

The Regulatory Response to the Financial Crisis: An Early Assessment

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It's a pleasure to join you today. Before I begin, I should mention that these are my own views and are not necessarily shared by my colleagues on the Federal Open Market Committee.¹

I would like to start with an explanation of my title: "The Regulatory Response to the Financial Crisis: An Early Assessment." First, I intend to construe the phrase "regulatory response" broadly to include all official responses, both those that came during the crisis and those that have followed. And second, the word "early" in the subtitle may be surprising. After all, we are nearly three years removed from the first signs that a broad-based financial crisis was upon us, a crisis to which central banks and governments around the world have responded with unprecedented interventions and plans for revamping regulatory regimes. We also are a year past the conclusion of the so-called "stress test" of major U.S. banks that assessed the sufficiency of their capital in the event of further deterioration of economic conditions. But I would put the current period in perspective by noting that just in the last two decades scholars have uncovered new insights about the efficacy of policy actions during the Great Depression, which ended seven decades ago. So by that measure, we still may be fairly early on in the assessment process.

Among the new insights regarding the Great Depression is that policy errors, both in monetary policy and in attempts to control wages and prices, contributed to the severity and length of the problems experienced in that decade. Policy actions are inevitably based on theory – some implicit or explicit notion of the nature of the problem and the way in which particular actions will help or hurt the situation. Policy actions during the Great Depression that, in retrospect, appear to have been errors were based on the well-meaning application of flawed theories. Monetary policymakers applied the wrong model to the economic and financial market conditions they observed,² and government interventions in wage and price setting were motivated by a misunderstanding of the potential macroeconomic consequences.³ The decades we have spent delving deeper into the lessons offered by the Great Depression should serve as a cautionary tale regarding the value of careful attention to the theories underlying official actions taken during this crisis and to plausible alternative theories that might have had different implications. My sense is that, as in the case of the Great Depression, the ultimate assessment of official response in this crisis will depend critically on whether future historians judge policymakers to have acted on an appropriate theory of the case.

Three underlying premises appear to have shaped policy response during this financial crisis. First, that markets are prone to the build-up of excessive (that is, inefficiently large) risk,

resulting from an externality – financial market participants do not take into account the “systemic” consequences of their risk-taking actions. Second – and perhaps as a consequence of the first – markets are subject to panicked flights from particular asset classes or counterparties. Again, the excessiveness of such actions stems from an assumption that, in pulling away from a counterparty, investors do not consider (that is, inefficiently underweight) the “systemic” consequences of that action. Third, the provision of public sector credit at the onset of a crisis, either from the central bank or the government, can prevent or ameliorate adverse consequences (that is, can improve efficiency, at least from an ex post point of view).

Collectively, these assumptions imply that market discipline will provide an inadequate check on risk-taking and the likelihood of panics will be undesirably elevated. So, on the front-end – that is, before a crisis occurs – regulatory oversight needs to control risk-taking. Viewed through this theoretical lens, the experience of the last three years would seem to suggest that these flaws are larger than we thought. The lesson then would be that we need to strengthen our ability to monitor financial system risks and respond with appropriate supervisory constraints on financial market participants. While I agree with this conclusion, I arrive by a different route – that is, a different theory about the causes of excessive risk-taking.

First, I am skeptical of the characterization of systemic risk as an externality that leads market participants to undervalue or ignore risks. Those spillovers are usually ascribed to the interconnectedness that is said to be more prevalent among financial firms. But those interconnections are all the result of mutually agreed-upon contracts. Creditors have voluntarily chosen their counterparties, and they have no inherent reason to neglect the implied exposure to their counterparties’ counterparties. Similarly, financial asset owners have voluntarily agreed to a range of potential returns, and they have no inherent reason to neglect any particular possibilities. Interconnectedness, by itself, is not a market failure.

Skepticism is also warranted, I believe, regarding the systemic consequences of an individual firm’s failure, no matter how interconnected. Arguments that one firm’s failure can spark costly runs at other firms rely on the logic of panics as self-fulfilling prophecies. While this logic is correct as far as it goes, it provides an unsatisfactory guide for policymakers, because it does not provide a means for determining whether creditors are justified in pulling away from other firms. After all, news that one firm has failed can be genuinely informative about fundamental prospects at other firms with similar exposures.

