The last time I addressed this group – August 21, 2007 – marked the beginning of a tumultuous period.¹ The two years since then have been marked by repeated waves of turmoil in financial markets and extraordinary actions by the authorities. As counterparties retreated from various market segments, governments and central banks worldwide responded by providing unprecedented levels of credit and credit guarantees, the broad effect of which has been to shield many creditors from losses.

In the wake of this “Crisis of 2007, 2008 and 2009” Congress is weighing proposals that would significantly restructure financial regulation in the United States. Central to the plans being discussed are stricter regulation of institutions and markets deemed to be systemically important and new governmental resolution authority for large, complex, nonbank financial institutions. Participants in the recent G-20 meetings, for instance, endorsed the notion of increased capital requirements for such companies. Given the broad and deep official support the financial sector has received, stiffer capital standards are warranted in order to better align incentives and protect taxpayer interests. But I think it also is worth questioning whether we need to take the level of official support as given.

In 1993, my predecessor Al Broaddus gave a speech entitled “Choices in Banking Policy,” in which he outlined the tradeoffs between reliance on market forces to align banks’ incentives and reliance on regulation and supervision to constrain banks’ risk taking.² I intend to take up this subject again today in the light of recent events; but as always, the views expressed are my own, and are not the official views of the Federal Reserve System. Broaddus’s speech came just a few years after another major U.S. financial crisis, and though the environment was very different, the tradeoffs he identified are just as relevant today as we consider reforming our regulatory structure. The more we rely on government guarantees of private-sector financial liabilities as our main defense against financial market disruption, the more we must regulate private risk management to offset the adverse incentive effects of that safety net. But by the same token, meaningful market discipline requires a credible government commitment to not shield private counterparties of large financial intermediaries from credit losses.

In this crisis, the official response has been to expand the scale and scope of public sector support, initially in the form of Federal Reserve lending, and later in the form of capital assistance for financial firms from the U.S. Treasury and guarantees on newly issued debt by the Federal Deposit Insurance Corporation. This response came in an attempt to make sound choices in an ever-deteriorating sequence of situations. At each moment of crisis, it is hard to argue with the proposition that losses to the creditors of a large, interconnected financial firm pose significant risks to the financial system and the broader economy. But the cumulative effect of these actions has been to solidify long-held beliefs by many market participants that large,
interconnected financial firms will be viewed by policymakers as “too-big-to-fail,” or at least too big to fail in a way that imposes substantial losses on creditors. These beliefs have evolved over a number of decades, through a series of actions that included the bailout of Continental Illinois National Bank and Trust in 1984, regulatory forbearance for banks that became undercapitalized from losses related to the debt of less developed countries in the 1980s, and the private sector rescue of Long Term Capital Management orchestrated by the New York Fed in 1998. While this last action involved no public sector funding, it clearly signaled an official concern for the disruption that could follow an outright default.3

The result is an environment in which there is both broad agreement on the need for stronger regulatory oversight of financial markets and institutions and widespread dissatisfaction with the scale of the official financial support the crisis has seemed to require. So we seem to face the same fundamental choice that my predecessor described 16 years ago: more regulation or more market discipline? The leading proposals before Congress concentrate almost exclusively on expanding government protection and regulation, but I believe we would be better off placing greater reliance on market-based incentives for prudent risk management.

What Financial Markets Do

Financial markets are fundamental to the way an economy allocates its scarce resources to their most productive uses. The markets and institutions that make up our financial system collect the savings of households and businesses and reallocate those funds to other households and businesses – as well as governments – who seek to finance additional current consumption or investment spending.

The possible uses of funds are many and diverse, varying both in expected outcomes and in risk. The conventional view of a market mechanism is that competition among alternative users of funds, through prices offered and bid, will tend to allocate those resources to their best uses, taking into account both risk and return. In doing so, markets also bring together the disparate knowledge of various market participants, none of which has a complete picture of the array of available investment opportunities. These two functions of financial markets – allocating resources and aggregating information – are clearly interdependent. After all, how can you distribute funds to their best uses without knowing something about the relative risks and rewards of various alternatives?

