

AN ★ O U N C E ★ O F  
**PREVENTION**

Financial regulation, moral hazard,  
 and the end of “too big to fail”



by **David A. Moss**

THE MAGNITUDE of the current financial crisis reflects the failure of an economic and regulatory philosophy that proved increasingly influential in policy circles during the past three decades. This philosophy, guided more by theory than historical experience, held that private financial institutions not insured by the government could be largely trusted to manage their own risks—to regulate themselves. The crisis has suggested otherwise, particularly since several of the least regulated parts of the system (including non-bank mortgage originators and the major broker-dealer Bear Stearns) were among the first to run into trouble. Former Federal Reserve Chairman Alan Greenspan acknowledged in October 2008, “Those of us who have looked to the self-interest of lending institutions to protect shareholders’ equity, myself included, are in a state of shocked disbelief.”

★ **FROM CRISIS TO CALM**

OF COURSE, financial panics and crises are nothing new. For most of the nation’s history, they represented a regular and often debilitating feature of American life. Until the Great Depression, major crises struck about every 15 to 20 years—in 1792, 1797, 1819, 1837, 1857, 1873, 1893, 1907, and 1929-33.

But then the crises stopped. In fact, the United States did not suffer another major banking crisis for just about 50 years—by far the longest such stretch in the nation’s history. Although there were many reasons for this, it is difficult to ignore the federal government’s active role in managing financial risk. This role began to take shape in 1933 with passage of the Glass-Steagall Act, which introduced federal deposit insurance, significantly expanded federal bank supervision, and required the separation of commercial from investment banking.

The simple truth is that New Deal financial regulation worked. In fact, it worked remarkably well. Banking crises essentially disappeared after 1933 (see chart, page 26), without *any* apparent

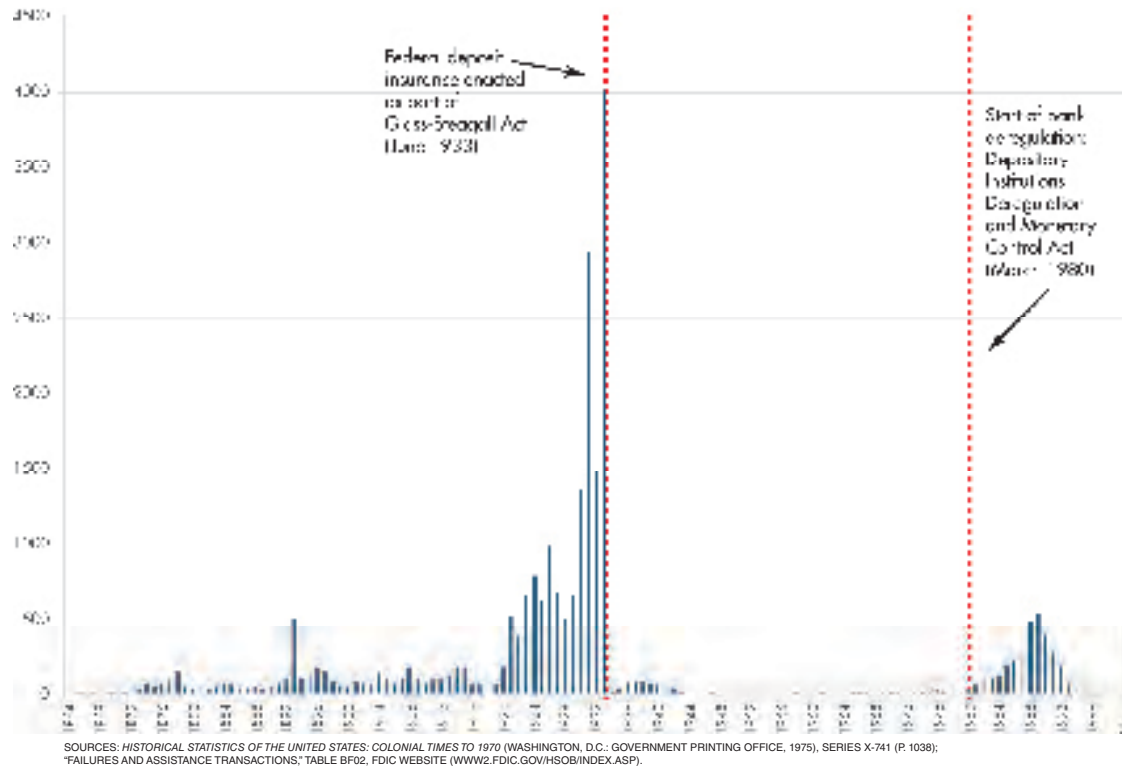
reduction in economic growth. Not only was the period of 1933-1980 one of unusually strong growth, but the growth was broad based, associated with stable or *falling* income inequality, rather than with the *rising* inequality that took hold after 1980.