I do think there is a fundamental deficiency in the way our financial markets have performed. And you could describe this deficiency as an externality that leads both to the overexposure to risks in the financial system and to contagious reactions of markets to problems at one institution. But this externality is the *product* of government policy – namely, the provision of government protection to creditors through an ambiguous, implicit financial safety net. The widespread belief that some financial firms are too big or too “systemically important” to fail and their creditors will benefit from government support increases those firms’ appetite for risk. In this setting, allowing a firm to fail creates contagion by forcing market participants to adjust their beliefs about the extent of future government protection.⁴

A compelling alternative premise, one that I personally believe is most likely to emerge as the consensus assessment among future scholars, is that the incentives created by the financial safety net were the chief cause of the financial crisis. Richmond Fed economists have conservatively estimated that in 1999, 18 percent of the U.S. financial sector was covered, or believed to be covered, by the implicit safety net.⁵ Another 27 percent received explicit protection such as deposit insurance, meaning that a total of 45 percent of financial sector liabilities benefited from explicit or implicit government safety net support. The implicit coverage was accounted for almost entirely by the housing government sponsored entities (GSEs) and several large commercial banks – all of which were important players in the build-up of risks related to housing finance over the last decade.

The involvement of Fannie Mae and Freddie Mac in housing finance set them up for a central role in the financial crisis. Their hybrid mission of supporting social home-ownership goals and providing returns to their shareholders, when combined with the perception that their debt was government-backed, made it almost inevitable that they would over-leverage. Estimates of their purchases and guarantees of high-risk mortgages from 2002 to 2007 range from a third to a half of total high-risk issuance.⁶

The role of large U.S. banks in the run-up to the crisis was a bit more indirect, but potentially consequential nonetheless. Most subprime and Alt-A mortgages were originated outside of the commercial banking system, but the process through which mortgage risks were re-intermediated involved banks in several key steps. Many of these mortgages found their way into off-balance sheet entities that issued asset-backed securities, including commercial paper. These arrangements often benefited from explicit backstop liquidity agreements provided by large banks, or the backstop commitment implied by the reputational concerns of their large bank sponsors. These credit enhancements put banks on the hook in the event that investors lost confidence in the underlying assets. This is exactly what happened, of course, causing risky off-balance assets to boomerang back onto banks' balance sheets.⁷ But providing this kind of support to the securitization process simply reflected large banks exploiting an artificial competitive advantage they enjoyed. Because of the presumed government backing associated with their too-big-to-fail status, they were better able to hold exposures to large aggregate shocks – particularly those involving a scarcity of liquidity – than other market participants. The implicit safety net for large commercial banks thus encouraged them to provide credit enhancements to the securitization process, which further boosted the market for risky mortgage loans.

The U.S. housing GSEs, as I noted, were responsible for a significant portion of the ultimate demand for risky mortgage-backed securities. But European banks, many seen as too big to fail by their home countries, also took on significant exposures to U.S. housing debt. Thus a substantial amount of subprime and non-traditional mortgage debt appears to have been held by financial institutions whose risk-taking incentives were distorted by safety net support regimes. Future research will be needed to quantify the extent to which such incentive effects could, by themselves, account for the magnitude of the housing boom and subsequent bust. Qualitatively, however, the moral hazard problems infecting the ultimate investors in mortgage-backed securities could plausibly explain seemingly suboptimal behavior throughout the housing finance pipeline, from deceptive origination practices to manipulated rating agency analyses.

Having been central to the build-up of risks, safety net ambiguity also played an important role, I believe, in how the ensuing crisis unfolded. In the initial bout of financial market turmoil in August 2007, investors pulled away from financial institutions that were perceived to have significant potential exposure to subprime mortgage losses, including through liquidity support for off-balance sheet entities. Interbank borrowing costs rose as lenders demanded higher counterparty risk premia. The Federal Reserve responded by lowering the discount rate's spread over the target federal funds rate and encouraging visible use of the discount window to dispel the "stigma effects" that were believed to discourage borrowing. This conveyed the message that central bank lending would be forthcoming to prevent or ameliorate the adverse consequences of the tumult in financial markets. While many financial firms raised additional capital in the months that followed, some institutions, including Bear Stearns and Lehman Brothers, let opportunities to improve their balance sheets and reduce their vulnerability to a loss in investor confidence pass them by.

