

The Political, Regulatory
and Market Failures That Caused
the US Financial Crisis

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Abstract

This paper discusses the key regulatory, market and political failures that led to the 2008–2009 United States financial crisis. While Congress was fixing the Savings and Loan crisis, it failed to give the regulator of Fannie Mae and Freddie Mac normal bank supervisory power. This was a political failure as Congress was appealing to narrow constituencies. In the mid-1990s, to encourage home ownership, the Administration changed enforcement of the Community Reinvestment Act, effectively requiring banks to lower bank mortgage

standards to underserved areas. Crucially, the risky mortgage standards then spread to other sectors of the market. Market failure problems ensued as banks, mortgage brokers, securitizers, credit rating agencies, and asset managers were all plagued by problems such as moral hazard or conflicts of interest. The author explains that financial deregulation of the past three decades is unrelated to the financial crisis, and makes several recommendations for regulatory reform.

This paper—a product of the Finance and Private Sector Development Team, Development Research Group—is part of a larger effort in the department to assess the consequences of the financial crisis on developing countries. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at dtarr@worldbank.org.

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“From the current handwringing, you’d think that the banks came up with the idea of looser underwriting standards on their own, with regulators just asleep on the job. In fact, it was the regulators who relaxed these standards—at the behest of community groups and ‘progressive political forces.’”

Professor Stan Leibowitz, University of Texas¹

I. Summary and Literature Review

Summary

In 2010, the US is in the worst financial crisis since the Great Depression. The core of the crisis is that 44 percent of all home mortgages (or 25 million mortgages) are default prone, a figure that is unprecedented in US history.² Why did financial institutions and homeowners acquire so many mortgages that are in default or in danger of wider default? I argue that the crisis is a result of regulatory failure, market failure and, most of all, political failure.

First, the seeds of the crisis were sown while Congress was appropriately imposing tougher regulation on banks and savings and loan associations in the early 1990s in response to the Savings and Loan crisis. Congress made a grave error: it agreed to avoid real regulation of the two Government Sponsored Enterprises (GSEs) commonly known as Fannie Mae and

¹New York Post, February 5, 2008. See Leibowitz (2008) for an elaboration of his views where he argues that “in an attempt to increase home ownership, virtually every [relevant] branch of government undertook an attack on underwriting standards.”

² Testimony of Ed Pinto (2008, p. 8), former chief credit officer of Fannie Mae. The principal database of the New York Fed under reports default prone mortgages. There are 7 million sub-prime loans in the Federal Reserve Bank of New York on-line database. Second, there are about 10 million sub-prime loans classified in the “Loan Performance Prime Database” as prime. (This database is mutually exclusive with the above mentioned New York Fed database.) Contrary to the name of the index, there were about 10 million sub-prime loans among the 50 million loans in its Prime database (by the conventional definition of a sub-prime loan as a loan with a FICO index of less than 660). Third, there are alt-A loans (such as “liar loans”) where the borrower had a FICO score above 660, but failed to provide documentation. These were favorite instruments of speculators and have conventionally been classified as prime; but they are defaulting at a rate approaching sub-prime. The New York Fed estimates that there are about 2.67 million alt-A loans, excluding Fannie and Freddie exposure and Pinto reports 2.9 million alt-A loans held by Fannie and Freddie. Finally, there are about 2.5 million other junk loans, such as negatively amortizing option adjustable rate mortgages. See Pinto (2008, Annex I) for further details.

Freddie Mac and allow them to take on unlimited risks with an implicit government guarantee. Fannie and Freddie avoided real regulation by proposing an affordable housing mission, which ultimately led to a lowering of their mortgage standards. Subsequently Congress used Fannie and Freddie projects like earmarked pork projects and taxpayers are now on the hook for an estimated 50 percent (or \$1.6 trillion) of the sub-prime, alt-A and other default prone mortgages. These mortgages are now defaulting at a rate eight times that of the GSEs traditional quality loans.³ The failure to give the GSE regulator normal bank supervisory power was a regulatory failure. But given that Congress was in the process of fixing the Savings and Loan crisis, Congress had to be aware of the risks. Therefore it was even more of a political failure. That is, the general social good was sacrificed to appeal to narrow political constituencies.

Second, in the mid-1990s, the Clinton Administration changed enforcement of the Community Reinvestment Act and effectively imposed quotas on commercial banks to provide credit to underserved areas. The banks were told to use “innovative or flexible”⁴ methods in lending to meet the goals of the Community Reinvestment Act. Failure to meet the quotas would result in denial of merger or consolidation requests. The evidence (cited below) reveals that bank mortgage standards fell as a consequence of this regulatory change. Crucially, the risky mortgage standards then spread to other sectors of the market. Encouraged by the home mortgage interest deduction and low interest rates in the 4-5 years prior to the crisis, speculators and households trading up to bigger houses acquired a large number of high risk mortgages. Riskier mortgage standards by banks were not the consequence of deregulation; rather the banks were compelled to change the standards by new regulations at the behest of community groups. Again, this was a political failure as the Administration sacrificed the greater social good to appeal to narrow constituencies.

Once the banks were pressured by regulation to offer risky mortgages to underserved areas, they (and mortgage brokers) found they could make money on them by selling them to “securitizers,” who in turn packaged the mortgages in pools and sold them. A key market failure problem was that the ratings agencies were influenced by the securitizers to underestimate the risk of the mortgage pools. Since the securitizers paid the rating agencies for the ratings, this his

³ For detailed estimates, see Pinto (2008, attachment 5).

⁴ Hossain (2004, p.57). See this reference for a detailed account of the change in Community Reinvestment Act regulations in the mid-1990s.

was accomplished awarding repeat business to agencies that gave good rating, and by “rating shopping,” a practice in which securitizers would ask multiple rating agencies how they would rate their pool of mortgages, and then select a ratings agency that gave a very secure rating. The problems were exacerbated by the fact that asset managers in the private sector who bought the pools of mortgages had a conflict of interest. Constrained to invest in high quality assets, rather than return the money of their clients and lose management fees, money managers closed their eyes to the signals that the mortgage pools were riskier than the ratings. These problems were market failures.

Within limits, a targeted program to expand home ownership to low or moderate income families is a worthy social goal. A much more efficient way to do it, however, is to subsidize down payments of first time low and moderate income home buyers, without encouraging or forcing banks to lower lending standards. Politicians, however, often prefer to mandate a regulation on firms to achieve a political objective, since this allows them to avoid exposure of the costs of their programs while obtaining support from narrow constituencies. In this further sense, the financial crisis is, at its root, a political failure. What is ominous is that the supporters of the programs that got us in this deep financial mess appear to still be pushing the same policies.

There were numerous regulatory failures and there is a clear need for new regulation and changes in regulation in several areas. The causes of the crisis, however, were sub-prime lending and securitization. Securitization was available for banks, investment banks and other financial institutions since the 1970s, and sub-prime lending was encouraged to promote wider home ownership. There is no connection between securitization and sub-prime lending on the one hand and financial deregulation of the past three decades. Characterization of the problems as “deregulation” diverts attention from the crucial task of fixing the perverse regulations in place and identifying where new regulation is needed.

In the next three sections, I explain these issues in more detail. This note concludes with lessons for regulatory reform to help us avoid similar crises in the future.

Literature Review

There is a vast literature on the financial crisis—both overview studies and papers that focus on specific problems and solutions. Among the most important overview studies are Barth (2009), Brunnermeier (2009), Calomiris (2008), Caprio, Demirguc-Kunt and Kane (2008), Kane (2009), Taylor (2009) and Wallison (2008). An explanation of the incentive problems of banks and credit rating organizations that were important in explaining the financial crisis is included in the studies of Barth, Brunnermeier, Calomiris, Kane and Caprio *et al.* The Barth study is a very accessible explanation of the causes of the crisis and provides the most factual detail of the mortgage and credit markets. The analysis of Brunnermeier would be of interest to economists who want a deep theoretical discussion of the incentive issues. A key recommendation of Caprio *et al.* is that credit rating organizations should be paid by the buyers of the collateralized credit obligations, not the sellers. Calomiris (2008), however, believes this will not solve the problem due to incentive problems of the buyers and recommends (Calomiris, 2009) tough new regulations on credit rating organizations. (I discuss this further below.) Kane emphasizes the incentive problems of regulators, the importance of limiting bailouts of financial institutions for fear of creating the next financial crisis and the mischaracterization of the crisis by the Obama Administration as a liquidity crisis rather than a solvency crisis. Taylor (2009) argues that monetary policy of the Federal Reserve contributed to the crisis, and provides evidence that the financial crisis is not a liquidity crisis. Wallison emphasizes the government failures that led to the financial crisis, especially the failure to regulate the GSEs and the pressure on banks to lower mortgage standards under changed regulations of the Community Reinvestment Act.

