using the early-identification approach noted above to identify the major causes of spillovers would offer a first step. The actual pricing of such activities could occur via something like an insurance premium. The FDIC already has made important progress in creating such an approach for large banks, although the price it charges is capped at a low level at this time.

I now turn to reforms to address TBTF where I am concerned policymakers may be asking too much.

Do Not Rely Too Heavily on Traditional Supervision and Regulation (S&R), Resolution Regimes, or Downsizing

Based on direct observation, I am not convinced that supervisors can consistently and effectively prevent excessive risk-taking by the large firms they oversee in a timely fashion, absent draconian measures that tend to throw out the good with the bad. For this reason, I am not confident that traditional S&R can reduce risk sufficiently such that it addresses the problems associated with TBTF status.[6] While policymakers should improve S&R by incorporating the lessons learned over the last two years, it cannot be the bulwark in addressing TBTF.

I do see clear benefits in increasing the scope of bank-like resolution systems to entities such as bank holding companies. Such regimes would facilitate imposition of losses on equity holders, allow for the abrogation of certain contracts, and provide a framework for operating an insolvent firm. These steps address some spillovers and increase market discipline. But I have long argued that the resolution regime created by FDICIA would not, by itself, effectively limit after-the-fact protection for creditors of systemically important banks.[7] Events over the last two years have largely reinforced those concerns. A bank-like resolution regime for nonbanks, which creates a systemic-risk exception, leaves some potential spillovers remaining, and so it is a necessary but not sufficient reform to address TBTF.

Finally, there has been increased discussion of efforts to address TBTF by making the largest financial firms smaller. My concerns here are practical and do not reflect

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[4] Raghuram Rajan made a similar recommendation in "The Credit Crisis and Cycle Proof Regulation," the Homer Jones Lecture at the Federal Reserve Bank of St. Louis, April 15, 2009.

[5] We discuss such a recommendation, based on work by Mark Flannery, briefly on page 128 of the TBTF book. For a more current discussion of this idea, along with other proposals to address TBTF, see the analysis carried out by the Squam Lake Working Group on Financial Regulation at *http://www.cfr.org/thinktank/greenberg/squamlakepapers.html.*

[6] For a fuller discussion, see Appendix C of the TBTF book.

[7] For a fuller discussion of limitations of the FDICIA resolution process, see Appendix A of the TBTF book.

any particular empathy for managers or equity holders of large firms. In short, I think efforts to break up the firms would result in a focus on a very small number of institutions, thereby leaving many systemically important firms as is. Moreover, I am skeptical, for the reasons noted above, that policymakers will effectively prevent the newly constituted (smaller) firms from taking on risks that can bring down others.

Conclusion

Maintaining the status quo with regard to TBTF could well impose large costs on the U.S. economy. We cannot afford such costs. I encourage you to focus on proposals that address the underlying reason for protection of creditors of TBTF financial institutions, which is concern for financial spillovers. I have offered examples of such reforms. Absent these or similar reforms, I am skeptical that we will make significant progress against TBTF.

ADDRESSING TBTF BY SHRINKING FINANCIAL INSTITUTIONS: AN INITIAL ASSESSMENT

The Region, June 2009

By Gary H. Stern President Federal Reserve Bank of Minneapolis and Ron Feldman Senior Vice President Supervision, Regulation and Credit Federal Reserve Bank of Minneapolis

"If financial institutions raise systemic concerns because of their size, fix the TBTF problem by making the firms smaller." A number of prominent observers have adopted this general logic and policy recommendation.[1] While we're sympathetic to the intent of this proposal, we have serious reservations about its likely effectiveness and associated costs. Our preferred approach to addressing the "too-big-to-fail" problem continues to be better management of financial spillovers.[2]

In this essay, we review our concerns about this "make-them-smaller" reform. We also recommend several interim steps to address TBTF that share some similarities with the make-them-smaller approach but do not have the same failings. Specifically, we support (1) imposing special deposit insurance assessments for TBTF banks to allow for spillover-related costs, (2) retaining the national deposit cap on bank mergers and (3) modifying the merger review process for large banks to provide better focus on reduction of systemic risk. If our suggested reforms prove less effective than we believe, policymakers will have to take the make-them-smaller approach seriously.

The reform

While its proponents have not provided details, this reform-if taken literally-seems straightforward. Policymakers would demark some firms as TBTF through the use of a specific measure, such as share of a given market(s), asset size or revenue. Policymakers would then force those firms to (1) shrink their balance sheets organically (that is, not replacing loans or securities after repayment), (2) divest certain operations or assets and/or (3) split them into smaller constituent parts such that the resulting firms fall below a specified threshold. (We distinguish such measures from short-term efforts to wind down the operations of a targeted, insolvent financial institution to position it for resolution, a reform we support.)

Rationale for reform

On its surface, the proposal has two attractive features, both related to simplicity. First, size seems to offer an easily measured and verifiable means of identifying financial institutions whose financial or operational failure would raise systemic concern. After all, firms that are frequently identified as posing TBTF concerns are large in some important, obvious way.

Second, implementing this reform appears to be fairly straightforward. The government could simply order across-the-board shrinkage of balance sheets for certain firms. Since many larger financial institutions came about through mergers of smaller institutions, and because the popularity among corporate leaders of creating

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[1] Examples include Robert Reich in an Oct. 21, 2008, blog post ("If they're too big to fail, they're too big period"), George Shultz in the Aug. 14, 2008, *Wall Street Journal* ("If they are too big to fail, make them smaller"), Gerald O'Driscoll in the Feb. 23, 2009, *Wall Street Journal* ("If a bank is too big to fail, then it is simply too big"), Meredith Whitney in a Feb. 19, 2009, CNBC interview (reported to advocate "disaggregating" market share of largest banks) and Simon Johnson in a Feb. 19, 2009, blog post ("Above all, we need to encourage or, most likely, force the large insolvent banks to break up").

[2] The Minneapolis Fed Web site (*minneapolisfed.org/publications__papers/studies/tbtf/index.cfm*) provides access to our fairly extensive prior writing on TBTF.

and then destroying conglomerates tends to wax and wane, a simple "unbundling" would merely return the financial world to a period when the TBTF problem did not loom as large.

A third rationale for the reform appears rooted in desperation. Recent events suggest profound failure in the supervision and regulation of large and complex financial institutions. Likewise, a number of observers have long seen the TBTF problem as intractable because policymakers will always face compelling incentives to support creditors at the time systemically important firms get into trouble. Society therefore appears to have no way to impose meaningful restraint on large or complex financial institutions. An option that makes firms neither large nor complex may appear to offer the only real means of imposing either market or supervisory discipline.

The reform's weaknesses

Shrinking firms so they don't pose systemic concern faces static and dynamic challenges that seem to seriously limit its effectiveness as a potential reform.

The static challenge involves the initial metric used to identify firms that need to be made smaller. Given the severity of the punishment (that is, breakup), policymakers will have to use a simple standard they can make public and defend from legal challenge. They might consider using, for example, the current limit on bank size that can be achieved via merger: 10 percent of nationwide deposits. Importantly, we assume (and again, because of the high-stakes nature of the reform) that policymakers would make only a few firms subject to forced contraction. This "high bar" raises the stakes in getting the "right" firms cut down to size.

But such a metric will not likely capture some or perhaps many firms that pose systemic risk. Some firms that pose systemic risk are very large as measured by asset size, but others—Northern Rock and Bear Stearns, for example—are not. Other small firms that perform critical payment processing pose significant systemic risk, but would not be identified with a simple size metric. We believe that a government or public agent with substantial private information could identify firms likely to impose systemic risk, but only by looking across many metrics and making judgment calls. Policymakers cannot easily capture such underlying analytics in a simple metric used to break up the firms. The dynamic challenge concerns both the ability of government to keep firms below the size threshold over time and the future decisions of firms that could increase the systemic risk they pose.

On the first point, we anticipate that policymakers would face tremendous pressure to allow firms to grow large again after their initial breakup. The pressure might come because of the limited ability to resolve relatively large financial institution failures without selling their assets to other relatively large financial firms and thereby enlarging the latter. We would also anticipate firms' stakeholders, who could gain from bailouts due to TBTF status, putting substantial pressure on government toward reconstitution. These stakeholders will likely point to the economic benefits of larger size, and those arguments have some heft. Academic research has typically found economies of scale exhausted before banks reach the size of the largest banking organizations, although some recent analysis suggests such economies may exist at these large sizes as well.[3] (Indeed, policymakers will have to consider the loss of scale benefits when they determine the net benefits of breaking up firms in the first place.)

Prominent examples suggest our concern about reconsolidation is not theoretical. Consider the breakup of the original AT&T and the subsequent mergers among telecommunication firms. Scholars have also highlighted the historical difficulty in limiting the long-run market share of powerful financial firms, including those found in the "zaibatsus" of Japan.[4]

Even if policymakers could get the initial list of firms right and were able to keep the post-breakup firms small, this reform does nothing to prevent firms from engaging in behavior in the future that increases potential for spillovers and systemic

[3] For literature that did not find economies of scale for large banks, see Allen N. Berger, Rebecca Demsetz, and Philip E. Strahan, 1999, "The Consolidation of the Financial Services Industry: Causes, Consequences, and Implications for the Future," *Journal of Banking and Finance* 23 (2–4), pp. 35–94; and Group of Ten, 2001, "Report of Consolidation in the Financial Sector," p. 253. For summaries of more current research finding economies of scale for larger institutions, see Joseph P. Hughes and Loretta J. Mester, 2008, "Efficiency in Banking: Theory, Practice and Evidence," Chap. 18 in *Oxford Handbook of Banking,* Oxford University Press. See also Loretta J. Mester, 2008, "Optimal Industrial Structure in Banking," in Section 3 of *Handbook of Financial Intermediation and Banking,* Elsevier.

[4] See Raghuram G. Rajan and Luigi Zingales, 2003, "The Great Reversals: The Politics of Financial Development in the Twentieth Century," *Journal of Financial Economics* 69, July, pp. 5–50.

risk. Newly shrunken firms could, for example, shift their portfolios to assets that suffer catastrophic losses when economic conditions fall off dramatically. As a result, creditors (including other financial firms) of the "small" firms could suffer significant enough losses to raise questions about their own solvency precisely when policymakers are worried about the state of the economy. Moreover, funding markets might question the solvency of other financial firms as a result of such an implosion. Such spillovers prompted after-the-fact protection of financial institution creditors in the current crisis, and we believe they would do so again, all else equal. One might call on supervision and regulation to address such high-risk bets. But the rationale for the make-them-smaller reform seems dubious in the first place if such oversight were thought to work.

These dynamics of firm risk-taking mean that the make-them-smaller reform offers protection with a Maginot line flavor. That is, it appears sensible and effective-even impregnable-but in fact it provides only a false sense of security that may lull policymakers into inaction on other fronts. In our experience, policymakers would likely view this reform as a substitute for other desirable actions, including some of the key reforms we think necessary to address spillovers. In the past, policymakers have thought-mistakenly-that the strong condition of banks, the FDICIA resolution regime or initiatives around new capital rules all provided rationales for not addressing the underlying sources of spillovers and the TBTF problem. If we exclusively embrace a reform that misleadingly promises victory over TBTF by constraining the size of large financial firms, we may squander the time and resources needed to address the problem at its roots.

Interim steps

While we would not move forward with a plan to make large financial firms smaller, we take seriously its intent to put uninsured creditors at risk of loss and to address concerns over size, spillovers and government support. In that vein, we recommend three interim steps that address concerns that might lead to support for the make-them-smaller option. They are (1) modify the FDIC insurance premium to better allow for spillover-related charges, (2) maintain the current national deposit cap on bank mergers and (3) modify the merger review process for bank holding companies to focus on systemic risk. We conclude this section with a brief discussion on when the make-them-smaller option might make sense.

- *Expand FDIC insurance premiums*

First, we recommend expanding the ability of the FDIC to charge banks (through the deposit insurance premium it levies) for activities that increase potential for spillovers.[5] The presence of spillovers makes it more likely that policymakers will resolve bank failures in a manner outside of the FDIC's mandated "least-cost" resolution, because those spillovers impose broader costs on society. Premiums offer an established mechanism by which society can force banks to internalize potential costs.[6]

We use the term "expand" in referring to the FDIC's ability to charge banks, because the FDIC has already created an infrastructure to facilitate spillover-related charges. In particular, the current premium structure allows under certain conditions for a "large bank [premium] adjustment." The FDIC offers several rationales for the adjustment, including the need "to ensure that assessment rates take into account all available information that is relevant to the FDIC's risk-based assessment decision."[7]

The FDIC lists the types of information it would consider in setting the adjustment, and several of them provide reasonable proxies for potential spillovers. For example, the FDIC would review (1) potential for "ring fencing" of foreign assets (which would limit the FDIC's ability to seize and sell those assets to pay off insured depositors, for example), (2) availability of information on so-called qualified financial contracts (which include a wide range of derivatives) and (3) FDIC ability

[5] More generally, George Pennacchi argues that premiums for banks should incorporate a "systematic risk" factor to account for links between a bank's specific condition and overall economic conditions. See George G. Pennacchi, 2009, "Deposit Insurance," paper for AEI Conference on Private Markets and Public Insurance Programs, January.

[6] Some observers have outlined a broader reform along the same lines that would charge all systemically important financial firms an assessment. We focus on banks in the short term because the infrastructure for such charges already exists; charging other systemically important financial firms should have similar benefits. For a discussion of the broader change, see Viral Acharya, Lasse Pedersen, Thomas Philippon and Matthew Richardson, 2008, "Regulating Systemic Risk," Chap. 13 in *Restoring Financial Stability: How to Repair a Failed System,* Wiley.

[7] See Federal Register, Oct. 16, 2008, p. 61568.

to take over key operations without paying extraordinary costs.[8] We might propose that the FDIC include other proxies of systemic risk, including measures of organizational complexity (such as number and type of legal entities) and a supervisory "score" of each bank's contingency plan for winding down operations while minimizing spillovers.

The FDIC apparently believes it can price spillover risk without having to rely on size per se (although it limits this assessment adjustment to large institutions). Not having to rely on size of financial institutions seems desirable, as it more directly targets activities causing spillovers. And imposing a price on these activities would discourage them, which is the point.

However, the FDIC has limited its ability to fully incorporate such spillover-related factors into its premium. It can, for example, only adjust large bank premiums by 100 basis points or less (recently increased from 50 basis points).[9] We recommend that the FDIC remove such artificial restrictions so that it can fully price the potential costs of spillovers.

- *Keep the cap*

Second, we recommend retaining the current national deposit cap. In general terms, Congress forbids authorities from approving mergers or acquisitions if it would result in the acquiring bank holding more than 10 percent of U.S. bank deposits. This cap, which applies to M&As across state lines, was put in place by the Riegle-Neal Banking Act of 1994. Note that a bank can exceed the national cap if its deposit growth comes from a non-M&A source (that is, so-called organic growth).

Why keep the cap at the current level? We see some serious downsides to lowering the cap as a way of addressing TBTF. A lower cap could cause the bank to increase its funding from nondeposit sources, which, all else equal, could increase its susceptibility to a run. Or a firm could meet the target by jettisoning its retail banking operations and increase its securities, payments or wholesale operations. This outcome, too, would seem to increase systemic risk.

Lowering the cap effectively taxes deposits, thereby directing energies at the wrong target. While this argument might suggest abolishing or increasing the cap, we would keep it at its current level at least for the foreseeable future because its costs do not seem large. In particular, the cap has not prevented the creation of extremely large and diversified financial institutions through mergers. Thus, we doubt it has had significant scale or scope costs.

Moreover, we think the cap offers some benefits. It provides a binding limit on size growth that may offer a marginal contribution to managing TBTF. The cap may also have the salutary effect of keeping policymakers' attention on the TBTF issue over time. Because the costs of keeping the cap seem quite low, we feel comfortable with our recommendation, even though the benefits seem low as well.

- *Reform the merger review process*

Third, we recommend implementing a reform to the merger reviews that the Federal Reserve conducts for large bank holding companies. In 2005, we proposed that "for mergers between two of the nation's 50 largest banks, the Federal Reserve, the Federal Deposit Insurance Corporation (FDIC) and the U.S. Treasury should report publicly on their respective efforts to address and manage potential TBTF concerns."[10] Such a requirement, which needn't be restricted to the 50 largest banks if policymakers favor another cutoff, would highlight the key policy issues raised by the merger itself and provide a communication focus for spillover-reduction efforts. We could envision this as an interim approach if spillover reduction does not prove possible to achieve. The Federal Reserve may find it appropriate over time to support changes to the statutes governing merger reviews to allow for explicit consideration of potential spillover costs created or made worse by the merger.[11]

We have confidence in our preferred approach of tackling spillovers directly by putting TBTF creditors at credible risk of loss. But others with equally strong convictions have been proven wrong when it comes to financial instability, and we could be wrong as well. In that case, we must go with an alternative, and the proposed reform to make firms smaller may offer the only promising choice.

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[8] See Federal Register, May 14, 2007, p. 27125.

[9] See Federal Register, March 4, 2009, p. 9525.

[10] See Gary H. Stern and Ron J. Feldman, 2005, "Addressing TBTF When Banks Merge: A Proposal," *The Region*, September, Federal Reserve Bank of Minneapolis.

[11] For discussions of how policymakers should or should not consider TBTF in the antitrust review process, see statements by Deborah A. Garza and Albert A. Foer before the House Judiciary Committee, Subcommittee on Courts and Competition Policy, March 17, 2009.

Moreover, we view addressing spillovers as the primary motivation for providing after-the-fact protection to uninsured creditors. To the degree that other motivations drive provision of such protection in the United States (for example, to reward "cronies" of elected officials or other entrenched interests), our reforms may not adequately address the TBTF problem, and other reforms might. That said, we continue to strongly believe that spillovers are the salient motivation that policymakers must address to fix TBTF (and our prior writings comment extensively on why we do not think other motivations have equal weight).

Conclusion

There is no easy solution to TBTF. Our longstanding proposal to put creditors at risk of loss by managing spillovers will prove challenging to implement effectively. Cutting firms down to size may seem easy by comparison. It is not. The high stakes of making firms smaller will make it difficult to determine which to shrink, and even then, the government will not have an easy time managing risk-taking by newly shrunken firms. We do take the aims of the make-them-smaller reform seriously and in that vein suggest options in this regard that we think would be more effective, including a spillover-related tax built on the FDIC's current deposit insurance premiums.

BETTER LATE THAN NEVER: ADDRESSING TOO-BIG-TO-FAIL

Remarks presented at the Brookings Institution, Washington, DC, March 31, 2009

By Gary H. Stern, President, Federal Reserve Bank of Minneapolis

Destiny did not require society to bear the cost of the current financial crisis. To at least some extent, the outcome reflects decisions, implicit or explicit, to ignore warnings of the large and growing "too-big-to-fail" problem and a failure to prepare for and address potential spillovers. While I am, as usual, speaking only for myself, there is now I think broad agreement that policymakers vastly underestimated the scale and scope of "too big to fail" and that addressing it should be among our highest priorities.

From a personal point of view, this recent consensus is both gratifying and disturbing. Gratifying because many initially dismissed our book,[1] published five years ago by Brookings, as exaggerating the TBTF problem and underestimating the value of FDICIA in strengthening bank supervision and regulation. In turn, I would point out that we identified:

- virtually all key facets of the growing TBTF problem, including the role that increased concentration and increased organizational and product complexity, as well as increased reliance on short-term funding, played in creating the current TBTF mess; and
- important reforms which, if taken seriously, could have reduced the risk-taking that produced the crisis.

But belated recognition of the severity of "too big to fail" is also disturbing because it implies that inaction raised the costs of the current financial crisis, as our analyses and prescriptions went unheeded. Despite our warnings, important institutions, public and private alike, were unprepared. And I am quite concerned that policymakers may double-down on previous decisions; some ideas presented in the current environment to address TBTF are unlikely to be effective and, if pursued, will waste valuable time and resources.

In the balance of these remarks, I will principally cover three subjects: (1) the nature of the current TBTF problem; (2) policies essential to addressing the problem effectively; (3) policies that, although well intentioned, are unlikely to make a material difference to TBTF at the end of the day.

The current TBTF problem

As matters stand today, the risk-taking of large, complex financial institutions is not constrained effectively by supervision and regulation nor by the marketplace. If this situation goes uncorrected, the result will almost surely be inefficient marshaling and allocation of financial resources, serious episodes of financial instability and lower standards of living than otherwise. Certainly, we should seek to improve and strengthen supervision and regulation where we can, but supervision and regulation is not a credible check on the risk-taking of these firms. I will go into this issue in more detail later and will simply note at this point that the recent track

[1] See Gary H. Stern and Ron J. Feldman, 2004, *Too Big to Fail: The Hazards of Bank Bailouts,* Washington, D.C.: Brookings Institution.

record in this area fails to inspire confidence. Similarly, market discipline is not now a credible check on the risk-taking of these firms; indeed, a critical plank of current policy is to assure creditors of TBTF institutions that they will not bear losses. Given the magnitude of the crisis, I have supported the steps taken to stabilize the financial system by extending the safety net, but I am also acutely sensitive to the moral-hazard costs of these steps and have no illusion that losses experienced by equity holders and management will somehow resurrect market discipline.

How did we arrive at such a bleak point in terms of TBTF? Let me make just two observations. First, the crisis was made worse, in my view significantly worse, by the lack of preparation I mentioned above. To provide some examples, policymakers did not create and/or execute (1) an effective communication strategy regarding government intentions for uninsured creditors of firms perceived as TBTF; (2) a program to systematically identify the interconnections between these large firms; and (3) systems aimed at reducing the losses that these large firms could impose on other firms. I raise these examples, not surprisingly, because we identified these steps as critical to addressing TBTF in the book and related analysis.[2]

Second, addressing the TBTF problem earlier could have avoided some of the risk-taking underlying the current crisis. To be sure, many small institutions have failed as a result of the crisis in housing finance but, nevertheless, the bulk of the losses seem concentrated in the largest financial institutions. And creditors of these large firms likely expected material support, thereby facilitating excessive risk-taking by such institutions. Policymakers should correct problems at credit-rating agencies with off-balance-sheet financing, mortgage disclosures and the like. But if, fundamentally, TBTF induces too much risk-taking, then these firms will continue to find routes to engage in it, other things equal.

Addressing sources of spillovers

I have spoken and written about TBTF concerns and policy proposals with sufficient frequency that some observers characterize my views on the topic as "boilerplate," a backhanded compliment I presume. Nonetheless, it suggests I only judiciously review the key points of the reforms we have long endorsed. The logic for our approach is clear.

