ESSAYS ON ISSUES

THE FEDERAL RESERVE BANK OF CHICAGO

SEPTEMBER 2010
NUMBER 278a

Chicago Fed Letter

Financial regulation in the post-crisis environment

by Douglas D. Evanoff, vice president and senior financial economist, and William F. Moeller, associate economist

The Chicago Fed's 46th annual Conference on Bank Structure and Competition, which took place May 5–7, 2010, focused on the future of the financial services industry in light of the recent financial crisis and forthcoming industry reforms.

More information on the conference is available at www.chicagofed.org/webpages/events/2010/bank_structure_conference.cfm.

This *Chicago Fed Letter* summarizes two key panels from this year's Bank Structure Conference. In his keynote address, Federal Reserve Chairman Ben S. Bernanke stated, "To avoid another destructive financial crisis, we must learn all that we can from the crisis just endured." Each presenter utilized lessons from the recent crisis to formulate the necessary policy recommendations to avoid future financial crises.

What went wrong and what needs to change?

Speakers on the conference's main panel discussed the crisis and its implications for the financial services industry. This panel featured Austan Goolsbee from the President's Council of Economic Advisers; Meredith Whitney of Meredith Whitney Advisory Group; Patrick Parkinson from the Board of Governors of the Federal Reserve System; Randall Kroszner from the University of Chicago; and Rodrigo de Rato y Figaredo from Caja Madrid Savings Bank. Goolsbee contended that some basic oversight and market functions failed miserably. Although it was the private sector that sowed the seeds of the crisis, financial regulators should have acted to prevent the large buildup of risk. One area in need of additional oversight, he said, was the over-the-counter (OTC) derivatives market, amounting to approximately $600 trillion dollars of notional exposure. He argued that these transactions should be conducted through clearinghouses and, when feasible, on exchanges, where there would be greater disclosure. Goolsbee noted that there would be pushback on this proposal from many OTC marketmakers because profit margins would shrink. He said the government should not permit systemically important financial institutions (SIFIs) to engage in risky activities while using access to implicit or explicit safety nets to lower their cost of capital.

Goolsbee said that breaking up large financial institutions is not likely to solve the problem of systemic risk because this does not address the underlying activities and risk levels within the system; it simply turns one SIFI into multiple smaller ones. In addition to size, he noted, the scope of an institution's activities and the interconnectedness of its lines of business determine its contribution to systemic risk. Finally, Goolsbee argued for the creation of a new resolution authority for bank holding companies (BHCs) and nonbank financial entities.

Whitney argued that the economy has a polarized structure: a robust recovery in the large-corporate sector and struggling small-business and consumer sectors that she argued will deteriorate further. This situation resulted from significant consolidation in the banking industry over the past 50 years that ultimately left four banks controlling two-thirds of all mortgages and credit cards. Whitney contended that this consolidation was partially due to the growth of securitization; large banks had greater access to securitized markets and were therefore able to underprice loan originations and make up for their underpricing through sales of the loans into the secondary market.

Corporate debt markets deteriorated severely during the recent crisis, but have recovered over the past year as credit spreads have narrowed to pre-crisis levels. Concurrently, securitization markets collapsed, leading to a sharp decline in consumer and small business loans; banks simply did not have room for new originations. With inadequate access to credit, small businesses could not expand and hire, Whitney said. Since 42% of U.S. employment comes from small businesses, she added, this represents a significant drag on the recovery. Therefore, the structure of the financial system can affect the real economy. Whitney argued that the banking system should shift back to a model of regionalized lending. Lenders need to know their borrowers, she noted, because "the highest correlation of loss to a loan is distance."

Kroszner said that the goal of financial regulatory reform should be to create a stable financial system that supports sustainable economic growth. Many research studies suggest that a "deeper and more developed" financial system enhances economic growth, he noted. However, he said the recent financial crisis shows that there might be a trade-off with volatility. Regulatory reform should focus on how to minimize extreme events without hindering aspects of the system that drive economic growth.

Kroszner argued that the recent crisis revealed fragilities with the infrastructure of the financial system. He noted that many institutions were highly levered and relied excessively on short-term repo market funding. As uncertainty grew about the quality of firms' balance sheets, markets became illiquid and there were funding runs on SIFIs. Amid uncertainty around bankruptcy proceedings, a panic ensued. These events revealed a growing interconnectedness within the financial network through counterparty and funding chain linkages.

Regulators and market participants need assurance that the financial system will not collapse if a significant institution fails, Kroszner said. To accomplish this, he argued that financial reform should address not only failure prevention but also the robustness of market infrastructure. Toward this goal, and to improve transparency and reduce interconnections, OTC derivatives should be placed onto a central clearinghouse platform and structured products (e.g., mortgage-backed securities) should be subjected to basic underwriting standards. He also suggested implementing countercyclical capital requirements that make banks set aside more capital in good times to protect the firms in downturns. This could help smooth cycles in both financial markets and the broader economy. However, he warned of the unintended consequences of simply raising capital requirements; higher requirements might encourage banks to shift their portfolios toward riskier and less transparent activities. Finally, new resolution processes for BHCs and nonbank financial institutions must be spelled out clearly to avoid creating greater uncertainty for bankruptcy proceedings and significant moral hazard.