Financial markets do not perform these functions perfectly. Limits to the information held by individual market participants and incompleteness in the range of financial instruments and markets available for trading risks and rewards mean that markets may not achieve the same results that could be realized by the – hypothetical – omniscient central decision maker in economists’ models. Indeed, such informational limits appear to motivate many types of financial intermediaries and a host of other financial market features. But these same imperfections mean that it is likely to be very hard to find a way to systematically improve on market outcomes, because the same informational limits are likely to apply to the real world policymaker, who lacks the theoretical omniscience of the economist’s fictional decision maker.

What Financial Safety Nets Do
Government guarantees of private debt – either explicit or implicit – can have profound effects on debtors’ and creditors’ incentives to appropriately price and manage risk exposures. These effects are likely to have been particularly acute for the large institutions that were at the heart of this crisis and viewed as too big to fail. Their creditors will see their own risks as at least partially reduced by the explicit or implicit government guarantees, and will therefore require less of a risk premium and impose fewer covenant restrictions than they otherwise would. Inexpensive debt financing will encourage an institution to seek greater leverage than it otherwise would, and increased leverage, in turn, makes an institution less averse to taking large risks, other things being equal.

Measuring the effects of the safety net on incentives for risk management is difficult. But measuring the safety net itself is possible. Research by Richmond Fed economists showed that in 1999 about 27 percent of all of the liabilities of firms in the U.S. financial sector were explicitly guaranteed by the federal government. By their estimate, another 18 percent enjoyed at least some implicit support, or were likely to be perceived by markets to have such support, so a total of 45 percent of financial sector liabilities had at least implicit government backing. This was a conservative estimate of implicit guarantees, consisting basically of the government-sponsored enterprises and the uninsured deposits of the largest banks. In the course of the current crisis, explicit guarantee programs have grown, for instance through the expansion of deposit insurance. An estimate of the implicit safety net guarantees would also no doubt be larger today, as we have seen protection temporarily extended to nondeposit creditors of banks and other financial institutions. So it seems likely that a substantially larger fraction of the financial sector is now operating under the effects of the safety net.

The scale and scope of the financial safety net should be matched by the scale and scope of the regulatory and supervisory regime surrounding financial institutions. The central role of prudential regulation is to constrain and prevent the excessive risk-taking that would otherwise be induced by the incentive effects of safety net support. Capital regulations, for example, limit leverage, and supervisory oversight of financial institutions’ risk management systems seeks to assure that senior management – and supervisors – understand the risks the institution takes. The dramatic recent expansion of government support for financial institutions and markets has enlarged the safety net to well beyond the scope of the previous regulatory regime. If no corrective action is taken to close that gap, the next economic expansion will likely see more excessive risk-taking and end with more firms in financial distress.

**The Origins of the Crisis, Revisited**

The basic choice we face in restructuring financial regulation is this: To what extent do we expand regulatory constraints to catch up with an expanded safety net and to what extent do we limit the safety net and rely on market incentives? Based on the experience of the last several years, it may be tempting to conclude that a market-based approach has failed and needs to be replaced by tougher regulatory constraints. This, after all, is the popular narrative which portrays the financial crisis as the inevitable aftermath of an inherent tendency towards excessive risk-taking in unregulated financial markets.
But market incentives have been seriously distorted for some time by beliefs about the financial safety net. In fact, I believe that the incentive effects of the financial safety net added to the vulnerability of financial institutions and contributed significantly to the housing boom and subsequent bust.6 Perceptions that some financial institutions were too-big-to-fail, including the housing-related government sponsored enterprises, reduced their cost of debt and capital and helped spur innovations in securitization and risk distribution which ultimately posed challenges for our regulatory apparatus. Those institutions enjoyed an artificial advantage in providing guarantees and backstop liquidity support through off-balance-sheet entities, support which would prove most valuable during times of financial distress, when ostensibly off-balance-sheet assets would “boomerang” back onto bank balance sheets. And during the financial turbulence of the housing bust, the prospect of official support blunted the incentives of many financial firms and their creditors to protect themselves against the possibility of “runs” or “panics” that might lead to disruptive failures.7

