

## 2 Prudential Bank Regulation: What's Broke and How to Fix It

**Charles W. Calomiris**

**F**inancial crises not only impose short-term economic costs but also create enormous regulatory risks. The financial crisis that is currently gripping the global economy is already producing voluminous proposals for regulatory reform from all quarters. Previous financial crises—most obviously the Great Depression—brought significant financial regulatory changes in their wake, most of which were subsequently discredited by economists and economic historians as counterproductive.

Since the 1980s, the United States has been removing many of those regulatory missteps by allowing banks to pay market interest rates on deposits, operate across state lines, and offer a wide range of financial services and products to their customers, thus diversifying banks' sources of income and improving their efficiency. It is worth remembering how long it took for unwise regulatory actions taken in the wake of the Depression to be reversed; indeed, some regulatory policies introduced during the Depression—most obviously, deposit insurance—will likely never be reversed. Ironically, financial economists and economic historians regard deposit insurance (and other safety-net policies) as the primary source of the unprecedented financial instability that has arisen worldwide over the past thirty years (Barth, Caprio, and Levine 2006; Demirguc-Kunt, Kane, and Laeven 2009; Calomiris 2008a).

Will the current regulatory backlash in response to the financial crisis once again set back financial efficiency, or will it lead to the refinement and improvement of our financial regulatory structure? As of this writing, a mixed outcome seems likely. Some changes in the content of banking regulation are likely to be constructive. In other areas—the reform of the regulatory use of rating agency opinions, and putting an end to the subsidizing of leverage in housing—the future is uncertain; counterproductive, knee-jerk reactions or preservation of the status quo, respectively, seem as likely as thoughtful reform. In some of the areas where reform would be desirable—most obviously, eliminating entry barriers in consumer banking—nothing is likely to occur. Finally, with respect to the implementation of supervision and regulation, major changes are afoot that will probably rearrange and consolidate financial oversight and extend the powers of the Federal Reserve Board into new areas. Reconsidering the allocation of regulatory power will likely bring a mix of unpredictable outcomes. Unfortunately, one desirable change—removing the Fed from its current role as a microsupervisor and regulator of banks—is unlikely to occur.

This chapter considers several important areas of response (or nonresponse) of banking regulation to the crisis. I begin with an overview of the causes of the crisis and the ways in which the crisis has highlighted the need for regulatory reform. I review the prospects for the reform of regulatory content. I also consider and evaluate the potential changes in the structure of regulation and supervision coming out of the crisis.

## THE ORIGINS OF THE CRISIS

Many commentators argue that the financial innovations associated with the securitization of subprime mortgages by banks and investment banks, and the repo finance of investment banks, permitted

subprime mortgage originators to sidestep commercial bank prudential regulation (of on-balance-sheet bank holdings of subprime mortgages and related instruments) so that they could assume more risk at lower cost by boosting leverage. There is no doubt that, had more subprime loans been placed on the balance sheets of commercial banks, financial system leveraging would have been smaller. But that would not have prevented the crisis. Government policies that promoted risk taking in housing finance, and regulatory standards for measuring risk when setting minimum capital requirements (for banks, investment banks, and their securitizations), were far more important in generating the hugely underestimated risks that brought down the U.S. financial system.

As Calomiris (2009a) shows, on an *ex ante* basis, subprime default risk was substantially underestimated during 2003–7. Reasonable, forward-looking estimates of risk were ignored, and senior management structured compensation for asset managers to maximize incentives to undertake underestimated risks.

Those mistakes were not the result of random mass insanity; rather, they reflect a policy environment that strongly encouraged financial managers to underestimate risk in the subprime mortgage market. Risk taking was driven by government policies. Four categories of government error were most important:

1. Lax monetary policy, especially from 2002 through 2005, promoted easy credit and kept interest rates low for a protracted period. The history of postwar monetary policy has seen only two episodes in which the real federal funds rate remained negative for several consecutive years: the high-inflation episode of 1975–78 (which was reversed by the rate hikes of 1979–82) and the accommodative period of 2002–5. The Fed deviated sharply from the “Taylor Rule” in setting interest rates during 2002–5; the federal funds rates remained substantially and persistently below levels that would have been consistent with that rule. Not only were short-term real rates held at persistent historic lows, but unusually high demand for longer term Treasuries related to global imbalances

flattened the Treasury yield curve during the 2002–5 period, resulting in extremely low interest rates across the yield curve. Accommodative monetary policy and a flat yield curve meant that credit was excessively available to support expansion in the housing market at abnormally low interest rates, which encouraged the overpricing of houses and subprime mortgages.