In this paper, I build on the earlier work and try to explain the incentive problems of banks, credit rating organizations and other key private financial institutions in a straightforward accessible manner. A contribution of this paper that is not discussed in the literature is the explanation of why political failure was a root cause of the financial crisis, and the reasons for that political failure.

II. The Failure to Regulate Fannie Mae and Freddie Mac

Top on the list of regulatory failures is the failure to regulate Fannie Mae and Freddie Mac. Pinto (2008) has estimated that about \$1.6 trillion or about 47 percent of the toxic mortgages were

purchased or guaranteed by these GSEs, and the government is now on the hook for these mortgages. How did this happen? There were two key economic principles that were ignored. One is that if the government and taxpayers stand behind the financial obligations of a company, the company should be regulated against taking excessive risks for which the taxpayers are responsible. The government agreed not to regulate the GSEs and even encouraged them to take on risky mortgages in order to widen home ownership among low and moderate income households (and the government also pressured banks to take on risky mortgages for the same reasons). This regulatory failure, however, was essentially a political failure.

The Economic Theory of Regulation (Public Choice Theory)

I argue below that the failure to regulate the GSEs was a political failure in the sense that Congress knowingly yielded to special interests at the expense of the public interest. This outcome is explained by the modern economic theory of regulation (or public choice theory), which characterizes the regulatory process as one of competition among interest groups to use of the coercive power of the state to obtain rents at the expense of more diverse groups.⁵ Producers of goods and services, who are likely to receive concentrated gains from regulation, are typically more effective at lobbying for their interests in regulation than consumers or taxpayers. The latter groups are typically very diverse and suffer from a free-rider problem that limits their contributions to lobbying. Pressure on regulators may come from politicians who receive campaign contributions or votes and then pass legislation favorable to the special interest. Or interest groups can influence regulators if regulators believe that they may receive lucrative positions when they leave the government. Producers are less likely to achieve a desired regulation if there is a group that receives concentrated losses (and may therefore overcome the free-rider problem and provide counter-lobbying) or if the inefficiency costs to society are very large (Becker, 1983; Stigler, 1971). And politicians may seek to spread the rents across different interest groups to build a coalition for support (Peltzman, 1976). Kroszner and Strahan have found this theory relevant to reform of banking supervision.⁶

⁵ Key contributions to this literature have been made by Olson (1965), Stigler (1971), Peltzman (1976), Becker (1983) and Grossman and Helpman (1994).

⁶ They examined the votes of members of the House of Representatives on the final passage of the Federal Deposit Insurance Corporation Improvement Act of 1991 as well as three amendments. They found consistent support for

Government Guarantees without Regulation against Excessive Risk Taking

Fannie Mae was chartered originally as a government enterprise to add liquidity to the mortgage market and hopefully to lower the costs of borrowing for mortgages. Fannie borrowed money cheaply on capital markets because it was a government entity and used it to buy mortgages. Fannie Mae was privatized in 1968, and Freddie Mac was privatized in 1989 with an almost identical charter to Fannie. But even as private enterprises, the GSEs were able to borrow at very attractive rates of interest because investors believed that the government would back them in the event they went bankrupt. This belief was validated in September 2008 when the US government placed the GSEs in “conservatorship,” and began to inject taxpayer dollars into the companies.

The Affordable Housing Mission to Avoid Regulation

In the light of the S&L crisis of the late 1980s, many in Congress realized that it was necessary to regulate the GSEs, since it was dangerous to allow private enterprises to take on large risks with government guarantees. In order to stave off regulation, Fannie Mae CEO Jim Johnson proposed that the GSEs add an affordable housing mission to their objectives (Wallison and Pinto, 2008). Members of Congress saw they could use GSE projects much as they use earmarked pork projects to boost popularity in their home districts. Congressmen could request funding from the GSEs for projects in their districts. For example in 2006, Senator Charles Schumer’s office issued a press release headlined:

“Schumer announces up to \$100 million Freddie Mac commitment to address Fort Drum and Watertown Housing Crunch.”

The press release indicated that Senator Schumer had urged the commitment.⁷ Jim Johnson realized that the local projects could be used to influence Congress. He created Fannie Mae “local partnership offices” (eventually totaling 51) in urban areas throughout the US. These offices performed a grassroots lobbying function, assuring Congressional backers of GSEs that they could tap into local supportive groups at election time.⁸ Political support for Congressional supporters of the affordable housing mandate of the GSEs also came from community

both intra-industry and inter-industry rivalry, but little role for consumer interests. They also found support for legislator ideology.

⁷ http://schumer.senate.gov/new_website/record.cfm?id=266131

⁸ Wallison and Pinto (2008).

organizations such as the Association of Community Organizations for Reform Now (ACORN). These organizations realized that they could be much more successful in pressuring banks to expand their sub-prime loans, if the banks were able to sell the mortgages on the secondary market.⁹ In addition, Fannie and Freddie, through their PACs during the 1989 to 2008 period, cumulatively contributed over \$3 million to the campaigns of Congressional supporters (and their employees contributed an additional \$1.8 million).¹⁰ In the end, the legislation that was passed in the early 1990s provided for the GSEs to lend to low and moderate income lenders, and in return their regulator lacked the authority routinely given bank regulators.¹¹ As the problems with the GSEs rose and became evident over the years, the bargain that was struck, that Congress would not regulate seriously and the GSEs would undertake an affordable housing objective (which was implemented through lower mortgage standards), continued until the GSE bankruptcies in September 2008 (and maybe beyond since the fundamental political failure regarding the GSEs has not been resolved).

Although the GSEs were willing accomplices, in the 1990s, HUD Secretary Mario Cuomo used the implicit bargain of the GSEs to add pressure on them to take on a higher share of its mortgages to low and middle income borrowers. As early as 1999, astute journalists warned that this meant that banks had to loan to progressively riskier borrowers and provide riskier mortgages, increasing the risks to Fannie and Freddie.¹²

In 2003 and 2004, the GSEs were caught in Enron style accounting scandals that eventually led to the resignation of Fannie CEO Franklin Raines, and there were calls for tougher

⁹ Community organizations such as ACORN, NACA and the Greenlining Institute had much at stake in advancing the affordable housing mandate of the GSEs and in putting teeth into enforcement of the Community Reinvestment Act (as discussed below). They successfully negotiated agreements with various banks to provide tens of billions in mortgages to underserved communities, typically serving as mortgage servicers for these agreements. In addition, ACORN received \$40 million in grants from various banks for dubious “counseling” services. See US House of Representatives (2010), Capital Research Corporation (2009) and the Washington Examiner, April 12, 2010, available at: <http://www.washingtonexaminer.com/opinion/columns/Uncle-Sam-opens-the-bank-vault-to-activists-90655894.html>.

¹⁰ Center for Responsive Politics (2008) calculations based on Federal Election Commission data. A complete list of all 354 active members of Congress who received contributions (and the amounts they received) is available in the article.

¹¹ The 1992 Federal Housing Enterprises Financial Safety and Soundness Act, also known as the GSE Act. For further details of this act see:

<http://online.wsj.com/article/SB10001424052748703298004574459763052141456.html>

¹² See articles by Steven Holmes in the New York *Times*, September 30, 1999 and Ronald Brownstein in the Los Angeles *Times*, May 31, 1999.

regulation. Moreover, Federal Reserve Board and Congressional Budget Office studies concluded that despite the implicit government guarantees that allowed them to borrow cheaply, GSE activity had not significantly lowered mortgage interest rates.¹³ Since they were creating risks for the taxpayer, what value were they providing? Alan Greenspan called for tougher regulation.

At this time, internal documents of Fannie and Freddie show that its own risk managers were sounding strong alarm bells in 2004, and they recognized that the GSEs had the power to influence standards in the market.