In order to reduce expectations of bailouts and reestablish market discipline, policymakers must convince uninsured creditors that they will bear losses when their financial institution gets into trouble. A credible commitment to impose losses must be built on reforms directly reducing the incentives that lead policymakers to bail out, that is provide significant protection for uninsured creditors. The dominant motivation for bailouts is to prevent the problems in a bank or market from threatening other banks, the financial sector and overall economic performance. That is, policymakers intervene because of concerns about the magnitude and consequences of spillovers.

Thus, the key to addressing TBTF is to reduce the potential size and scope of the spillovers, so that policymakers can be confident that intervention is unnecessary.What specifically should policymakers do to achieve this outcome? To answer this question we have taken reforms proposed in the book and combined them in a program we call systemic focused supervision (SFS), which we have discussed in detail elsewhere. In general, SFS, unlike conventional bank supervision and regulation, focuses on reduction of spillovers; it consists of three pillars: early identification, enhanced prompt corrective action (PCA) and stability-related communication.

Early identification. As we have described in detail elsewhere, early identification is a process to identify and to respond, where appropriate, to the material direct and indirect exposures among large financial institutions and between those institutions and capital markets.We anticipate valuable progress simply by having central banks and other relevant supervisory agencies focus resources on, and take seriously, the results of failure simulation exercises, for example. Indeed, such exercises appear to have identified the precise type of issues-around derivative contracts, resolution regimes and overseas operations-that have plagued policymakers' ability to adequately address specific TBTF cases.[3]

In fact, it appears that the policy failure was not primarily in identification of potential spillovers, but rather in making corrective action a sufficiently high priority. One constructive option related to early identification would require the relevant TBTF firms to prepare documentation of their ability to enter the functional equiva-

[2] See Gary H. Stern, 2008, "Too Big to Fail: The Way Forward," Nov.13, 2008.

[3] For a discussion of preparing for large bank failure, see Shelia Bair, 2007, "Remarks," March 21, and Shelia Bair, 2008, "Remarks," June 18.

lent of “prepackaged bankruptcy.”[4] The appropriate regulatory agencies should require TBTF firms to identify current limitations of the resolution regime they face and the spillovers that might occur if their major counterparties entered such proceedings.

Without doubt, implementing early identification will prove challenging. That said, recommendations from other knowledgeable observers suggest that the task is possible and worthwhile. The G–30 recommendations, for example, would have firms continuously monitor and report on the full range of their counterparty exposures, in addition to reviewing their vulnerability to a host of potential risks, many related to spillovers.[5] These reports are precisely the key supervisory inputs to early identification.

One might reasonably wonder about a plan that seems to give center stage to supervisors, when I earlier noted reservations about supervision and regulation? I would point out, however, that here we are emphasizing a role for supervision where it in fact has a comparative advantage. In particular, we would focus supervision on collection of private information on financial institutions, looking across institutions, and worrying about fallout that potentially affects the public, rather than asking supervisors to try to tune risk-taking to its optimal level. Other entities have neither the incentive nor the access to carry out the role we envision for supervision.

Enhanced prompt corrective action. PCA works by requiring supervisors to take specified actions against a bank as its capital falls below specified triggers. One of its principal virtues is that it relies upon rules rather than supervisory discretion. Closing banks while they still have positive capital, or at most a small loss, can reduce spillovers in a fairly direct way. If a bank’s failure does not impose large losses, by definition it cannot directly threaten the viability of other depository institutions that have exposure to it. Thus, a PCA regime offers an important tool to manage systemic risk. However, the regime currently uses triggers that do not adequately account for future losses and give too much discretion to bank management.We would augment the triggers with more forward-looking data, outside the control of bank management, to address these concerns.

Communication. The first two pillars of SFS seek to increase market discipline by reducing the motivation policymakers have for protecting creditors. But creditors will not know about efforts to limit spillovers, and therefore will not change their expectations of support and in turn, their pricing and exposures, absent explicit communication by policymakers about these efforts. This recommendation highlights a key distinction between our approach and that advocated by others: Our approach does not simply seek to limit systemic risk, but takes the next step of directly trying to address TBTF by putting creditors at risk of loss. If we do not do this, we will not limit TBTF.

Now let me turn to some alternative reforms that have received significant attention recently.

Reducing the size of (TBTF) financial institutions

This proposal is straightforward: If financial institutions raise systemic concerns because of their size, make them smaller.We intend to discuss this suggestion at some length in a separate document, but suffice it to say that we have serious reservations about the ultimate effectiveness of such an approach. And I would note, in passing, that it is an idea born of desperation since it seems to admit that large, complex organizations cannot be supervised effectively.

To provide a flavor for our concerns about this proposal, consider the government’s ability to keep the firms “small” after dismantling has occurred. There might, for example, be tremendous pressure in the direction of expansion if, in the future, the smooth resolution of the failure of a major institution required the sale of assets to other significant institutions. Even if this situation can be avoided, these firms could still engage in behavior that increases the risk of significant spillovers. They could do so, for example, by shifting their portfolios to assets that suffer catastrophic losses only when economic conditions deteriorate dramatically, thus making themselves and the financial system vulnerable to cyclical outcomes.

Reliance on supervision and regulation and/or FDICIA

The two broad approaches discussed to this point seek both increased market and supervisory discipline to better constrain the risk-taking of large financial institu-

[4] For a similar suggestion, see page 62 of Markus Brunnermeier, Andrew Crockett, Charles Goodhart, Avinash D. Persaud, and Hyun Shin, 2009, “The Fundamental Principles of Financial Regulation.”

[5] See Group of Thirty, 2009, “Financial Reform: A Framework for Financial Stability,” p. 41.

tions. But some observers do not believe that policymakers can credibly put creditors of these firms at risk of loss. And some analysts do not believe that creditors can effectively discipline these oft-sprawling firms even if they had an incentive to do so. As a result, some proposals to better limit the risk-taking of firms perceived TBTF focus primarily on strengthening conventional supervisory and regulatory discipline.

Policymakers could pursue this approach in many ways. After identifying TBTF firms, a more rigorous supervisory and regulatory regime would be applied to them. The tougher approach might include, for example, (a) higher capital requirements, (b) requirements that the firms maintain higher levels of liquid assets, (c) additional restrictions on the activities in which the firms engage, and (d) a much larger presence of on-site supervisors monitoring compliance with these dictates.

My concerns about this approach, and they are considerable, center on the heavy reliance on supervision and regulation but are not a wholesale rejection of S/R per se. Given the distortion to incentives caused by the explicit safety net underpinning banking, society cannot rely exclusively on market forces to provide the appropriate level of discipline to banks.We must have a system of supervision and regulation to compensate. And naturally we should learn from recent events to improve that system, a process under way.[6]

But we must recognize the important limitations of supervision and regulation and establish objectives that it can achieve. The owners of systemically important financial institutions provide incentives for firm management to take on risk, which is the source of the returns to equity holders (risk and return go hand in hand). Under a tougher S/R regime, these firms have no less incentive than formerly to find ways of assuming risk that generates the returns required by markets and that does not violate the letter of the restrictions they face. By way of example, research on bank capital regimes finds ambiguous results regarding their ultimate effect, as firms can offset increased capital by taking on more risk.

And, as I noted earlier, the track record of S/R does not suggest it prevents risk-taking that seems excessive *ex post.* True, long shots occasionally come in, and perhaps a regime dependent on conventional S/R would succeed, but it is NCAA Tournament time, and we know that a 15 seed rarely beats a number two. To pick just one example from the current episode, supervisors have been unable once again to prevent excessive lending to commercial real estate ventures, a well-known, high-risk, high-return business which contributed importantly to the serious banking problems of the late 1980s and early 1990s.

I recognize that creating a new regulatory framework for a small number of very large institutions differs from supervising thousands of small banks. But I forecast the same disappointing outcome for two reasons. First, we have already applied a version of the suggested approach; right now, we have higher standards and more intensive supervision for the largest banking firms. Second, the failure of supervision and regulation reflects inherent limitations. Supervisors operate in a democracy and must follow due process before taking action against firms. This means that there is an inevitable lag between identification of a problem and its ultimate correction. As previously noted, management has ample incentive to find ways around supervisory restrictions. Further, the time inconsistency problem frequently makes supervisory forbearance look attractive.

A truly draconian regulatory regime could conceivably succeed in diminishing risk-taking but only at excessive cost to credit availability and economic performance. As Ken Rogoff, a distinguished economist at Harvard who has considerable public policy experience as well put it: “If we rebuild a very statist and inefficient financial sector—as I fear we will—it’s hard to imagine that growth won’t suffer for years.”

Just as we should not rely exclusively, or excessively, on S/R, I do not think that imposing an FDICIA-type resolution regime on systemically important nonbank financial institutions will correct as much of the TBTF problem as some observers anticipate. To be sure, society will be better off if policymakers create a resolution framework more tailored to large financial institutions, in particular one that allows operating the firms outside of a commercial bankruptcy regime once they have been deemed insolvent. This regime would take the central bank out of rescuing and, as far as the public is concerned, “running” firms like AIG. That is a substantial benefit. And this regime does make it easier to impose losses on uninsured creditors if policymakers desire that outcome.

[6] For a discussion of improvement efforts under way for both the banking industry and bank supervisors, see Roger T. Cole, 2009, *Risk Management in the Banking Industry,* before the Subcommittee on Securities, Insurance, and Investment, Committee on Banking, Housing, and Urban Affairs, U.S. Senate, Washington, D.C., March 18, 2009.

But I am skeptical that this regime will actually lead to greater imposition of losses on these creditors in practice. Indeed, we wrote our book precisely because we did not think that FDICIA put creditors at banks viewed as TBTF at sufficient risk of loss.We thought that when push came to shove, policymakers would invoke the systemic risk exception and support creditors well beyond what a least-cost test would dictate.We thought this outcome would occur because policymakers view such support as an effective way to limit spillovers. I don't think a new resolution regime will eliminate those spillovers (or at least not the preponderance of them), and so I expect that a new regime will not, by itself, put an end to the support we have seen over the last 20 months.

Conclusion

I recognize the limits of any proposal to address the TBTF problem.We will never avoid entirely the financial crises that lead to extraordinary government support. But that is a weak excuse for not taking the steps to prepare to make that outcome as remote as we can. It is with deep regret for damage done to residents of the Red River Valley that I note the return of flood season to the Upper Midwest. Many residents have noted that the "100-year flood" has come many more times to this part of the country than its designation implies. And these residents have rightly focused on preparing to limit the literal spillovers when this extraordinary event becomes routine. In contrast, policymakers did not prepare for the TBTF flood; indeed, they situated themselves in the flood plain, ignored the flood warning, and hoped for the best.We must now finally give highest priority to preparation and take the actions required before the next deluge.

2007 Annual Report, May 2008, Federal Reserve Bank of Minneapolis

The Region

Managing the Expanded Safety Net

Gary H. Stern AND Ron J. Feldman*

PRESIDENT SENIOR VICE PRESIDENT

In this essay, we first briefly explain why the government's response to the 2007–08 financial turmoil, although justified, expanded the safety net and exacerbated the existing too big to fail (TBTF) problem. A larger TBTF problem is costly, having the capability to sow the seeds of future financial crises, which means we should begin now to develop a new approach to manage TBTF.

We believe recommendations we had already crafted to address TBTF would effectively address the safety net expansion and position policymakers to respond more effectively to "the next Bear Stearns." We describe the recommendations briefly and explain their relevance in today's environment in the second half of the essay. Because our approach and recommendations are spelled out in our 2004 book, *Too Big To Fail: The Hazards of Bank Bailouts*, we conclude with excerpts from it summarizing our arguments in a bit more detail.

A Wider Safety Net, A Larger TBTF Problem

The Federal Reserve's expansion of the safety net was not subtle or implied. The Federal Reserve took on risk normally borne by private parties when it supported JPMorgan Chase's purchase of Bear Stearns. The Federal Reserve also opened the discount window to select investment banks (i.e., primary dealers).

One could describe the former action as one-time and the latter program as temporary. But such a characterization obscures the message these actions send. Through these efforts, the Federal Reserve sought to limit the collateral damage or spillovers caused by the failure of a large financial firm. And these spillovers can take many forms. In a simple example, the failure of a large financial

*The authors thank David Fettig, Art Rolnick, Phil Strahan, Dick Todd, David Torregrossa, and Niel Willardson for their comments.

firm means that other large financial firms might not have loans paid back or otherwise receive funds owed to them by the failing entity. In another case, the failure of a large financial firm could prevent it from providing critical services to financial market participants such as clearing and settlement of financial transactions. In both examples, the shock to financial firms could impair their normal operations, which could injure their customers and the rest of the economy. If the threat of such spillovers presented itself again, and spillovers frequently define a financial crisis, many large-firm creditors would anticipate another extraordinary action or resurrection of a special lending program.

To be sure, Bear Stearns' equity holders—including many employees of the firm—took significant financial losses. This was an appropriate outcome. And doesn't this action sufficiently curtail expectations of government support in the future and thus fix whatever problem such expectations create? The short answer is no. The long answer requires a brief summary of why we care about safety net expansion and TBTF in the first place.

The bigger the government safety net, the more the government shifts risk from creditors of financial firms to taxpayers. With less to lose, creditors have less incentive to monitor financial firms and to discipline risk-taking. Consider an extreme but simple case where nominally uninsured depositors at the largest U.S. commercial banks come to expect complete government support if their bank fails. These depositors have essentially no reason to pull their funds even if these banks take on so much risk that they doom themselves to failure.

Now, this dulling of the depositors' senses has the welcome effect in our example of stopping runs on the largest banks. Such runs can spread into panics and significant economic downturns. The prevention of such ill effects, as noted, motivated the Federal Reserve's safety net expansion and is the reason government support during a crisis should never be categorically ruled out.

But the same stickiness of deposits has a major downside, which is the point of our example. The large bank that fleeing depositors would otherwise close remains open to continue or increase its risky bets. If it does not get lucky, the bank's losses actually grow. In this way, the safety net encourages risk-taking that exposes society to increasing losses, with their associated instability.

Of equal concern, TBTF wastes society's resources. Financial firms allocate capital, and when they work well, they ensure that high-return projects are funded. But excessive government support warps that allocation process, sending too much money to higher-risk projects.

We focused deliberately on depositors in our example; we could have mentioned other short- or long-term holders of interest-bearing investments, insured or uninsured. For it is the reduced vigilance of depositors and other debt holders—lulled by implied government support—that leads large financial institutions to take on too much risk and underlies TBTF. Policymakers face a TBTF problem even if equity holders fully expect to suffer large losses upon failure of the firm in question.

And policymakers faced a TBTF problem even before recent safety net expansions; the

[1] See Stern and Feldman (2004). Mishkin (2006) provides a detailed summary and critique of our book. Analysis published after the book including, but not limited to, Morgan and Stiroh (2005), Rime (2005), and Deng et al. (2007) continues to find evidence of a TBTF problem. For Moody's related assessment of the likelihood that select large banks in the United States would receive government support, see American Banker (2007). Acharya and Yorulmazer (2007) discuss a phenomenon somewhat similar to TBTF.

> The bigger the government safety net, the more the government shifts risk from creditors of financial firms to taxpayers. With less to lose, creditors have less incentive to monitor financial firms and to discipline risk-taking. ... Now, this dulling of the depositors' senses has the welcome effect in our example of stopping runs on the largest banks. ... But the same stickiness of deposits has a major downside. ... The large bank that fleeing depositors would otherwise close remains open to continue or increase its risky bets. If it does not get lucky, the bank's losses actually grow. In this way, the safety net encourages risk-taking that exposes society to increasing losses, with their associated instability.

TBTF problem we described in 2004 has grown since then.[1] Some very large banks and financial firms (e.g., Countrywide Financial) faced significant pressure during the 2007–08 market disturbance. Reporting on these cases, sometimes months before the run on Bear Stearns, had at times explicitly raised the specter of government support. The initial rescue in 2007 and later nationalization of Northern Rock in 2008 by the British government may have contributed to the speculation. Nationalization occurred in a country viewed, like the United States, as having a low propensity to support uninsured creditors and involved a financial institution that supervisors did not apparently treat as if it posed significant systemic risk.

Our concern about the preexisting TBTF problem led us to suggest policy reforms, as detailed in our book. We now turn to summarizing our approach, explaining why it applies to the current situation and why it is preferable to other options.

Managing the Safety Net, Addressing the TBTF Problem

While safety net expansion has increased TBTF concerns, the essence of the problem and underlying cause of TBTF have not changed since 2004: Policymakers support large-bank creditors to contain or eliminate spillover effects, but the support creates an incentive for too much risk-taking in the future. Our approach is straightforward. If spillovers lead to government support, then policymakers who want to reduce creditors' expectations of such support should enact reforms that make spillovers less threatening. Reforms that fail to address this fundamental issue will not change policymaker behavior and will not convince creditors that they face real risk of loss. We provide more details on this approach in excerpted summaries from our book following this section.

So what should policymakers do to address concerns over spillovers? We recommend a three-pronged approach (again, a few more details follow in the excerpts with many more details in the book itself). Policymakers should

☐ reduce their uncertainty about the potential magnitude and cost of spillovers through tools like failure simulation. This "disaster" preparation could either directly lead to more informed actions that reduce spillovers or provide sufficient information to policymakers such that they can reduce support for creditors more confidently. Recent progress in addressing potential sources of instability also fall under this approach. For example, the Federal Reserve Bank of New York played an important role in an effort to improve the processing and settlement of certain derivative transactions while the Federal Deposit Insurance Corporation is taking steps to facilitate large-bank resolution absent extraordinary government support.[2]

☐ augment policies that manage the losses one firm's failure imposes on its counterparties. Policymakers would be more willing to let large firms fail if they thought the fallout would be constrained. Closing firms while they still have some capital left is one example of this approach (although we recommend modifications to the current "prompt closure" regime).

☐ enhance payments system reforms that limit the exposure that payment processing creates for financial firms. The goal of these reforms is to limit the chance that through the payments system, one firm's failure puts the solvency of other firms in doubt.

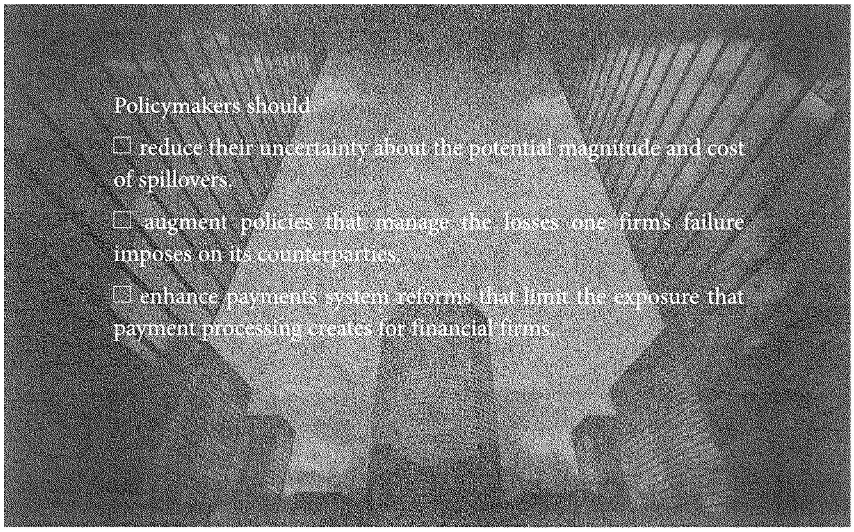
For each of the three strategies, we recommend that policymakers broadly communicate the actions they've taken to reduce expectations of bailouts. We detail the form and benefits of potential communication elsewhere, but the basic point is simple.[3] Creditors will not realize that the spillover threats have declined and will not change behavior unless informed through effective communication.

Put together, this approach offers at least the potential for a positive cycle. Policymakers limit the need for government support by managing underlying sources of instability. Reduced expectations of government support lead to less risk-taking and greater stability.

Our approach contrasts with some other alternatives policymakers might adopt. Some observers suggest that policymakers try to manage the expanded safety net, for example, by extending rules that procedurally make it more difficult for policymakers to support creditors. For example, the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) requires on-the-record support from a variety of policymakers before the FDIC can provide extraordinary support to bank creditors (FDICIA subjected such extraordinary support to other reviews and reforms as well). Policymakers might apply these strictures before providing support to creditors of any financial firm.

While we do not oppose expanding the types of firms covered under the FDICIA regime, we doubt the changes would materially reduce the support provided to large-firm creditors. Why? These procedural changes do not reduce the underlying rea-

[2] These two examples are discussed in Stern and Feldman (2006).
[3] See Stern (2007) and Stern and Feldman (2005a, b).

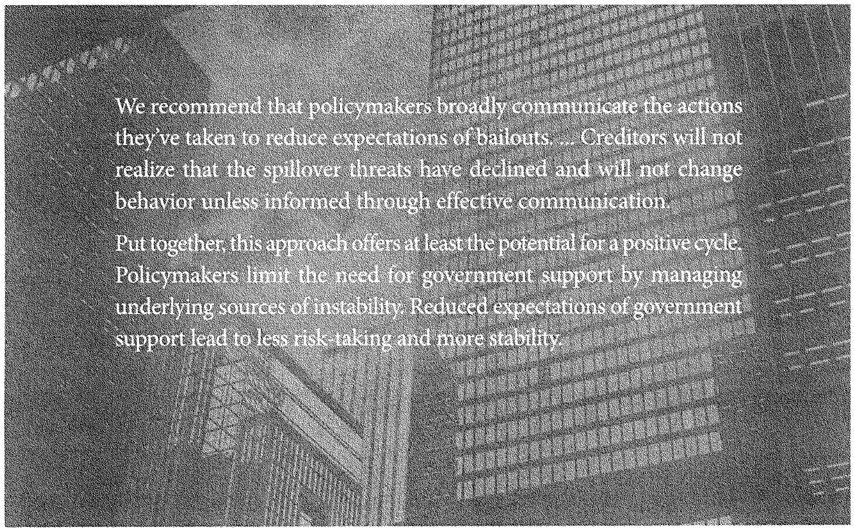


son policymakers provided support in the first place. Consider that the intervention with Bear Stearns involved the type of on-the-record voting and consultations across agencies that FDICIA would mandate.

Pledges of "no bailouts" from policymakers or general prohibitions against bailouts are even less credible unless accompanied by action. And such prohibitions and related jawboning are unwise. Policymakers will face circumstances where, even accounting for distortions to future behavior, the provision of government support has benefits exceeding costs.