Regulators and market participants need assurance that the financial system will not collapse if a significant institution fails.

Parkinson contended that legislation should extend supervision and regulation to all firms that pose a systemic threat. In addition to providing greater oversight, financial reforms must increase reliance on market discipline. Accordingly, he argued that the government should be empowered with resolution authority to help avoid the disorderly failure of SIFIs, but only if it is willing to impose meaningful losses on creditors. Otherwise, it could exacerbate the dilemma of moral hazard.

Parkinson argued that any effective resolution authority must be able to separate a failing firm's systemically important businesses from the nonessential ones. However, the largest financial firms often have very complex legal structures that can include thousands of subsidiaries and other legal entities, many with intra-company dependencies. This makes it extremely challenging to isolate the systemically important businesses. One proposed method to alleviate these challenges is to force SIFIs to prepare "living wills" that outline how to wind down their operations. These plans should require detailed tracking of counterparty and creditor linkages and explicit operational guidelines and alternative solutions for running the businesses. The living wills would also provide some incentive to firms to simplify their structures, potentially reducing instability within the system.

In addition, Parkinson emphasized that SIFIs should avoid being vulnerable to runs on short-term funding. Reforms should include stricter regulation of liquidity risk, he said, in order to steady firms' financial position. Still, Parkinson said, "it is critical that the government has strong emergency stabilization authorities that enable it to provide liquidity or facilitate the provision of private sector liquidity to the system."

Finally, Parkinson contended that reforms must improve transparency and reduce interconnectedness among firms to improve financial stability. One possibility would be to set a concentration limit on single-firm credit exposures relative to regulatory capital. In addition, standardized OTC derivatives could be placed into a well-regulated clearinghouse, which would act as a central counterparty to each contract. Simultaneously, capital requirements could be increased on SIFIs that enter into any contracts that are not centrally cleared.

De Rato spoke about Spain's experience in the financial crisis and that country's regulatory approach. He highlighted Spain's efforts to implement countercyclical loan-loss provisions (i.e., funds set aside as an allowance for bad loans) to better withstand downturns. Additionally, he noted that in Spain, securitized products were transparent and noncomplex and that these products remained on the balance sheet. For the most part, Spanish financial institutions had avoided toxic assets from the U.S. These factors contributed to strong capital adequacy and reserve levels in Spain, as well as relatively high and sustained profits. Accordingly, government support to the banking system as a percentage of gross domestic product (GDP) was approximately 5% in Spain—lower than in the U.S. (7.7%) and the UK (27.5%).

However, Spain had significant exposure to the downturn in real estate. Spanish housing starts declined precipitously despite a relatively moderate adjustment in prices. Simultaneously, nonperforming loans grew dramatically, and Spain had one of the highest nonperforming loan ratios in Europe. Real estate represents 63% of total loans outstanding, and de Rato said he expected one-third of those assets to further deteriorate. Still, the Spanish banking system can cover the losses because of its high coverage ratio from countercyclical reserves and strong operational profits. Also, he argued that the system is ready for a gradual withdrawal of support from the European Central Bank (ECB).

De Rato proposed a two-tier approach to focus, first, on strengthening financial institutions' individual resilience and, second, on minimizing systemic risks and reducing procyclical movements in credit markets. He warned that new regulations must maintain a delicate equilibrium. On the one hand, too much regulation could minimize systemic risk but reduce credit growth and profitability. On the other hand, too little regulation could encourage innovation but increase the likelihood of new financial crises.

Responding to the crisis—regulatory reform proposals

Speakers on another key panel offered specific reforms they thought necessary to help avoid or mitigate future financial crises. This panel consisted of Philipp Hartmann from the European Central Bank; Diana Hancock from the Board of Governors of the Federal Reserve System; H. Rodgin Cohen of Sullivan and Cromwell LLP; and Viral Acharya from New York University's Stern School of Business. Hartmann explained that the goal of macroprudential supervision and regulation is to identify and contain systemic risk. According to the ECB, systemic risk occurs when "financial instability becomes so widespread that it impairs the functioning of the financial system to the point that economic growth and welfare suffer materially." The sources and transmission mechanisms of this risk can encompass all components of the financial system, including intermediaries, markets, and infrastructure. In addition, there are different forms of systemic risk, Hartmann noted, which are contagion, unraveling of imbalances, and aggregate shocks.

In a European Union proposal, Hartmann explained, the macroprudential supervisor would identify systemic risks early on and make policy recommendations to a microprudential authority on how to alleviate the emerging risks. The macroprudential supervisor would be supported by the ECB, and the microprudential authority would house the regulators of the banking, financial markets, and insurance industries, which enforce policy. To effectively monitor risk, the macroprudential supervisor needs relevant market intelligence on financial innovations, statistical data, and analytical models for each form of systemic risk.