Donald Besenius of Freddie Mac, in his April 1, 2004 letter to Mike May said “*we did no-doc lending before, took inordinate losses and generated significant fraud cases. I’m not sure what makes us think we’re so much smarter this time around.*”

David Andrukonis of Freddie Mac said in an email to Mike May on September 8, 2004 that “*...we were in the wrong place on business or reputation risk....What I want Dick [Freddie Mac CEO] to know that is that he can approve of us doing these loans but it will be against my recommendation.*”¹⁴

But Freddie Mac’s management ignored these warnings. Instead Freddie Mac fired their chief credit officer¹⁵ and the GSEs turned to their Congressional allies. Senator Charles Schumer stated in late 2003:

*“My worry is that we’re using the recent safety and soundness concerns, particularly with Freddie, and with a poor regulator, as a straw man to curtail Fannie and Freddie’s affordable housing mission.”*¹⁶

¹³ The Congressional Budget Office (2001) estimated that the GSEs lowered mortgage interest rates by 25 basis points, i.e., 0.25 percentage points. See also Bhutta (2009).

¹⁴ Statements of Besenius and Andrukonis were submitted as part of the testimony of Calomiris (2008a). Dona Cogswell of Freddie Mac wrote similar warnings in a memo to Dick Syron, Mike May and others on September 7, 2004.

¹⁵ See http://www.swamppolitics.com/news/politics/blog/2008/12/fannies_freddies_exchiefs_blas.html. Ed Pinto notes that he was fired as chief credit officer of Fannie Mae in 1989 for early warnings about the dangers of the affordable housing mandate.

¹⁶ Wall Street Journal, “What They Said About Fan and Fred,” October 2, 2008. Available at: <http://online.wsj.com/article/SB122290574391296381.html>

At the House Financial Services Committee meeting in September 10, 2003, speaking about GSE regulation, Representative Barney Frank said:

“I do not think I want the same kind of focus on safety and soundness....I want to roll the dice a bit more toward subsidized housing.”¹⁷

And roll the dice they did.

Seeing what they had to do to avoid regulation in a tougher political environment, the GSEs increased their portfolios of sub-prime, alt-A and high risk mortgages from less than 8% of their mortgages in 2003 to over 30% in 2008.¹⁸ But this worked in fending off the tougher regulation. Unfortunately, if defaults continue at the current high rates, the \$150 billion loss of the S&L crisis will easily be exceeded—at considerable cost to taxpayers in the future (Pinto, 2008).

The Political Failure of Lax Regulation of the GSEs

As Edward Kane (who predicted the S&L crisis years in advance, Kane, 1985) and others have noted, in the early 1990s, Congress repeated with Fannie and Freddie the mistake that caused the collapse of the S&L industry. That is, it gave government backing to private enterprises without adequately limiting the risks these companies could take. But the Fannie and Freddie case is a far worse political failure than the S&L debacle. First, taxpayers’ losses will be much greater than in the S&L crisis. Second, in the S&L crisis, Congress might be excused for not recognizing that it should have imposed tighter limits on the risks assumed by government backed institutions. But while Congress was passing tough new banking regulation to fix the S&L crisis, the decision not to regulate the GSEs must have been a conscious decision on the part of the supporters of the GSEs in Congress. As documented above, the GSE supporters in Congress received political contributions, grass roots organizing at election time and used GSE resources like pork projects. Congress decided not to regulate the GSEs; instead many in Congress used GSE lobbying and political organizing resources and the resources of others lobbying for the GSE affordable housing mandate for their own interests.

¹⁷ <http://online.wsj.com/article/SB122290574391296381.html>

¹⁸ Pinto (2008, 7).

Ominous Signs for the Future

In September 2008, Fannie and Freddie were placed in conservatorship under the newly created US Federal Housing Finance Agency. Although the US Treasury has been less definite, James B. Lockhart III, director of the agency that serves as both regulator and conservator of Fannie and Freddie stated “the conservatorship and the access to credit from the U.S. Treasury provide an effective guarantee to existing and future debt holders of Fannie Mae and Freddie Mac.”¹⁹ This approach still fails to address the underlying issue of guaranteed assets without constraints on risk taking. In the middle of this crisis, James B. Lockhart III appears ready to forge ahead with the same mistakes. He lamented, in testimony before the House Financial Services Committee on Sept 25, 2008, that market turmoil of 2008 resulted in more stringent loan criteria, for example, higher required down payments. He hoped that both Fannie and Freddie would develop and implement ambitious plans to meet HUD regulations for low and moderate income lending. Shockingly, rather than seeing higher down payment requirements as a positive step toward stability in the housing market, the regulator is still pushing for a lowering of mortgage standards. And as of April 2010, despite frequent requests from Congressmen to the Administration for a plan to restructure the GSEs, and a major financial overhaul package before Congress, the Administration has been silent on what to do about the GSEs.

III. Perverse Incentives from the Community Reinvestment Act and Market Failures in the Private Sector

Pinto (2008) estimates that Fannie and Freddie bought an estimated 47 percent of the toxic mortgages. We still have to explain why the private sector created and bought the rest. And we also have to explain why so many homeowners who are wealthier than low or moderate income households are defaulting on mortgages. Part of the answer is that Fannie and Freddie played a “market maker” role. Their dominant size in the market and their readiness to purchase these risky mortgages set standards in the market, and meant that banks could pass on the risks of badly underwritten mortgages. They also brought other actors into the business of trying to profit

¹⁹ Reuters, “GSE Debt has an ‘effective guarantee,’ ” October 23, 2008. On November 25, 2008, the Federal Reserve announced it would buy \$100 billion of debt of the GSEs and \$500 billion on the Mortgage Backed Securities guaranteed by the GSEs and Ginnie Mae.

from risky mortgages.²⁰ There is, however, another crucial component to the lowering of bank mortgage standards. In the mid-1990s, the government changed the way the Community Reinvestment Act was enforced and effectively compelled banks to initiate risky mortgages. Moreover, there were incentive or market failure problems that induced many of the key private actors to act in socially counterproductive ways.

Banks' Incentives and the Role of the Community Reinvestment Act

The originators and servicers of the mortgages were the banks and mortgage brokers. There were two problems that led to the banks issuing a lot of mortgages with excessive risks. First, the effort to lower mortgage underwriting standards was led by the US Department of Housing and Urban Development (HUD). President Clinton directed then HUD Secretary Henry Cisneros to develop a “National Homeownership Strategy” that would “increase home ownership opportunities among populations and communities with lower than average home ownership rates.”²¹ HUD states that “the National Homeownership Strategy commits both government and the mortgage industry to a number of initiatives designed to increase the availability of alternate financing products in housing markets throughout the country.”²² Among the actions it recommended was the following “Lending institutions, secondary market investors, mortgage insurers, and other members of the partnership should work collaboratively to reduce homebuyer down payment requirements many low-income families do not have access to sufficient funds for a down payment in reducing this barrier to homeownership, more must be done.”²³

One of the principal means through which this policy was implemented was through a change in the enforcement of the Community Reinvestment Act. This Act was originally passed in 1977, but weakly enforced prior to 1995. New regulations phased in between 1995 and 1997 called for banks to use “flexible or innovative standards” to address credit needs of low and moderate income (LMI) borrowers (Hossain, 2004, p.57); and banks would be evaluated on outcomes of their lending, i.e., quotas, not on efforts to reach the of low and moderate income community. Failure to comply meant that banks could not participate in mergers or acquisitions. So banks and mortgage brokers developed many innovative products. Notably they lowered

²⁰ See Calomiris (2008a) for an elaboration.

²¹ See US Housing and Urban Development (1994; 1995, p.2).

²² US Housing and Urban Development (1995, p.9).

²³ US Housing and Urban Development (1994, chapter 4, action 35).

down payment requirements below the traditional 20 percent minimum, and allowed loans to borrowers with little or no credit history or documented source of income. And Fannie and Freddie, under their affordable housing mandate, modified their rules so they could buy these innovative instruments. Professor Hossain (2004) writes that the rule change

“can be thought of as a shift of emphasis from procedural equity to equity in outcome. In that, it is not sufficient for lenders to prove elaborate community lending efforts directed towards borrowers in the community, but an evenhanded distribution of loans across low and moderate income and non- low and moderate income areas and borrowers.”

Studies have documented that bank lending standards fell after this rule change.²⁴ For example, much lower down payments were accepted, and it had the desired effect of widening home ownership.