Observers also suggest that enhanced supervision, or regulations like those found in Basel II, might curtail the risk-taking of financial firms. While supervision and regulation have an important role to play, these tools may not adequately curtail the risk-taking encouraged by TBTF. Supervisors with discretion, for example, cannot easily limit firm risk-taking before the damage is done. Minimum capital rules also seem one step too slow; that is, regulators cannot readily institute capital rules that link minimum capital levels to current bank risk-taking.

None of this is to suggest that our recommendations are beyond reproach. Some of the specific recommendations we made in 2004 deserve a second look given the events of 2007 and 2008. For example, we suggested that policymakers consider implementing a form of "coinsurance" for uninsured creditors, whereby such creditors must take some loss if their financial firm becomes insolvent. While our proposal differs from the use of coinsurance for insured depositors in England, some observers attribute part of the Northern Rock crisis to this feature, suggesting it deserves reconsideration.



Our recommendations have received more general critiques as well. Some critics focus on the inability of our recommendations, or any recommendations for that matter, to anticipate the source of the next major disruption. These observers argue that the idiosyncratic nature of each financial disruption means that policymakers can, at best, fight the last war and cannot take steps that limit future spillovers. Who could have foreseen, critics might ask, that losses originating in subprime mortgages would ultimately lead to a freeze in the secured funding markets on which Bear Stearns and others relied?

The manner in which Bear Stearns imploded certainly caught most observers and market participants by surprise. But it was no surprise that a failure of one of the largest U.S. investment banks posed spillover risks or raised TBTF concerns. Indeed, Paul Volcker, in the foreword to our book, raised a similar point.

> The implications of [the TBTF book] ... go beyond the world of commercial banking. Witness the officially encouraged (if not officially financed) rescue a few years ago of Long-Term Capital Management, a large but unregulated, secretive, speculative hedge fund. The fact is the relative importance of commercial banks in the United States has been diminishing steadily. Consequently, the lessons and approaches reviewed in *Too Big To Fail* have wider application.[4]

[4] See Stern and Feldman (2004, ix).

[5] Without implying agreement between our proposal and more recent alternatives, other parties have also suggested that policymakers respond to safety net expansion by focusing on broad stability-related issues. For one example, see Nason (2008).

Moreover, we do not need to forecast the event that brings down systemically important firms to make progress against TBTF. Instead, we need to consider the spillovers that failure might cause. Would that failure, for example, eliminate the availability of important clearing and settlement services? If so, what can we do today to facilitate continued provision of those services? Would that failure impose large losses on other firms potentially seen as TBTF? If so, what actions today would help policymakers quickly quantify potential exposures and assess counterparties' management of that risk? Of course, this approach is sure to miss some potential spillovers or risks. While not perfect, this approach is superior to efforts that do not focus on spillover potential or which react to instability once a firm fails.[5]

In conclusion, we think the recommendations we made several years ago have stood the test of time. They offer a structure and specific steps that policymakers can take to better manage the safety net and the TBTF problem. Due to its recent expansion, such safety net management should, in our view, take a considerably higher priority with policymakers than it has in the past. ■

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*Too Big To Fail: The Hazards of Bank Bailouts**

Excerpts from the 2004 book by Gary H. Stern and Ron J. Feldman

EDITOR'S NOTE: The preceding essay in this Annual Report explains the authors' policy recommendations in light of the 2007-08 financial turmoil. This excerpt, from the book's introduction, summarizes the authors' main messages and contrasts their approach with some alternatives.

Despite some progress, our central warning is that *not enough has been done to reduce creditors' expectations of TBTF protection.* Many of the existing pledges and policies meant to convince creditors that they will bear market losses when large banks fail are not credible and therefore are ineffective. Blanket pledges not to bail out creditors are not credible because they do not address the factors that motivate policymakers to protect uninsured bank creditors in the first place. The primary reason why policymakers bail out creditors of large banks is to reduce the chance that the failure of a large bank in which creditors take large losses will lead other banks to fail or capital markets to cease working efficiently.

*Excerpts are reprinted, with permission, from *Too Big To Fail: The Hazards of Bank Bailouts*, Gary H. Stern and Ron J. Feldman, Washington D.C.: Brookings Institution Press, 2004.

Other factors may also motivate governments to protect uninsured creditors at large banks. Policymakers may provide protection because doing so benefits them personally, by advancing their career, for example. Incompetent central planning may also drive some bailouts. Although these factors receive some of our attention and are addressed by some of our reforms, we think they are less important than the motivation to dampen the effect of a large bank failure on financial stability.

Despite the lack of definitive evidence on the moral hazard costs and benefits of increased stability generated by TBTF protection, the empirical and anecdotal data, analysis, and our general impression—imperfect as they are—suggest that TBTF protection imposes net costs. *We also argue that the TBTF problem has grown in severity.* Reasons for this increase include growth in the size of the largest banks, greater concentration of banking system assets in large banks, the greater complexity of bank operations, and, finally, several trends in policy including a spate of recent bailouts.

Our views are held by some, but other respected analysts come to different conclusions. Some observers believe that the net costs of TBTF protection have been overstated, while others note that some large financial firms have failed without their uninsured creditors being protected from losses. However, even analysts who weigh the costs and benefits differently than we do have reason to support many of our reforms. Some of our recommendations, for example, make policymakers less likely to provide TBTF protection and address moral hazard precisely by reducing the threat of instability. Moreover, our review of cases where bailouts were not forthcoming suggests that policymakers are, in fact, motivated by the factors we cite and that our reforms would push policy in the right direction.

A second camp believes that TBTF protection could impose net costs in theory, but in practice legal regimes in the United States—which other developed countries could adopt—make delivery of TBTF protection so difficult as to virtually eliminate the TBTF problem.

We are sympathetic to the general and as yet untested approach taken by U.S. policymakers and recognize that it may have made a dent in TBTF expectations. In the long run, however, we predict that the system will not significantly reduce the probability that creditors of TBTF banks will receive bailouts. The U.S. approach to too big to fail continues to lack credibility.

Finally, a third camp also recognizes that TBTF protection could impose net costs but believes that there is no realistic solution. This camp argues that policymakers cannot credibly commit to imposing losses on the creditors of TBTF banks. The best governments can do, in their view, is accept the net costs of TBTF, albeit with perhaps more resources devoted to supervision and regulation and with greater ambiguity about precisely which institutions and which creditors could receive ex post TBTF support.

Like the third camp, we believe that policymakers face significant challenges in credibly putting creditors of important banks at risk of loss. A TBTF policy based on assertions of "no bailouts ever" will certainly be breached. Moreover, we doubt that any single policy change will dramatically reduce expected protection. But fundamentally we part company with this third camp. *Policymakers can enact a series of reforms that reduce expectations of bailouts for many creditors at many institutions.* Just as policymakers in many countries established expectations of low inflation when few thought it was possible, so too can they put creditors who now expect protection at greater risk of loss.

The first steps for credibly putting creditors of important financial institutions at risk of loss have little to do with too big to fail per se. Where needed, countries should create or reinforce the rule of law, property rights, and the integrity of public institutions. Incorporating the costs of too big to fail into the policymaking process is another important reform underpinning effective management of TBTF expectations. Appointment of leaders who are loath to, or at least quite cautious about, providing TBTF bailouts is also a conceptually simple but potentially helpful step. Better public accounting for TBTF costs and concern about the disposition of policymakers could restrain the personal motivations that might encourage TBTF protection.

With the basics in place, policymakers can take on TBTF expectations more credibly by directly addressing their fear of instability. We recommend a number of options in this regard. One class of reforms tries to reduce the likelihood that the failure of one bank will spill over to another or to reduce the uncertainty that policymakers face when confronted with a large failing bank. These reforms include, among other options, simulating large bank failures and supervisory responses to them, addressing the concentration of payment system activity in a few banks, and clarifying the legal and regulatory framework to be applied when a large bank fails.

Other types of reforms include reducing the losses imposed by bank failure in the first place and maintaining reforms that reduce the exposure between banks that is created by payments system activities. These policies can be effective, in our view, in convincing public policymakers that, if they refrain from a bailout, spillover effects will be manageable. Such policies therefore encourage creditors to view themselves at risk of loss and thus improve market discipline of erstwhile TBTF institutions.

We are less positive about other reforms. A series of reforms that effectively punish policymakers who provide bailouts potentially also could address personal motivational factors. However, we are not convinced that these reforms are workable and believe that they give too much credence to personal motivations as a factor to explain bailouts. The establishment of a basic level of supervision and regulation (S&R) of banks should help to restrict risk-taking, although we view S&R as having important limitations.

Finally, policymakers have a host of other available options once they have begun to address too big to fail more effectively. For example, policymakers could make greater use of discipline by creditors at risk of loss. Bank supervisors could rely more heavily on market signals in their assessment of bank risk-taking. Deposit insurers could use similar signals to set their premiums.

EDITOR'S NOTE: This excerpt, from the book's conclusion, recaps the key points from the book and offers some more details about the authors' proposals.

Three Bottom Lines

FIRST, the TBTF problem has not been solved, is getting worse, and leads, on balance, to wasted resources.

SECOND, although expectations of bailouts by uninsured creditors at large banks cannot be eliminated, they can be reduced and better managed through a credible commitment to impose losses. Policymakers can establish credible commitments by addressing and reducing the motivation for bailouts.

THIRD, although other reforms could help to establish a credible commitment, policymakers should give highest priority to reforms limiting the chance that one bank's failure will threaten the solvency of other banks.

We now provide supporting points for these conclusions.

The Problem

—Even though they are not entitled to government protection, uninsured creditors of a large or systemically important bank believe they will be shielded from at least part of the loss in the event of bank failure.

—Anticipation of government protection warps the amount and pricing of funding that creditors provide a TBTF bank, which, in turn, leads banks to take excessive risk and make poor use of financial capital. The costs of poor resource use resulting from TBTF guarantees appear to be quite high. We believe these costs exceed the benefits of TBTF coverage in most cases, but even those who weigh the costs and benefits differently should be able to support many of our reforms.

—Expectations of TBTF coverage have likely grown and become more strongly held because more banks are now "large" and because a smaller group of banks controls a greater share of banking assets and provides key banking services. In addition, banks have become increasingly complex, making it more difficult for policymakers to predict the fallout from bank failure and to refuse to provide subsequent coverage to uninsured creditors.

—Reforms over the last decade aiming to limit TBTF protection, including those adopted in the United States, are unlikely to be effective in the long run (although they have yet to be tested and may have made a dent in TBTF expectations).

Commitment as the Solution

—In order to change the expectations of bailouts, policymakers must convince uninsured creditors that they will bear losses when large banks fail; changes in policy toward the uninsured must involve a credible commitment.

—A credible commitment to impose losses must be built on reforms directly reducing the incentives that lead policymakers to bail out uninsured creditors.

—Reforms that forbid coverage for the uninsured are not credible because they do not address underlying motivations and are easily circumvented.

—Policymakers have considerable experience in establishing credible commitments in the setting of monetary policy. The experience of monetary policy over the last two decades demonstrates the feasibility of reducing long-held expectations, such as those likely held by uninsured creditors of large banks.

Specific Motivations and Reforms

—The most important motivation for bailouts is to prevent the failure of one bank from threatening other banks, the financial sector, and overall economic performance. To reduce that motivation, we recommend that policymakers in developed countries take three general steps: enact policies and procedures that would reduce their uncertainty about the potential for spillovers; implement policies that directly limit creditor losses or allocate losses such that market discipline increases without an excessive increase in instability; and consider or follow up on payment system reforms that reduce the threat of spillovers.

—Reforms that reduce policymaker uncertainty include the following: increase supervisory planning for, and simulation of, a large bank failure; undertake targeted efforts that reduce the likelihood and cost of failure for banks dominating payment markets; make legal and regulatory adjustments that clarify the treatment of bank creditors at failure; and provide liquidity more rapidly to uninsured creditors.

—Reforms that could address concerns of excessive creditor loss include the following: close institutions before they can impose large losses; require banks in a weak position to increase the financial cushion to absorb losses; impose rules that require creditors to absorb at least some loss when their bank fails (for example, requiring coinsurance); and allow for select coverage of the nominally uninsured while, in general, making it more likely that creditors will suffer losses.

—Although payment system reforms are quite complex in implementation, they are fairly straightforward in concept. One type of reform would eliminate or significantly limit the amount that banks owe each other through the payment system. A second type of reform would establish methods by which a bank owed funds by a failing institution could offset losses (for example, by seizing collateral). ■

PREPARED STATEMENT OF PETER J. WALLISON*

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MAY 6, 2009

Chairman Dodd, Ranking member Shelby and members of the Committee:

I am very pleased to have this opportunity to appear before this Committee to discuss one of the most important issues currently facing our country. The financial crisis will eventually end. The legislation that Congress adopts to prevent a similar event in the future is likely to be with us for 50 years. The terms "too big to fail" and "systemically important" are virtually interchangeable. The reason that we might consider some financial institutions "too big to fail" (TBTF) is that their failure could produce substantial losses or other ill effects elsewhere in the economy—a systemic breakdown of some kind. Thus, if a firm is systemically important, it is also likely to be TBTF.

Understanding the virtual identity between these two terms is essential, because we should not be concerned about business failures unless they can have knock-on effects that could involve the whole economy or the whole financial system. There is real danger that policymakers will confuse efforts to prevent simple business failures with efforts to prevent systemic breakdowns. It is to the credit of the Obama administration that they have not claimed that the bankruptcy of General Motors would cause a systemic breakdown, even though GM's failure could cause widespread losses throughout the economy.

In this testimony, I will discuss the GM case frequently, as a way of testing whether we have adequate concepts for determining whether a financial firm is TBTF. If GM is not TBTF it raises questions whether any nonbank financial firm—no matter how large—is likely to be TBTF. The discussion that follows will specifically address the four issues that Chairman Dodd outlined in his letter of invitation:

- Whether a new regulatory framework is desirable or feasible to prevent institutions from becoming "too big to fail" and posing the risk of systemic harm to the economy and financial system;
- Whether existing financial organizations considered "too big to fail" should be broken up;
- What requirements under a new regulatory framework are necessary to prevent or mitigate risks associated with institutions considered "too big to fail;" for example, new capital and disclosure requirements, as well as restrictions on size, affiliations, transactions, and leverage; and
- How to improve the current framework for resolving systemically important non-bank financial companies.

Is it desirable or feasible to develop a regulatory framework that will prevent firms from becoming TBTF or posing a risk of systemic harm?

A regulatory framework that will prevent companies from becoming TBTF—or causing systemic breakdowns if they fail—is only desirable or feasible if Congress can clearly define what it means by systemic harm or TBTF. If Congress cannot describe in operational terms where to draw the line between ordinary companies and companies that are TBTF—or if it cannot define what it means by "systemic harm"—it would not be good policy to give the power to do so to a regulatory agency. The standard, "I know it when I see it" may work when a systemic event is imminent, but not for empowering a regulatory agency to designate TBTF or systemically important firms in advance. If Congress does so, the likelihood of severe and adverse unintended consequences is quite high.

First, if a firm is designated in advance as TBTF (that is, as systemically important), it will have competitive advantages over other firms in the same industry and other firms with which it competes outside its industry. This is true because the TBTF designation confers important benefits. The most significant of these is probably a lower cost of funding, arising from the market's recognition that the risk of loss is significantly smaller in firms that the government will not allow to fail than it is in firms that might become bankrupt. Lower funding costs will translate inevitably—as it did in the case of Fannie Mae and Freddie Mac—into market dominance and consolidation. Market sectors in which TBTF firms are designated will come to be dominated and controlled by the large TBTF firms, and smaller firms will gradually be squeezed out. Ironically, this will also result in consolidation of risk in fewer

*The views expressed in this testimony are those of the author alone and do not necessarily represent those of the American Enterprise Institute.

and fewer entities, so that the likelihood of big firm collapses becomes greater and each collapse more disruptive. In some markets, status as TBTF has another advantage—the appearance of greater stability than competitors. In selling insurance, for example, firms that are designated as systemically important will be able to tell potential customers that they are more likely to survive and meet their obligations than firms that have not been so designated.

Accordingly, if there is to be a system of designating certain firms as systemically important, it is necessary to be able to state with some clarity what standards the agency must use to make that decision. Leaving the agency with discretion, without definitive standards, would be courting substantial unintended consequences. The natural tendency of a regulator would be to confer that designation broadly. Not only does this increase the regulator's size and power, but it also minimizes the likelihood—embarrassing for the regulator—that a systemic event will be caused by a firm outside the designated circle. Accordingly, the ability of Congress to define what it means by a TBTF firm would be important to maintain some degree of competitive vigor in markets that would otherwise be threatened by the designation of one or more large firms as systemically important and thus TBTF.

Second, apart from competitive considerations, it is necessary to consider the possibility that ordinary business failures might be prevented even though they would not have caused a systemic breakdown if they occurred. Again, the tendency of regulators in close cases will be to exercise whatever power they have to seize and bail out failing firms that might be TBTF. The incentives all fall in this direction. If a systemic breakdown does occur, the regulator will be blamed for failing to recognize the possibility, while if a firm is bailed out that would not in fact have caused a systemic breakdown, hardly anyone except those who are forced to finance it (a matter to be discussed later) will complain. This makes bailouts like AIG much more likely unless Congress provides clear guidelines on how a regulator is to identify a TBTF or systemically important firm.

The stakes for our competitive system are quite high in this case, because bailouts are not only costly, but they have a serious adverse effect on the quality of companies and managements that continue to exist. If firms are prevented from failing when they are not TBTF or otherwise systemically important, all other firms are weakened. This is because our competitive market system improves—and consumers are better served—through the "creative destruction" that occurs when bad managements and bad business models are allowed to fail. When that happens, the way is opened for better managements and business models to take their place. If failures are prevented when they should not be, the growth of the smaller but better managed and more innovative firms will be hindered. Overall, the quality and the efficiency of the firms in any market where this occurs will decline.

Finally, setting up a mechanism in which companies that should be allowed to fail are rescued from failure will introduce significant moral hazard into our financial system. This is true even if the shareholders of a rescued firm are wiped out in the process. Shareholders are not the group whose views we should be worried about when we consider moral hazard. Shareholders, like managements, benefit from risk-taking, which often produces high profits as well as high rates of failure. The class of investors we should be thinking about are creditors, who get no benefits whatever from risk-taking. They are the one who are in the best position to exercise market discipline, and they do so by demanding higher rates of interest when they see greater risk-taking in a potential borrower. To the extent that the wariness of creditors is diminished by the sense that a company may be rescued by the government, there will be less market discipline by creditors and increased moral hazard. The more companies that are added to the list of firms that might be rescued, the greater the amount of moral hazard that has been introduced to the market. The administration's plan clearly provides for possible rescue, since it contemplates either a receivership (liquidation) or a conservatorship (generally a way to return a company to health and normal operations).

Accordingly, although it is exceedingly important for Congress to be clear about when a company may be designated as TBTF, it will be very difficult to do so. This is illustrated by the GM case. GM is one of the largest companies in the U.S.; its liquidation, if it occurs, could cause a massive loss of jobs not only at GM itself but at all the suppliers of tires, steel, fabrics, paints, and glass that go into making a car, all the dealers that sell the cars, all the banks that finance the dealers, and all the communities, localities, and states throughout the U.S. that depend for their revenues on the taxes paid by these firms and their employees. In other words, there would be very serious knock-on effects from a GM failure. Yet, very few people are suggesting that GM is TBTF in the same way that large financial institutions are said to be TBTF. What is the difference?

This question focuses necessary attention on two questions: what it means to be TBTF and the adequacy of the bankruptcy system to resolve large firm failures. If GM is not TBTF, why not? The widespread losses throughout the economy would certainly suggest a systemic effect, but if that is not what we mean by a systemic effect, what is it that we are attempting to prevent? On the other hand, if that *is* what we mean by a systemic effect, should the government then have the power to resolve *all* large companies—and not just financial firms—outside the bankruptcy system? The fact that GM may ultimately go into bankruptcy and be reorganized under Chapter 11 suggests that the bankruptcy system is adequate for large financial nonbank institutions, unless the propensity of nonbank financial institutions to create systemic breakdowns can be distinguished from that of operating companies like GM. Later in this testimony, I will argue that this distinction cannot be sustained.

The forgoing discussion highlights the difficulty of defining both a systemic event and a systemically important or TBTF firm, and also the importance of defining both with clarity. Great harm could come about if Congress—without establishing any standards—simply authorizes a regulatory agency to designate TBTF companies, and authorizes the same or another agency to rescue the companies that are so designated. My answer, then, to the Committee's first question is that—given the great uncertainty about (i) what is a systemic event, (ii) how to identify a firm that is TBTF, and (iii) what unintended consequences would occur if Congress were not clear about these points—it would be neither desirable nor feasible to set up a structure that attempts to prevent systemic harm to the economy by designating systemically important firms and providing for their resolution by a government agency rather than through the normal bankruptcy process.

Nevertheless, it would not be problematic to create a body within the executive branch that generally oversees developments in the market and has the responsibility of identifying systemic risk, wherever it might appear to be developing within the financial sector. The appropriate body to do this would be the President's Working Group (PWG), which consists of most of the major Federal financial supervisors and thus has a built-in market-wide perspective. The PWG currently functions under an executive order, but Congress could give it a formal charter as a government agency with responsibility for spotting systemic risk as well as coordinating all financial regulatory activity in the executive branch.

Breaking up systemically significant or TBTF firms

There could be constitutional objections to a breakup—based on the takings and due process—unless there are clear standards that justify it. I am not a constitutional lawyer, but a fear that a company *might* create a systemic breakdown *if* it fails does not seem adequate to take the going concern value of a large company away from its shareholders. As we know from antitrust law, firms can be broken up if they attempt to monopolize and under certain other limited circumstances. But in those cases, there are standards for market dominance and for the requisite intent to use it in order to create a monopoly—and both are subject to rigorous evidentiary standards. As I pointed out above, there are no examples that define a systemic risk or why one company might cause it and another might not. Accordingly, providing authority for a government agency to break up companies that are deemed to be systemically risky could be subject to constitutional challenge.

In addition, as a matter of policy, breaking up large institutions would seem to create many more problems than it would solve. First, there is the question of breaking up successful companies. If companies have grown large because they are successful competitors, it would be perverse to penalize them for that, especially when we aren't very sure whether they would in fact cause a systemic breakdown if they failed. In addition, our economy is made up of large as well as small companies. Large companies generally need large financial institutions to meet their financing needs. This is true whether we are talking about banks, securities firms, insurance companies, finance companies, or others. Imagine a large oil company trying to insure itself against property or casualty losses with a batch of little insurance companies. The rates it would have to pay would be much higher, if it could get full coverage at all. Or imagine the same oil company trying to pay its employees worldwide without a large U.S. bank with worldwide operations, or the same company trying to place hundreds of millions of dollars in commercial paper each week through small securities firms without a global reach.