2. Numerous housing policies promoted subprime risk taking by financial institutions (Calomiris 2009a, 2009b). Those policies included (a) political pressures from Congress on the government-sponsored enterprises (GSEs), Fannie Mae and Freddie Mac, to promote “affordable housing” by investing in high-risk subprime mortgages, (b) lending subsidies for housing finance via the Federal Home Loan Bank System to its member institutions, (c) Federal Housing Administration (FHA) subsidization of high mortgage leverage and risk, (d) government and GSE mortgage foreclosure mitigation protocols that were developed in the late 1990s and early 2000s to reduce the costs to borrowers of failing to meet debt service requirements on mortgages, which further promoted risky mortgages, and—almost unbelievably—(e) 2006 legislation that encouraged ratings agencies to relax standards for subprime securitizations.

All these policies encouraged the underestimation of subprime risk, but the behavior of members of Congress toward Fannie Mae and Freddie Mac, which encouraged reckless lending by the GSEs in the name of affordable housing, were arguably the most damaging actions leading up to the crisis. For Fannie and Freddie to maintain lucrative implicit (now explicit) government guarantees on their debts, they had to commit growing resources to risky subprime loans (Calomiris and Wallison 2008). Fannie and Freddie ended up holding \$1.6 trillion in exposures to those toxic mortgages, half the total of non-FHA outstanding amounts of toxic mortgages (Pinto 2008).

3. Government regulations limiting the concentration of stock ownership and the identity of who can buy controlling interests in

banks have made effective corporate governance within large banks virtually impossible. Lax corporate governance allowed bank management to pursue investments that were unprofitable for stockholders in the long run but were very profitable to management in the short run, given the short time horizons of managerial compensation systems. When stockholder discipline is absent, managers can set up the management of risk to benefit themselves at the expense of stockholders. An asset bubble (like the subprime bubble of 2003–7) offers an ideal opportunity; if senior managers establish compensation systems that reward subordinates based on total assets managed or total revenues collected, without regard to risk or future potential loss, then subordinates have the incentive to expand portfolios rapidly during the bubble without regard to risk. Senior managers then reward themselves for having overseen “successful” expansion with large short-term bonuses and cash out their stock options quickly so that a large portion of their money is invested elsewhere when the bubble bursts.

4. The prudential regulation of commercial banks and investment banks has proven to be ineffective. That failure reflects (a) fundamental problems in measuring bank risk resulting from regulation’s ill-considered reliance on inaccurate rules of thumb, credit rating agencies’ assessments, and internal bank models to measure risk, and (b) the too-big-to-fail problem (Stern and Feldman 2004), which makes it difficult to credibly enforce effective discipline on large, complex financial institutions (such as Citibank, Bear Stearns, AIG, and Lehman) even if regulators detect large losses or imprudently large risks.

The risk measurement problem has been the primary failure of banking regulation and a subject of constant academic criticism for more than two decades. Regulators use different means to assess risk, depending on the size of the bank. Under the simplest version of regulatory measurement of risk, subprime mortgages (like all mortgages) have a low asset risk weight (50 percent) relative to commercial loans, although they are riskier than those loans. More

complex measurements of risk (applicable to larger U.S. banks) rely on the opinions of ratings agencies or the internal assessments of banks, neither of which is independent of bank management.

