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Addressing the Too Big to Fail Problem

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

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 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.

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 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.

[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.

[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.

[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.

Addressing TBTF by Shrinking Financial Institutions:
An Initial Assessment

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"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 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. Current academic research finds potential scale benefits in all bank size groups, including the very largest.[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 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 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.

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.

[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.

[3] 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.

[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.

[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.

Better Late Than Never:
Addressing Too-Big-To-Fail

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March 31, 2009

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 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 equivalent 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 institutions. 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.

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.

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

[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.

[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.

[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.

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).

Policymakers should

- reduce their uncertainty about the potential magnitude and cost of spillovers.
- augment policies that manage the losses one firm's failure imposes on its counterparties.
- enhance payments system reforms that limit the exposure that payment processing creates for financial firms.

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.

We recommend that policymakers broadly communicate the actions they've taken to reduce expectations of bailouts. ... 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 more stability.

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. R

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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.

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

[*]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.

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). R