There are also international competitive factors. If other countries did not break up their large financial institutions, our large operating companies would probably move their business to the large foreign financial institutions that could meet their needs.

Leaving our large operating companies without an alternative source of funding could also be problematic, in the event that a portion of the financial markets becomes unavailable—either in general or for a specific large firm. The market for asset-backed securities closed down in the summer of 2007 and hasn't yet reopened. Firms that used to fund themselves through this market were then compelled to borrow from banks or to use commercial paper or other debt securities. This is one of the reasons that the banks have been reluctant to lend to new customers; they have been saving their cash for the inevitable withdrawals by customers that had been paying over many years for lines of credit that they could use when they needed emergency funds. The larger firms might not have been able to find sufficient financial resources if the largest banks or other financial institutions had been broken up.

The breakup of large financial firms would create very great risks for our economy, with few very benefits, especially when we really have no idea whether any particular firm that might be broken up actually posed a systemic risk or would have created a systemic breakdown if it had failed.

Are there regulatory actions we can take to mitigate or prevent systemic risk caused by TBTF companies?

For the reasons outlined below, it is my view that only the failure of a large commercial bank can create a systemic breakdown, and that nonbank financial firms—even large ones—are no more likely than GM to have this effect. For that reason, I would not designate any nonbank financial institution (other than a commercial bank) as systemically important, nor recommend safety and soundness supervision of any financial institutions other than those where market discipline has been impaired because they are backed by the government, explicitly or implicitly.

The track record of banking regulation is not good. In the last 20 years we have had two very serious banking crises, including the current one, when many banks failed and adversely affected the real economy. The amazing thing is that—despite this record of failure—the first instinct of many people in Washington it is to recommend that safety and soundness regulation be extended to virtually the entire financial system through the regulation and supervision of systemically important (or TBTF) firms. After the S&L debacle and the failure of almost 1600 commercial banks at the end of the 1980s and the beginning of the 1990s, Congress adopted the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA), a tough regulatory statute that many claimed would put an end to banking crises. Yet today we are in the midst of a banking crisis that some say could be as bad as that of the Great Depression, perhaps even worse. If banks were not backed by the government—through deposit insurance, a lender of last resort, and exclusive access to the payment system—their risk-taking would probably be better controlled by market discipline exerted by creditors. But given the government support they receive, and its effect in impairing market discipline, regulation and supervision of their safety and soundness is the only sensible policy.

Nevertheless, there are some reasonable steps that could be taken to improve bank regulation and to mitigate the possibility that the failure of a large bank might in the future have a significant adverse effect on other economic actors. For the reasons outlined above, I don't think that restrictions on size are workable, and they are likely to be counterproductive. The same thing is true of restrictions on affiliations and transactions, both of which will impose costs, impair innovation, and reduce competition. Since we have no idea whether any particular firm will cause a systemic breakdown if it fails, it does not seem reasonable to impose all these burdens on our financial system for very little demonstrable benefit. Restrictions on leverage can be effective, but I see them as an element of capital regulation, as discussed below.

A good example of the unintended consequences of imposing restriction on affiliations is what has happened because of the restrictions on affiliations between banks and commercial firms. As the Committee knows, the Bank Holding Company Act provides that a bank cannot be affiliated with any activity that is not "financial in nature." For many years the banking industry has used this to protect themselves against competition by organizations outside banking, most recently competition from Wal-Mart. They and others have argued that the separation of banking and commerce (actually, after the Gramm-Leach-Bliley Act was adopted in 1999, the principle became the separation of finance and commerce) was necessary to prevent the extension of the so-called Federal "safety net" to commercial firms. That idea has now backfired on the banks, because by keeping commercial firms out of the business of investing in banks, they have made it very difficult for banks to raise the capital they need in the current financial crisis. We should not impose restrictions on affiliations unless there is strong evidence that a particular activity is harmful. All such restrictions turn out to be restrictions on competition and ultimately hurt consumers, who must pay higher prices and get poorer services. Because Wal-Mart was unable to compete with banks, many Wal-Mart customers pay more for banking services than they should, and many of them can't get banking services at all.

Nevertheless, capital requirements can be used effectively to limit bank risk-taking and growth, and this would be far preferable to other kinds of restrictions. It would make sense to raise bank capital requirements substantially. The only reason banks are able to keep such low capital ratios is that they have government backing. In addition, capital requirements should be raised as banks grow larger, which is in part the result of higher asset values that accompany a growing market. An increase of capital requirements with size would also have the salutary effect of dampening growth by making it more expensive, and it would provide a strong countercyclical brake on the development of asset bubbles. Higher capital requirements as banks grow larger would also induce them to think through whether all growth is healthy, and what lines of business are most suitable and profitable. In addition, as bank profits grow, capital requirements or reserves should also be increased in order to prepare banks for the inevitable time when growth will stop and the decline sets in. Before the current crisis, 10 percent risk-based capital was considered well-capitalized, but it is reasonably apparent now that this level was not high enough to withstand a serious downturn.

In addition, regulation should be used more effectively to enhance market discipline. Bank regulators are culturally reluctant to release information on the banks they supervise. This too often leaves market participants guessing about the risks the banks are taking—and wrongly assuming that the regulators are able to control these risks. To better inform the markets, the regulators, working with bank analysts, should develop a series of metrics or indicators of risk-taking that the banks should be required to publish regularly—say, once every month. This would enable the markets to make more informed judgments about bank risk-taking and enhance the effectiveness of market discipline. Rather than fighting market discipline, bank regulators should harness it in this way to supplement their own examination work.

Finally for larger commercial banks, especially the ones that might create systemic risk if they failed, it would be a good idea to require the issuance of a form of tradable subordinated debt that could not by law be bailed out. The holders of this debt would have a strong interest in better disclosure by banks and could develop their own indicators of risk-taking. As the market perceived that a bank was taking greater risk, the price of these securities would fall and its yield would rise. The spread of that yield over Treasuries would provide a continuing strong signal to a bank's supervisor that the market foresees trouble ahead if the risk-taking continues. Using this data, the supervisor could clamp down on activities that might result in major losses and instability at a later time.

Can we improve the current framework for resolving systemically important nonbank financial firms?

The current framework for resolving all nonbank financial institutions is the bankruptcy system. Based on the available evidence, there is no reason to think that it is inadequate for performing this task or that these institutions need a government-administered resolution system. Because of the special functions of banks, a special system for resolving failed banks is necessary, but as discussed below banks are very different from other financial institutions. The creation of a government-run system will increase the likelihood of bailouts of financial institutions and prove exceedingly costly to the financial industry or to the taxpayers, who are likely to end up paying the costs.

The underlying reason for the administration's proposal for a special system of resolution for nonbank financial institutions is the notion that the failure of a large financial firm can create a systemic breakdown. Thus, although many people look at the administration's resolution plan as a means to liquidate systemically important or TBTF firms in an orderly way, it is more likely to be a mechanism for bailing out these firms so that they will not cause a systemic breakdown. The Fed's bailout of AIG is the paradigm for this kind of bailout, which sought to prevent market disruption by using taxpayer funds to prevent losses to counterparties and creditors.

As support for its proposal, the administration cites the "disorderly" bailout of AIG and the market's panicked reaction to the failure of Lehman Brothers. On examination, these examples turn out to be misplaced. Academic studies after both events show that the market's reaction to both was far more muted than the administration suggests. Moreover, the absence of any recognizable systemic fallout from the Lehman bankruptcy—with the exception of a single money market mutual fund, no other firm has reported or shown any serious adverse effects—provides strong evidence that in normal market conditions the reaction to Lehman's failure would not have been any different from the reaction to the failure of any large company. These facts do not support the notion that a special resolution mechanism is necessary for any financial institutions other than banks.

The special character of banks. Although the phrase "shadow banking" is thrown around to imply a strong similarity between commercial banks and other financial institutions such as securities firms, hedge funds, finance companies or insurers, the similarity is illusory in most important respects. Anyone can lend; only banks can take deposits. Deposit-taking—not lending—is the essence of banking. By offering deposits that can be withdrawn on demand or used to pay others through an instruction such as a check, banks and other depository institutions have a special and highly sensitive role in our economy. If a bank should fail, its depositors are immediately deprived of the ready funds they expected to have available for such things as meeting payroll obligations, buying food, or paying rent. Banks also have deposits with one another, and small banks often have substantial deposits in larger banks in order to facilitate their participation in the payment system.

Because of fear that a bank will not be able to pay in full on demand, banks are also at risk of "runs"—panicky withdrawals of funds by depositors. Runs can be frightening experiences for the public and disruptive for the financial system. The unique attribute of banks—that their liabilities (deposits) may be withdrawn on demand-is the reason that banks are capable of creating a systemic event if they fail. If bank customers cannot have immediate access to their funds, or if a bank cannot make its scheduled payments to other banks, the others can also be in trouble, as can their customers. That is the basis for a true systemic event. The failure of a bank can leave its customers and other banks without the immediate funds they are expecting to use in their daily affairs. The failure of a large bank can cause other failures to cascade through the economy, theoretically creating a systemic event. I say "theoretically" because the failure of a large bank has never in modern times caused a systemic event. In every case where a large bank might have failed and caused a systemic breakdown, it has been rescued by the FDIC. The most recent such case—before the current crisis—was the rescue of Continental Illinois Bank in 1984.

The foregoing description of how a large bank's failure can cause a systemic breakdown raises a number of questions about whether and how a systemic breakdown can be caused by the failure of a *nonbank* financial institution. These financial institutions—securities firms, hedge funds, insurance companies, finance companies, and others—tend to borrow for a specific term or to borrow on a collateralized basis. In this respect, they are just like GM. In common with all other large commercial borrowers, nonbank financial institutions also fund themselves with short-term commercial paper. Unless they are extremely good credits, this paper is collateralized. If they should fail, their creditors can recoup their losses by selling the collateral. Their failures, then, do not cause any immediate cash losses to their lenders or counterparties. Losses occur, to be sure, but in the same way that losses will occur if GM should file for bankruptcy—those who suffer them do not lose the immediate access to cash that they were expecting to use for their current obligations, and thus there is rarely any contagion in which the losses of one institution are passed on to others in the kind of cascade that can occur when a bank fails. It is for this reason that describing the operations of these nondepository institutions as "shadow banking" is so misleading. It ignores entirely the essence of banking—which is not simply lending—and how it differs from other kinds of financial activity.

Because of the unique effects that are produced by bank failures, the Fed and the FDIC have devised systems for reducing the chances that banks will not have the cash to meet their obligations. The Fed lends to healthy banks (or banks it considers healthy) through what is called the discount window—making cash available for withdrawals by worried customers—and the FDIC will normally close insolvent banks just before the weekend and open them as healthy, functioning new institutions on the following Monday. In both cases, the fears of depositors are allayed and runs seldom occur. The policy question facing Congress is whether it makes sense to extend FDIC bank resolution processes to other financial institutions. For the reasons outlined above, there is virtually no reason to do so for financial institutions other than banks.

Before proceeding further, it is necessary to correct some misunderstandings about the effectiveness of the FDIC, which has been presented by the administration and others as a paragon in the matter of resolving banks. The facts suggest a different picture, and should cause policymakers to pause before authorizing the FDIC or any other agency to take over the resolution of nonbank financial institutions. The FDIC and the other bank regulators function under a FDICIA requirement for prompt corrective action (PCA) when a bank begins to weaken. The objective of PCA is to give the FDIC and other supervisors the authority to close a bank before it actually becomes insolvent, thus saving both the creditors and the FDIC insurance fund from losses. It has not worked out that way. Thus far in 2009, there have been 32 reported bank failures for which the FDIC has reported its losses. In these cases, the losses on assets have ranged from 8 percent to 45 percent, with both an average and a weighted average of 28 percent. In 2008, there were 25 bank failures, with losses averaging 25 percent. There may be reasons for these extraordinary losses, including the difficulty of dealing with the primary Federal or state regulator, but the consistency of the losses in the face of the PCA requirement casts some doubt on the notion that even the best Federal resolution agency—dealing with failing insurance companies, securities firms, hedge funds and others—would be able to do a more efficient job than a bankruptcy court.

While the failures of the FDIC as a resolution agency are not well known, the weakness of the bankruptcy system as a way of resolving failing financial institutions has been exaggerated. The evidence suggests that the Lehman's bankruptcy filing—as hurried as it was—has resulted in a more orderly resolution of the firm than AIG's rescue by the Fed. As reported by professors Kenneth Ayotte and David Skeel, things moved with dispatch after Lehman filed for bankruptcy under Chapter 11 of the code. Thus, as Ayotte and Skeel note:

> Lehman filed for Chapter 11 on September 15, 2008. Three days later, Lehman arranged a sale of its North American investment banking business to Barclays, and the sale was quickly approved by the court after a lengthy hearing . . . Its operations in Europe, the Middle East, and Asia were bought by Nomura, a large Japanese brokerage firm. By September 29, Lehman had agreed to sell its investment management business to two private equity firms.[1]

Chapter 11 allows bankrupt debtors to remain in possession of their assets and continue operating while their creditors reach agreement on how best to divide up the firm's assets. It also permits firms to return to financial health if their creditors conclude that this is more likely to result in a greater recovery than a liquidation. In other words, Chapter 11 provides a kind of bailout mechanism, but one that is under the control of the creditors-the parties that have suffered the real losses. Neither the taxpayers nor any other unrelated party is required to put in any funds to work out the failed company.

There are many benefits of a bankruptcy that are not likely to come with a system of resolution by a government agency. These include certainty about the rights of the various classes of creditors; a well-understood and time-tested set of procedures; the immediate applicability of well-known stay provisions that prevent the disorderly seizure of collateral; equally well-known exemptions from stay provisions so that certain creditors holding short-term obligations of the failed company can immediately sell their collateral; and well worked out rules concerning when and under what circumstances preferential payments to certain creditors by the bankrupt firm have to be returned to the bankrupt estate.

Still, the examples of Lehman Brothers and AIG have had a significant impact on the public mind and a hold on the attitudes of policymakers. It is important to understand these cases, and the limited support they provide for setting up a system for resolving large nonbank financial institutions.

The market reactions after the failures of AIG and Lehman are not examples of systemic risk. Secretary Geithner has defended his proposal for a resolution authority by arguing that, if it had been in place, the rescue of AIG last fall would have been more "orderly" and the failure of Lehman Brothers would not have occurred. Both statements might be true, but would that have been the correct policy outcome? Recall that the underlying reason for the administration's plan to designate and specially regulate systemically important firms is that the failure of any such company would cause a systemic event—a breakdown in the financial system and perhaps the economy as a whole. If this is the test, it is now reasonably clear that neither AIG nor Lehman is an example of a large firm creating systemic risk or a systemic breakdown.

In a widely cited paper and a recent book, John Taylor of Stanford University concluded that the market meltdown and the freeze in interbank lending that followed the Lehman and AIG events in mid-September 2008 did not begin until the Treasury and Fed proposed the initial Troubled Asset Relief Program later in the same

[1] Kenneth Ayotte and David A. Skeel, Jr., "Bankruptcy or Bailouts?" (March 2, 2009). U of Penn, Inst for Law & Econ Research Paper No. 09–11; Northwestern Law & Econ Research Paper No. 09–05, pp 9–10. Available at SSRN: *http://ssrn.com/abstract=1362639*.

week, an action that implied that financial conditions were much worse than the markets had thought.[2] Taylor's view, then, is that AIG and Lehman were not the cause of the meltdown that occurred later that week. Since neither firm was a bank or other depository institution, this analysis is highly plausible. Few of their creditors were expecting to be able to withdraw funds on demand to meet payrolls or other immediate expenses, and later events and data have cast doubt on whether the failure of Lehman or AIG (if it had not been bailed out) would have caused the losses that many have claimed.

In another analysis after the Lehman and AIG events, Ayotte and Skeel concluded that the evidence suggests "at a minimum, that the widespread belief that the Lehman Chapter 11 filing was the singular cause of the collapse in credit that followed is greatly overstated."[3] They also show that that there was very little difference between the market's reaction to Lehman and to AIG, although the former went into bankruptcy and the latter was rescued.

Advocates of broader regulation frequently state that financial institutions are now "interconnected" in a way that they have not been in the past. This idea reflects a misunderstanding of the functions of financial institutions, all of which are intermediaries in one form or another between sources of funds and users of funds. In other words, they have always been interconnected in order to perform their intermediary functions. The right question is whether they are now interconnected in a way that makes them more vulnerable to the failure of one or more institutions than they have been in the past, and there is no evidence of this. The discussion below strongly suggests that there was no need to rescue AIG and that Lehman's failure was problematic only because the market was in an unprecedentedly fragile and panicky state in mid-September 2008.

This distinction is critically important. If the market disruption that followed Lehman's failure and AIG's rescue was not caused by these two events, then identifying systemically important firms and supervising them in some special way serves no purpose. Even if the failure of a systemically important firm could be prevented through regulation—a doubtful proposition in light of the current condition of the banking industry—that in itself would not prevent the development of a fragile market, or its breakdown in the aftermath of a serious shock. The weakness or failure of individual firms is not the source of the problem. In terms of a conventional systemic risk analysis, the chaos that followed was not the result of a cascade of losses flowing through the economy as a result of the failure of Lehman or the potential failure of AIG. In the discussion that follows, I show first that Lehman did not cause, and AIG would not have caused, losses to other firms that might have made them systemically important. I then show that both are examples of nonbank financial firms that can be successfully resolved—at no cost to the taxpayers—through the bankruptcy process rather than a government agency.

AIG Should Have Been Sent into Bankruptcy. AIG's quarterly report on Form 10–Q for the quarter ended June 30, 2008—the last quarter before its bailout in September—shows that the $1 trillion company had borrowed, or had guaranteed subsidiary borrowings, in the amount of approximately $160 billion, of which approximately $45 billion was due in less than 1 year.[4] Very little of this $45 billion was likely to be immediately due and payable, and thus, unlike a bank's failure, AIG's failure would not have created an immediate cash loss to any significant group of lenders or counterparties. Considering that the international financial markets have been estimated at more than $12 trillion, the $45 billion due within a year would not have shaken the system. Although losses would eventually have occurred to all those who had lent money to or were otherwise counterparties of AIG, these losses would have occurred over time and been worked out in a normal bankruptcy proceeding, after the sale of its profitable insurance subsidiaries.

Many of the media stories about AIG have focused on the AIG Financial Products subsidiary and the obligations that this group assumed through credit default swaps (CDSs). However, it is highly questionable whether there would have been a significant market reaction if AIG had been allowed to default on its CDS obligations in September 2008. CDSs—although they are not insurance—operate like insurance; they pay off when there is an actual loss on the underlying obligation that is protected by the CDS. It is much the same as when a homeowners' insurance company

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[2] John B. Taylor, "The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong" Working Paper 14,631, National Bureau of Economic Research, Cambridge, MA, January 2009), 25ff, available at *www.nber.org/papers/w14631* (accessed April 8, 2009).John B. Taylor, *Getting Off Track: How Government Actsion and Ingterventions Caused, Prolonged, and Worsened the Financial Crisis,* Hoover Institution Press, 2009, pp 25–30.

[3] Ayotte and Skeel, p 27.

[4] American International Group, 10–Q filing, June 30, 2008, 95–101.

goes out of business before there has been a fire or other loss to the home. In that case, the homeowner must go out and find another insurance company, but he has not lost anything except the premium he has paid. If AIG had been allowed to default, there would have been little if any near-term loss to the parties that had bought protection; they would simply have been required to go back into the CDS market and buy new protection. The premiums for the new protection might have been more expensive than what they were paying AIG, but even if that were true, many of them had received collateral from AIG that could have been sold in order to defray the cost of the new protection. CDS contracts normally require a party like AIG that has sold protection to post collateral as assurance to its counterparties that it can meet its obligations when they come due.

This analysis is consistent with the publicly known facts about AIG. In mid-March, the names of some of the counterparties that AIG had protected with CDSs became public. The largest of these counterparties was Goldman Sachs. The obligation to Goldman was reported as $12.9 billion; the others named were Merrill Lynch ($6.8 billion), Bank of America ($5.2 billion), Citigroup ($2.3 billion), and Wachovia ($1.5 billion). Recall that the loss of CDS coverage—the obligation in this case—is not an actual cash loss or anything like it; it is only the loss of coverage for a debt that is held by a protected party. For institutions of this size, with the exception of Goldman, the loss of AIG's CDS protection would not have been problematic, even if they had in fact already suffered losses on the underlying obligations that AIG was protecting. Moreover, when questioned about what it would have lost if AIG had defaulted, Goldman said its losses would have been "negligible." This is entirely plausible. Its spokesman cited both the collateral it had received from AIG under the CDS contracts and the fact that it had hedged its AIG risk by buying protection against AIG's default from third parties.

Also, as noted above, Goldman only suffered the loss of its CDS coverage, not a loss on the underlying debt the CDS was supposed to cover. If Goldman, the largest counterparty in AIG's list, would not have suffered substantial losses, then AIG's default on its CDS contracts would have had no serious consequences in the market. This strongly suggests that AIG could have been put into bankruptcy with no costs to the taxpayers, and if it had not been rescued its failure would not have caused any kind of systemic risk. On the other hand, it is highly likely that a systemic regulator would have rescued AIG—just as the Fed did—creating an unnecessary cost for U.S. taxpayers and an unnecessary windfall for AIG's counterparties.

Lehman's Failure Did Not Cause a Systemic Event. Despite the contrary analyses by Taylor, Skeel, and Ayotte, it is widely believed that Lehman's failure proves that a large company's default, especially when it is "interconnected" through CDSs, can cause a systemic breakdown. If that were true, then it might make sense to set up a regulatory structure to prevent a failure by a systemically important company. But it is not true. Even if we accept that Lehman's failure somehow precipitated the market freeze that followed, that says nothing about whether, in normal market conditions, Lehman's failure would have caused the same market reaction. In fact, analyzed in light of later events, it is likely that Lehman's bankruptcy would have had no substantial adverse effect on the financial condition of its counterparties. In other words, the failure would not—in a normal market—have caused the kind of cascade of losses that defines a systemic breakdown.