Rating agencies, after all, cater to buy-side market participants (i.e., banks, pensions, mutual funds, and insurance companies that maintained subprime-related asset exposures). When ratings are used for regulatory purposes, buy-side participants reward rating agencies for underestimating risk because that helps the buy-side clients reduce the costs associated with regulation. Many observers wrongly believe that the problem with rating agency inflation of securitized debts is that sellers (sponsors of securitizations) pay for the ratings; on the contrary, the problem is that the *buyers* of the debts want inflated ratings because of the regulatory benefits they receive from such ratings.

The too-big-to-fail problem involves the lack of credible regulatory discipline for large, complex banks. The prospect of their failing is considered so potentially disruptive that regulators have an incentive to avoid intervention. That ex post “forbearance” makes it hard to ensure compliance ex ante. The too-big-to-fail problem magnifies incentives to take excessive risks; banks that expect to be protected by deposit insurance, Fed lending, and Treasury-Fed bailouts and believe that they are beyond discipline will tend to take on excessive risk because taxpayers share the downside costs.

The too-big-to-fail problem was clearly visible in the behavior of large investment banks in 2008. After Bear Stearns was rescued in March, Lehman, Merrill Lynch, Morgan Stanley, and Goldman Sachs sat on their hands for six months awaiting further developments (i.e., either an improvement in the market environment or a handout from Uncle Sam). In particular, Lehman did little to raise capital or shore up its position. But when conditions deteriorated and the anticipated bailout failed to materialize for Lehman in September 2008 (showing that there were limits to Treasury-Fed generosity), the other major investment banks immediately were either

acquired or transformed themselves into bank holding companies to increase their access to government support.

This review of government policy contributions to the financial crisis has not mentioned deregulation. During the 2008 election, many candidates (including President Obama) made vague claims that “deregulation” had caused the crisis. That claim makes no sense: involvement by banks and investment banks in subprime mortgages and mortgage securitization was in no way affected by banking deregulation. In fact, the deregulation of the past two decades (which consisted of the removal of branching restrictions and the expansion of permissible bank activities) facilitated adjustments to the subprime shock by making banks more diversified and by allowing troubled investment banks to become stabilized by becoming, or being acquired by, commercial banks (Calomiris 2009a). Since the election, President Obama and other erstwhile critics of deregulation have begun properly to focus on the various failures of regulation, rather than deregulation, as causes of the crisis.

## REFORMING THE SUBSTANCE OF REGULATION

The policy errors enumerated above were all subjects of substantial research before the financial crisis. It is not surprising, therefore, that credible solutions to those problems have been identified by financial economists who write about public policy. It is perhaps more surprising that the emerging academic consensus about reform is being embraced by Congress and the administration (at least so far). Even populist demagogues such as Barney Frank and Chris Dodd (who were egging on the pitchforks-and-torches crowd during the disgraceful AIG bonus hullabaloo) have shown some restraint in their regulatory reform advocacy.

Of course, the devil is in the details, and significant risks remain,

including the possibility of counterproductive limits on compensation that could drive talent to less-regulated environments abroad, trading or reporting rules that would impose implicit taxes on the development of new derivatives products, barriers to competition masquerading as “stabilizing” regulation, and the empowerment of politicized regulators who would in turn politicize credit flows and other financial decisions.

No credible voice within the administration or Congress is pushing to repeal the 1999 Gramm-Leach-Bliley Act, which allowed banks unfettered entry into investment banking, although some (notably, Paul Volcker) have expressed the view that proprietary trading should be segregated from other aspects of banking. Barney Frank recently agreed with Chairman Bernanke during his testimony before Frank’s committee, in particular with respect to the appropriate regulatory approach toward the hedge fund industry, which Bernanke argued should focus primarily on disclosure rather than regulatory control of hedge funds’ risk or capital structure (the approach favored in much of continental Europe).

The emerging consensus reflects, *inter alia*, the Fed’s ability to take the intellectual lead, thanks to its substantial staff resources and experience. Few in Washington have the wherewithal to dispute the Fed’s knowledge and expertise on the technical matters of regulation. Having succeeded in elevating the discussion on regulatory reform, the Fed has given reformers (including myself) hope that this time government will not compound its errors too badly in its regulatory response to the financial crisis.