Thus, banks did not come up with the idea of looser underwriting standards and slip these past regulators. Rather, in order to meet the objective of broadening home ownership and providing credit to underserved areas, banks were compelled by the regulators to lower mortgage standards. The real problem is that once bank regulators initiated changes in enforcing the Community Reinvestment Act to require banks to lower underwriting standards, they could hardly oppose similar loans to better qualified borrowers. Then the relaxed standards spread to the wider mortgage market, including to speculative borrowers and borrowers who wanted to trade up to bigger homes. The key point here is not merely that low and moderate income earners received loans that they could not afford. While that may be true to some extent, it can not account for the large number of sub-prime and alt-A mortgages that plague the housing market today. Between 2001 and 2006, the share of mortgages made up of conventional mortgages fell from 57 percent to 33 percent.²⁵ The contagion of poorly underwritten mortgages spread well beyond the low and moderate income community groups.

What Is Securitization?

Prior to the 1970s, home mortgages were the most illiquid asset on a bank's balance sheet. Banks could not sell the mortgages on the secondary market due what is known as an “adverse

²⁴ See Demyanyk and van Hemert (2008), England (2002) and Bhutta (2008).

²⁵ Wallison (2008).

selection” problem arising from asymmetric information. That is, buyers were afraid that banks, who knew their mortgages better, would sell only the bad mortgages and keep the better mortgages on their own balance sheets. Thus, prior to 1980, the vast majority of home mortgages were made by financial institutions who originated, serviced and held the loans in their portfolios—the “originate to hold” business model. In order to create a market for mortgages, in the 1970s “securitizers,” which can be banks themselves but were more frequently investment banks, took pools of mortgages, had the pools of mortgages rated and then sold the pools of mortgages. The large pools of mortgages were typically divided into sections known as tranches, where each tranche offered differing risks or default. In the event of default, the losses are absorbed by the lowest priority investors before the investors with the higher priority claims are affected. These more complicated offerings were known as Collateralized Debt Obligations (CDOs). Over time, home mortgages were increasingly securitized—the “originate to distribute” business model. Crucially, this allowed loan originators to shift most of the risk to the secondary market for mortgages.

The Moral Hazard Problem of Banks

Faced with a regulatory regime that pressured banks to make risky loans, the banks figured out how to make money on the risky mortgages. The banks and mortgage brokers reaped significant fees from the mortgages and then sold them on secondary markets through securitization. So the risks of default were borne by those who purchased the pools of mortgages from the securitizers, while the loan originators got the fees. Securitization was designed to address the adverse selection problem that prevented resale of mortgages. Instead we got a “moral hazard” problem as the loan originators collected fees on badly underwritten mortgages without bearing the risks. An efficient capital market will allocate capital to where the risk adjusted rate of return is highest. We now know that a large share of these mortgage backed securities had a much lower rate of return than expected (e.g., Bemelach and Dlugosz, 2009a), and too much capital was allocated to these investments relative to a social optimum, i.e., this was a market failure problem. This market failure was due to moral hazard problems at banks and credit rating organizations, and possibly a principal agent problem with asset managers. The banks did keep

some of the mortgages for themselves, and on these mortgages they bore the risks, but overall this is a market failure problem as the capital was not allocated efficiently.²⁶

Moral Hazard and the Credit Rating Organizations

The pools of mortgages were rated regarding their riskiness by Moody's, Standard and Poor's or Fitch. These firms enjoyed a preferred designation of the Securities and Exchange Commission (SEC) as a "nationally recognized statistical rating organization" (NRSRO), better known as Credit Rating Organizations (CROs). Unfortunately, the CROs, who have a responsibility to objectively evaluate the risks of the instruments they assess, had a conflict of interest. They had an incentive to undervalue the risk. These rating agencies became heavily dependent on the fees from rating mortgage pools. Securitizers were the ones who paid the ratings agencies, and repeat business for a CRO was dependent on good ratings. Moreover, securitizers routinely employed the practice known as "rating shopping." A securitizer would ask a rating agency how the agency might hypothetically rate a pool of mortgages. If the rating were low, the securitizer would go to another rating agency. In what they call "the alchemy of the CDO credit ratings," Benmelach and Dlugosz (2009a) have shown that the CDOs received credit ratings that were strikingly higher than the credit quality of the underlying collateral pools, and Benmelach and Dlugosz (2009b) show that severe downgrading of these securities started in 2007 leading to financial institution write downs of more than \$200 billion in early 2009. Caprio *et al.* (2008) argue that a critical failure in the system was the fact that the securitizers were the ones who paid the raters. That is, the CROs had a moral hazard problem as the fees too strongly influenced their evaluations. The result was a gross undervaluation of the riskiness of these pools of mortgages and buyers purchasing very risky assets they assumed had low risk. This led to a market failure of buyers purchasing more of these risky securities than was efficient.

The poor performance of the CROs highlights long standing regulatory distortions of the industry that artificially restricted their supply and increased demand for their services. Supply was restricted by the SEC definition of the category of NRSRO in 1975 and subsequent SEC restraint on which firms could be so designated (there were never more than five and there were

²⁶ The Lehman Brothers bankruptcy revealed that Lehman kept some of the riskiest tranches of the mortgage pools on its own books. It is not clear if Lehman kept these tranches in order to secure AAA ratings of the remaining mortgage pool or if it was willing to bear increased risk to obtain a higher return.

only three during the CDO ratings debacle). Demand was increased by financial regulators requirements that the institutions they regulate must follow the judgments of these NRSROs. White (2001) noted this was a recipe for rents and distortions.²⁷

Asset Managers and a Principal-Agent Problem

Calomiris (2008) argues, in effect, that there is another market failure-- that the biggest problem in the private sector was that the asset managers of mutual funds had a conflict of interest between their own income and the interests of their clients (a “principal-agent problem”). If they had not bought the mortgages, dramatically fewer would have been issued—securitizers were supplying what was being demanded by asset managers. That is, the asset managers managed funds like mutual funds or pension funds, where these funds were constrained to invest in only very low risk financial instruments. If these mortgage pools were not rated AAA, the rules of the fund would have prohibited the asset managers from investing in them. Calomiris maintains that there was a lot more money available for placement in AAA rated mortgage funds than there were actual AAA mortgage pools available (if the pools were properly rated). The asset managers were faced with a choice: (1) find pools of mortgages to buy at the rated quality required by the conditions of the mutual fund; or (2) return the money to the investors. If the asset managers returned the money to their clients, they would lose their bonuses and management fees, and put their huge salaries at risk. Rather than return the money, they held their noses and bought mortgage pools that they knew to be improperly rated.²⁸

Solution to the Problem of Inappropriate Ratings—SEC Assignment

The conventional solution to the problem of underestimation of the risks of a portfolio by the ratings agencies is to require that the buyers pay the fees of rating agencies (see, for example, Caprio et al.) There are two problems, however, with this solution. First, there is a free-rider problem, as prospective buyers may refuse to pay for a rating in hope that another buyer would

²⁷ Richardson and White (2009) suggest that a better outcome would have been achieved if regulated financial institutions were free to pick their own bond advisor (which could be a NRSRO). They would be required to justify their choice to their regulator, but the bond advisory market would become open. This solution, however, does not address the moral hazard problem.

²⁸ He cites a story of a rater, who had not been selected to rate the mortgage pool because he gave too risky a rating. The rater warned an asset manager not to buy the pool, but the asset manager replied: “we have to put our money somewhere.”

pay. Moreover, Calomiris (2009) argues buyer paying for the rating will not fix the problem, since the principal-agent problem will still lead to asset managers purchasing more risky assets than is economically warranted by an efficient market. Instead he recommends that ratings agencies be required to provide a quantitative assessment of the percentage of loans in a portfolio that will default. If the default rate exceeds this percentage, then the ratings agencies will be penalized. The Calomiris solution, however, also has problems as it would appear to provide an opposite incentive for the ratings agencies—namely to overestimate the risks. What appears to be the best solution comes from Richardson and While (2009). They propose to continue with the model in which the issuer pays for rating the CDOs, but they would require that the issuer apply to Securities and Exchange Commission (SEC). The SEC would assign the credit rating organization that would do the rating. SEC assignments could be based on rating performance and other qualifications. Their recommendation would avoid the free-rider problem, eliminate rating shopping and the CROs would have the incentive to perform well since their repeat business would depend on their reputation for quality ratings. The problem is that the solution depends on the ability of the SEC to evaluate and reward good performance.