After Lehman's collapse, there is only one example of any other organization encountering financial difficulty because of Lehman's default. That example is the Reserve Fund, a money market mutual fund that held a large amount of Lehman's commercial paper at the time Lehman defaulted. This caused the Reserve Fund to "break the buck"—to fail to maintain its share price at exactly one dollar—and it was rescued by the Treasury and Fed. The need to rescue the Reserve Fund was itself another artifact of the panicky conditions in the market at the time. That particular fund was an outlier among all funds in terms of its risks and returns.[5] The fact that there were no other such cases, among money market funds or elsewhere, demonstrates that the failure of Lehman in a calmer and more normal market would not have produced any of the significant knock-on effects that are the hallmark of a systemic event. It is noteworthy, in this connection, that a large securities firm, Drexel Burnham Lambert, failed in 1990 and went into bankruptcy without any serious systemic effects. In addition, when Lehman's CDS obligations were resolved a month after its bankruptcy, they were all resolved by the exchange of only $5.2 billion among all the counterparties, a minor sum in the financial markets and certainly nothing that in and of itself would have caused a market meltdown.

So, what relationship did Lehman's failure actually have to the market crisis that followed? The problems that were responsible for the crisis had actually begun more

[5] Ayotte and Skeel, Op. Cit., p 25, note 73.

than a year earlier, when investors lost confidence in the quality of securities—particularly mortgage-backed securities (MBS)—that had been rated AAA by rating agencies. As a result, the entire market for asset-backed securities of all kinds became nonfunctional, and these assets simply could not be sold at anything but a distress price. With large portfolios of these securities on the balance sheets of most of the world's largest financial institutions, the stability and even the solvency of these institutions—banks and others—were in question.

In this market environment, Bear Stearns was rescued through a Fed-assisted sale to JPMorgan Chase in March 2008. The rescue was not necessitated because failure would have caused substantial losses to firms "interconnected" with Bear, but because the failure of a large financial institution in this fragile market environment would have caused a further loss of confidence—by investors, creditors, and counterparties—in the stability of *other* financial institutions. This phenomenon is described in a 2003 article by professors George Kaufman and Kenneth Scott, who write frequently on the subject of systemic risk. They point out that when one company fails, investors and counterparties look to see whether the risk exposure of their own investments or counterparties is similar: "The more similar the risk-exposure profile to that of the initial [failed company] economically, politically, or otherwise, the greater is the probability of loss and the more likely are the participants to withdraw funds as soon as possible. The response may induce liquidity and even more fundamental solvency problems. This pattern may be referred to as a 'common shock' or 'reassessment shock' effect and represents *correlation without direct causation.*"[6] In March 2008, such an inquiry would have been very worrisome; virtually all large financial institutions around the world held, to a greater or lesser extent, the same assets that drove Bear toward default.

Although the rescue of Bear temporarily calmed the markets, it led to a form of moral hazard—the belief that in the future governments would rescue all financial institutions larger than Bear. Market participants simply did not believe that Lehman, just such a firm, would not be rescued. This expectation was shattered on September 15, 2008, when Lehman was allowed to fail, leading to exactly the kind of reappraisal of the financial health and safety of other institutions described by Kaufman and Scott. That is why the market froze at that point; market participants were no longer sure that the financial institutions they were dealing with would be rescued, and thus it was necessary to examine the financial condition of their counterparties much more carefully. For a period of time, the world's major banks would not even lend to one another. So what happened after Lehman was not the classic case of a large institution's failure creating losses at others—the kind of systemic event that has stimulated the administration's effort to regulate systemically important firms. It was caused by the weakness and fragility of the financial system as a whole that began almost a year earlier, when the quality of MBS and other asset-backed securities was called into question and became unmarketable. If Lehman should have been bailed out, it was not because its failure would have caused losses to others—the reason for the designation of systemically important or TBTF firms—but because the market was in an unprecedented condition of weakness and fragility. The correct policy conclusion arising out of the Lehman experience is not to impose new regulation on the financial markets, but to adopt policies that will prevent the correlation of risks that created a weak and fragile worldwide financial market well before Lehman failed.

Thus, Lehman didn't cause, and AIG (if it had been allowed to fail) wouldn't have caused, a systemic breakdown. They are not, then, examples of why it is necessary to set up a special resolution system, outside the bankruptcy process, to resolve them or other large nonbank financial firms. Moreover, and equally important, a focus on Lehman and AIG as the supposed sources of systemic risk is leading policymakers away from the real problem, which is the herd and other behavior that causes all financial institutions to become weak at the same time.

The funding question. There is also the question of how a resolution system of the kind the administration has proposed would be financed. Funds from some source are always required if a financial institution is either resolved or rescued. The resolution of banks is paid for by a fund created from the premiums that banks pay for deposit insurance; only depositors are protected, and then only up to $250,000. Unless the idea is to create an industry—supported fund of some kind for liquidations or bailouts, the administration's proposal will require the availability of taxpayer funds for winding up or bailing out firms considered to be systemically important. If the funding source is intended to be the financial industry itself, it would have to entail a very large levy on the industry. The funds used to bail out

[6] George G. Kaufman and Kenneth Scott, "What Is Systemic Risk and Do Regulators Retard or Contribute to It?" *The Independent Review* 7, no. 3 (Winter 2003). Emphasis added.

AIG alone are four times the size of the FDIC fund for banks and S&Ls when that fund was at its highest point—about $52 billion in early 2007. If the financial industry were to be taxed in some way to create such a fund, it would put all of these firms—including the largest—at a competitive disadvantage *vis-a-vis* foreign competitors and would, of course, substantially raise consumer prices and interest rates for financial services.

The 24 percent loss rate that the FDIC has suffered on failed banks during the past year should provide some idea of what it will cost the taxpayers to wind up or (more likely) bail out failed or failing financial institutions that the regulators flag as systemically important. The taxpayers would have to be called upon for most, if not all, of the funds necessary for this purpose. So, while it might be attractive to imagine the FDIC will resolve financial institutions of all kinds more effectively than the way it resolves failed or failing banks, a government-run resolution system opens the door for the use of taxpayer funds to unnecessary bailouts of companies that would not cause systemic breakdowns if they were actually allowed to fail.

Sometimes it is argued that bank holding companies (BHCs) must be made subject to the same resolution system as the banks themselves, but there is no apparent reason why this should be true. The whole theory of separating banks and BHCs is to be sure that BHCs could fail without implicating or damaging the bank, and this has happened frequently. If a holding company of any kind fails, its subsidiaries can remain healthy, just as the subsidiaries of a holding company can go into bankruptcy without the parent becoming insolvent. If a holding company with many subsidiaries regulated by different regulators should go into bankruptcy, there is no apparent reason why the subsidiaries cannot be sold off if they are healthy and functioning, just as Lehman's broker-dealer and other subsidiaries were promptly sold off after Lehman declared bankruptcy. If there is some conflict between regulators, these—like conflicts between creditors—would be resolved by the bankruptcy court.

Moreover, if the creditors, regulators, and stakeholders of a company believe that it is still a viable entity, Chapter 11 of the Bankruptcy Code provides that the enterprise can continue functioning as a "debtor in possession" and come out of the proceeding as a slimmed-down and healthy business. Several airlines that are functioning today went through this process, and—ironically—some form of prepackaged bankruptcy that will relieve the auto companies of their burdensome obligations is one of the options the administration is considering for that industry. (Why bankruptcy is considered workable for the auto companies but not financial companies is something of a mystery.) In other words, even if it were likely to be effective and efficient—which is doubtful—a special resolution procedure for financial firms is unlikely to achieve more than the bankruptcy laws now permit.

In addition to increasing the likelihood that systemically important firms will be bailed out by the government, the resolution plan offered by the administration will also raise doubts about priorities among lenders, counterparties, shareholders, and other stakeholders when a financial firm is resolved or rescued under the government's control. In bankruptcy, the various classes of creditors decide, under the supervision of a court, how to divide the remaining resources of the bankrupt firm, and whether the firm's business and management are sufficiently strong to return it to health. In an FDIC resolution, insured depositors have a preference over other creditors, but it is not clear who would get bailed out and who would take losses under the administration's plan. One of the dangers is that politically favored groups will be given preferences, depending on which party is in power at the time a systemically important firm is bailed out.

Perhaps even more important, the FDIC's loss rate even under PCA demonstrates that the closing down of losing operations is slow and inefficient when managed by the government. Under the bankruptcy laws, the creditors have strong incentives to close a failing company and stop its losses from growing. As the FDIC experience show, government agencies have a tendency to forbear, allowing time for the losses in a failing firm to grow even greater.

Given that bailouts are going to be much more likely than liquidations, especially for systemically important firms, a special government resolution or rescue process will also undermine market discipline and promote more risk-taking in the financial sector. In bailouts, the creditors will be saved in order to prevent a purported systemic breakdown, reducing the risks that creditors believe they will be taking in lending to systemically important firms. Over time, the process of saving some firms from failure will weaken all firms in the financial sector. Weak managements and bad business models should be allowed to fail. That makes room for better managements and better business models to grow. Introducing a formal rescue mechanism will only end up preserving bad managements and bad business models that should have been allowed to disappear while stunting or preventing the growth of their better-managed rivals. Finally, as academic work has shown again and again, regulation suppresses innovation and competition and adds to consumer costs.

Accordingly, there is no need to establish a special government system for resolving nonbank financial institutions, just as there is no need to do so for large operating companies like GM. If such a system were to be created for financial institutions other than banks—for which a special system is necessary—the unintended consequences and adverse results for the economy and the financial system would far outweigh any benefits.

PREPARED STATEMENT OF MARTIN NEIL BAILY

SENIOR FELLOW, ECONOMIC STUDIES PROGRAM, THE BROOKINGS INSTITUTION, AND FORMER CHAIRMAN OF THE COUNCIL OF ECONOMIC ADVISERS UNDER PRESIDENT CLINTON, AND ROBERT E. LITAN [1]

MAY 6, 2009

Thank you Mr. Chairman and members of the Committee for asking us to discuss with you the appropriate policy response to what has come to be widely known as the "too big to fail" (TBTF) problem. We will first outline some threshold thoughts on this question and then answer the questions that you posed in requesting this testimony.

The Key Points

Too Big to Fail and the Current Financial Crisis

- The U.S. economy has been in free fall. Hopefully the pace of decline is now easing, but the *transition to sustained growth will not be possible without a restoration of the financial sector to health.*
- The largest U.S. financial institutions hold most of the financial assets and liabilities of the sector as a whole and, despite encouraging signs, many of them remain very fragile.
- Many banks in the UK, Ireland, Switzerland, Austria, Germany, Spain and Greece are troubled and there is no European counterpart to the U.S. Treasury to stand behind them. *The global financial sector is in a very precarious state.*
- In this situation policymakers must deal with "too big to fail" institutions because we cannot afford to see the disorderly failure of another major financial institution, which would exacerbate systemic risk and threaten economic recovery.
- The stress tests are being completed and some banks will be told to raise or take additional capital. There is a lot more to be done after this, however, as large volumes of troubled or toxic assets remain on the books and more such assets are being created as the recession continues.
- It is possible that one or two of the very large banks will become irretrievably insolvent and must be taken over by the authorities and, if so, they will have to deal with that problem even though the cost to taxpayers will be high. But pre-emptive nationalization of the large banks is a terrible idea on policy grounds and is clouded by thicket of legal problems.[2]
- Getting the U.S. financial sector up and running again is essential, but will be very expensive and is deeply unpopular. If Americans want a growing economy next year with an improving labor market, Congress will have to bite the bullet and provide more Treasury TARP funds, maybe on a large scale. The costs to taxpayers and the country will be lower than nationalizing the banks.
- Congress recently removed from the President's budget the funds to expand the TARP, a move that can only deepen the recession and delay the recovery.[3]

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[1] Robert E. Litan is Vice President, Research and Policy, The Kauffman Foundation and Senior Fellow, Economic Studies and Global Economy Programs, The Brookings Institution. This testimony draws on several of the authors' recent essays on the financial crisis on the Brookings website, *www.brookings.edu,* the work of Douglas Elliott of Brookings and the papers of the Squam Lake Working Group on Financial Regulation *http://squamlakeworkinggroup.org/.*

[2] See the papers by Doug Elliott on the Brookings website.

[3] If it is any consolation, between 72 and 80 percent of Federal income taxes are paid by the top 10 percent of taxpayers. Average working families will not be paying much for the bailout.

Too Big to Fail: Answering the Four Key Questions (Plus One More)

- *Should regulation prevent financial institutions from becoming "too big to fail"?* We need very large financial institutions given the scale of the global capital markets and, of necessity, some of these may be "too big to fail" (TBTF) because of systemic risks. For U.S. institutions to operate in global capital markets, they will need to be large. Congress should not punish or prevent organic growth that may result in an institution having TBTF status.
- At the same time, however, TBTF institutions can be regulated in a way that at least partially offsets the risks they pose to the rest of the financial system by virtue of their potential TBTF status. Capital standards for large banks should be raised progressively as they increase in size, for example. In addition, financial regulators should have the ability to prevent a financial merger on the grounds that it would unduly increase systemic risk (this judgment would be separate from the traditional competition analysis that is conducted by the Department of Justice's Antitrust Division).
- *Should Existing Institutions be Broken Up?* Organic growth should not be discouraged since it is a vital part of improving efficiency. If, however, the FDIC (or another resolution authority) assumes control of a weakened TBTF financial institution and later returns it to the private sector, the agency should operate under a presumption that it break the institution into pieces that are not considered TBTF. And it should also avoid selling any one of the pieces to an acquirer that will create a new TBTF institution. The presumption could be overcome, however, if the agency determines that the costs of breakup would be large or the immediate need to avoid systemic consequences requires an immediate sale to another large institution.
- *What Requirements Should be Imposed on Too Big to Fail Institutions?* TBTF or systemically important financial institutions (SIFIs) can and should be specially regulated, ideally by a single systemic risk regulator. This is a challenging task, as we discuss further below, but we believe it is both one that can be met and is clearly necessary in light of recent events.
- Too big to fail institutions have an advantage in that their cost of capital is lower than that of small institutions. At a recent Brookings meeting, Alan Greenspan estimated informally that TBTF banks can borrow at lower cost than other banks, a cost advantage of 50 basis points. This means that some degree of additional regulatory costs (in the form of higher capital requirements, for example) can be imposed on large financial institutions without rendering them uncompetitive.[4]
- *Improved Resolution Procedures for Systemically Important Banks.* This is an important issue that should be addressed soon. When large financial firms become distressed, it is difficult to restructure them as ongoing institutions and governments end up spending large amounts to support the financial sector, just as is happening now. The Squam Lake Working group has proposed one solution to this problem: that systemically important banks (and other financial institutions) be required to issue a long-term debt instrument that converts to equity under specific conditions. Institutions would issue these bonds before a crisis and, if triggered, the automatic conversion of debt into equity would transform an undercapitalized or insolvent institution, at least in principle, into a well capitalized one at no cost to taxpayers.[5]
- Where the losses are so severe that they deplete even the newly converted capital, there should be a bank-like process for orderly resolving the institution by placing it in receivership. Treasury Secretary Geithner has outlined a process for doing this, which we generally support. There are other important resolution-related issues that must be addressed and we discuss them below.
- *The Origin of the Crisis and the Structure of the Solution.* The financial crisis was the result of market failure and regulatory failure. Market failure occurred because wealth-holders in many cases failed to take the most rudimentary precautions to protect their own interests. Compensation structures were established in companies that rewarded excessive risk taking. Banks bought mortgages knowing that lending standards had become lax.[6]

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[4] However it is important that international negotiation be used to keep a level playing field globally.

[5] *http://squamlakeworkinggroup.org/.*

[6] See "The Origins of the Financial Crisis" and "Fixing Finance" available on the Brookings website.

- At the same time, there were thousands of regulators who were supposed to be watching the store, literally rooms full of regulators policing the large institutions. Warnings were given to regulators of impending crisis but they chose to ignore them, believing instead that the market could regulate itself.
- In the future we must seek a system that takes advantage of market incentives and makes use of well-paid highly qualified regulators. Creating such a system will take time and commitment, but it is clearly necessary.

Expanding on the Issues

As the Committee is well aware, TBTF actually is somewhat of a misnomer, since no company is actually "too big to fail." More accurately, as we have seen in the various bailouts during this crisis, even when the government comes to the rescue, it does not prevent shareholders from being wiped out or having the value of their shares significantly diminished. The beneficiaries of the rescues instead are typically short-term creditors, and in some cases, longer term creditors. The rescues are mounted to prevent systemic risk, which can arise in two ways: if creditors at one institution suffer loss or have to wait for their money, their losses will cascade throughout the financial system and threaten the failure of other firms and/or creditors in similar institutions will "run" and thereby trigger a wider crisis.

In what follows we refer to financial institutions whose failure poses systemic risk as "systemically important financial institutions" or "SIFIs" for short. Clearly, large banks can be SIFIs because they are funded largely by deposits that can be withdrawn on demand. But, as has been painfully learned during this crisis, policymakers have feared that certain non-banks—the formerly independent investment banks and AIG—can be SIFIs because they, too, are or were funded largely by short-term creditors.

By similar reasoning, other financial institutions—if sufficiently large, leveraged, or interconnected with the rest of the financial system—also can be systemically important, especially during a time of general economic stress:

—Our entire financial system, for example, depends on the ability of the major stock and futures exchanges to price financial instruments, and on the major financial clearinghouses to pay those who are owed funds at the end of each day.

—The harrowing experience with the near failure of LTCM in 1998 demonstrates that large, leveraged hedge funds can expose the financial system to real dangers if counter-parties are not paid on a timely basis.

—Large troubled life insurers can also generate systemic risks if policyholders run to cash out their life insurance policies, or if the millions of retirees who rely on annuities suddenly learn that their contracts may not be honored sharply curtail their spending as a result.

—It is an open question whether the large monoline bond insurers, which have been hit hard by losses on subprime securities they have guaranteed, are systemically important. On the one hand, these losses for a time appeared to threaten the ability of these insurers to continue underwriting municipal bond issues (their core business), which could have had major negative ripple effects throughout the economy. On the other hand, as the recent entry of Berkshire Hathaway into this business has demonstrated, other entrants eventually can take up the slack in the market if one or more of the existing bond insurers were to fail. Nonetheless, because the entry process takes time, it is possible that one or more of the existing bond insurers could be deemed too big (or important) to fail in a time of broad economic distress, such as the present time.

—One or more large property-casualty insurers could be deemed to be systemically important if they each were hit suddenly by a massive volume of claims—for example, following one or a series of catastrophic hurricanes—which, among other things, could trigger a large amount of securities sales in a short period of time. A large volume of CAT claims could also imperil the solvency of one or more large insurers (and/or possibly state backup insurance pools, like the one in Florida) and leave millions of policy holders without coverage, an outcome that Federal policymakers may deem unacceptable.

One question we are certain you have been asked by your constituents and the media is why the auto companies have been treated differently, at least so far, from large financial firms. To be sure, in each case, it now appears that the Federal Government will end up owning some or, in the case of GM, most of the equity. But the creditors of the auto companies are not being protected, unlike those of the large financial firms that have been labeled "too big to fail." Why the difference?

There is an economic answer to this question which admittedly may be politically less than persuasive to some. Essentially by definition, systemically important financial institutions are funded largely if not primarily by short-term borrowings—deposits, repurchase agreements, commercial paper—which if not fully repaid when due or "rolled over" will cause not only the firm to fail, but threaten the failure of many other firms throughout the economy in one or both of the ways we have already described. In contrast, non-financial firms are typically not funded primarily by short-term borrowing, but instead by a combination of longer-term debt and equity. To be sure, their failure can lead to the failure of other firms, such as suppliers, and also trigger a wider loss of confidence among consumers, but most economists believe the damage to the entire economy is not likely to be as substantial as it would be if depositors at one or more of the largest banks or the short-term counter-parties of a large hedge fund or insurance company are not paid on time.

We are nonetheless confident that the various financial firm bailouts do not please you or your constituents, which presumably is why you've convened this hearing. We are all highly uncomfortable with having the government bail out some or all possibly all of the creditors of large systemically important financial institutions. In particular, there are three reasons for this discomfort.

First, if creditors of some institutions know that they will be fully protected regardless of how the managers of those firms act, the creditors will have no incentive to monitor the firms' risks and to discourage the taking of excessive risk. Economists call this the "moral hazard" effect, and over time, if left unchecked it will lead to too much risk-taking by too many institutions, putting the economy at risk of future bubbles and the potentially huge costs when they pop.

Second, bailouts of creditors of failed firms are fundamentally inconsistent with capitalism, which rewards and thus provides incentives for success, but punishes failure. Socializing the risks of failure is not how the game is played, and not only introduces too much risk-taking into the economy, but is also rightfully perceived as unfair by those firms whose creditors who are not given this protection.

Third, we are learning that bailouts undermine the public's trust in government, which can make it harder for elected officials to do the public's business. Thus, for example, the unpopularity of the bailouts thus far may slow down the much needed cleanup of the financial system, which will slow the recovery. Likewise, if the public gets the impression that much of what Washington does is bail out mistakes, voters may be much more reluctant to support and fund worthy, cost-effective endeavors by government to ensure more universal health care, fix education, and address climate change, among other important objectives.

For all these reasons, policymakers must take reasonable steps now to prevent institutions from becoming TBTF, or if that is the outcome of market forces, then to prevent these institutions from taking excessive risks that expose taxpayers to paying for their mistakes. These are essentially the options on which you have requested comment, and to which we now turn.

Desirability and Feasibility of Preventing Institutions from Becoming TBTF

Clearly, we all want a financial and economic system in which those who take risks—whether they are large or small—to bear the full consequences of their actions if they are wrong, just as they are entitled to all of the rewards if they are successful. The policy challenge is how best to ensure this result.

One way to prevent non-banking financial institutions from becoming TBTF is to impose limits on their size, measured by assets, indebtedness, counter-party risk exposures, or some combination of these factors. While, as we discuss further below, these measures are useful for establishing whether an institution should be presumptively treated as systemically important and thus subject to heightened regulatory scrutiny, it would be quite extraordinary and unprecedented to actually prevent such institutions from growing above a certain size limit. Putting aside the arbitrary nature of any limit, imposing one would establish perverse, and we believe, undesirable incentives that would undermine economy-wide growth.

For one thing, any size limit would punish success, and thus discourage innovation. There are well-managed large financial institutions, such as JP Morgan, TIAA-CREF, Vanguard and Fidelity, to name a few. If the managers and shareholders of each of the institutions had been told in advance that beyond some limit the company could not grow, each of them would have stopped innovating and serving customers' needs well before reaching the limit. Employee morale also clearly would suffer, especially for those employees paid in stock or options, whose value would quite growing and indeed fall as companies reached their limit. These outcomes not only would ill serve consumers, but would discourage future entrepreneurs from reaching for the heights.