The following list summarizes sensible policy reforms (see Calomiris 2009b for details), many of which have been advocated by Secretary Geithner, Chairman Bernanke, and members of Congress and are reflected in the recent G20 declaration on regulatory reform (although the details the various parties will advocate remain uncertain):

1. Limit incentives for large, complex institutions to take advantage of too-big-to-fail protection by (a) employing regulatory surcharges on complexity (e.g., requiring higher capital or liquidity by

large, complex institutions) and (b) giving a financial regulator the authority to establish new procedures for intervening and resolving the problems of large, complex, distressed financial institutions (banks and nonbanks), rather than simply bailing them out. Secretary Geithner supports both elements. Some critics (e.g., Diebold and Skeel 2009) are legitimately concerned that discretionary resolution authority could lead to incompetent or politically motivated interventions. Other critics worry that defining an institution as “large and complex” might actually encourage bailouts. The answer to both problems is to require large, complex institutions to devise detailed and regularly updated plans to resolve their own problems. Those plans would specify how control would be transferred to a prepackaged bridge bank if the institution became severely undercapitalized and specify formulas for loss sharing among international subsidiaries of the bank (such loss-sharing arrangements would be preapproved by regulators in countries where subsidiaries are located). Credible, preapproved plans would discourage such banks from taking advantage of their large size and complexity to avoid discipline and would reduce the costs of too-big-to-fail protection. Such plans would also avoid the chaotic process of coordinating international loss sharing after the fact, in that the interests of different countries regulating different subsidiaries of troubled institutions often diverge (a major contributor to the chaos over the management of the crisis in Europe and the main remaining challenge to resolving the Lehman Bros. bankruptcy).

2. “Macro” prudential regulation is a relatively new idea that has been gaining support, including by Secretary Geithner, many in Congress, and the G20. A macro prudential regulator would vary capital and liquidity requirements over time in response to changes in macroeconomic and financial system circumstances. For example, during booms, minimum capital would be set higher, especially if a boom were occurring in which asset prices and credit were rising rapidly. Raising capital requirements on banks would discourage a protracted bubble from forming and create a larger

equity cushion for banks if a bubble should burst. Calomiris (2009b) reviews various ideas for setting dynamic capital requirements, arguing that it is possible to devise simple, desirable rules to implement such a policy.

3. Replace housing leverage subsidies with subsidies that carry less risk to low-income, first-time home buyers. Democrats in the House, Senate, and White House have not yet supported concrete measures that would reduce the vulnerability of housing finance going forward; many Democrats have, however, stopped claiming that Fannie and Freddie were mere victims of the crisis. The December 9, 2008, hearings in the House resulted in a bipartisan consensus that Fannie and Freddie had been major contributors to the crisis and that it is necessary to reform these institutions (which are currently in conservatorship). Given the huge political stakes, however, the prospects for reform are uncertain.

4. Use regulatory surcharges (capital or liquidity requirements) to encourage clearing of over-the-counter (OTC) transactions through clearinghouses, thus simplifying and rendering transparent counterparty risk in the OTC market. Secretary Geithner has advocated encouraging some migration of derivatives clearing to centralized clearinghouses (in fact, he championed the need to improve derivatives clearing when serving as president of the New York Fed). He seems to understand the need to distinguish between homogeneous derivatives products (like plain vanilla interest-rate swaps) that are good candidates for centralized clearing and other customized products that are not. Progress in bringing some derivatives products into clearinghouses has already been made.

5. Require timely disclosure of OTC positions to regulators and lagged public disclosure of net positions. This would help track systemwide risks by the macro prudential regulator and the market. The potential costs of too much disclosure or too rapid disclosure of positions are that such disclosures could reduce market liquidity under some circumstances (see Calomiris 2009b).