Two Paths

The extent to which decades of policy precedents led to growing expectations of official support in instances of financial distress suggests a view of this financial crisis that is different from the popular narrative. Successive crises elicited broadened support, but this case-by-case evolution makes it hard to characterize just what limits, if any, there are to safety net support to large financial firms at any one time. The resulting uncertainty itself can be a source of volatility when financial distress looms as market participants are forced to speculate on the likelihood of a rescue. That uncertainty can create further pressure to bail out a distressed firm to avoid disappointing expectations and a sharp pullback by investors from other firms. The result has been an ever growing expectation of support, a dynamic which my former colleague Marvin Goodfriend and I wrote about 10 years ago.8

One key, therefore, to improving financial market performance is greater clarity about safety net policy. We should seek to identify and articulate clear and credible limits to our willingness to shield private creditors from loss. This necessarily means taking steps to limit discretion in the midst of financial disturbances. To understand why, put yourself in the position of a creditor of a large financial institution and ask yourself the following question: “If, in spite of the government’s best regulatory efforts, this institution finds itself on the brink of a financial crisis, threatening the failure of an array of institutions, how are the authorities likely to respond?” If the answer involves expanded protection to that institution, then market discipline has been weakened. And if the nature of the authorities’ response has not been made clear ahead of time, then financial market volatility is likely to be greater as well.

This is a relevant question because regulatory restraint on bank risk taking can never be perfect. Regulators, who as I said lack the omniscience of the economic theorist, cannot prevent the failure of all large complex financial institutions, nor should they attempt to do so. In the presence of a substantial safety net, competition will drive firms to seek innovative ways to take on leveraged risks and to bypass regulatory constraints. A market participant might then reasonably assume that regulators will successfully manage routine risks, while novel, nonroutine risks that result from financial innovations are likely to be more difficult to manage.
and afforded special protection. And it is nonroutine, innovation-related risks that have been the source of past crises and will likely be the source of future crises.

The case for the discretionary use of public funds rests on the desire to head off the costly effects that might result from a large firm’s unassisted failure. Many have pointed to the market turmoil that followed the Lehman Brothers failure last September as an example of such effects. But the general distress on the days and weeks that followed was a response to many things. The news of Lehman’s failure alone, quite apart from how that failure was resolved, was clearly relevant to creditors of other financial institutions with mortgage-related exposures. That information was going to be revealed in any case, and in fact one would actually want it absorbed quickly in the prices of other financial assets for the financial system to function effectively. Another important component in the market response to Lehman was undoubtedly the unexpected nature of the government’s treatment of Lehman, given the actions that had come before in the period since the summer of 2007. Market participants marked down the probability they attached to future rescues, and no doubt further revised those probabilities (both up and down) many times in the days that followed. The argument for scaling back the safety net is not an argument for safety net uncertainty. Rather, it is an argument that we should both create expectations about the limits of assistance and take actions that validate those expectations. The real lesson from Lehman, in my view, is that officials should make a clear commitment about what institutions they will not support.

One focus in recent discussions of financial regulatory restructuring has been the process for resolving the failure of large financial firms, including firms without bank charters. This focus is appropriate, because beliefs about the safety net are really beliefs about what happens to large firms in financial stress. One proposal is to establish a new federal “resolution authority” to handle the failure of a large financial firm during times of stress. A failing financial firm could be taken into conservatorship or receivership, and the Treasury (or some other federal agency) would be able to provide loans, guarantees, or capital to the firm, or buy assets from the firm. The intent is to provide for a less disruptive alternative to a bankruptcy filing, with the hope that such an authority can be credibly expected to impose appropriate losses on the firm’s creditors.

The description of this proposed resolution authority leaves it unclear how it would establish such a credible commitment. The proposal involves two distinct features. One is to provide for an alternative to the provisions of bankruptcy law as a resolution mechanism for a large financial firm with many creditors. I would not be surprised if a close look at the bankruptcy code in light of recent events reveals worthwhile improvement opportunities. But the proposed resolution authority would be distinct from established bankruptcy mechanisms. In addition, it would have the discretion to use public funds to shield creditors from losses, a feature that I believe will severely limit the benefit from reforming the resolution process. A widespread belief that public funds will soften the blow to private creditors would weaken market discipline and further complicate the task of regulators. Moreover, uncertainty about whether such an authority will intervene to supersede the provisions of bankruptcy law and which creditors will benefit from public funds is likely to intensify financial market turmoil in the event stresses arise.