How to Meet an Affordable Housing Objective Most Efficiently

There is evidence that home ownership conveys some benefits to the community (what economists refer to as an externality) so there is reason for the government to encourage home ownership within limits.²⁹ But this has to be done efficiently and in a manner that does not induce a financial crisis. The second key economic principle that was ignored is that simply mandating an objective onto firms and hoping that the market participants will not change their behavior in ways that are socially undesirable is a poor public policy choice. It is better to impact incentives most directly. Based on a theorem developed by Bhagwati and Ramaswami (1963), economists state the approach more generally as:-the most efficient way to achieve an objective not achieved by the market is to use the regulatory instrument that impacts the objective most directly, we say “at the relevant margin.” In this case, the objective not achieved by the market is wider home ownership for low and moderate income families. As implemented by the GSEs, mortgage standards were simply lowered for all. So speculators and wealthy individuals who wanted to trade up in a housing boom could move into homes that they ordinarily would not qualify for.

²⁹ See Glaeser and Shapiro (2002).

This obviously was not the objective of Congress and there is no evidence that *larger* home consumption conveys benefits to the wider community.³⁰ More importantly, the most efficient way to encourage home ownership is the way Australia has periodically done it: Australia has subsidized the down payment of first time low income home buyers (by 50% in their case).³¹ Banks in Australia do not change their standards, but with the larger down payments, many low and moderate income families, who could not qualify for mortgages without the down payment assistance, are able to qualify. This would put the cost of the program on the budget of the government, where the costs of the program would be transparent and subject to public scrutiny, rather than hidden in the costs of banks and private financial market participants. Many in Congress prefer to hide the cost of their programs (the problem is not limited to housing finance). Consequently, they avoid subsidies since they expose the costs of the program. But mandating a social objective onto private firms (in this case telling banks and Fannie and Freddie to lower their mortgage standards) and ignoring the adjustments that markets will inevitably make, can have much greater costs, as we are all painfully learning.

Low Interest Rates as a Contributor to the Crisis—Due to Monetary Policy

Taylor (2007; 2009) has argued, the low interest policy of the Federal Reserve from about January 2002 to early in 2006 contributed to the housing boom and ultimate bust. The Federal Reserve set the federal funds rate at less than two percent from January 2002 to late 2004. This was considerably below (by about 3 percentage points in 2004) the level needed for price stability based on historical data, i.e., less than prescribed by the “Taylor rule.” Although this did not translate into an increase in the money supply,³² Barth *et al.*, (2009, p.7) explain that this induced a drop in mortgage rates, especially in the one year rate on adjustable rate mortgages

³⁰ See Glaeser and Shapiro (2002).

³¹ The costs of such a targeted subsidy program for low and moderate income earners would have to be weighed against the benefits, and would likely justify a small subsidy program. See Bourassa and Yin (2006) for a comparison of the impacts of the US and Australian approaches. In 2008, however, the US implemented a program of interest free loans for first time home buyers (or buyers who have not owned a home in the past three years) for homes purchased between April 9, 2008 and July 1, 2009. The program allows a tax credit of up to \$7,500, which must be paid back interest free over a period up to 17 years.

³² Based on data available from the Saint Louis Federal Reserve website, the rate of growth of M2 for the ten year period ending in 2006 was 5.8 percent or 6.1 percent in the seven years ending in 200. This is a lower rate of money supply growth than in any of the final four final decades of the 20th century, except for the 1990s. M3 growth, up until discontinuance of the series in February 2006, tells a similar story. Specifically, the average growth rates in M2 (M3) by decades are the following: 1960s, 7 (7.6) percent; 1970s, 9.5 (11.1) percent; 1980s, 8 (8.7) percent; 1990s, 4 (4.6) percent. M3 growth from January 2000 to February 2006 was 7.7 percent, and 7.8 percent from January 1996 to December 2005.

which fell to about 4 percent during this period. Many borrowers opted for adjustable rate mortgages during this period (as 30 year fixed rate mortgages carried higher interest rates), and lenders accommodated the borrowers since it shifted interest rate risk to the borrowers. Fueled by these low interest rates, subprime mortgage originations rose dramatically from 8 percent in 2001 to 21 percent in 2005.^{33 34}

The Homeowner: Why Tax Laws and Homeowner Options Have Contributed to the Crisis

The more equity a homeowner has in her home, the less likely she will want to walk away from a mortgage in a downturn in the housing market, and the more stable the housing market will be. Our laws, however, have induced a very low positive equity and now negative equity environment.

The right to refinance is rare in the commercial world, but state laws generally guarantee that right to homeowners without penalty. Moreover, home mortgage interest and home equity loan interest are deductible on federal income tax returns, while interest payments on car and consumer loans of all kinds are not deductible. (Since low and middle income earners pay little or no federal income tax, this does not make sense for the purpose of encouraging wider home ownership.) In this situation, it was rational for the homeowner to use a home equity loan rather than alternate financing for consumer expenditures. Combined with the gradual decline in lenders' requirements for home mortgages, the result was the so-called "cash-out" refinancing, through which homeowners treated their houses like savings accounts, drawing out funds to finance cars, boats and other consumer expenditures. By the end of 2006, 86 percent of home mortgage refinancing was cash out refinancing.³⁵ Thus, with the collapse of the housing bubble, many homeowners found themselves with negative equity; and this was true not just for subprime mortgages, but for prime mortgages as well. In this situation, homeowners might prefer to default on the mortgage rather than make the payments.

³³ Taylor (2007) provides econometric evidence for this story by estimating the impact of interest rates on housing starts. He infers that housing starts increased dramatically during this period due to the low interest rate policies.

³⁴ As Taylor (2009) has explained, it does not appear that the low interest rates were due to a global savings glut, led by Chinese savings. World savings as a percentage of GDP was low during the 2002-2004 period, especially compared to the 1970s and 1980s. (See International Monetary Fund (2005). World Economic Outlook, chapter 2.) Savings exceeded investment outside of the United States, but this was offset by negative savings in the United States.

³⁵ Joint Center for Housing Studies (2008, 37).

The problem is exacerbated by additional government policies. In most states, mortgages are either “without recourse,” meaning that a defaulting homeowner is not responsible for paying the difference between the value of the home and the principal amount of the mortgage, or else the law makes the process of enforcing the obligation so burdensome that lenders take no action. Thus, homeowners with negative equity are more likely to walk away from the mortgage given this regulatory protection, contributing to the problems of banks.

Fair Market Accounting Standards—Not a Cause of the Crisis

Some critics have alleged that “fair value accounting” standards that often (but, crucially, not always) compel financial institutions to value assets on the books at market values (“mark to market” accounting) have exacerbated the financial crisis. These critics argue that mark to market accounting has forced write downs of assets during the crisis, depleted bank capital and forced sales of assets at distressed sale prices. These prices were ostensibly considerably less than their proper value in a normally functioning market, i.e, less than the present value of the cash flows of the asset.³⁶ They argue that there is then a downward spiral or contagion as many banks are forced to unload assets at distressed prices, further driving down prices.

Downward spirals in prices, however, arise for many reasons. Given the large number of defaults in the underlying mortgage pools that back the value of the mortgage backed securities and the resulting reduction in the cash flow of these securities, an alternate plausible explanation for the reduced prices of the mortgage backed securities is that they reflect a more accurate assessment of the present value of the cash flow of the securities. In support of this latter view, Laux and Leux (2010) maintain that the allegations that fair market accounting contributed to the crisis are not supported by evidence. They find “little evidence that banks reported fair values suffered from excessive write-downs or undervaluation in 2008, which in turn, could have contributed to downward spirals and contagion. If anything, the evidence points in the opposite direction. Fair values played only a limited role for bank’s income statements and regulatory capital ratios except for a few banks with large trading positions. For these banks, investors would have worried about exposures to sub-prime mortgages and made their own judgments

³⁶ See, for example, Institute of International Finance (2008).

even in the absence of fair value disclosures.”³⁷ Companies such as investment funds, investment banks and bank holding companies that relied heavily on short term borrowing and had substantial sub-prime exposure would have had to sell assets regardless of the accounting regime.

IV. The Myth of Deregulation

Deregulation is unrelated to the instruments that are the problems. On the contrary, what deregulation that has occurred has contributed to the stabilization of the crisis.