Hartmann highlighted some of the existing models for systemic risk. For contagion risk, supervisors can use contagion spillover models, which simulate how an individual SIFI's failure would affect the system. For unraveling of imbalances, supervisors can use early warning signal models, which incorporate macroeconomic measures, such as credit-to-GDP ratios or systemwide leverage ratios. For aggregate shocks, supervisors can simulate various scenarios, using a financial stress index, such as the ECB's Composite Indicator of Systemic Stress. This indicator allows the ECB to aggregate data from all components of the financial system, give weight to the data, and produce a normalized measure of financial stress. Although good progress has been made in modeling systemic risk, Hartmann emphasized that the concept is highly complex and more work is needed to understand the transmission mechanisms.

Hancock discussed a proposal that attempts to augment current capital regulation in order to limit future financial crises. Basic capital requirements reduce, but do not eliminate, the need for reserves in the event of a crisis. Therefore, she proposed "financial-stability-based prompt corrective action," which she described as a "hierarchical defense structure for mitigating systemic risks." It employs a series of capital buffers, including common equity and contingent capital arrangements, and a systemic event trigger that would convert all contingent capital instruments to common equity; SIFIs would be required to replenish their contingent capital.

Contingent capital contracts provide a pre-specified form and amount of capital, conditional upon the realization of a trigger event. The trigger may be based on bank capital levels, macroeconomic stress indexes, or a composite financial stress index. The contingent capital would act as a privately provided

Charles L. Evans, *President*; Daniel G. Sullivan, *Executive Vice President and Director of Research*; David Marshall, *Senior Vice President, financial markets*; Jonas D. M. Fisher, *Vice President, macroeconomic policy research*; Daniel Aaronson, *Vice President, microeconomic policy research*; William A. Testa, *Vice President, regional programs, and Economics Editor*; Helen O'D. Koshy and Han Y. Choi, *Editors*; Rita Molloy and Julia Baker, *Production Editors*; Sheila A. Mangler, *Editorial Assistant*.

Chicago Fed Letter is published by the Economic Research Department of the Federal Reserve Bank of Chicago. The views expressed are the authors' and do not necessarily reflect the views of the Federal Reserve Bank of Chicago or the Federal Reserve System.

ISSN 0895-0164

form of insurance against extreme events by increasing loss absorption capacity and reducing the need for firms to deleverage and engage in fire sales. This would help the system avoid the feedback effects that aggravate panics. The proposal could mitigate systemic risk, especially if coupled with a resolution authority for BHCs and nonbank financial intermediaries, and would improve financial stability ex ante, reducing the likelihood of future panics.

Cohen argued that the single most important regulatory reform would be the creation of a resolution authority for SIFIs. The bailouts in the recent crisis exposed taxpayers to severe losses, and created competitive inequities that exacerbated moral hazard among SIFIs. An effective resolution authority could mitigate these problems and improve overall market confidence ex ante. To have an effective resolution regime, he argued that taxpayers should incur no losses and that creditors must be exposed to losses.

One of the key components of an orderly resolution process is an effective means to deal with creditor and counterparty claims. Cohen emphasized that it is imperative to deal with these claims quickly to minimize adverse effects on the system. He suggested that the resolution authority could promptly make payments to creditors based on a conservative estimate of the failed institution's ultimate recovery—similar to what the Federal Deposit Insurance Corporation currently does. However, he said that these payments would be subject to clawback mechanisms to protect taxpayers in case the estimated rate of recovery proved to be greater than the realized rate. If there were still deficits following the clawbacks, Cohen said that the authority could assess an ex post fee against other SIFIs.

Finally, Cohen argued that a truly effective resolution regime for SIFIs requires a comprehensive international framework. This framework must consist at a minimum of a basic and binding structure that delineates cross-country resolution authority for the holding company, bank, and various subsidiaries of the SIFI. He also emphasized the need to establish in advance how the payout to creditors across countries would be structured.

Acharya discussed a method for measuring firm-specific systemic risk contributions and how these measurements could be used. While current financial regulations focus on limiting firm-level risk, restricting the risk of each bank does not necessarily reduce the risk of the entire system. Acharya said the challenge is therefore to measure ex ante the firms' contribution to systemic risk and force firms to factor this externality into their business decisions.

In this model, systemic risk is defined as the risk that a crisis occurs and the financial system becomes undercapitalized. An individual firm's contribution is defined as its systemic expected shortfall (SES). Acharya used a number of empirical methods to estimate a firm's potential contribution to systemic risk before the crisis and to see how this measure relates to how the firm actually fared during the crisis. The results show that the ex ante risk measure (SES) predicts ex post crisis losses and capital shortages; i.e., the method did predict which firms contributed the most to the crisis. He argued that the SES measurement could be used to determine taxes on SIFIs for their potential contribution to systemic risk. This would encourage SIFIs to account for the risk they impose on the financial system.

Conclusion

Congress has recently passed a financial reform bill. Many of the components of that bill center on the issues discussed in these two Bank Structure Conference panels. Importantly, the legislation leaves many of the details to be worked out by the regulatory authorities. The 47th annual Bank Structure Conference will be held May 4–6, 2011. The theme is still being finalized, but there is little doubt that the issues surrounding the financial crisis and resulting regulatory reform will be on the agenda.