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By Janet L. Yellen, President and CEO, Federal Reserve Bank of San Francisco
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Linkages between Monetary and Regulatory Policy: Lessons from the Crisis[1]

Thank you. It is a great privilege to be here among such a distinguished group. I want to thank the Institute of Regulation & Risk for inviting me to speak tonight and express my particular gratitude to Ms. Au King-chi of the Hong Kong Government and Mr. Norman Chan of the Hong Kong Monetary Authority. I'm especially grateful to our gracious host Mr. Robert Pringle. Given the limited time I have, I will try to lay out some broad themes concerning the implications of the financial crisis for regulatory reform and monetary policy. My comments are my own and do not necessarily reflect the views of my Federal Reserve colleagues. I look forward to the extended discussion we shall have later tonight when we will be able to delve more deeply into these critical issues.

In the past, monetary and regulatory policies have generally been viewed as separate domains with distinct objectives. The primary focus of monetary policy has been on attaining the macroeconomic goals of low inflation and a stable economy. In the United States, these goals find their expression in the Federal Reserve's dual mandate of maximum employment and price stability. By contrast, regulatory policy has generally pursued significantly different ends: protecting the safety and soundness of individual financial institutions and reducing systemic risk.

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[1] I would like to thank John Williams and Sam Zuckerman for assistance in preparing these remarks.

Of course, monetary and regulatory policies do not exist in total isolation and the Federal Reserve, an institution with responsibilities in both domains, has long recognized some important linkages. For example, it's clear that the effectiveness of monetary policy and the performance of the macroeconomy depend greatly on maintaining a stable and healthy financial system. And a sound economy makes the work of regulators much easier because economic downturns put considerable stress on the financial system. In addition, the insights we derive from our supervision of banking organizations are helpful in formulating monetary policy. And the economic analysis that underpins monetary policy improves our understanding of the risks confronting financial institutions. Nonetheless, policymakers have generally viewed monetary and regulatory questions as separate disciplines, and we have designed our strategies and carried out our policies accordingly.[2]

The painful events of the past two years have fundamentally challenged this dichotomization of monetary and regulatory policies. It is no longer obvious that setting policies to stabilize the economy on the one hand and to safeguard the financial system on the other can be cleanly separated—either in conception or implementation.[3] This experience has important implications for both monetary and regulatory policy. Here I will focus on the conceptual issues, leaving aside vital questions concerning implementation, such as the appropriate division of authority among different regulatory bodies—a subject that is under discussion in the United States.

[2] At times, the connections between monetary policy and regulation have become more apparent. For example, the abolition of Regulation Q in the United States had a direct bearing on how monetary policy affected the economy and the appropriate monetary policy response to shocks (see Mauskopf 1990).

[3] See Shirakawa (2009) for further discussion on this point.

Let me start by considering our regulatory responsibilities. Government agencies have long practiced micro-prudential supervision and regulation—that is, oversight of individual financial institutions aimed at preserving their safety and soundness. Indeed, micro-prudential supervision—including on-site examinations, surveillance, guidance, regulations, and enforcement—is the first line of defense against systemic risk. The crisis has taught us valuable lessons on how to strengthen supervision going forward. For example, we need to develop stronger and more effective capital and liquidity standards, strengthen our oversight of risk management practices, and insure that compensation arrangements do not create incentives that could compromise safety and soundness.[4] In the United States, we also gleaned important insights on how to improve our consolidated supervision of bank holding companies through this year's stress test of the 19 largest banking organizations, as part of the Supervisory Capital Assessment Program. We intend to make such horizontal institutional reviews involving multidisciplinary teams an important component of our supervision going forward. Currently, we are conducting a horizontal assessment of internal processes for evaluating capital adequacy at the largest U.S. banking organizations and will shortly undertake a similar horizontal review of incentive compensation practices.

Overall, the crisis has exposed serious deficiencies in our micro-prudential regulatory structure. We clearly need to address gaps, such as inadequate authority or tools to properly supervise the so-called shadow banking system, including major investment banks, nonbank lenders, and vital financial insurance providers such as AIG.

A broad consensus exists that we need to make these changes. But, it is critical to recognize that carrying bigger sticks as micro-prudential supervisors entails tradeoffs between

[4] See, for example, Crockett (2009) and Tarullo (2009) for discussions of these issues.

stability and efficiency—that is, between managing systemic risk and cultivating a fertile environment for economic growth. Admittedly, we may well have been operating far off the optimal tradeoff curve in recent years! Still, in designing a new regulatory framework, we must be aware that stronger capital standards that reduce leverage might hamper the flow of funds to businesses and households in ways that could impede investment and consumption. Of course, finding the right balance is an immense challenge.

To strike that balance between stability and growth, we should examine what other policy weapons should be in our arsenal. Perhaps the most important are in the area of macro-prudential oversight, which we increasingly understand is an essential complement to micro-prudential supervision. Now, what exactly does macro-prudential supervision entail? To me, it means identifying and correcting behaviors and structures in financial markets that create excessive risk *before* they mushroom into something that threatens the entire financial system. This requires real-time collection and analysis of data from a wide variety of financial institutions and markets, the deployment of tools to mitigate the inherent pro-cyclical tendencies of financial markets, and new resolution powers to deal with the failure of any institution that poses a threat to financial stability.