There were numerous regulatory failures that led to the current financial crisis and there is a need for new regulations. The failure to give regulators normal bank supervisory authority in the case of the GSEs and giving bank regulators conflicted objectives under the Community Reinvestment Act where they are instructed to ignore poor mortgage underwriting standards top the list. I discuss one additional perverse regulation below and Calomiris (2008) discusses others. But contrary to the allegations by non-specialists, there are no actual acts of deregulation that contributed to the crisis. Paraphrasing Charles Calomiris we know the following:

The instruments that are the problems in the current crisis are sub-prime lending and securitization. Securitization was available for banks, investment banks and other financial institutions since the 1970s. Sub-prime lending was facilitated by regulation changes in the mid-1990s as a means of extending home ownership to low and moderate income households. There is no connection whatsoever securitization or sub-prime lending and financial deregulation of the past three decades. Financial deregulation in the past three decades consisted of the removal of interest rate ceilings, allowing greater consolidation through the relaxation of branching restrictions and allowing commercial banks to enter underwriting and insurance and other financial activities.

³⁷ Two examples of assets values on the books at more than market value are the following. Merrill Lynch sold \$30.6 billion of collateralized debt obligations backed by mortgages for 22 cents on the dollar; but at the time of the sale, the assets were valued on their books at 65 percent higher. In the first quarter of 2008, Lehman wrote down its \$39 billion commercial mortgage backed securities portfolio by 3 percent, when an index of these securities dropped 10 percent. Laux and Leux (2010, p. 102).

On the Contrary—Deregulation and Globalization Have Helped Stabilize the Crisis

The 1999 Gramm-Leach-Bliley act repealed part of the 1933 Glass-Steagal Act and thereby allowed commercial banks and investment banks to merge. But this merger capability has helped to stabilize the financial markets rather than contribute to it. In the 2008 financial crisis, deregulation allowed Bear Stearns to be acquired by J.P. Morgan,³⁸ Merrill Lynch to be acquired by Bank of America and allowed Goldman Sachs and Morgan Stanley to convert to bank holding companies and help shore up their positions.

Moreover, deregulation, consolidation and globalization of the banking system has permitted the banks to recapitalize to a far greater extent than in previous crises. That is, financial crises periodically occur throughout the world. There were 100 in the world in the past 30 years alone. The two most serious in the US were the Great Depression and the crisis of 1989. What has been common to past crises has been that banks have been unable to raise capital largely because potential investors are uncertain about how deep the problems are with the bank seeking to recapitalize. What has been different about the current US crisis is that banks have been able to recapitalize to some nontrivial extent. For example, in the S&L crisis, bank recapitalization averaged about \$3 billion per year in 1989-1991.³⁹ In the year ending September 2008 banks raised \$434 billion in new capital.⁴⁰ What explains this unprecedented ability to raise capital in a financial crisis? Calomiris and others argue that deregulation, consolidation and globalization contributed to substantial profits in the banks in the past 15 years and left banks in a stronger position at the start of the crisis so they could more credibly argue they would survive the crisis and thereby attract investors. Moreover, many analysts have noted that regional concentration of banks contributed to US financial crises in the past, as regional banks are vulnerable to regional shocks (Bernanke and Lown, 1991). With consolidation and deregulation of interstate branching, however, banks are less vulnerable to regional shocks. As a further benefit, globalization of banking has allowed banks to access credit from sovereign wealth funds and other international sources.⁴¹

³⁸ The Bear Stearns-J.P Morgan merger was facilitated by a \$30 billion government subsidized loan. Jaffe and Perlow (2008).

³⁹ Federal Reserve data cited in Bernanke and Lown (1991, 239).

⁴⁰ For details of which financial institutions raised capital and how much, see Calomiris (2008, 106).

⁴¹ See Calomiris (2008, 47-55) for details.

The SEC Rule Change in 2004—or Why International Coordination of Regulation Does Not Necessarily Lead to Improved Regulation

The SEC rule change in 2004 that changed how the SEC figured the net capital requirements is now seen as a significant mistake. Some journalists have mistakenly called this deregulation.⁴² What these journalists fail to note is that this rule change was the antithesis of deregulation; rather it was the imposition of internationally coordinated regulatory standards—rules known as the “Basel Rules.” The Basel Committee rules were the consequence of years of work by the central bankers of the world and are based on the belief that a common set of global banking standards would result in more efficient use of capital and a more stable global financial system. The Basel rules call for banks to have capital reserves of eight percent on a risk weighted basis. Commercial loans had a risk weight of 100, so had to be backed by 8 percent capital in reserve. But AAA rated securities (like the securitized mortgage pools), had a substantially lower risk weight of 20 percent, so banks only had to have 1.6 percent capital in reserve to back investments in AAA rated securities. Basel I rules were replaced with Basel II rules in 2007, which allow for more use of internal bank models in the assessment of risk, something which we would all question today; but rules for residential mortgages did not change.) As I have explained, all those responsible for assessing the risks earned large fees from underestimating the risk and the investment banks ended up leveraging themselves far too highly. Swiss authorities are now raising the minimum capital requirements above those allowed under the Basel Rules. The SEC rule change was one of the regulatory failures that contributed to the financial crisis. But rather than a deregulation problem, this is a cautionary tale against agreement to internationally coordinated regulatory standards. If they substitute for prudential regulation, they could be a lot worse.

V. Lessons and Reforms

1. Eliminate the GSEs. As a second best solution, regulate the GSEs against excessive risk taking like normal banks.

The *raison d’être* of the GSEs was to lower mortgage interest rates. Studies by the Federal Reserve and the Congressional Budget Office have shown that they have failed in that objective.

⁴² See Stephen Labaton (2008), “Agency’s ’04 Rule Lets Banks Pile Up Debt,” *New York Times*, October 2.

Consequently, the GSEs add risk to the financial system without benefits. A first best solution would be to eliminate them. Failing elimination, since the Federal Government is guaranteeing their debt, they need to be regulated against excessive risk taking.

2. We need to fix the perverse incentives in enforcement of the Community Reinvestment Act (and other laws) that induce financial crises. Market mandates, such as requiring changes in bank lending standards are usually inefficient, do not achieve wider home ownership in the long run and involve unintended adverse consequences. This will take political will to correct the political failures.

Pressure on banks to lower mortgage standards under the Community Reinvestment Act is at the top of the list of perverse regulations. It is naïve economics to believe that we can simply impose a mandate on private firms and assume that the cost increases or risk increases of the mandate will have no adverse consequences. The home mortgage deduction on federal income taxes and related state homeowner regulations have also contributed to the crisis, but are of lesser importance as the primary cause. To address many of the most important problems, it will take political will and economic sophistication from Congress that has been lacking in the past.

3. Large financial institutions are not too big to fail. It is necessary to take a financial institution that cannot survive without substantial infusion of public funds into receivership.

Safety net subsidies must be limited for proper incentives. In order to reduce the likelihood that the next new financial instrument that is misunderstood induces a financial crisis, we must allow large financial institutions to fail. Financial institutions have mismanaged risk on a grand scale. It is crucial that they internalize the risks.⁴³ Caprio *et al.* (2008) and others have noted that the incentives for managers in many financial institutions are not properly aligned with the long run risks. For financial institutions to internalize the risks of large losses and to align their compensation structures for their managers with the risk, they have to bear the costs of their losses. This is not possible if bailouts are anticipated and there is no possibility of bankruptcy or takeover by the government. Thus, bailouts should be avoided.

⁴³ See Kane (2009) for an elaboration of this view

Receivership of a very large bank does not mean chaos. Although the FDIC routinely takes regional banks into receivership, including over 130 in 2009, many are afraid to apply the same strategy with large financial institutions. In receivership, the financial institution need not fall into disarray. The FDIC could take receivership of a large bank, defend the customer assets, change the management, wipe out the stockholders' equity entirely, and a share of the bondholders claims, continue the operation of the institution in receivership, and eventually sell or reissue the company to private ownership, leaving the bondholders with the residual. This is how the largest bank failure in U.S. history – Washington Mutual was six times larger than the previous largest U.S. bank failure – was handled so seamlessly in 2008 that it was almost unnoticed. Washington Mutual was placed into FDIC receivership and reopened literally the next day as J.P Morgan Chase with the customers having full access to their accounts and services of the bank.