Perhaps even more striking, America’s post-Glass-Steagall financial system soon became the envy of the world. Although critics had warned that the forced separation of commercial from investment banking could undermine the nation’s financial system, American financial institutions from Morgan Stanley to Goldman Sachs dominated global high finance for the remainder of the century.

Critics of Glass-Steagall had also warned that federal deposit insurance would encourage excessive risk-taking, what economists call “moral hazard.” According to this argument, because depositors would no longer have to worry about the soundness of their banks and might well be attracted by the higher interest rates offered by riskier institutions, funds would ultimately flow to weak banks—rather than strong—and losses could mount. Said one opponent in 1933, “A reputation for high character [in banking] would be cheapened and recklessness would be encouraged.”

Fortunately, the authors of Glass-Steagall (and the follow-on Banking Act of 1935) prepared for this threat, authorizing not only public deposit insurance but also meaningful bank regulation, designed to ensure the safety and soundness of insured banks. Regulation was necessary to deal with the moral hazard that critics warned about. The combination of insurance and regulation adopted as part of Glass-Steagall engendered a powerful dose of consumer protection, a remarkable reduction in systemic risk, and a notable increase in public confidence in the financial system. By all indications, this well designed risk-management policy strengthened the financial markets and helped prevent subsequent crises.

## CALM AMIDST THE STORM: BANK FAILURES (SUSPENSIONS), 1864-2000



In retrospect, it appears that the New Dealers hit on a successful strategy: stringent regulation (combined with mandatory public insurance) for commercial banks, the biggest systemic threat at the time, and a lighter regulatory touch for most of the rest of the financial system. This approach helped ensure financial stability and financial innovation—the best of both worlds—for half a century. In fact, significant bank failures (in the form of the savings and loan crisis) did not reappear until after the start of bank deregulation in the early 1980s, when oversight was relaxed and the essential link between insurance and regulation was temporarily severed.

### ★ A MISTAKE, NOT AN ACCIDENT

LIKE THE SAVINGS AND LOAN FIASCO of the 1980s, the current financial crisis is the product of a mistaken regulatory philosophy—only this time the consequences have proved far more severe. In too many cases, regulators chose not to use tools they already had, or they neglected to request new tools to meet the challenges of an evolving financial system. The failure to regulate the sprawling market for credit default swaps (CDS) in the late 1990s and the Securities and Exchange Commission's 2004 decision to allow voluntary regulation on the part of major investment firms are two particularly striking examples.

In both of these cases and many others, the prevailing view of financial regulation was that less was more, because private actors could be trusted to optimize financial decisionmaking on their own. For example, Alan Greenspan in 2002 explained his view on “the issue of regulation and disclosure in the over-the-counter derivatives market” this way: “By design, this market, presumed to involve dealings among sophisticated professionals, has been largely exempt from government regulation. In part, this exemption reflects the view that professionals do not require the investor protections commonly afforded to markets in which re-

tail investors participate. But regulation is not only unnecessary in these markets, it is potentially damaging, because regulation presupposes disclosure and forced disclosure of proprietary information can undercut innovations in financial markets just as it would in real-estate markets.” Sophisticated economic reasoning seemed to validate the point; and as the bubble inflated, the results spoke for themselves.