Macro-prudential supervision takes a very different perspective than its micro-prudential sibling. It's akin to caring for an entire ecosystem rather than individual trees. It is targeted at spillovers and externalities that contribute to systemic risk even when they don't directly harm individual institutions. An example is an investment strategy that is highly positively correlated across institutions. Taken in isolation, each institution may appear to be adequately managing liquidity, capital, and exposure to risk. But, when many large institutions invest in the same class of assets, a downturn in that asset class can cause a rush to the exits as everyone tries to sell

at the same time. That's exactly what happened in 2007 and 2008 in the markets for mortgage-related securities, with disastrous effects that we know too well. In the worst case, correlation can feed contagion that spreads across the globe as institutions seek to rapidly deleverage and protect liquidity. This presents a regulatory challenge of the first order: How are we to measure and safeguard against such highly correlated investment strategies? Research is under way now to provide some answers.[5] One promising strategy is to implement a system that would require banking organizations to build capital buffers in good times that could be run down under stressful conditions. Such a system could serve as an automatic stabilizer, mitigating the buildup of leverage in booms and the destabilizing impact of broad-based deleveraging in downturns.

Other practices may also be ripe for macro-prudential supervision. They include pro-cyclical underwriting standards, shortcomings in the provision of liquidity and credit risk protection during crises, and payment and clearing systems.[6] For example, markets for over-the-counter derivatives, including credit default swaps, lack the stabilizing mechanisms associated with central exchanges.[7]

A key issue in macro-prudential supervision concerns the too-big-to-fail problem of systemically important financial institutions. A number of approaches have been suggested to limit the systemic risk from large, interconnected financial institutions. These include capping the size of these institutions, moving some activities to exchanges or clearing firms, requiring them to hold more capital, and reducing their odds of failure by requiring them to hold debt that automatically converts to equity in a crisis situation. It is also essential to devise effective means

[5] See Caruana (2009) and Adrian and Brunnermeier (2009).

[6] See Bernanke (2009) and Dudley (2009) for further discussion of these and related issues of macro-prudential regulation.

[7] See Duffie and Zhu (2009) for an analysis of the problems associated with clearing credit default swap contracts.

to resolve large, highly interconnected financial institutions in an orderly manner to minimize the damage to the financial system. In the United States, the Federal Deposit Insurance Corporation uses a well-tested and highly effective procedure for resolving commercial banks and thrifts. But, for nondepository financial institutions, the standard bankruptcy process is all that's available. We've seen that the mere hint a financial institution is headed for bankruptcy can set off a run, depriving it of vital short-term funding and leaving it incapable of paying creditors. As recent events attest, in the cases of systemically important institutions, the end result can be market turmoil, cascading declines in valuations, and panic.

Macro-prudential supervision has the potential to lower systemic risk and thereby create a more secure financial system that will contribute to macroeconomic goals as well. But, monetary policy may also play a role in managing systemic risk. One notable feature of boom-and-bust cycles has been highly pro-cyclical leverage at primary dealers, such as investment banks. Recent research by Tobias Adrian and Hyun Shin suggests that monetary policy affects these cycles in asset growth.[8] Specifically, they find that periods when monetary policy is "tight" relative to the predictions of an estimated Taylor rule are associated with weaker growth in holdings of repurchase agreements by primary dealers.[9] By contrast, "easy" monetary policy is associated with rapid increases in financial institution balance sheets that can add to systemic risk.[10]

These results suggest that monetary policy could play a role in restraining undesirable swings in leverage and, by extension, reduce systemic risk. In particular, interest rate cuts in a

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[8] See Adrian and Shin (2008a).

[9] Taylor (2007) describes a different channel, but comes to the same conclusion that monetary policy can contribute to undesirable booms and busts.

[10] See Adrian and Shin (2008b, 2009). They also find evidence that asset growth is linked to housing construction.

time of market disruption can be effective at stopping a deleveraging cycle from turning into an uncontrolled crash. And higher rates than called for based on purely macroeconomic conditions may help forestall a potentially damaging buildup of leverage and an asset price boom.

This raises the broader—and very contentious—issue of whether monetary policy should seek to lean against potentially dangerous swings in asset prices. The answer is far from clear, because the use of monetary policy for these ends necessarily compromises the attainment of other macroeconomic goals. Because such use of monetary policy is costly, high priority should be assigned to developing regulatory tools to address systemic risk. Even so, the crisis of the past two years has prompted many of us to reexamine the widely held view that monetary policy should respond to asset prices only to the extent that they influence the anticipated trajectories of inflation and unemployment. Further research into the connections among monetary policy, the banking and financial sectors, and systemic risk is needed to help answer this question.[11]

In summary, the events of the past few years compel us to reexamine many of our long-held ideas and practices in both monetary and regulatory policy. I am gratified that researchers around the world are looking hard at these questions. In addition, I am encouraged by the sense of purpose and cooperation exhibited by my colleagues at central banks, governments, and international organizations in their efforts to develop policies that will help us avoid the kind of crisis we have just experienced. Thank you.

[11] Increasingly macroeconomists are incorporating banking and financial frictions in their macroeconomic models. See, for example, Curdia and Woodford (2009) and Gertler and Karadi (2009).

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