Second, even though this crisis has demonstrated that the failure of large financial institutions can impose substantial costs on the rest of the financial system economists do not know with any degree of precision at what size these externalities outweigh the benefits of diversification and economies of scale that large institutions may achieve (and further, how these size levels likely vary by activity or industry). Accordingly, by essentially requiring large, growing companies to split themselves up beyond some point, policymakers would be arbitrarily sacrificing these economies.

Nonetheless, there are steps short of an absolute size limitation that policymakers should consider to contain future TBTF problems.

First, Congress could require regulators to establish a rebuttable presumption against financial institution mergers that result in a new institution above a certain size. Such a standard would provide stronger incentives, if not a requirement, that companies earn their growth organically. For reasons just indicated, we are not certain that economists yet have sufficient evidence to know with any precision at what size level such a presumption should be set, but the harms from limiting mergers beyond a size threshold would be less than imposing an absolute limit on internal growth.

If Congress takes this approach, we recommend that it continue to require dual approval for mergers by both the antitrust authorities and the appropriate financial regulator (either the relevant supervisor for the firm, or a new systemic risk regulator, our preference). The reason for this is that while the antitrust enforcement agencies (the Department of Justice and the Federal Trade Commission) have well-defined and supportable numerical standards for assessing whether a merger in any industry poses an unacceptable risk of harming *competition*, they have no special expertise in making the *financia*l decision with respect to the size at which an institution poses an undue systemic financial risk. This latter decision is more appropriate for the relevant financial regulator to make.

A second suggestion about which we have even greater confidence is for Congress to require the appropriate financial regulator(s) to subject systemically important financial institutions to progressively tougher regulatory standards and scrutiny than their smaller counterparts. We provide greater detail below on how this might be done. The basic rationale for this is quite straightforward. Larger financial institutions, if they fail or encounter financial trouble, imperil the entire financial system. This externality must be offset somehow, and a different regulatory regime—one that entails progressively tougher capital and liquidity standards in particular—is the best way we know how to accomplish this.

Third, even for large systemically important financial institutions, it is possible to retain at least some market discipline and thus to limit the need for Federal authorities to protect at least some creditors, which is what makes a large and/or highly interconnected financial firm "too big to fail." The way to do this is to require as many SIFIs as possible (large hedge funds may be excepted because their limited partnership interests and/or debt are not publicly traded) to fund a certain minimum percentage of their assets by convertible unsecured long-term debt. Because the debt would be long-term it would not be susceptible to runs (as is true of short-term debt, which in a crisis may not be rolled over). Furthermore, if the debt must be converted to equity upon some pre-defined event—such as a government takeover of the institution (discussed below) or if the capital-to-asset ratio falls below some required minimum level—this would automatically provide an additional cushion of equity when it is most needed, while effectively requiring the debt holders to take a loss, which is essential for market discipline. The details of this arrangement should be left to the appropriate regulators (or the systemic risk regulator), but the development of the concept should be mandated by the Congress.

Should SIFIs Be Broken Up?

Even if financial institutions are not subjected to a size limit, a number of experts have urged that regulators begin seizing weak banks (and perhaps weak non-bank SIFIs), cleaning them up (by separating them into "good" and "bad" institutions), and then breaking up the pieces when returning them to private hands (through sale to a single acquirer or public offering).

We address below the merits of adopting a bank-like resolution process for non-bank SIFIs. For the numerous practical reasons outlined by our Brookings colleague Doug Elliott, we also urge caution in having regulators seize full control of financial institutions unless it is clear that their capital shortfalls are significant and cannot be remedied through privately raised funds.[7]

However, where regulators lawfully assume control of a troubled important financial institution (bank or non-bank), we are sympathetic with having the FDIC (or any other agency charged with resolution) required to make reasonable efforts to

[7] Elliot's discussions of the difficulties of even temporary nationalizations also appear on the Brookings website.

break up the institution when returning it to private hands (through sale or public offering) if it is already deemed to be systemically important or to avoid selling it to another institution when the result will be to *create* a new systemically important financial institution, provided the resolution authority also has an "out" if there is no other reasonable alternative.

The rationale for the proposed presumption should be clear: given the costs that taxpayers are already bearing for the failure of certain systemically important institutions in this crisis, why, if it is not necessary, allow more TBTF problems to be created or aggravated by future financial mergers? Congress should recognize, however, that in limiting the sale of troubled financial institutions, it may make some resolutions more expensive than they otherwise be, at least in the short run. Subject to the qualification we next set out, this is an acceptable outcome, in our view, since measures that avoid making the TBTF problem worse have long-run benefits to taxpayers and to society.

There must be escape clause, however. The Treasury, the Federal Reserve Board and the appropriate regulator may believe that the functions of the failing (or failed) institution are so intertwined or inseparable, and/or that its purchase by a single entity in a very short period of time—as in the case of Bank of America's acquisition of Merrill Lynch or JP Morgan's purchase of Bear Stearns—is so essential to the health of the overall financial system that disposition of the institution in pieces is impractical or substantially more costly (as measured by the amount of government financing required) than other alternatives. Such a "systemic risk exception" should be very narrowly drawn, and conceivably require the approval of all of the regulatory entities just mentioned.

We should note, however, that if Congress also creates a bank-like resolution process for non-bank SIFIs, the systemic risk situation we describe truly should be exceedingly rare. Once regulators have the authority to put a non-bank SIFI into receivership and to guarantee against loss such creditors as are necessary to preserve overall financial stability, then regulators should not be forced by the pressure of time to sell the entity in one piece. Of course, it still may be the case that the activities of the institution are sufficiently inseparable that it would be impractical or highly costly for the resolving authority to break up the firm in the disposition process. If that is the case, then the regulators should have the ability to sell off the institution in one piece.

One other practical issue must also be addressed. There must be some way for the resolving authority to identify the circumstances under which the resolution of a troubled institution would create or aggravate the TBTF problem. One way to do this is to require an appropriate regulator (a topic we discuss shortly) to designate in advance certain financial institutions as being systemically important (and thus subject to a tougher regulatory scrutiny). Alternatively, the resolution authority could make this determination at the time, in consultation with the Federal Reserve and/or the Treasury, or with the designated systemic risk regulator. In either case, the resolution authority must still be able to determine if a particular sale might *create* a new systemically important institution.

Regulating SIFIs

If SIFIs are not to be broken up (outside of temporary government takeover) or subjected to an absolute size constraint, then it is clear that they must be subject to more exacting regulatory scrutiny than other institutions. Otherwise, smaller financial institutions will be disadvantaged and the entire financial system and economy will be put at undue risk. That is perhaps one of the clearest lessons from this current crisis.

We recognize, however, that establishing an appropriate regulatory regime for SIFIs is a very challenging assignment, and entails many difficult decisions. We review some of them now. Our overall advice is that because of the complexity of the task, as well as the constantly changing financial environment in which these institutions compete, that Congress avoid writing the details of the new regime into law. Instead, it would be far better, in our view, for Congress to establish the broad outlines of the new system, and then delegate the details to the appropriate regulator(s).

First, the regulatory objective must be clear: We suggest that the primary purpose of any new regulatory regime for systemically important financial institutions should be to significantly reduce the sources of systemic risk or to minimize such risk to acceptable levels. The goal should not be to *eliminate* all systemic risk, since it is unrealistic to expect that result, and an effort to do so could severely dampen constructive innovation and socially useful activity.

Second, if SIFIs are to be specially regulated, there must be criteria for identifying them. The Group of Thirty has suggested that the size, leverage and degree of interconnection with the rest of the financial system should be the deciding factors, and we agree.[8] We also believe that whether an institution is deemed systemically important may depend on both general economic circumstances, as well as the conditions in a specific sector at the time. Some large institutions may not pose systemic risks if they fail if the economy is generally healthy or is experiencing only a modest downturn; but the same institution, threatened with failure, could be deemed systemically important under a different set of general economic or industry-specific conditions. This is just one reason why we counsel against the use of hard and fast numerical standards to determine whether an institution is systemically important. Another reason is that the use of numerical criteria alone could be easily gamed (institutions would do their best either to stay just under or over any threshold, whichever outcome it believes to be to its advantage). Accordingly, the regulator(s) should have some discretion in using these numerical standards, taking into account the general condition of the economy and/or the specific sector in which the institution competes. The ultimate test should be whether the combination of these factors signifies that the failure of the institution poses a significant risk to the stability of the financial system.

As we discussed at the outset of our testimony, application of this test should result in some banks, insurers, clearinghouses and/or exchanges, and hedge funds as being systemically important (certain formerly independent investment banks that have since converted to bank holding companies or that are no longer operating as independent institutions also would have qualified, and conceivably could do so again). We doubt whether venture capital firms would qualify.

Clearly, to the extent possible, the list of SIFIs should be compiled in advance, since otherwise there would no method of specially regulating them (some institutions that may be deemed systemically important only in the context of particular economy-wide or sector-specific conditions cannot be identified in advance, or may be so identified only when such conditions are present). A natural question then arises: should this list be made public? As a practical matter, we do not think one could avoid making it public. At a minimum, it would be apparent from the capital and liquidity positions reported in the firms' financial statements that the relevant institutions had been deemed by regulators to be systemically important. Meanwhile, the presence of more intensive regulatory oversight, coupled with a mandatory long-term debt requirement, both not applicable to smaller institutions, would counter the concern that public announcement of the firms on the list would somehow weaken market discipline or give the institutions access to lower cost funds than they might otherwise have.

Institutions designated as systemically important should have some right to challenge, as well as the right to petition for removal of that status, if the situation warrants. For example, a hedge fund initially highly leveraged should be able to have its SIFI designation removed if the fund substantially reduces its size, leverage and counter-party risk.

As this discussion implies, the process of designating or identifying institutions as systemically important must be a dynamic one, and will depend on the evolution of the financial service industry, the firms within in, and the future course of the economy. It is to be expected that some firms will be added to the list, while others are dropped, over time. In particular, regulators must be vigilant to include new variations of the ostensibly off-balance sheet structured investment vehicles (SIVs), which technically may have complied with existing accounting rules regarding consolidation, but which functionally always were the creations and obligations of their bank sponsors. Regulators should take a functional approach toward such entities in the future for purposes of determining whether an institution is systemically important. If the firm's affiliates or partners in any way could require rescue by other institutions, then that prospect should be considered when assessing the size, leverage, and financial interconnection of the firm.

Third, the nature of regulation should depend on the activity of the institutions. For financial intermediaries, such as banks and insurance companies, and clearinghouses or exchanges, which are considered to be systemically important, the main regulatory tools should be higher capital, liquidity and risk management standards than those that apply to smaller institutions. It is to be expected that these standards will differ by type of institution. Furthermore, the appropriate regulator(s) should consider making these standards *progressively* higher as the size of the SIFI increases, to reflect the likely increasing bailout risk that SIFIs pose to the rest of the financial system as they grow.

[8] Group of Thirty. "Financial Reform: A Framework for Financial Stability" (Washington D.C., Jan 2009) .

Several more details about these standards also deserve mention. Capital standards, for SIFIs and other financial institutions, should be made less pro-cyclical, or even counter-cyclical. Another lesson from this crisis is that financial regulation should not unduly constrain lending in bad times and fail to curb it in booms. The way to learn this lesson, however, is not to leave too much discretion to regulators in raising or lowering capital (and possibly liquidity) standards in response to changes in economic conditions. If regulators have too much discretion about when to adjust capital standards, they may succumb to heavy pressures to relax them in bad times, and not to raise them when times are good. To avoid this problem, Congress should require the regulators to set in advance a clear set of standards for good times and bad (or, at a minimum, to specify a range for those standards, as the Group of Thirty has suggested).

With respect to their oversight of an institution's risk management procedures, regulators must be more aggressive in the future in testing the reasonableness of the assumptions that are built into the risk models used by complex financial institutions. In addition, regulators should consider the structure of the executive compensation systems of SIFIs under their watch, paying particular attention to the degree to which compensation is tied to long-run, rather than short-run, performance of the institution. In the normal course of their supervisory activities, regulators should use their powers of persuasion, but should also have a "club in the closet"—the authority to issue cease and desist orders—if necessary.

For private investment vehicles, primarily or possibly only hedge funds, the appropriate regulatory regime is likely to differ from publicly traded financial intermediaries. Here, we would expect that the appropriate regulator, at a minimum, would have the authority to collect on a regular basis information about the size of the fund, its leverage, its exposure to specific counter-parties, and its trading strategies so that the supervisor can at least be alert to potential systemic risks from the simultaneous actions of many funds. We would expect that most of this information, with the exception of fund size and perhaps its leverage, would be confidential, to preserve the trade secrets of the funds. We would not expect the regulator to have authority to dictate counter-party exposures or trading strategies. However, where the authorities see that particular funds are excessively leveraged, or when considered in the aggregate their trading strategies may create excessive risks, the appropriate regulator should have the obligation to transmit that information to the banking regulators or the systemic risk regulator, which in turn should have the ability to constrain lending to particular funds or a set of funds.

Fourth, ideally a single regulator should oversee and actively supervise all systemically important financial institutions (bank and non-bank). Splitting up this authority among the various functional regulators—such as the three bank regulators, the SEC (for securities firms), the CFTC, a merged SEC/CFTC or another relevant body (for derivatives clearinghouses), and a new Federal insurance regulator—runs a significant risk of regulatory duplication of effort, inconsistent rules, and possibly after-the-fact finger-pointing in the event of a future financial crisis. Likewise, vesting authority for systemic risk oversight in a committee of regulators—for example, the President's Working Group on Financial Markets—risks indecision and delay. The various functional regulators should be consulted by the systemic risk regulator. In addition, the systemic risk regulator should have automatic and regular access to information collected by the functional regulators. But, in our view, systemic risks are best overseen by a single agency.[9]

If a single systemic risk regulator is designated, a question that must be considered is whether it, or the appropriate functional regulator, should actively supervise systemically important institutions. There are merits to either approach. However, on balance, we believe that the systemic risk regulator should have primary supervisory authority over SIFIs. There is much day-to-day learning that can come from regular supervision that could be useful to the systemic risk regulator in a crisis, when there is no room for delay or error.

In addition to overseeing or at least setting supervisory standards for SIFIs, the systemic risk regulator should be required to issue regular (annual or perhaps more frequent, or as the occasion arises) reports outlining the nature and severity of any systemic risks in the financial system. Such reports would put a spotlight on, among other things, rapidly growing areas of finance, since rapid growth in particular asset classes tends to be associated (but not always) with future problems. These reports

[9] We are aware that the Committee has not asked for views about which regulator should have this authority, but if asked, we would suggest either a single new Federal financial solvency regulator, or the Federal Reserve. For further details, see Testimony of Robert E. Litan before the Senate Committee on Homeland Security, March 4, 2009.

should be of use to both other regulators and the Congress in heading off potential future problems.

A legitimate objection to early warnings is that policymakers will ignore them. In particular, the case can be made that had warnings about the housing market overheating been issued by the Fed and/or other financial regulators during the past decade, few would have paid attention. Moreover, the political forces behind the growth of subprime mortgages—the banks, the once independent investment banks, mortgage brokers, and everyone else who was making money off subprime originations and securitizations—could well have stopped any counter-measures dead in their tracks.

This recounting of history might or might not be right. But the answer should not matter. The world has changed with this crisis. For the foreseeable future, perhaps for several decades or as long as those who have lived and suffered through recent events are still alive and have an important voice in policymaking, the vivid memories of these events and their consequences will give a future systemic risk regulator (and all other regulators) much more authority when warning the Congress and the public of future asset bubbles or sources of undue systemic risk.

Fifth, Congress should assign regulatory responsibilities for overseeing derivatives that are currently traded "over-the-counter" rather than on exchanges. As has been much discussed, regulators already are moving to authorize the creation of clearinghouses for credit default swaps, which should reduce the systemic risks associated with standardized CDS. But these clearinghouses must still be regulated for capital adequacy and liquidity, either by specific functional regulators or by the systemic risk regulator.

Yet even well-capitalized and supervised central clearinghouses for CDS and possibly other derivatives will not reduce systemic risks posed by *customized derivatives* whose trades are not easily cleared by a central party (which cannot efficiently gather and process as much information about the risks of non-payment as the parties themselves). Congress should enable an appropriate regulator to set minimum capital and/or collateral rules for sellers of these contracts. At a minimum, more detailed reporting to the regulator by the participants in these customized markets should be required.

Finally, while there are legitimate concerns about the efficacy of financial regulation, we believe that these should not deter policymakers from implementing and then overseeing a special regulatory system for systemically important financial institutions. We recognize, of course, that financial regulators did not adequately control the risks that led to the current crisis. But that does not mean that we should simply give up on doing something about the TBTF problem.

We should remember that U.S. bank regulators in fact were able to contain risk taking for roughly the 15 year period following the last banking crisis of the late 1980s and early 1990s, and financial regulators are already learning from their mistakes this time around. Furthermore, we take some comfort from the fact that Canadian bank regulators have prevented that country's banks from running into the trouble that our banks have experienced, by applying sensible underwriting and capital standards. So, regulation, when properly practiced, can prevent undue risk-taking.[10]

Further, under the regulatory system we recommend, regulators would not be the only source of discipline against excessive risk-taking by SIFIs. They would be assisted by holders of long-term uninsured, convertible debt, who would have their money at risk and thus incentives to monitor and control risk-taking by the institutions.

In short, regulators, working hand in hand with market participants under the right set of rules, can do better than simply waiting for the next disasters to occur and cleaning up after them. The costs of cleaning up after this crisis—which eventually could run into the trillions of dollars—as well as the damage caused by the crisis itself should be stark reminders that we can and must do better to prevent future crises or at least contain their costs if they occur.

Improving Resolution of Non-Bank SIFIs

The Committee is surely aware of the many calls for extending the failure resolution procedure for banks to non-banks determined to be systemically important (either before or after the fact). The basic idea, known as "prompt corrective action" or "PCA", is to authorize (or direct) a relevant agency (the FDIC in the case of banks) to assume control over a weakly capitalized institution before it is insolvent,

[10] For a guide to how the Canadians have done it, see Pietro Nivola, "Know Thy Neighbor: What Canada Can Tell Us About Financial Regulation," March 2009, at *www.brookings.edu*.

and then either to liquidate it or, after cleaning up its balance sheet (by separating out the bad assets), return it to private ownership (through sale to another firm or a public offering). Such takeovers are meant to be a last resort, only if prior regulatory restrictions and/or directives to raise private capital, have failed. Many have argued that had something like this system been in place for the various non-banks that have failed in this crisis—Bear Stearns, Lehman, and AIG—the resolutions would have been more orderly and achieved at less cost to taxpayers.[11]

We agree with this view. By definition, troubled systemically important financial institutions cannot be resolved in bankruptcy without threatening the stability of the financial system. The bankruptcy process stays payment of unsecured creditors, while inducing secured creditors to seize and then possibly sell their collateral. Either or both outcomes could lead to a wider panic, which is why a bank-like restructuring process—which puts the troubled bank into receivership, allowing the FDIC to transfer the institution's liabilities to an acquirer or to a "bridge bank"—is necessary for non-bank SIFIs.

Congress must resolve a number of complex issues, however, in creating an effective resolution process for these non-bank institutions.

First, the law should provide some procedure for identifying the systemically important institutions that are eligible for this special resolution mechanism in lieu of a normal bankruptcy. This can be done either by allowing the appropriate regulator (we would prefer this be a single systemic risk regulator) to designate specific institutions in advance as SIFIs and therefore subject to a special resolution process if they get into financial trouble, or on ad hoc basis, as the appropriate regulator(s) deem appropriate. Secretary Geithner, for example, has proposed that the Secretary of Treasury could make this designation, upon the positive recommendation of the Federal Reserve Board and the appropriate regulator, in consultation with the President. We favor a combination of these approaches: institutions subject to special regulation as SIFIs automatically would be covered by the special non-bank resolution process, while the Treasury Secretary under the procedure outlined by Secretary Geithner would have the ability to use the special resolution process for other troubled institutions deemed systemically important given unusual circumstances that may be present at a particular time.

Second, there must be clear and effective criteria for placing a financially weak non-bank SIFIs into the special resolution process, ideally before it is insolvent. In principle, bank regulators have this authority under FDICIA, but in practice, regulators tend to arrive too late—after banks are well under water (one recent, notable example is the failure of IndyMac, which is going to cost the FDIC several billion dollars).

There is really only one way to address this problem, for banks and non-bank SIFIs alike, and that is to raise the minimum capital-to-asset threshold that can trigger regulatory takeover of a weak bank or non-bank SIFI (if, by some chance, there is still some positive equity after an early resolution, it can and should be returned to the shareholders, as is the case for early bank resolutions, at least in principle). Since the appropriate threshold is likely to differ by type of institution, this reform is probably best handled by delegating the job to the appropriate regulator: the banking regulators for banks and Treasury and/or the FDIC for non-bank SIFIs (or the systemic risk regulator, if one is established). The capital-to-asset trigger also should be coordinated with any new counter-cyclical capital regulatory regime that may be established for banks and other financial institutions. In particular, once the new standards are phased in, they should not be so low in recessions as to render ineffective any capital-to-asset trigger designed to facilitate sufficiently early interventions by regulators to avoid or at least minimize losses to taxpayers.

Third, the resolution mechanism must have a well-defined procedure for handling uninsured creditor claims. Unlike a bank that has insured liabilities, the creditors of a non-bank are likely to be uninsured (unless they have bought reliable credit default protection, or they have some limited protection through other means: through state guaranty funds for insurance policy holders or through SPIC for brokerage accounts). In a normal bankruptcy, creditors are paid in order of seniority and whether their borrowings are backed by specific collateral. Market discipline requires that creditors not be paid in full if there are insufficient corporate assets to repay them. However, what makes a non-bank systemically important is that the failure to protect at least short-term creditors can trigger creditor runs on other, similar institutions and/or unacceptable losses throughout the financial system.

[11] Lehman was not rescued and thus all its losses have fallen on its shareholders and creditors. We won't know for some time the full cost of JP Morgan's rescue of Bear Stearns, which was aided by loans from the Federal Reserve, or certainly the much larger final cost of the Fed's takeover of AIG.

There are several ways to handle this problem. One approach would require all SIFIs, bank and non-bank, to file a resolution plan with their regulator, spelling out the procedures for "haircutting" specific classes of creditors if the regulator assumes control of the institution. Another approach is to have the regulators spell out those procedures including minimum haircuts that each class of creditors would be expected to receive if the regulators assume control of the institution. A third idea is to address the issue on a case by case basis—for example, by dividing the institution into a "good" and "bad" entity, and require shareholders and creditors to bear losses associated with the "bad" one. Of course, to be truly effective in preserving market discipline, regulators actually must imposes losses under any of these approaches on unsecured creditors, which as recent events have demonstrated, can be difficult, if not impossible, to do.