Resolution of the Lehman Brothers bankruptcy shows fear of systemic financial market failure for a central player in the counterparty transactions is grossly exaggerated-- Not Too Big to Fail. Lehman Brothers is more worrisome to many than Washington Mutual, since it was a central player in the counterparty operations. The US experience, however, starting in mid-2008, shows that very large banks, even those central to the counterparty operations, can be reorganized with little or no systemic problems for the wider financial system. When it went bankrupt, Lehman Brothers was the third largest user of credit default swaps on mortgage backed securities worldwide and the fifth largest user of credit default swaps on government backed securities. It had its massive credit default swap holdings unwound within four weeks by the Depository Trust and Clearing Corporation (DTCC) and its subsidiaries, with all parties receiving payment on the terms of their original contracts. Consequently, when the Senior Supervisors Group (the official financial supervisors of the U.S., France, U.K., Canada, Germany, Japan and Switzerland) investigated the impact on financial markets of the Lehman Brothers bankruptcy, as well as the impact of the financial failures of Fannie Mae, Freddie Mac and Landsbanki Islands, it concluded that these “credit events were managed in an orderly fashion, with no major operational disruptions or liquidity problems.”⁴⁴ Moreover, through the

⁴⁴ See Senior Supervisory Group (2009, 2). The U.S. was represented in the report by the Board of Governors of the Federal Reserve, the Federal Reserve Bank of New York, the Securities and Exchange Commission and the Comptroller of the Currency.

DTCC, there are private financial market institutional mechanisms in place designed to assure that the smooth resolution of credit default swaps, as occurred in the Lehman case, will hold in general.⁴⁵

4. Regulate and financial institution against excessive risk taking if its debts are government guaranteed, either implicitly or explicitly.

If the government is going to extend the safety net even partially to large private banks, investment banks or insurance companies, they will also need greater regulation. I have argued that on economic grounds, large financial institutions are not too big to fail. The first best public policy is to allow them to fail. But possibly due to a shared belief system in their importance, as argued by Johnson (2009), or other reasons, many large financial institutions received substantial bailout subsidies. Large financial institutions are likely to anticipate this in the future and take excessive risks, gambling on a taxpayer bailout if things go bad. This moral hazard problem must be controlled.

5. Use the market to inform regulators.

Geithner is proposing extensive new regulation of financial institutions, with tougher capital requirements to assure that the financial crisis is not repeated. Recent history suggests, however, that we should be cautious in assuming that regulators will have sufficient information and judgment in new financial instruments to be aware of when a financial institution is at increased risk and needs an additional capital infusion. The Federal Deposit Insurance Corporation Improvement Act of 1991 gave the FDIC substantially greater powers of supervision to assure that the S&L crisis did not happen again. Under the expanded powers of this act, examiners from the Comptroller of the Currency were inside Citigroup full time for years supervising its operations. Despite these broad supervisory powers, in late 2008, the federal government stepped in to shore up Citigroup by guaranteeing or investing more than \$300 billion dollars of Citigroup assets (and \$118 billion of Bank of America assets). Although in late 2009 Citigroup was

⁴⁵ See Tarr (2009) for further details.

attempting to pay back its TARP money to avoid constraints on executive compensation, the loan guarantees of the FDIC, Treasury and Federal Reserve have slipped under the radar.⁴⁶

Hart and Zingales (2009) have proposed the use of the price of credit default swaps as a trigger mechanism to provide information to a regulator. When the price (“spread”) of a credit default swap on a financial institution rises, reflecting the market’s assessment that default is more likely, the regulator would require that the institution raise additional equity until the price of the credit default swap falls back to an acceptable level. (The price of a subordinated debt instrument could serve the same purpose.⁴⁷) If the financial institution fails to do so in an acceptable period of time, the regulator would take over, acting as the receiver as in a FDIC takeover. In this manner, risk taking by the institution and taxpayer liabilities would be limited. For this proposal to work, however, it is essential that the government be willing to takeover large financial institutions.

6. To the extent that wider home ownership is seen as a desirable social objective, modest subsidies for wider home ownership that are in the federal budget should be considered.

Although large subsidies would be a problem, a modest program along the lines of the Australian approach to the affordable housing problem would be more efficient. With no economic rationale, tax policies of the federal government subsidize the mortgage payments of well to do income earners, while denying subsidies to low and moderate income earners (who get little or no tax break from the mortgage deduction).

7. Increase capital requirements of financial institutions; it would also be useful to develop counter-cyclical financial instruments to finance financial institutions.

There is widespread agreement regarding the necessity of increasing capital requirements for financial institutions. A problem for the banks is that they can easily raise capital during booms, but have great difficulty in raising capital during recessions or a financial crisis. The creation of a

⁴⁶ See “Assistance to Citigroup” and “Assistance to Bank of America” on the FDIC website at: http://www.fdic.gov/about/strategic/report/2008annualreport/statements_dif_15.html.

⁴⁷ Several studies (see Fan et al., 2002) have suggested that a minimum subordinated debt requirement would help. Banks would be required to issue some subordinated bonds (senior bondholders would be paid prior to subordinated bondholders in the event of bankruptcy) to finance their lending. The market price of these bonds would provide a market measure of the riskiness of the banks.

subordinated debt instrument that regulators could require the bank to convert to equity could help resolve this problem. Regulators would insist on the conversion when the price of the subordinated debt instrument (or credit default swap) suggests that the bank is too risky.

8. Require loan originators to be well capitalized and bear some of the risks of the mortgages they underwrite.

It is necessary to address the moral hazard problem that has plagued the sector originating mortgages. As Pinto (2008) has explained, it would be useful to introduce regulation to require loan originators to hold some percentage of the risk on any loan they originate and to be well capitalized against possible default on these loans. Rather than requiring this, ironically, existing regulations discourage it (Calomiris, 2008, 33).

9. Have the SEC assign the Credit Rating Organization that will do the rating

Require that the issuer of a debt that would like to have it rated apply to the Securities and Exchange Commission for a rating. The SEC would assign the credit rating organization that would do the rating. SEC assignments could be based on rating performance and other qualifications.

Partial List of References

- Barth, J. R. (2009), *The Rise and Fall of the U.S. Mortgage and Credit Markets*, John Wiley and Sons: Hoboken, N.J.
- Barth, J. R.; Li, T.; Lu, W.; Phumiwasana, T. and Yago, G. (2009), *The Rise and Fall of the U.S. Mortgage and Credit Markets, Summary document*, Milken Institute, January. Available at: <http://www.milkeninstitute.org/publications/publications.taf?function=detail&ID=38801185&cat=resrep>.
- Benmelach E. and Dlugosz, J. (2009a), "The Alchemy of CDO Credit Ratings," NBER Working Paper No. 14878, and *Journal of Monetary Economics*, Vol. 56, No. 5, July, 617-634.
- Benmelach E. and Dlugosz, J. (2009b), "The Credit Rating Crisis," NBER Working Paper No. 15045, and *NBER Macro Annual 2009*.
- Bernanke, B. and Lown, C. (1991), "The Credit Crunch," *Brookings Papers on Economic Activity*: 2, 205-47.
- Bernanke, B. (2009), "American International Group," Testimony before the Committee on Financial Services, U.S. House of Representatives, March 24. Available at: <http://www.federalreserve.gov/newsevents/testimony/bernanke20090324a.htm>
- Bhagwati, J. and Ramaswami, V. K. (1963), "Domestic Distortions, Tariffs and Optimum Subsidy," *Journal of Political Economy*, 71(1), February, 44-50.
- Bhutta, N. (2009), "GSE Activity and Mortgage Supply in Lower-Income and Minority Neighborhoods: The Effect of the Affordable Housing Goals, Finance and Economics Discussion Series, Federal Reserve Board, Washington, D.C. Available at: <http://www.federalreserve.gov/Pubs/FEDS/2009/200903/revision/200903pap.pdf>.
- Bhutta, N. (2008), "Giving Credit where Credit is Due? The Community Reinvestment Act and Mortgage Lending in Lower-Income Neighborhoods," Finance and Economics Discussion Series, Federal Reserve Board, Washington, D.C. Available at: <http://www.federalreserve.gov/pubs/feds/2008/200861/200861abs.html>.
- Bourassa, S. and Yin, M. (2006), "Housing Tenure Choice in Australia and the United States: Impacts of Alternative Subsidy Policies," *Real Estate Economics*, Vol. 34, No. 2, pp. 303-328.
- Brunnermeier, M. K. (2009), "Deciphering the 2007-2008 Liquidity and Credit Crunch," *Journal of Economic Perspectives*, Vol. 23, No 1, Winter, 77-100.
- Calomiris, C. (2009), "A Recipe for Ratings Reform," *The Economists Voice*, Vol. 6.(11), Article 5. Available at: <http://www.bepress.com/ev/vol6/iss11/art5/>
- Calomiris, C. (2008), "The Subprime Turmoil: What's Old, What's New and What's Next," October 2. Available at: http://www.aei.org/docLib/20081002_TheSubprimeTurmoil.pdf.
- Calomiris, C. (2008a), "Statement before the Committee on Oversight and Government Reform, US House of Representatives, December 9. Available at: <http://oversight.house.gov/documents/20081209145551.pdf>

Capital Research Corporation (2009), NACA: Neighborhood Assistance Corporation of America: ACORN's Rival in Shakedown Tactics," April. Available at: <http://www.capitalresearch.org/pubs/pubs.html?id=684>.