Ironically, it is possible that the success of New Deal financial regulation actually contributed to its own undoing. After nearly 50 years of relative financial calm, academics and policymakers alike may have begun to take that stability for granted. Given this mindset, financial regulation looked like an unnecessary burden. It was as if, after sharply reducing deadly epidemics through public-health measures, policymakers concluded that these measures weren't really necessary, since major epidemics were not much of a threat anymore.

But private financial markets and institutions have *always* had trouble managing risk—and especially systemic risk—on their own. The long series of financial crises that punctuated American history up through 1933 testifies to this fact, as does the current crisis, which exploded not coincidentally during a period of aggressive financial innovation and deregulation. Unfortunately, the timing of this most recent swing toward financial deregulation could not have been worse.

### ★ THE CURSE OF BIGNESS?

AT THE VERY TIME that policymakers were downplaying the importance of regulation—especially in the 1980s and 1990s—the financial system was changing in ways that greatly magnified their mistake. In particular, we began to see the emergence of a new systemic threat: the growth of massive financial institutions outside of commercial banking. For example, the assets of the nation's



security brokers and dealers increased from \$45 billion (1.6 percent of gross domestic product) in 1980 to \$262 billion (4.5 percent of GDP) in 1990 to more than \$3 trillion (22 percent of GDP) in 2007. All by itself, Bear Stearns saw its assets increase from about \$37 billion in 1990 to nearly \$400 billion at the start of 2007; and the behemoth Citigroup, after consolidating a broad range of financial services under one roof, grew its balance sheet from less than \$700 billion at the start of 1999 to more than \$2 trillion by 2007!

The rise of these massive institutions represented a profound change in our financial system and a powerful new source of systemic risk. Yet we didn't update our regulatory policies in response—a critical mistake.

Although there were obviously many causes of the current crisis (including irresponsible lending and borrowing in the mortgage markets, asset securitization carried to a dangerous extreme, a severely dysfunctional credit-rating system, and excessive leverage throughout the financial system), perhaps the biggest culprits of all were the supersized financial institutions. At root, this was a crisis of big institutions.

As asset prices rose, many of the huge financial conglomerates played a pivotal role in inflating the bubble. They used their pristine credit ratings (and their *illusion of permanence*) to access cheap funds on a tremendous scale, and they employed those funds in support of countless high-risk transactions and investments. Once the bubble began to deflate, it was many of these same huge (and hugely leveraged) firms that helped precipitate a vicious downward spiral as they all began desperately trying to sell troubled assets simultaneously. And when the bubble finally burst, federal officials concluded that they had to save these very same institutions from collapse, because the failure of any one of them could have triggered an avalanche of losses, potentially threatening the financial system as a whole.

### ★ IMPLICIT GUARANTEES AS FAR AS THE EYE CAN SEE

DURING THE COURSE of 2008 and early 2009, federal officials made absolutely clear that there was almost no limit to the resources they would devote to preventing or halting a systemic panic at a time of general financial distress. The Federal Reserve extended unprecedented support to investment banks, money-market funds, and the commercial-paper market; it also helped rescue Bear Stearns, AIG, and Citigroup. The Treasury guaranteed all money-market funds, injected capital into a broad range of financial institutions under the Troubled Asset Relief Program (TARP), supported the takeover of Fannie Mae and Freddie Mac, and also supported the operations of the Federal Reserve. The Federal Deposit Insurance Corporation (FDIC), meanwhile, increased deposit insurance coverage from \$100,000 to \$250,000 per account, guaranteed senior unsecured bank debt, and contributed to the rescue of Citigroup. In all, by the end of 2008, federal agencies had already disbursed more than \$2 trillion in responding to the crisis and had taken on potential commitments in excess of \$10 trillion, and those figures continued to increase in 2009.

As these extraordinary interventions prove, federal policymakers view many of the nation's largest financial institutions as too big—or, more precisely, too systemic—to fail. The only major non-bank financial institution that has been allowed to fail and enter Chapter 11 was Lehman Brothers, and the shock waves emanating from that event made it the exception that proved the rule.

The implicit federal guarantees that were once regarded as a special privilege of Fannie Mae, Freddie Mac, and other government-sponsored enterprises have now, by all accounts, been extended, essentially, to every major (systemically significant) financial institution in the country.