In particular, when overall economic conditions are dire, as they have been throughout the current crisis, regulators will feel much pressure to protect one or more classes of creditors in full, regardless of what any pre-filed or mandated resolution plan may say (or what the allocation of losses may be as a result of splitting the institution in two). Thus, in the banking context, FDICIA enables regulators to guarantee all deposits, included unsecured debt, of banks when it is deemed necessary to prevent systemic risk. This "systemic risk exception" to the general rule that only insured deposits are covered may be invoked, however, only with the concurrence of ⅔ of the members of the Federal Reserve Board, ⅔ of the members of the FDIC Board, and the Secretary of the Treasury, in consultation with the President. Even then, the Comptroller General must make a report after the fact assessing whether the intervention was appropriate. A similar systemic risk exception (with the perhaps the same or a similar approval procedure) should also be established for debt issued by troubled non-bank SIFIs (Secretary Geithner has suggested that government assistance be provided when approved by the Treasury and the FDIC, in consultation with the Federal Reserve and the appropriate regulatory authority).

Fourth, the resolution process should be overseen by a specific agency. The Treasury has proposed that the FDIC handle this responsibility, as has the current FDIC Chair. Given the FDIC's expertise with resolving bank failures, expanding its authority to cover suitable non-banks makes sense.

Fifth, the non-bank resolution process must have a funding mechanism. This is relatively easy, as these things go, for banks, which are covered by an explicit deposit insurance system that is funded by all members of the banking industry. Of special relevance to the TBTF issue, if the Federal Government guarantees uninsured deposits and other creditors of any banks under the "systemic risk exception", all other banks must be assessed for the cost, although the FDIC can borrow from the Treasury to finance its initial outlays if its reserves are insufficient (under current law, the FDIC's borrowing limit is $30 billion, but in light of the current crisis, the agency is requesting that this limit be raised to $500 billion).

It is difficult to structure an assessment structure for the costs of rescuing the creditors of non-bank SIFIs, however. For one thing, who should pay? Just the other members of the industry in which the failed SIFI is active (such as other hedge funds or insurers, as the case may be), all non-bank SIFIs, or even all non-banks? Under any of these options, what would be the assessment base, and should the contribution rate differ by industry sector? And should any assessment be collected in advance, after the fact, or both?

Merely asking these questions should make clear how difficult it can be to design an acceptable industry-based assessment system. We realize that on grounds of equity, it would be appropriate only to assess other SIFIs, assuming they are specifically identified. But this approach may not raise sufficient funds to cover the costs involved. We note that the costs of the AIG rescue alone, for example, are approaching $200 billion. A similar amount has been put aside for the conservatorships of Fannie Mae and Freddie Mac.

Congress could broaden the assessment base to include all non-bank institutions (to cover the costs only of providing financial assistance to non-bank SIFIs). This may not appear equitable on the surface, but if the institution receiving government funds is truly systemically important then even smaller institutions do benefit when the government steps in to prevent creditor losses at a SIFI from damaging the rest of the financial system.

Indeed, if an institution is truly systemic, then everyone presumably benefits from not having the financial system meltdown, which is why it is advisable in our view for Congress to give the FDIC and/or the Treasury an appropriation up to some sizable limit—say $250 billion—that could be tapped, if necessary for future non-bank SIFI resolutions. Congress may also want to instruct the FDIC and/or the Treasury to use this appropriation only as a resort, and turn to assessments on some class of institutions first. We have no objection to such an approach, but for reasons just noted, there is no perfect way to do that. In any event, as with bank resolutions under the systemic risk exception, the Comptroller General should be required to report to Congress on all non-bank resolutions, too: whether government-provided financial assistance was appropriate, and whether the resolution was completed at least cost.

However the Congress decides these issues, it should do so promptly, without waiting to reach agreement on a more a comprehensive financial reform bill. The country clearly would be best served if a new resolution process were in place before another large non-banking firm approaches insolvency before this recession is over.

Concluding Observations

We would like to close with perhaps the obvious observation that addressing the TBTF problem is not simple. Further, as we have noted, it is unreasonable to expect any new policy framework to prevent all future bailouts, and future bubbles. Perfection is not possible in this or any other endeavor, and suggestions for policy improvements should not be judged against such a harsh and unrealistic standard.

The challenge before the Congress instead is to significantly improve the odds that future bailouts of large financial institutions will be unnecessary, without at the same time materially dampening the innovative spirit that has driven our financial system and our economy. We believe that goal can be accomplished, but it will take time. Congress will write new laws, but will have to place considerable faith in regulators to carry them out. In turn, regulators will make mistakes, they will learn, and they will make mid-course corrections.

This Committee is certainly well aware that regulation can never fully keep up with market developments. Private actors always find ways around rules; economists call this regulatory arbitrage, in which the regulatory "cats" are constantly trying to keep the private "mice: from doing damage to the financial system." This crisis has exposed the unwelcome truth that over the past several years, some of the private sector mice grew so large and so dangerous that they threatened the welfare of our entire financial system. It is now time to beef up the regulatory cats, to arm them with the right rules, and to assist them with constructive market discipline so that the game of regulatory arbitrage will be kept in check, while the financial system continues to do what it is supposed to do: channel savings efficiently toward constructive social purposes.

Thank you and we look forward to addressing your questions.

PREPARED STATEMENT OF RAGHURAM G. RAJAN

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MAY 6, 2009

Too Systemic to fail: Consequences, Causes, and Potential Remedies[1]

Perhaps the single biggest distortion to the free enterprise system is when a number of private institutions are deemed by political and regulatory authorities as too systemic to fail. Resources are trapped in corporate structures that have repeatedly proven their incompetence, and further resources are sucked in from the taxpayer as these institutions destroy value. Indeed, these institutions can play a game of chicken with the authorities by refusing to take adequate precautions against failure, such as raising equity, confident in the knowledge the authorities will come to the rescue when needed.

The consequences are observationally identical to those in a system of crony capitalism. Indeed, it is hard for the authorities to refute allegations of crony capitalism—after all, the difference is only one of intent for the authorities in a free enterprise system do not want to bail out systemically important institutions, but are nevertheless forced to, while in crony capitalism, they do so willingly. More problematic, corrupt officials can hid behind the doctrine of systemic importance to bail out favored institutions. Regardless of whether such corruption takes place, the collateral damage to public faith in the system of private enterprise is enormous, especially as the public senses two sets of rules, one for the systemically important, and another for the rest of us.

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[1] The opinions expressed in this piece are mine alone, but I have benefited immensely from past discussions and work with Douglas Diamond, Anil Kashyap, and Jeremy Stein, as well as members of the Squam Lake Group (see *http://www.cfr.org/project/1404/squam_lake_working_group_on_*financial*_regulation.html).*

As important as the economic and political damage created in bad times, is the damage created in good times because these institutions have an unfair competitive advantage. Some institutions may undertake businesses they have no competence in, get paid for guarantees they have no ability to honor, or issue enormous amounts of debt cheaply only because customers and investors see the taxpayer standing behind them. Other institutions may deliberately create complexities, fragilities, and interconnections so as to become hard to fail. In many ways, therefore, I believe the central focus of any new regulatory effort should be on how to prevent institutions from becoming too systemic to fail.

Is it only too "big" to fail?

Note that I have avoided saying "too big to fail." This is because there are entities that are very large but have transparent, simple structures that allow them to be failed easily—for example, a firm running a family of regulated mutual funds. By contrast, there are relatively small entities—the mortgage insurers or Bear Stearns are examples—whose distress caused substantial stress to buildup through the system. This means a number of factors other than size may cause an institution to be systemically important including (i) the institution's centrality to a market (mortgage insurers, exchanges) (ii) the extent to which systemic institutions are exposed to the institution (AIG) (iii) the extent to which the institution's business and liabilities are intertwined, or are in foreign jurisdictions where U.S. bankruptcy stay does not apply, so that the act of failing the institution will impose substantial losses on its assets, and (iv) the extent to which the institution's business interacts in complex ways with the financial system so that the authorities are uncertain about the systemic consequences of failure and do not want to take the risk of finding out.

This last point takes us to the role of regulators and politicians in creating an environment where institutions are deemed too systemic to fail. For the authorities, there is little immediate benefit to failing a systemically important institution. If events spin out of control, the downside risks to one's career, as well as short-term risks to the economy, loom far bigger for the authorities than any long term benefit of asserting market discipline and preventing moral hazard. Moreover, the public is likely to want to assign blame for a recognized failure, while a bailout can largely be hidden from public eye. Finally, the budgetary implications of recognizing failure can be significant, while the budgetary implications of bailouts can be postponed into the future. For all these reasons, it will be the brave or foolhardy regulator who tries to fail a systemically important institution, and give the experience of the events surrounding the Lehman bankruptcy, I do not see this happening over the foreseeable future.

If the authorities are likely to bail out systemically—or even near-systemically important institutions—the solution to the problem of institutions becoming "too systemically important to fail" has to be found elsewhere than in stiffening the backbone of regulators or limiting their discretion.[2] There are three obvious possibilities: 1) prevent institutions from becoming systemically important; 2) keep them from failing by creating additional private sector buffers; 3) when they do become truly distressed, make it easier for the authorities to fail them. Let me discuss each of these in turn.

Preventing Institutions From Becoming Systemically Important

Many current regulatory proposals focus on preventing institutions from becoming systemically important. These include preventing institutions from expanding beyond a certain size or limiting the activities of depository institutions (through a modern version of the 1933 Glass-Steagall Act). I worry that these proposals may be very costly, and may still not achieve their intent. Here is why.

Clearly, casual empiricism would suggest that some institutions have become too big to manage. If in addition they are likely to impose costs on the system because they are "too big to fail," it seems obvious they should be constrained from growing, and indeed should be forced to break up.[3] Similarly, it seems obvious that the peripheral risky activities of banks should be constrained or even banned if there are underlying core safe activities than need to be protected.

[2] For example, the Federal Deposit Insurance Corporation Improvement Act (FDICIA) in many ways was meant to ensure regulators took prompt corrective action, by reducing their leeway to forbear. However, FDICIA was focused on the problem of relatively small thrifts, not "too-big-to-fail" institutions.

[3] The academic literature lends support to such a view for banks because it finds few economies of scale for banks beyond a certain size.

Economic Concerns

More careful thought would, however, suggest serious concerns about such proposals. First, consider the economic concerns. Some institutions get large, not through opportunistic and unwise acquisitions, but through organic growth based on superior efficiency. A crude size limit, applied across the board, would prevent the economy from realizing the benefits of the growth of such institutions. Furthermore, size can imply greater diversification, which can reduce risk. The optimal size can vary across activities and over time. Is a trillion dollar institution permissible if it is a mutual fund holding assets? What if it is an insurance company? What if it is an insurance company owning a small thrift? Finally, size itself is hard to define. Do we mean assets, liabilities, gross derivatives positions, net derivatives positions, transactions, or profitability? Each of these could be a reasonable metric, yet vastly different entities would hit against the size limit depending on the metric we choose. Given all these difficulties, any legislation on size limits will have to give regulators substantial discretion. That creates its own problems which I will discuss shortly.

Similar issues arise with activity limits. What activities would be prohibited? Many of the activities that were prohibited to commercial banks under Glass-Steagall were peripheral to this crisis. And activities that did get banks into trouble, such as holding sub-prime mortgage-backed securities, would have been permissible under Glass Steagall.[4] Some suggest banning banks from proprietary trading (trading for their own account). But how would regulators distinguish (illegitimate) proprietary trading from legitimate risk-reducing hedging?

Regulatory Concerns

Regulating size limits would be a nightmare. Not only would the regulator have to be endowed with substantial amounts of discretion because of the complexities associated with size regulation, the regulated would constantly attempt to influence regulators to rule in their favor. While I have faith in regulators, I would not want them to be subject to the temptations of the license-permit Raj of the kind that flourished in India. Indeed, even without such temptations, regulators are influenced by the regulated—one of the deficiencies uncovered by this crisis is that banks were allowed under Basel II to set their levels of capital based on their own flawed models.

Moreover, the regulated would be strongly tempted to arbitrage draconian regulations. In India, strict labor laws kicked in once firms reached 100 employees in size. Not surprisingly, there were a large number of firms with common ownership that had 99 employees—every time a firm was to exceed 100 employees, it broke up into two firms. Similarly, would size limits lead to firms shifting activity into commonly owned and managed, but separately capitalized, entities as soon as they approach the limits? Will we get virtual firms that are as tightly knit together as current firms, but are less transparent to the regulator? I fear the answer could well be yes.

Similar problems may arise with banning activities. The common belief is that there are a fixed set of risky possibilities so if enough are prohibited to banks, they will undertake safe activities only—what one might call the "lump of risk" fallacy. The truth is that banks make money only by taking risks and managing them carefully. If enough old risky activities are banned, banks will find new creative ways of taking on risk, with the difference that these will likely be hidden from the regulator. And because they are hidden, they are less likely to be managed carefully.

Political Concerns

Finally, the presumption is that the political support for heavy regulation will continue into the future. Yet, as the business cycle turns, as memories of this crisis fade, and as the costs associated with implementing the regulation come to the fore without visible benefits, there will be less support for the regulation. Profitable banks will lobby hard to weaken the legislation, and they will likely be successful. And all this will happen when we face the most danger from too-systemic-to-fail entities. If there is one lesson we take away from this crisis, it should be this—regulation that the regulated perceive as extremely costly is unlikely to be effective, and is likely to be most weakened at the point of maximum danger to the system.

I would suggest that rather than focusing on regulations to limit size or activities, we focus on creating private sector buffers and making institutions easier to fail. Let us turn to these now.

[4] Banks like Citibank have found sufficient ways to get into trouble in recent decades even when Glass Steagall was in force.

Adding Additional Private Sector Buffers.

One proposal making the rounds is to require higher levels of capital for systemically important institutions. The problem though is that capital is costlier than other forms of financing. In boom times, the market requires very low levels of capital from financial intermediaries, in part because euphoria makes losses seem remote. So when regulated financial intermediaries are forced to hold more costly capital than the market requires, they have an incentive to shift activity to unregulated intermediaries, as did banks in setting up SIVs and conduits during the current crisis. If systemically important institutions are required to hold substantially more capital, their incentive to undertake this arbitrage is even stronger. Even if regulators are strengthened to detect and prevent this shift in activity, banks can subvert capital requirements by taking on risk the regulators do not see, or do not penalize adequately with capital requirements.

So while increased capital for systemically important entities can be beneficial, I do not believe it is a panacea.[5] An additional, and perhaps more effective, buffer is to ask systemically important institutions to arrange for capital to be infused when the institution or the system is in trouble. Because these "contingent capital" arrangements will be contracted in good times when the chances of a downturn seem remote, they will be relatively cheap (compared to raising new capital in the midst of a recession) and thus easier to enforce. Also, because the infusion is seen as an unlikely possibility, firms cannot go out and increase their risks, using the future capital as backing. Finally, because the infusions come in bad times when capital is really needed, they protect the system and the taxpayer in the right contingencies.

Put differently, additional capital is like keeping buckets full of water ready to douse a potential fire. As the years go by and the fire does not appear, the temptation is to use up the water. By contrast, contingent capital is like installing sprinklers. There is no water to use up, but when the fire threatens, the sprinklers will turn on.

Contingent Debt Conversions

One version of contingent capital is for banks to issue debt which would automatically convert to equity when two conditions are met; first, the system is in crisis, either based on an assessment by regulators or based on objective indicators such as aggregate bank losses (this could be cruder, but because it is automatic, it will eliminate the pressure that would otherwise come on regulators), and second, the bank's capital ratio falls below a certain value.[6] The first condition ensures that banks that do badly because of their own errors, and not when the system is in trouble, don't get to avoid the disciplinary effects of debt. The second condition rewards well-capitalized banks by allowing them to avoid the forced conversion (the number of shares the debt converts to will be set at a level so as dilute the value of old equity substantially), while also giving banks that anticipate losses an incentive to raise new equity well in time.

Capital Insurance

Another version of contingent capital is to require that systemically important levered financial institutions buy fully collateralized insurance policies (from unlevered institutions, foreigners, or the government) that will infuse capital into these institutions when the system is in trouble.[7]

Here is one way it could operate. Megabank would issue capital insurance bonds, say to sovereign wealth funds or private equity. It would invest the proceeds in Treasury bonds, which would then be placed in a custodial account in State Street Bank. Every quarter, Megabank would pay a pre-agreed insurance premium (contracted at the time the capital insurance bond is issued) which, together with the interest accumulated on the Treasury bonds held in the custodial account, would be paid to the sovereign fund.

If the aggregate losses of the banking system exceed a certain pre-specified amount, Megabank would start getting a payout from the custodial account to bolster its capital. The sovereign wealth fund will now face losses on the principal it has invested, but on average, it will have been compensated by the insurance pre-

[5] See the comprehensive discussion of capital requirements in the Squam Lake Group's proposal *http://www.cfr.org/publication/19001/reforming_capital_requirements_for_financial_institutions.html.*

[6] This describes work done by the Squam Lake Group, and a more comprehensive treatment is available at *http://www.cfr.org/publication/19002.*

[7] This is based on a paper I wrote with Anil Kashyap and Jeremy Stein, which is available at *http://www.kc.frb.org/publicat/sympos/2008/KashyapRajanStein.03.12.09.pdf*

mium.Clearly, both the convertible debt proposal and the capital insurance proposal will have to be implemented with care. For instance, it would be silly for any systemically important institution to buy these instruments, and they should be deterred from doing so. At the same time, some obvious objections can be answered easily. For instance, some critics worry whether there will be a market for these bonds that fall in value when the whole economy is in distress. The answer is there are already securities that have these characteristics and are widely traded. Moreover, a bank in Canada has actually issued securities of this sort.

Making Institutions Easier to Fail.

Let us now turn to the other possible remedy—making systemically important institutions easier to fail. There are currently a number of problems in failing systemically important institutions. Let me list them and suggest obvious remedies.

(i) Regulators do not have resolution authority over non-bank financial firms or bank holding companies, and ordinary bankruptcy court would take too long—the financial business would evaporate while the institution is in bankruptcy court. This leaves piece-meal liquidation, with attendant loss in value, as the only alternative to a bailout. **Regulators need resolution authority of the kind the FDIC has for banks.**

(ii) Regulators do not have full information on the holders of a systemically important institution's liabilities. They have difficulty figuring out whom the first round of losses would hit, let alone where the second round (as institutions hit by the first round fail) would fall. While in principle they could allow the institution to fail, and ensure the first and second round failures are limited by providing capital where necessary, they do not have the ability to do so at present. Furthermore, because the market too does not know where the exposures are, the failure of a large institution could lead to panic. **More information about exposures needs to be gathered,** and the authorities need the ability to act on this information (including offering routine warnings to levered regulated entities that have high exposure to any institution), as well as the ability to disseminate it widely if they have to fail an institution.

(iii) The foreign operations of institutions are especially problematic since there is no common comprehensive resolution framework for all of a multi-national bank's operations. Failing a bank in the United States could lead to a run on a branch in a foreign country, or a seizure of local assets by a foreign authority in order to protect liability holders within that country. These actions could erode the value of the bank's international operations substantially, resulting in losses that have to be borne by U.S. taxpayers, and making authorities more reluctant to fail the bank. **A comprehensive international resolution framework needs to be negotiated with high priority.**

(iv) The operations of some systemically important institutions are linked to their liabilities in ways that are calculated to trigger large losses if the bank is failed. For instance, if a bank is on one side of swap transactions and it fails, the counterparties on the other side need to be paid the transactions costs incurred in setting up new substitute swap contracts. Even if the market is calm, these seemingly small transactions costs multiplied by a few trillion dollars in gross outstanding contracts can amount to a large number, in the many billions of dollars. If we add to this the higher transactions costs when the market is in turmoil, the costs can be very high. **Regulators have to work with the industry to reduce the extent to which business losses are triggered when the institution's debt is forced to bear losses.** These cross-default clauses essentially are poison-pills that make large institutions too costly to fail.

(v) Finally, the implicit assumption that some of these institutions will not be failed causes market participants to treat their liabilities as backed by the full faith and credit of the government. These liabilities then become the core of strategies that rely indeed on their being fully backed. Any hint that belief in the backing is unwarranted can cause these strategies to implode, making the authorities averse to changing beliefs.[8] **Regulators have to convince the market that no institution is too systemically important to fail.**

[8] Mohamed El Erian of Pimco phrases this as a situation where what the market thinks of as constant parameters become variables, resulting in heightened risk aversion. One example of this is the failure of Lehman, which resulted in the Reserve Primary money market fund "breaking the buck". The strategy of money market funds investing in the debt of systemically important-but-weak banks in order to obtain higher yields imploded, causing a run on money market funds.

The problem is that none of this can be achieved if the financial institutions are working at cross-purposes to the regulator—all will be for naught if even while the regulator is working with international authorities to devise a comprehensive resolution scheme, the financial institution is adding on layers of complexity in its international operations. Therefore I end with one last suggestion: **Require systemically important financial institutions to develop a plan that would enable them to be resolved quickly—eventually over a weekend.**

Such a "shelf bankruptcy" plan would require institutions to track, and document, their exposures much more carefully and in a timely manner, probably through much better use of technology. The plan will need to be stress tested by regulators periodically and supported by enabling legislation—such as one facilitating an orderly transfer of the institution's swap books to pre-committed partners. And regulators will need to be ready to do their part, including paying off insured depositors quickly where necessary.

Not only will the need to develop a plan give these institutions the incentive to work with regulators to reduce unnecessary complexity and improve management, it may indeed force management to think the unthinkable during booms, thus helping avoid the costly busts. Most important, it will convey to the market the message that the authorities are serious about allowing the systemically important to fail. When we emerge from this crisis, this will be the most important message to convey.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR VITTER FROM SHEILA C. BAIR

Q.1. Mr. Wallison testified that, "In a widely cited paper and a recent book, John Taylor of Stanford University concluded that the market meltdown and the freeze in interbank lending that followed the Lehman and AlG events in mid-September 2008 did not begin until the Treasury and Fed proposed the initial Troubled Asset Relief Program later in the same week, an action that implied that financial conditions were much worse than the markets had thought. Taylor's view, then, is that AlG and Lehman were not the cause of the meltdown that occurred later that week. Since neither firm was a bank or other depository institution, this analysis is highly plausible."