6. An important area that has not been much discussed by policy

makers is the need to reform the regulatory techniques for measuring risk. Secretary Geithner talks about the need for “capital, capital, capital,” but more capital alone is not an effective solution; financial institutions can raise asset risk to offset higher capital requirements using various means, some of which are hard to detect. There is no substitute for effective risk measurement; yet ideas for reforming risk measurement have been missing in the congressional testimonies and speeches and G20 posturing, at least thus far. The most promising approach would be to use market prices to complement improved versions of existing measures of risk based on rating agency opinions and internal models. The key problem with the current approach is that it depends on bank reporting, supervisors’ observations, and rating agencies’ opinions. None of those three parties has a strong interest in accurate, timely measurement of risk. Furthermore, even if supervisors were extremely diligent in measuring risk, how could they successfully defend high risk estimates that were entirely the result of their own models and judgment? Part of the solution is to bring objective information from the market into the regulatory process and to bring outside (market) sources of discipline in debt markets to bear on bank risk taking. A large body of evidence favors that approach. The Fed and Treasury blocked that approach in 1999 (in response to lobbying pressure from the big banks), but Fed officials seem more amenable now.

7. Avoid grade inflation in rating agencies’ opinions. Lots of bad ideas are surfacing about how to accomplish that goal, one of which is to require that the buy side pay for ratings rather than the sell side. As argued above, this would not improve the reliability of ratings. The regulated buy-side investors (banks, pensions, mutual funds, and insurance companies) pushed for ratings inflation of securitized debts to loosen restrictions on what they could buy; it is ludicrous to argue that giving the buy side more power would discourage ratings inflation. Another bad idea gaining ground in Europe is to have regulators micromanage the ratings process,

which would be destructive to the content of ratings. There are better alternatives, one of which would force ratings to be quantitative. Letter grades have no objective meaning that can be evaluated or penalized for inaccuracy. Numerical estimates of the probability of default (PD) and loss given default (LGD), in contrast, do have objective, measurable meanings. Rating agencies that provide ratings used by regulators (so-called NRSROs) should provide specific estimates of the PD and LGD for any rated instrument (they already calculate and report such statistics). Requiring NRSROs to express ratings using numbers could alter their incentives dramatically. If NRSROs were penalized for systematically underestimating risk over a significant period of time (say, with a six-month “sit out” from having their ratings used for regulatory purposes), they would have a strong self-interest in correctly estimating risk because the reduced demand for their services during the sit out would affect their fee income.

8. Change corporate governance rules to encourage better discipline of bank management. Rather than deal with the symptoms of poor governance in banks (e.g., compensation structure), it would be better to improve the ability of stockholders to discipline management. One such reform would be to eliminate ownership concentration limits on stockholders of bank holding companies, which would significantly improve their corporate governance.

Unfortunately, we are far from seeing legislation, much less sensible legislation, on most or all of the reforms listed, and there is substantial risk of mischief. But compared to the backlash we could be facing, the prospects for reform are reasonably good, with an encouraging absence of terrible ideas. Even the discussion on regulating compensation has so far focused on the need to align management incentives with long-term performance, rather than trying to limit the overall size of compensation.

Other desirable reforms, unrelated to the financial crisis, include, most importantly, permitting nonfinancial companies to enter consumer banking. Telecommunications and retail networks could

provide cost-effective alternatives to bank branches and improve access for low- and middle-income consumers. That sort of deregulation was a long shot before the crisis; it is not a realistic near-term possibility.

### REALLOCATING REGULATORY AND SUPERVISORY POWER

An area in which prospects for change are not favorable and on which economics is less helpful in guiding policy is the reallocation of regulatory and supervisory authority. The increased weight given to Fed opinions about reform may not be helpful here; the Fed's main goal in such debates has always been to preserve and expand its own authority, which has not generally been in the public interest (Calomiris 2006).

A lot is up for grabs in the reallocation of regulatory power, with one question being whether we should maintain the current system of multiple prudential bank regulators. The Office of the Comptroller of the Currency regulates national banks, the Fed regulates Fed-member, state-chartered banks, the FDIC regulates state-chartered, non-Fed member banks, the Office of Thrift Supervision regulates nationally chartered thrifts, and the Securities and Exchange Commission (SEC) regulates investment banks. Some critics fear that a "race to the bottom" could ensue as regulators compete to attract banks to their sphere of influence through lax standards. But the traditional view among banking historians has been that competition among regulators, who otherwise may be excessively prohibitive in their approach, fosters better regulation and supervision. Although no convincing evidence supports the race to the bottom argument, not much more evidence exists to support benefits from regulatory competition.