All such guarantees have the potential to invite excessive risk-taking—as a result of moral hazard. Unfortunately, implicit guarantees are *particularly* dangerous because they are typically open-ended, not always tightly linked to careful risk monitoring (regulation), and almost impossible to eliminate once in place. The costly federal takeover of Fannie Mae and Freddie Mac illustrates this point, as do the ever-rising costs of federal disaster relief—following floods and hurricanes, for instance—which represents another open-ended, and implicit, federal guarantee.

The extension of implicit guarantees to all systemically significant financial institutions takes moral hazard in the financial system to an entirely new level. Creditors of these institutions will monitor less aggressively, knowing that the federal government stands as a backstop, and they are likely to pay less attention to the riskiness of these institutions in chasing the highest yields. If we are not careful, the inevitable result will be more (and more excessive) risk-taking, greater losses, and further crises. If we are going to provide guarantees—and that decision has already been made—it is essential that we create effective mechanisms for monitoring and controlling the inevitable moral hazard.

### ★ RETHINKING REGULATION: TARGETING SYSTEMIC RISK

TODAY, FEDERAL OFFICIALS WAIT until *after* a financial institution is in trouble to decide if it poses a systemic threat to the broader economy. In 2008, Bear Stearns, Fannie Mae, Freddie Mac, AIG, and Citigroup were all deemed too systemic to fail—and taxpayers were put on the hook for hundreds of billions and perhaps trillions of dollars to help keep them alive.

This is the wrong approach. Regulators should not have to wait until the very last minute, when they are under enormous time pressure and often in the dead of night, to make such momentous decisions. By that point, financial regulation has already failed. The underlying problem can no longer be prevented. All that can be done is to stabilize the institution with an extraordinary infusion of taxpayer dollars. Even then there is no guarantee that the infusion will be sufficient.

A much better approach would be to identify financial institutions with “systemic significance” *in advance*—that is, in normal times—and to regulate them accordingly. These are institutions that are so big or so deeply interconnected with other financial actors that their failure could trigger cascading losses and even contagion across the financial system. They are also the institutions that, as we have seen, helped drive the crisis on the way up (by inflating the bubble) and on the way down (by provoking a fire sale in the financial markets). The Obama administration now calls these institutions “Tier 1 Financial Holding Companies.” Providing proper oversight of such institutions would help to prevent a crisis from striking in the first place, and it would put public officials in a much better position to deal with the consequences in the unlikely event that a crisis did occur. It would also help to update the highly successful New Deal regulatory strategy by ensuring vigorous regulation of today's greatest sys-

temic threats. As the saying goes, an ounce of prevention is worth a pound of cure.

## ★ REFORMING AMERICAN FINANCIAL REGULATION

CONGRESS AND THE PRESIDENT should direct a new regulatory agency to identify financial institutions whose failure would pose a systemic threat to the broader financial system. Such determinations would be made *continuously*, not simply in bad times, so that a complete list of financial institutions deemed to have “systemic significance” would always be publicly available.

The regulatory body designated to make these determinations (call it a Systemic Risk Review Board) would have broad powers to collect information, both from other regulatory agencies and directly from financial institutions themselves. All financial institutions—from banks to hedge funds—would be required to report to this body, irrespective of other regulatory coverage. Financial institutions would have the right to appeal a determination, but ultimately (if it was upheld or not challenged) the determination would be binding.

Once systemically significant institutions were clearly identified, it would then be necessary to provide appropriate oversight and, at the same time, to clarify (in advance) how such institutions would be regulated and governed at moments of distress.

**PRUDENTIAL REGULATION.** Precisely because of the potential threat they pose to the broader financial system, systemically significant institutions should face enhanced prudential regulation to limit excessive risk-taking and help ensure their safety. Such regulation might include relatively stringent capital and liquidity requirements, most likely on a counter-cyclical basis (to limit excessive lending in boom markets and the need for fire sales in down markets); a maximum leverage ratio (on the whole institution and potentially also on individual subsidiaries); well-defined limits on contingent liabilities and off-balance-sheet activity; and perhaps also caps on the proportion of short-term debt on the institution’s balance sheet.