Effective resolution reform should limit the discretionary use of public funds. Federal Reserve lending has played a prominent role in this crisis and has been expanded far beyond the
boundaries that previously were believed to constrain it. Section 13(3) of the Federal Reserve Act allows Reserve Banks, with the permission of the Board of Governors, to lend to any individual, partnership or corporation, provided the circumstances are “unusual and exigent,” and the borrower is “unable to secure adequate credit accommodations from other banking institutions.” This provision was rarely invoked before 2008, but now that it has, we should seek to clarify how we want people to expect it to be used in the future. Successfully solidifying these expectations may require rewriting Section 13(3). I would favor revisions that specify more clearly the circumstances in which the Fed can extend such credit and forms that such credit can take. For instance, I previously have suggested limiting the Fed’s emergency loans to duration of a few days, after which further funding would become the responsibility of the Treasury.

But limiting discretion does not stop with the Fed. Decisions and actions of a separate resolution authority should be judged against a clear and simple benchmark process for closing down firms and paying off creditors – a benchmark that involves minimal use of public funds. This might resemble the FDIC’s “least cost resolution” mandate. This provision of the FDIC Improvement Act, while not always binding, does provide a simple basic option against which to assess alternatives.

I have focused a bit more so far on reforms related to the failure resolution process than on those relating to the on-going regulation and supervision of financial firms and markets. This is not out of complacency about our current regulatory regime. Federal Reserve staff have been devoting substantial time and effort to implementing improvements to our supervisory processes that were suggested by a thorough review of the lessons learned from this episode. Rather, I believe that, whatever we do to enhance prudential regulation, our efforts will be undercut if we do not also seek to rein in the incentives created by expectations of limitless safety net protection in financial markets. How well we curtail those expectations rests crucially on how clear we can be about what happens when financial firms face distress, because inevitably, in a dynamic economy, some institutions will fail. Only by setting credible bounds on the safety net can we expect private-sector incentives to align at all with the public interest in sound risk management.

The transition to a narrower safety net is likely to be quite difficult. By itself, merely announcing the intention to restrict support to a predetermined field and allowing uncovered institutions to fail without assistance will not necessarily be credible. If actions speak louder than words, as is often the case, then officials will have to demonstrate their commitment by imposing costly and painful losses on creditors. Perhaps this is why there are those who seem resigned to an expansive safety net, and are limiting their attention to providing additional tools so that policymakers can resolve a broader range of cases without resorting to bankruptcy. But this seems likely to increase rather than decrease the likelihood of future financial market turbulence. The wider we cast the net, the greater the incentives of market participants to evade regulatory constraints while still availing themselves of protection in situations of distress, leading to a continuing cycle of crisis and bail out. And I have a hard time believing that we really need a publicly funded financial-institution support system covering nearly half of the liabilities in our credit markets. So I believe that ultimately the benefits of a much more limited regime will come to be more widely appreciated. Perhaps our choices in financial regulation are really more about when than what.
I am grateful for the assistance of John Weinberg in preparing this speech.


Jeffrey M. Lacker, “Financial Stability and Central Banks,” a speech delivered to the European Economics and Financial Centre, London, England, June 5, 2008. To be sure, financial market distortions related to the safety net were not the whole story in the housing boom and bust. Earlier in this decade housing market fundamentals favored the devotion of an increasing share of the economy’s resources to home construction, an array of other government policies were aimed at expanding home ownership, and many participants in housing markets may have been acting on overly optimistic assessments of the future path of home prices. But nonetheless, judging from the pattern of fallout from the bust, beliefs about the financial safety net appear to have contributed significantly to excessively risky mortgage lending during the housing boom.

Marvin Goodfriend and Jeffrey M. Lacker, “Limited Commitment and Central Bank Lending,” Federal Reserve Bank of Richmond Economic Quarterly, Fall 1999, vol. 85, no. 4, pp. 1-27. See, especially, p. 15. We noted that central banks’ implied responsibility for financial stability “can create pressure to expand the scope of central bank lending to nonbank financial institutions.” We predicted “a tendency for central banks to overextend lending,” and an increase in the rate of financial distress over time “as market participants come to understand the range of the central bank’s actual (implicit) commitment to lend.”

Federal Reserve Act, Section 13, “Powers of Federal Reserve Banks.”


Goodfriend and Lacker, 1999.