Uncertainty about whether the short-term creditors of such firms would be protected by government support meant that policymakers faced an excruciating dilemma if one of them ran out of liquidity. Letting a firm file for bankruptcy could diminish the odds investors placed on government support for other similarly-situated firms, risking a sudden investor retreat that would add to market volatility. Protecting creditors and counterparties becomes irresistible, despite knowing how it might exacerbate moral hazard. By late September 2008, the fact that six large financial failures had been handled five different ways⁸ caused tremendous market uncertainty regarding the status of safety net protection. At that point, establishing and articulating credible new boundaries around future support would have been very difficult. This suggests that future assessments of the official response to the financial crisis will hinge less on the TARP and the large-scale market interventions by the Fed that followed AIG, and more on how the sequence of actions in the year before might have discouraged critical actions that firms could have taken to protect against financial distress.

One result of the crisis is that official support has been given to a set of firms and markets that extends well beyond our estimate of the safety net as of 1999. Taking into account actions taken over the last three years, Richmond Fed researchers have updated their safety net estimate to the end of 2008, with the figure for implicit protection now standing at 37 percent of financial sector liabilities, reflecting the growth in the housing GSEs and the extension of support to financial institutions beyond commercial banks.⁹ Interestingly, while the fraction of financial sector liabilities backed by explicit government support has declined to 22 percent, the total safety net has grown to cover 59 percent of the financial sector at the end of 2008. The expansion we've seen in the safety net over time has been, I believe, a direct result of the ambiguity of unstated, implicit guarantees.

With market discipline increasingly compromised by a growing financial safety net, regulatory oversight becomes the main defense against excessive risks in the financial system. And if bank-like risk-taking in the form of maturity transformation takes place outside of the formal banking sector but is still likely to elicit support in a crisis, then regulation would need to extend to these activities as well. But financial markets in the past have shown a seemingly endless capacity for inventing ways to engage in bank-like maturity transformation in new forms and new places, just outside the reach of regulation. To successfully limit excessive risk taking in a world of safety

net ambiguity, regulation needs to anticipate and constrain innovation. This is a daunting task, because it requires distinguishing between beneficial and detrimental innovations. As a result, new forms of financial fragility seem inevitable, and financial crises are likely to recur.

This logic suggests a vicious circle. Regulation seeks to rein in the adverse incentives created by the safety net. Regulation, in turn, creates the incentive to find innovations that by-pass existing constraints but create potentially fragile financial arrangements that could well receive support in a crisis. The prospect of support makes these new arrangements less costly and leads to their being over used, contributing to a build-up of risks in the financial system. When a crisis occurs, safety net ambiguity may once again be resolved in favor of protection, necessitating a further expansion of regulatory reach.¹⁰

To the extent this vicious circle has driven the expansion of an implicit safety net whose incentive effects were responsible for the crisis, the problem prior to the crisis was not solely or even primarily insufficient regulation. As much if not more responsibility ought to be attributed to the long-standing tolerance of an open-ended, unlegislated and implicit safety net commitment for large financial firms. So to my mind, assessment of the regulatory response to this crisis will depend predominantly on how well it clarifies and places discernable boundaries around the federal financial safety net.

Bills currently under consideration in Congress seek to break this cycle of regulation, by-pass, crisis, and rescue by giving policymakers the discretion to extend the scope of regulation to any financial institution whose failure might induce government support. The success of this strategy will depend critically on ability of regulators to identify ex ante the risk-taking that can cause so much damage ex post. While regulators have a fairly good record of preventing exact replicas of past crises, it is another matter entirely to foresee the distress that might result from the confluence of innovative financial arrangements and shocks to unanticipated macroeconomic fundamentals.

The bills before Congress also would expand the tools available to policymakers by providing the Treasury and the FDIC with the authority to seize and liquidate failed nonbank financial institutions. This seems like a natural extension of the FDIC's existing powers to resolve failing banks, but the FDIC would be allowed to provide funds to the receiver that could be used to settle short-term debts as they came due. Even if shareholders are dutifully "wiped out" and the firm ultimately closed, the protection of short-term creditors weakens the incentives of the most critical liability holders. If, in a crisis, regulators remain focused on alleviating ex post distress, they are likely to err on the side of rescue and further weaken market discipline. A provision of the Senate bill that provides for "clawbacks" of funds advanced in excess of what a claimant would receive in liquidation could restore some discipline to the process. But limitations in the clawback mechanism could mean that short-term creditors still benefit from the use of public funds.