However implemented, an important advantage of the proposed system is that it would provide financial institutions with a *strong incentive to avoid becoming systemically significant*. This is exactly the opposite of the existing situation, where financial institutions have a strong incentive to become “too big to fail,” precisely in order to exploit a free implicit guarantee from the federal government. This unhealthy state of affairs can be corrected by being clear about the systemic nature of financial institutions and regulating them appropriately, rather than waiting until they are already in trouble to act.

**FEDERAL INSURANCE.** To the extent that systemically significant financial institutions will receive federal support in the event of a general financial crisis, such support should be formalized (and paid for) *in advance*. Historical experience suggests that government guarantees that are explicit, well defined, and closely monitored generate far less moral hazard than open-ended, implicit guarantees. It is important to convert what are now massive *implicit* guarantees into *explicit* ones that are clear, delimited, and well understood.

One option for doing this would be to create an explicit system of federal capital insurance for systemically significant financial



institutions. Under such a program, covered institutions would be required to pay regular and appropriate premiums for the coverage; the program would pay out “claims” only in the context of a systemic financial event (determined perhaps by a presidential declaration); and payouts would be limited to pre-specified amounts. For example, if a systemically significant financial institution with \$500 billion in assets were required to buy federal capital insurance equal to 10 percent of total assets, the potential payout by the federal capital insurance program in a systemic event would be \$50 billion. In return, the federal government would receive \$50 billion in non-voting preferred shares (which the affected institution would have the obligation to repurchase after the crisis had passed).

Such capital insurance would *not* create a new federal liability. Rather, it would make an existing *implicit* liability *explicit*. Because it is now understood that the federal government will support systemically significant financial institutions in the event of a crisis, it is only reasonable that these institutions pay premiums for this expected federal coverage in advance of any crisis and that the potential support be well defined and limited. In fact, such a program might well *reduce* the federal government’s ultimate liability, because its obligation would be pre-specified and no longer open-ended.

There are other options as well, beyond federal capital insurance. One potentially attractive option—a convertible debt rule—would involve a regulatory requirement and trigger, but no government guarantee. The basic idea (patterned after a recent proposal by a group of distinguished financial economists) is that systemically significant institutions would be required to carry a sizable amount of special debt, which would automatically convert to equity capital in the event of a systemic crisis. In this way, systemic financial institutions could count on a significant—and potentially vital—reduction in leverage in times of general distress. With a portion of their debt turned into equity, these institutions ideally would not have to undertake emergency asset sales in disrupted markets or seek additional financial support from

the federal government to shore up their balance sheets. Whether such an approach would be sufficient on its own remains an open question, but at a minimum it might present a useful complement to a federal capital-insurance program.

### RECEIVERSHIP PROCESS FOR FAILING INSTITUTIONS.

Ultimately, under the system proposed here, *no* financial institution would be too big to fail. Systemically significant institutions might receive automatic capital infusions in times of general financial distress (as just described), but an individual institution would *not* be propped up or bailed out when it was on the verge of failure. Instead, it would be promptly taken over by a federal receiver and either restructured, sold, or liquidated—in much the same way that FDIC takes over (and, in many cases, promptly restructures and reopens) failing banks.

Although non-financial firms enter bankruptcy when they can no longer make good on their debts, the federal bankruptcy system was simply not designed for large, systemically significant financial institutions. As a result, regulators often feel the need to prop up such institutions when they falter to avoid a messy and potentially destructive bankruptcy process. But this cannot be tolerated any longer. Instead, we need a receivership process that works, so regulators don't have to be afraid to let a systemically significant financial institution fail. The FDIC has proved that this can be done for commercial banks, and it is now time to extend the FDIC-receivership model to all systemically significant institutions. No private entity should ever be too big to fail.

### ★ REGULATION FOR THE LONG TERM

IN DESIGNING THIS NEW SYSTEM, lawmakers need to remember that they are building a regulatory infrastructure for the long term. In general, major financial crises strike rather infrequently—perhaps once in 20 or even 50 years—making it exceedingly difficult for regulators to stay vigilant. And because a systemic regulator would be charged with regulating the most powerful financial institutions in the country, it would be highly vulnerable to falling under their influence—a phenomenon that social scientists call “regulatory capture.”