A second question is whether banking regulation should be compartmentalized (e.g., separating prudential regulation from consumer protection regulation) to improve enforcement. Aspects of

prudential regulation may conflict with regulation designed to foster access (e.g., encouraging banks to tolerate greater risk when lending to low-income borrowers). Some advocates favor creating separate bodies for consumer and prudential matters so that each supervisory/regulatory body will have a clear, focused agenda. Others argue that combining consumer protection and prudential regulation in the same regulatory authority prevents regulators from issuing contradictory instructions.

Third, now that new regulatory actions relating to large, systemically important financial institutions are being proposed, where will those new authorities be housed? The Fed is perhaps the most likely choice. It possesses the resources and breadth of perspective to gauge risks and relevant trends in the economy better than any other macro prudential regulator. Furthermore, as the central bank and a lender to financial institutions, it already needs to maintain timely information about systemwide risk. The Fed is also a candidate for the new resolution authority (and is explicitly favored for that role by Barney Frank). Congress prefers to vest powers in the Fed because it exercises more control over the Fed than over other financial regulators. With respect to resolution powers and other new micro prudential authority, however, many strongly argue against expanding the Fed's role.

Indeed, policy makers should require the Fed to give up its role as a micro regulator, rather than expand that role through new resolution authority. Former secretary Paulson advocated reforms to remove the Fed from day-to-day regulatory and supervisory authority but gave it a new mandate to pursue macro prudential supervision and regulation.

Removing the Fed from micro regulation and supervision would have substantial advantages (Calomiris 2006). The United States is almost alone among developed economies in relying on its monetary authority as its primary day-to-day bank regulator and supervisor. The Fed not only sets and enforces prudential and consumer regulations but approves bank mergers and acquisitions and

decides what constitutes permissible activities for banks. Why have other countries distanced their monetary authorities from such things? First, monetary authorities—especially when subject to political oversight by Congress, as the Fed is—may be less reliable regulatory enforcers. Second, combining regulatory powers with monetary authority politicizes monetary authorities, thus threatening independent monetary policy. Unfortunately, given the dominant role of the Fed in the current debates over the reallocation of power, there is little chance of distancing the Fed from the day-to-day responsibilities of supervision and regulation, despite the benefits.

## CONCLUSION

Financial crises produce regulatory reactions, for better or worse, often for worse. The reforms in reaction to the current crisis have not yet been settled, and prospects for reform are mixed.

The most important desirable changes in regulation highlighted by the crisis would be (1) regulatory taxes and reforms of resolution processes that would discourage too-big-to-fail protection of large, complex banks, (2) macro prudential regulatory authority to gauge overall risk in the financial system and structure dynamic capital and liquidity requirements accordingly, (3) elimination of leverage subsidies in housing, (4) rules to encourage OTC clearing in clearinghouses, (5) disclosure standards for OTC market participants, (6) improvements in the measurement of regulatory risk that would include market-based measures, (7) changes in the use of rating agencies' opinions to discourage grade inflation, and (8) eliminating regulatory limits on the concentration of ownership in banks.

Items (1), (2), (4), and (5) seem likely to be implemented in some form, but the others are less certain. In areas unrelated to the

crisis (most importantly, the relaxation of entry barriers in consumer finance) there is little hope of progress at the moment, and in many areas (e.g., new compensation rules) there is great potential for mischief from regulatory overreach; it is too early to be confident of measured reform.

With respect to reallocating regulatory and supervisory powers, important questions remain unresolved in theory and uncertain in prospect. One desirable reform—removing the Fed from day-to-day regulatory and supervisory decisions, especially in the most highly politicized areas of regulatory decision making—remains unlikely given the Fed’s thirst for power, Congress’s preference for vesting the Fed with power, and the Fed’s growing influence in the current debates on regulatory reform. Indeed, if anything, the Fed’s role as a micro prudential regulator is likely to grow, particularly through an expansion of its authority over the resolution of distressed financial firms.

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