The tensions evident in the negotiation of the Senate provisions on resolution authority mirror the tensions between an ex post and an ex ante perspective on policy questions. The expansion of the implicit safety net has been driven by the pursuit of ex post efficiency – that is, doing whatever it takes to alleviate the adverse impact of financial distress once it has occurred.¹¹

Future economists may continue to debate whether official interventions in this crisis have achieved significant ex post efficiency gains, but our true goal ought to be ex ante efficiency, not ex post efficiency. That is, people's expectations about ex post policy interventions affect their choices ex ante, and policy evaluation should take that into account.

When the pursuit of ex post efficiency and ex ante efficiency is in conflict – that is when there is a “time consistency problem” – two broad strategies are possible. One is to tie one's hands by preventing the actions one would take to pursue ex post efficiency when it conflicts with ex ante efficiency. This motivates the clawback provision of the Senate resolution title, which attempts to limit actions regulators might be tempted to take to provide short-term creditors of a failing financial firm more than they would get in bankruptcy. And the elimination of the Federal Reserve's so-called Section 13(3) power to extend emergency loans to individual entities outside the banking system certainly helps. But my early assessment is that the House legislation – and to some extent even the Senate version – creates enough discretionary rescue powers to dampen market discipline and sustain the vicious circle that brought us an expansive financial safety net.

An alternative strategy is for policymakers to invest in a reputation for pursuing ex ante efficiency rather than ex post efficiency. This, arguably, was the strategy pursued by the Volcker FOMC to reduce inflation in the early 1980s, when the short-run costs of disinflation might have deterred a policymaker focused solely on ex post efficiency.¹² And, arguably, we will not break the cycle of regulation, by-pass, crisis and rescue until we are willing to clarify the limits to government support, and incur the short-term costs of confirming those limits, in the interest of building a stronger and durable foundation for our financial system. Measured against this gauge, my *early* assessment is that progress thus far has been negligible.

¹ I am grateful to John Weinberg for assistance in preparing this speech.

² Tom Humphrey, “Monetary Policy Frameworks and Indicators for the Federal Reserve in the 1920s,” *Federal Reserve Bank of Richmond Economic Quarterly*, Winter 2001, vol. 87, no. 1, pp. 65-92.

³ Harold L. Cole and Lee E. Ohanian, “A Second Look at the U.S. Great Depression from a Neoclassical Perspective,” in Timothy J. Kehoe and Edward C. Prescott, eds., *Great Depressions of the Twentieth Century*, Minneapolis: Federal Reserve Bank of Minneapolis, 2007.

⁴ Marvin Goodfriend and Jeffrey M. Lacker, “Limited Commitment and Central Bank Lending,” *Federal Reserve Bank of Richmond Economic Quarterly*, Fall 1999, vol. 85, no. 4, pp. 1-27

⁵ John R. Walter and John A. Weinberg, “How Large is the Federal Financial Safety Net?” *Cato Journal*, Winter 2002, vol. 21, no. 3, pp. 369-99.

⁶ Edward Pinto, “High LTV, Subprime and Alt-A Originations over the Period 1992-2007 and Fannie, Freddie, FHA and VA's Role,” Memorandum, April 21, 2010.

⁷ Daniel M. Covitz, Nellie Liang, and Gustavo A. Suarez, “The Evolution of a Financial Crisis: Panic in the Asset-Backed Commercial Paper Market,” Finance and Economics Discussion Series, Federal Reserve Board, no. 2009-36, August 19, 2009.

⁸ Bear Stearns, acquisition assisted by Federal Reserve Bank of New York; IndyMac FSB, FDIC conservatorship; Fannie Mae and Freddie Mac, U.S. Treasury conservatorship; Lehman Brothers, bankruptcy; AIG, FRB New York collateralized credit facility in exchange for equity warrants.

⁹ John R. Walter and Nadezhda Malysheva (2010) “How Large Has the Federal Financial Safety Net Become?” Federal Reserve Bank of Richmond Working Paper No. 10-03, March.

¹⁰ Jeffrey M. Lacker, “Real Regulatory Reform” Speech to Institute of International Bankers Annual Conference, Washington D.C., March 1, 2010.

¹¹ Kartik B. Athreya, “Systemic Risk and the Pursuit of Efficiency,” *Federal Reserve Bank of Richmond Annual Report*, 2009, pages 4-18.

¹² Robert G. King “The Phillips Curve and U.S. Macroeconomic Policy: Snapshots, 1958-1996” *Federal Reserve Bank of Richmond Economic Quarterly*, Fall 2008, vol. 94, no. 4, pp 311-59.