The best weapon against both complacency and capture is sunlight. This is one of the reasons why Congress should create a new agency, rather than house a systemic regulator in an existing one. Although the Federal Reserve might seem an attractive home, because it has a great deal of financial expertise already, the “Fed” was never designed to be particularly transparent. On the contrary, it has long been thought that an effective central bank requires a substantial degree of insulation from democratic impulses. A successful systemic regulator, by contrast, would need to be far more open and responsive to democratic scrutiny.

The need for sunlight is also the reason why a list of systemically significant institutions (which the regulator would compile) must be public, not private. Such a list would help to ensure not only *public engagement* in the process of systemic regulation, but also *public pressure* if the systemic regulator were to fall down on the job (or fall under the spell of the firms it was regulating). Imagine, for example, the outcry that would ensue if a major financial firm mysteriously disappeared from the list. It is precisely the fear of such unwelcome attention that would help keep regulators on the straight and narrow. Without the discipline of a public list, regu-

latory diligence would invariably weaken over time in the face of unrelenting pressure from the regulated firms.

Some critics contend that a public list of this sort would confer special status on the named firms, *increasing* moral hazard by strengthening the implicit guarantee these firms already enjoy. But it is a fantasy to believe that the government's implicit guarantee of all systemically significant institutions will magically disappear (or even diminish meaningfully) if we simply stop talking about it. After more than a year of massive federal rescues and bailouts of major financial firms, that guarantee is now rock solid.

As past experience has shown, implicit guarantees don't disappear on their own and can't be ignored or denied into oblivion. Nor is it credible to pretend that such institutions would receive no federal support at a moment of crisis. The right approach is to be explicit about which institutions represent a true systemic threat; regulate them effectively on the basis of strong prudential standards; promise a reasonable—but strictly limited—amount of support in times of crisis (through a capital-insurance program); and be clear in advance that they will face an FDIC-style receivership process (rather than ad hoc government bailouts) if they fail. This is the best way to limit moral hazard and, at the same time, avoid regulatory complacency and capture over the long term.

### ★ RESTORING CALM, AVOIDING CRISES

THE PRESENT FINANCIAL CRISIS should remind us that private financial institutions and markets cannot always be counted upon to manage risk optimally on their own. Almost everyone now recognizes that the government has a critical role to play—as the lender, insurer, and spender of last resort—in times of crisis. But effective public risk management is also needed in normal times to protect consumers and investors and to help prevent financial crises in the first place.

New Deal reforms helped produce nearly a half-century of relative financial calm, without quashing essential financial innovation. Today, the biggest threat to our financial system is posed not by volatile commercial banks (as in 1933), but rather by huge, systemically significant financial institutions (think AIG, Citigroup, Fannie Mae) that have the potential to trigger financial avalanches. And the threat posed by these institutions is only compounded by the unprecedented federal guarantees introduced in response to the current crisis and the pervasive moral hazard they spawn.

The best way to address this threat is by identifying, regulating, and potentially insuring systemically significant financial institutions continuously, *before* crisis strikes. This would mark a major but essential reform to ensure a healthy and productive financial system for the next half-century. ▽

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*David A. Moss is McLean professor of business administration. He is also the author of When All Else Fails: Government as the Ultimate Risk Manager, a broad historical analysis of public risk-management, including strategies for addressing the moral hazard associated with public guarantees and other market interventions. This essay is adapted and updated from “An Ounce of Prevention: The Power of Public Risk Management in Stabilizing the Financial System,” January 2009, a Harvard Business School working paper (available, with supporting footnotes, at [www.hbs.edu/research/pdf/09-087.pdf](http://www.hbs.edu/research/pdf/09-087.pdf)). That paper grew out of his work for the TARP Congressional Oversight Panel and a draft report on financial regulatory reform he prepared for the panel. It was also presented at the Tobin Project Conference on Government and Markets at White Oak.*