Do you agree or disagree with the above statement? Why, or why not?

A.1. Professor Taylor argues that the data on the LIBOR–OIS spread indicate that the market had a stronger reaction to the testimony by Federal Reserve Board Chairman Ben Bernanke and Treasury Secretary Henry Paulson of September 23, 2008, on the government policy intervention that would become known as the TARP program than to the bankruptcy of Lehman Brothers on September 15. Professor Taylor's interpretation does not acknowledge that the events of the period happened so rapidly and in such short order that it is difficult to disentangle the effects of specific news and market events. Other evidence suggests that reserves held by banks jumped dramatically immediately after Lehman entered bankruptcy (Federal Reserve Statistical Release H–3), indicating that banks preferred the security of a deposit at the Federal Reserve over the risk-and-return profile offered by an interbank loan.

Following the Lehman Brothers bankruptcy filing, Primary Reserve—a large institutional money market fund—suffered losses on unsecured commercial paper it had bought from Lehman. The fund "broke the buck" on September 16. This "failure" instigated a run and subsequent collapse of the commercial paper market.

The events of the week may have had compound effect on the market's perception of risk. For example, it is unclear whether AIG would have deteriorated as fast if Lehman had not entered bankruptcy. Indeed, TARP may not have even been proposed without the failure of Lehman. It also took time for markets to understand the size of the Lehman bankruptcy losses—which were larger than anticipated—and to use this new information to reassess the worthiness of all surviving counterparties.

In the FDIC's view, uncertainty about government action and interventions has been a source of systemic risk. As outlined in my testimony, the FDIC recommends a legal mechanism for the orderly resolution of systemically important institutions that is similar to what exists for FDIC-insured banks. The purpose of the resolution authority should not be to prop up a failed entity, but to permit the swift and orderly dissolution of the entity and the absorption of its assets by the private sector as quickly as possible. Imposing losses on shareholders and other creditors will restore market discipline. A new legal mechanism also will permit continuity in key financial operations and reduce uncertainty. Such authority can preserve valuable business lines using an industry-paid fund when debtor-in-possession financing is unavailable because of market-wide liquidity shocks or strategic behavior by potential lenders who also are potential fire sale acquirers of key assets and businesses of the failing institution. Under a new resolution process, uninsured creditor claims could be liquefied much more quickly than can be done in a normal bankruptcy.

Q.2. Do you believe that if Basel II had been completely implemented in the United States that the trouble in the banking sector would have been much worse? Some commentators have suggested that the stress tests conducted on banks by the Federal Government have replaced Basel II as the nation's new capital standards. Do you believe that is an accurate description? Is that good, bad, or indifferent for the health of the U.S.-banking system?

A.2. Throughout the course of its development, the advanced approaches of Basel II were widely expected to result in lower bank capital requirements. The results of U.S. capital impact studies, the experiences of large investment banks that increased their financial leverage during 2006 and 2007 under the Securities and Exchange Commission's version of the advanced approaches, and recent evidence from the European implementation of Basel II all demonstrated that the advanced approaches lowered bank regulatory capital requirements significantly. Throughout the interagency Basel II discussions, the record shows that the FDIC took the position that capital levels needed to be strengthened for the U.S. Basel II banks. If the advanced approaches of Basel II had been fully in place and relied upon in the United States, the FDIC believes that large banks would have entered the crisis period with significantly less capital, and would therefore have been even more vulnerable to the stresses they have experienced.

Supervisors have long encouraged banks to hold more capital than their regulatory minimums, and we view the stress tests as being squarely within that tradition. While stress testing is an important part of sound risk management practice, it is not expected to replace prudential regulatory minimum capital requirements. In many respects, the advanced approaches of Basel II do not constitute transparent regulatory minimum requirements, in that they depend for their operation on considerable bank and supervisory judgment. The FDIC supported the implementation of the advanced approaches only subject to considerable safeguards, including the retention of the leverage ratio and a regulatory commitment that the banking agencies would conduct a study after 2010 to identify whether the new approaches have material weaknesses, and if so, that the agencies would connect those weaknesses.

Q.3. If there is an ordered resolution process, whether that's bankruptcy, a new structured bankruptcy or a new resolution authority—what can we do to generate the political will to use it?

A.3. For a new resolution process to work efficiently, market expectations must adjust and investors must assume that the government will use the new resolution scheme instead of providing government support. It is not simply a matter of political will, but of having the necessary tools ready so that a resolution can be credibly implemented. A systemic resolution authority could step between a failing firm and the market to ensure that critical functions are maintained while an orderly unwinding takes place. The government could guarantee or provide financing for the unwinding if private financing is unavailable. Assets could be liquidated in an orderly manner rather than having collateral immediately dumped on the market. This would avoid the likelihood of a fire sale of assets, which depresses market prices and potentially weakens other firms as they face write-downs of their assets at below "normal" market prices.

Q.4. Should we be limiting the size of companies in the future to prevent a "too-big-to-fail" situation, or can we create a resolution process that only needs the political will to execute it that will eliminate the need to be concerned about a company's size?

A.4. The FDIC supports the idea of providing incentives to financial firms that would cause them to internalize into their decision-making process the potential external costs that are imposed on society when large and complex financial firms become troubled. While fewer firms may choose to become large and complex as a result, there would be no prohibition on growing or adding complex activities.

Large and complex financial firms should be subject to regulatory and economic incentives that require these institutions to hold larger capital and liquidity buffers to mirror the heightened risk they pose to the financial system. Capital and regulatory requirements could increase as firms become larger so that firms must operate more efficiently if they become large. In addition, restrictions on leverage and the imposition of risk-based premiums on institutions and their activities should provide incentives for financial firms to limit growth and complexity that raise systemic concerns.

To address pro-cyclicality, capital standards should provide for higher capital buffers that increase during expansions and are drawn down during contractions. In addition, large and complex financial firms could be subject to higher Prompt Corrective Action limits under U.S. laws. Regulators also should take into account off-balance-sheet assets and conduits as if these risks were on-balance-sheet.

Q.5. What role did the way financial contracts are treated in bankruptcy create in both the AIG and Lehman situations?

A.5. In bankruptcy, current law allows market participants to terminate and net out derivatives and sell any pledged collateral to pay off the resulting net claim immediately upon a bankruptcy filing. In addition, since the termination right is immediate, and the bankruptcy process does not provide for a right of a trustee or debtor to transfer the contracts before termination, the bankruptcy filing leads to a rapid, uncontrolled liquidation of the derivatives positions. During normal market conditions, the ability of counterparties to terminate and net their exposures to bankrupt entities prevents additional losses flowing through the system and serves to improve market stability. However, when stability is most needed during a crisis, these inflexible termination and netting rights can increase contagion.

Without any option of a bridge bank or similar type of temporary continuity option, there is really no practical way to limit the potential contagion absent a pre-packaged transaction or arrangements by private parties. While this sometimes happens, and did to some degree in Lehman's bankruptcy, it raises significant questions about continuity and comparative fairness for creditors. During periods of market instability—such as during the fall of 2008—the exercise of these netting and collateral rights can increase systemic risks. At such times, the resulting fire sale of collateral can depress prices, freeze market liquidity as investors pull back, and create risks of collapse for many other firms.

In effect, financial firms are more prone to sudden market runs because of the cycle of increasing collateral demands before a firm fails and collateral dumping after it fails. Their counterparties have every interest to demand more collateral and sell it as quickly as possible before market prices decline. This can become a self-fulfilling prophecy—and mimics the depositor runs of the past.

The failure of Lehman and the instability and bail-out of AIG led investors and counterparties to pull back from the market, increase collateral requirements on other market participants, and dramatically de-leverage the system.

In the case of Lehman, the bankruptcy filing triggered the right of counterparties to demand an immediate close-out and netting of their contracts and to sell their pledged collateral. The immediate seizing and liquidation of the firm's assets left less value for the firm's other creditors.

In the case of AIG, the counterparties to its financial contracts demanded more collateral as AIG's credit rating dropped. Eventually, AIG realized it would run out of collateral and was forced to turn to the government to prevent a default in this market. Had AIG entered bankruptcy, the run on its collateral could have translated into a fire sale of assets by its counterparties.

In the case of a bank failure, by contrast, the FDIC has 24 hours after becoming receiver to decide whether to pass the contracts to a bridge bank, sell them to another party, or leave them in the receivership. If the contracts are passed to a bridge bank or sold, they are not considered to be in default and they remain in force. Only if the financial contracts are left in the receivership are they subject to immediate close-out and netting.

Q.6. Chrysler's experience with the Federal Government and bankruptcy may prove a useful learning experience as to why bankruptcy despite some issues may still best protect the rights of various investors. A normal bankruptcy filing is straight forward—senior creditors get paid 100 cents on the dollar and everyone else gets in line. That imposes the losses on those who chose to take the risk. Indeed, the sanctity of a contract was paramount to our Founding Fathers. James Madison, in 1788, wrote in Federalist Papers Number 44 to the American people that, "laws impairing the obligation of contracts are contrary to the first principles of the social compact, and to every principle of sound legislation."

With that in mind, what changes can be made to bankruptcy to ensure an expedited resolution of a company that does not roil the financial markets and also keeps government from choosing winners and losers?

A.6. Bankruptcy is designed to facilitate the smooth restructuring or liquidation of a firm. It is an effective insolvency process for most companies. However, it was not designed to protect the stability of the financial system. Large complex financial institutions play an important role in the financial intermediary function, and the uncertainties of the bankruptcy process can create 'runs' similar to depositor runs of the past in financial firms that depend for their liquidity on market confidence. Putting a bank holding company or other non-bank financial entity through the normal corporate bankruptcy process may create instability as was noted in the previous answer. In the resolution scheme for bank holding companies and other non-bank financial firms, the FDIC is proposing to establish a clear set of claims priorities just as in the bank resolution system. Under the bank resolution system, there is no uncertainty and creditors know the priority of their claims.

In bankruptcy, without a bridge bank or similar type of option, there is really no practical way to provide continuity for the holding company's or its subsidiaries' operations. Those operations are based principally on financial agreements dependent on market confidence and require continuity through a bridge bank mechanism to allow the type of quick, flexible action needed. A stay that prevents creditors from accessing their funds destroys financial relationships. Without a system that provides for the orderly resolution of activities outside of the depository institution, the failure of a large, complex financial institution includes the risk that it will become a systemically important event.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR VITTER FROM GARY STERN

Q.1. Mr. Wallison testified that, "In a widely cited paper and a recent book, John Taylor of Stanford University concluded that the market meltdown and the freeze in interbank lending that followed the Lehman and AIG events in mid-September 2008 did not begin until the Treasury and Fed proposed the initial Troubled Asset Relief Program later in the same week, an action that implied that financial conditions were much worse than the markets had thought. Taylor's view, then, is that AIG and Lehman were not the cause of the meltdown that occurred later that week. Since neither firm was a bank or other depository institution, this analysis is highly plausible."

Do you agree or disagree with the above statement? Why, or why not?

A.1. Members of the Board of Governors of the Federal Reserve System have addressed the factors that contributed to the market dislocation in mid-September 2008. See, for example, the testimony of Chairman Ben S. Bernanke on U.S. financial markets before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, on September 23, 2008, and the testimony of Vice Chairman Donald L. Kohn on American International Group before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, Washington, D.C., on March 5, 2009. Based on my understanding of the facts and circumstances around market conditions in mid-September, I will defer to these descriptions of events.

Q.2. Do you believe that if Basel II had been completely implemented in the United States that the trouble in the banking sector would have been much worse?

A.2. To the degree that a fully implemented Basel II would have left large financial institutions with less capital, the financial crisis could have been more severe. To the degree that large financial institutions would have had improved risk management systems due to Basel II, perhaps the crisis would not have been as severe. In short, we cannot know with any precision how a fully implemented Basel II would have altered bank performance during the recent financial crisis; the effect that a fully implemented Basel II would have had on the depth and severity of the financial crisis would have depended on competing factors such as the two just noted. In any case, and consistent with my remarks during the recent hearing, I believe Basel II should undergo a thorough review to determine if and how policymakers should modify it.

Q.3. Some commentators have suggested that the stress tests conducted on banks by the Federal Government have replaced Basel II as the nation's new capital standards. Do you believe that is an accurate description? Is that good, bad, or indifferent for the health of the U.S. banking system?

A.3. As noted by the Board of Governors of the Federal Reserve System in "The Supervisory Capital Assessment Program: Overview of Results" (May 7, 2009), "the SCAP buffer does not represent a new capital standard and is not expected to be maintained on an ongoing basis." I believe that policy is appropriate.

Q.4. If there is an ordered resolution process, whether that's bankruptcy, a new structured bankruptcy or a new resolution authority—what can we do to generate the political will to use it?

A.4. Consistent with my testimony, I believe that financial spillovers lead policymakers to provide extraordinary support to the creditors of systemically important financial institutions. To discourage policymakers from providing such support requires them to take action to reduce the threat of these spillovers. I provided examples of these actions in my written testimony.

Q.5. Should we be limiting the size of companies in the future to prevent a "too-big-to-fail" situation, or can we create a resolution process that only needs the political will to execute it that will eliminate the need to be concerned about a company's size?

A.5. As I noted in my written testimony, I do not believe that either reducing the size of financial institutions or creating a new resolution framework for nonbank financial institutions will, by itself, sufficiently address the "too-big-to-fail" problem. Neither step will effectively reduce the spillover problem that leads to the provision of government support for uninsured creditors of systemically important financial institutions in the first place. A resolution regime offers a tool to address some spillovers and not others. I detail in my written testimony recommendations to address spillovers.

Q.6. What role did the way financial contracts are treated in bankruptcy create in both the AIG and Lehman situations?

A.6. We discussed issues surrounding so-called early termination, closeout netting, and other aspects of the treatment of derivative contracts in bankruptcy and their relation to the "too-big-to-fail" problem in our earlier analysis. (See Gary H. Stern and Ron J. Feldman, 2009, *Too Big To Fail: The Hazards of Bank Bailouts,* pp.118 and 119.) These issues deserve careful scrutiny in light of the AIG and Lehman situations to ensure that current policy and law adequately reflect the "lessons learned" from those two cases.

Q.7. Chrysler's experience with the Federal Government and bankruptcy may prove a useful learning experience as to why bankruptcy despite some issues may still best protect the rights of various investors. A normal bankruptcy filing is straight forward—senior creditors get paid 100 cents on the dollar and everyone else gets in line. That imposes the losses on those who chose to take the risk.

Indeed, the sanctity of a contract was paramount to our Founding Fathers. James Madison, in 1788, wrote in Federalist Papers Number 44 to the American people that, "laws impairing the obligation of contracts are contrary to the first principles of the social compact, and to every principle of sound legislation."

With that in mind, what changes can be made to bankruptcy to ensure an expedited resolution of a company that does not roil the financial markets and also keeps government from choosing winners and losers?

A.7. I see merit in creating a resolution regime for all systemically important financial firms that has similarities to the one currently used by the FDIC to resolve banks. As noted in my written testimony, "such regimes would facilitate imposition of losses on equity holders, allow for the abrogation of certain contracts, and provide a framework for operating an insolvent firm. These steps address some spillovers and increase market discipline." However, as noted previously, these advantages do not address the full range of potential spillovers and thus may not sufficiently facilitate policymakers' decision to impose losses on creditors of systemically important firms.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR VITTER FROM PETER J. WALLISON

Q.1. If there is an ordered resolution process, whether that's bankruptcy, a new structured bankruptcy or a new resolution authority—what can we do to generate the political will to use it?

A.1. The problem with a new resolution authority is that there will be too much political will to use it. My concern is that regulators will use the system to bail out failing financial companies when these companies should be allowed to go into bankruptcy. The result will be that the taxpayers will end up paying for something that—in bankruptcy—would be paid for by the company's creditors.

Q.2. Should we be limiting the size of companies in the future to prevent a "too-big-to-fail" situation, or can we create a resolution process that only needs the political will to execute it that will eliminate the need to be concerned about a company's size?

A.2. There is no reason to be concerned about the size of any company other than a commercial bank, and even then it would not be good policy to try to limit the size of a bank because we are afraid that its failure will cause a systemic problem. Companies and banks get large because they are good competitors and serve the public well. We shouldn't penalize them for that. In addition, our big international operating companies need big international banks to serve their needs. If we cut back the size of banks or insurance companies or securities firms because of fear about systemic risk, we would be adding costs for our companies for no good reason. Finally, I don't think that any financial company other than a large commercial bank can—even in theory—create a systemic problem. Banks alone have liabilities that can be withdrawn on demand and are used to make payment by businesses and individuals. If a bank fails, these funds might not be available, and that could cause a systemic problem. But other financial companies are more like large commercial operating companies. They borrow money for a term. If they fail, there are losses, but not the immediate loss of the funds necessary to meet daily obligations. For example, if GM goes into bankruptcy, it will cause a lot of disruption, but no one who is an investor in GM is expecting to use his investment to meet his payroll or pay his mortgage. That's also true of insurance companies, securities firms, hedge funds and others. If they fail they may cause losses to their investors, but over time, not the cascade of losses through the economy that is the signature of a systemic breakdown. We should not be concerned about losses to creditors and investors. It's the wariness about losses that creates market discipline-which is the best way to control risk-taking.

Q.3. What role did the way financial contracts are treated in bankruptcy create in both the AIG and Lehman situations?

A.3. Most financial contracts are exempt from the automatic stay that occurs when a bankruptcy petition is filed. This allows the counterparties of a bankrupt company to sell the collateral they are holding and make themselves whole, or close to it. This prevents losses from cascading through the economy when they occur. They are stopped by the ability of counterparties to sell the collateral they hold and reimburse themselves. As a result, we have only one example of a Lehman counterparty encountering a serious and immediate financial problem as a result of Lehman's failure. That was the Reserve Fund, which was holding an excessive amount of Lehman's short term commercial paper. Other than that, Lehman's failure is an example of what I said above about nonbank financial institutions. They do not cause the kind of cascading losses that could occur when a bank fails. We do not therefore need a special resolution function for these nonbank firms.

AIG should have been allowed to go into bankruptcy. I don't see any reason why AIG's failure would have caused the kind of systemic breakdown that was feared. Again, the ability of counterparties to sell their collateral would have reduced any possible losses. Much a ttention has been focues on credit default swaps, but we now know that Goldman Sachs, which was the largest AIG swap counterparty, would not have suffered any losses if AIG had been allowed by the Fed to go into bankruptcy. The reason that Goldman would not have suffered losses is that they had collateral coverage on their swap agreements, and if AIG had failed they would have been able to sell the collateral and make themselves whole. So the treatment of financial contracts in bankruptcy is a strong reason to allow bankruptcy to operate rather than substituting a government agency.

Q.4.a. Chrysler's experience with the Federal Government and bankruptcy may prove a useful learning experience as to why bankruptcy despite some issues may still best protect the rights of various investors. A normal bankruptcy filing is straight forwardsenior creditors get paid 100 cents on the dollar and everyone else gets in line. That imposes the losses on those who chose to take the risk.

A.4.a. Exactly right.

Q.4.b. Indeed, the sanctity of a contract was paramount to our Founding Fathers. James Madison, in 1788, wrote in Federalist Papers Number 44 to the American people that, "laws impairing the obligation of contracts are contrary to the first principles of the social compact, and to every principle of sound legislation."

A.4.b. Again, exactly right.

Q.4.c. With that in mind, what changes can be made to bankruptcy to ensure an expedited resolution of a company that does not roil the financial markets and also keeps government from choosing winners and losers?

A.4.c. I am not enough of a bankruptcy specialist to make a recommendation. However, the Lehman bankruptcy seems to be going smoothly without any significant reforms. In the 2 weeks following its filing Lehman sold off its brokerage, investment banking and investment management businesses to 4 different buyers, and the process is continuing. Based on the Lehman case, it does not appear to me that any major changes are necessary.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR VITTER FROM MARTIN NEIL BAILY

Q.1. If there is an ordered resolution process, whether that's bankruptcy, a new structured bankruptcy or a new resolution authority—what can we do to generate the political will to use it?

A.1. Presumably the key thought behind this question is what can be done to ensure that some class of creditors, in addition to shareholders, can be forced to incur at least some loss in the event a large systemically important financial institution were to subject to some resolution procedure? One way is to ensure that all such institutions are required to back at least of their assets by uninsured long-term subordinated (unsecured) debt, a security not subject to a "run" since its holders cannot ask for their money back until the debt matures. Precisely for this reason, regulatory authorities can safely permit the holders of such instruments to suffer some loss without a threat of wider financial contagion. In addition, Congress can and should exercise vigilant oversight over the activities of any authority that may be given the power to resolve such troubled institutions.

Q.2. Should we be limiting the size of companies in the future to prevent a "too-big-to-fail" situation, or can we create a resolution process that only needs the political will to execute it that will eliminate the need to be concerned about a company's size?

A.2. There is no principled basis, in our view, for imposing arbitrary size limits by institution. However, regulation can and should be designed to ensure that as institutions grow in size and begin to expose the financial system to danger should those institutions fail, the institutions internalize this "externality." This can be accomplished by imposing progressively higher capital and liquidity requirements as financial institutions grow beyond a certain size, as well as more intensive supervision of their risk management practices. In addition, resolution authorities should be instructed to make an effort to break up troubled systemically important financial institutions, unless the costs of such breakups are projected to outweigh the benefits (in terms of reducing future exposure to systemic risk).

Q.3. What role did the way financial contracts are treated in bankruptcy create in both the AIG and Lehman situations?

A.3. We do not claim expertise in this area, and leave it to others to comment.

Q.4. Chrysler's experience with the Federal Government and bankruptcy may prove a useful learning experience as to why bankruptcy despite some issues may still best protect the rights of various investors. A normal bankruptcy filing is straight forward—senior creditors get paid 100 cents on the dollar and everyone else gets in line. That imposes the losses on those who chose to take the risk.

Indeed, the sanctity of a contract was paramount to our Founding Fathers. James Madison, in 1788, wrote in Federalist Papers Number 44 to the American people that, "laws impairing the obligation of contracts are contrary to the first principles of the social compact, and to every principle of sound legislation."

With that in mind, what changes can be made to bankruptcy to ensure an expedited resolution of a company that does not roil the financial markets and also keeps government from choosing winners and losers?

A.4. We agree that the sanctity of contracts is of paramount importance in our constitution and our economy. Bankruptcy law is not an area of our expertise. In the area of financial institutions in particular, however, we reiterate that one way to retain at least some market discipline without threatening the financial system is to require large systemically important financial institutions to issue at least some long-term subordinated (unsecured) debt.