Caprio, G., Demirguc-Kunt, A. and Kane, E. (2008), "The 2007 Meltdown in Structured Securitization: searching for lessons, not scapegoats," World Bank Policy and Research Working Paper number 4756, November 1. Available at: http://econ.worldbank.org/external/default/main?pagePK=64165259&theSitePK=469372&piPK=64165421&menuPK=64166093&entityID=000158349_20081125132435

Center for Responsive Politics (2008), "Fannie Mae and Freddie Mac Invest in Lawmakers," September 11. Available at: <http://www.opensecrets.org/news/2008/09/update-fannie-mae-and-freddie.html>

Congressional Budget Office (2001), "Federal Subsidies and the Housing GSEs." Available at: <http://www.cbo.gov/ftpdocs/28xx/doc2841/GSEs.pdf>.

Demyanyk, Y. and van Hemert, O. (2008), "Understanding the Subprime Mortgage Crisis," August 19. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1020396

England, R. S. (2002), "Giving it 100 Percent," Mortgage Banking, February 1.

Fan, R.; Haubrich, J. G. ; Ritchken, P. and Thomson, J. B. (2002), "Getting the Most Out of a Mandatory Subordinated Debt Requirement," Federal Reserve Bank of Cleveland Working Paper No. 0214. Available at: <http://www.clevelandfed.org/research/Workpaper/2002/WP0214.pdf>

Glaeser, E. and Shapiro, J. (2002), "The Benefits of the Home Mortgage Interest Deduction," Harvard Institute of Economic Research, Working Paper 1979. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=343800.

Grossman, G. and Helpman, E. (1994). "Protection for Sale," *American Economic Review*, Vol.84, No. 4, pp. 833-850.

Institute of International Finance (2008), "'IIF Board of Directors: Discussion Memorandum on Valuation in Illiquid Markets," April 7.

Hart, Oliver and Luigi Zingales (2009), "To Regulate Finance, Try the Market," *The New Foreign Policy.com*, March 30. Available at: http://experts.foreignpolicy.com/posts/2009/03/30/to_regulate_finance_try_the_market

Hossain, A.K.M. R. (2004), "The Past, Present and Future of the Community Reinvestment Act: A Historical Perspective," Department of Economics, University of Connecticut Working Paper. Available at: www.econ.uconn.edu/working/2004-30.pdf.

Hunt, J. (2008), "Credit Rating Agencies and the 'Worldwide Credit Crisis': The Limits of Reputation, the Insufficiency of Reform, and a Proposal for Improvement," Social Science Research Network Working Paper 1292667. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1267625&rec=1&srcabs=1292667 and *Columbia Business Law Review*, Vol 2009, No. 1.

Jaffe, D. (2008), "Reforming Fannie and Freddie," *Regulation*, vol. 31(4), 52-57.

- Jaffe, D. and Perlow, M. (2008), "Investment Banking Regulation After Bear Stearns," *Economist's Voice*, Vol 5 (5) Available at: <http://www.bepress.com/ev/vol5/iss5/art1/>.
- Joint Center for Housing Studies (2008), *The State of the Nation's Housing, 2008*, Cambridge MA: Harvard University, November. Available at: www.jchs.harvard.edu/publications/markets/son2008/index.htm.
- Johnson, S. (2009), "The Quiet Coup," *The Atlantic*, May.
- Kane, E. (1985), *The Gathering Crisis in Federal Deposit Insurance*, Cambridge MA: MIT Press.
- Kane, E. (2009), "Incentive Roots of the Securitization Crisis and its Early Mismangement," *Yale Journal of Regulation*, Vol. 26, No. 2, July.
- Kroszner, R. S. and Strahan, P. E. (2000), "Obstacles to Optimal Policy: The Interplay of Politics and Economics in Shaping Bank Supervision and Regulation Reforms," in *Prudential Supervision: What Works and What Doesn't*, F. Mishkin (ed.), Cambridge MA: National Bureau of Economic Research. Available at: <http://www.nber.org/chapters/c10762.pdf>.
- Leibowitz, S. (2008), "Anatomy of a Train Wreck: Causes of the Mortgage Meltdown," in *Housing America, Building out of a Crisis*, edited by R.G. Holcombe and B.W. Powell. Available at: http://www.independent.org/pdf/policy_reports/2008-10-03-trainwreck.pdf
- Mason, J. R. (2008), "A National Homeownership Strategy for the New Millenium," mimeo, February 26.
- Olson, M. (1965), *The Logic of Collective Action*, Cambridge MA: Harvard University Press.
- Peltzman, S. (1976). "Toward a More General Theory of Regulation," *Journal of Law and Economics*, Vol 19, No. 2, pp. 211-240.
- Pinto, E. (2008), "Statement before the Committee on Oversight and Government Reform, US House of Representatives, December 9. Available at: <http://oversight.house.gov/documents/20081209145847.pdf>
- Richardson, M. and White, L. (2009), "Fixing the Ratings Agencies: Is Regulation the Answer," Voxeu, February 2. Available at: <http://www.voxeu.org/index.php?q=node/2958>.
- Senior Supervisors Group (2009), "Observations on Management of Recent Credit Default Swap Events," March 9. Available at: <http://www.sec.gov/news/press/2009/report030909.pdf>
- Stigler, G., "The Theory of Economic Regulation," *Bell Journal of Economics and Management Science*, Vol. 2, No. 1, pp. 3-21.
- Tarr, D. G. (2009), "Bailouts and Deficits or Haircuts: How to Restore U.S. Financial Market Stability,," Social Science Research Network Working Paper 1401555, May. Available at: <http://ssrn.com/abstract=1401555>
- Tarr, D. G. (2010). "Why Too Big to Fail is a Myth," Social Science Research Network Working Paper 1533522, January. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1533522

Taylor, J. B. (2009), *Getting Off Track: How Government Actions and Interventions Caused, Prolonged and Worsened the Financial Crisis*, Stanford CA: Hoover Institution Press.

Taylor, J. B. (2007), "Housing, Housing Finance and Monetary Policy," Kansas City: Federal Reserve Bank of Kansas City. Available at:
<http://www.stanford.edu/~johntayl/Housing%20and%20Monetary%20Policy--Taylor--Jackson%20Hole%202007.pdf>

United States Department of Housing and Urban Development (1995), "Urban Policy Brief, Number 2," August. Available at: <http://www.huduser.org/publications/txt/hdbrf2.txt>

United States Department of Housing and Urban Development (1995), "A National Homeowner Strategy,". Available at:
<http://web.archive.org/web/20000830124240/www.huduser.org/publications/affhsg/homeown/toc.html>

United States House of Representatives (2010), "Follow the Money: ACORN, SEIU and their Political Allies," Staff Report of the Committee on Oversight and Government Reform, February 18. Available at: <http://republicans.oversight.house.gov/images/stories/Reports/20100218followthemoneyacornseiuantheirpoliticalallies.pdf>

Wallison, P. J. (2008), "Cause and Effect: Government Policies and the Financial Crisis," November. Available at: http://www.aei.org/docLib/20081203_1123724NovFSOg.pdf

Wallison, P. and Pinto, E. (2008), "What Went Wrong at Fannie and Freddie—and What Still Might," *National Review*, October 21. Available at: <http://www.aei.org/article/28810>

While, L. (2001), "The Credit Rating Industry: An Industrial Organization Effort," Social Science Research Network Working Paper 1292667, May. Available at:
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1292667.