

# FEDERAL RESERVE BANK *of* CHICAGO

Last Updated: 12/01/09

## The International Financial Crisis: Asset Price Exuberance and Macroprudential Regulation

2009 International Banking Conference  
Chicago, IL

Thank you, Justin. I'm Charlie Evans, President and CEO of the Federal Reserve Bank of Chicago. On behalf of the World Bank and everyone here at the Chicago Fed, it's my pleasure to welcome you to the 12th annual International Banking Conference. Over the years, this conference has served as a valuable forum for the discussion of current issues affecting global financial markets, such as international regulatory structures, the globalization of financial markets, systemic risk, and the problems involved with the resolution of large, globally active banks. Also, we have been fortunate to have leading academics, regulators, and industry executives participate in the various venues—providing valuable perspectives and enriching the discussions on the issues.

This year's theme is the international financial crisis. If you look back at the past conferences, you will see that the most common theme over the years deals with various aspects of financial crises. After looking over this year's program, I want to compliment the organizers from both the World Bank and the Chicago Fed for putting together a very impressive group of experts in the current debate on how best to reduce the probability of another financial crisis, and, if one should occur, how to respond. I look forward to the next two days and believe you will find the discussion cutting edge and useful for deciding how we as a global financial community should move forward. Again, on behalf of the World Bank and the Federal Reserve Bank of Chicago, enjoy the 12th annual International Banking Conference.

Before I turn the podium over to Doug, I'd like to offer a few remarks on the theme of this year's conference—financial crisis—with an emphasis on the oversight of financial markets. I should note that my remarks reflect my own views and are not those of the Federal Open Market Committee or the Federal Reserve System.

When thinking about the events of the past couple of years, what comes to mind most often, or the big "take away" from all of this, is that we don't *ever* want to find ourselves in this situation again.

If we are committed to that outcome, we should ask ourselves, first, how can policies be changed so that in the future, it will be much less likely that systemically important financial institutions will find themselves in crisis situations? And, second, if such crises do occur, how can we best contain them, preventing them from having a major impact on the rest of the economy as in the recent crisis? Surely, prevention should form our first and strongest line of defense and remedial, or containment, policies should form the second.

I recently gave a speech to the European Economic and Financial Center on the issues associated with too-big-to-fail. I argued that in the current regulatory environment it is unrealistic to expect that regulators would allow the uncontrolled failure of a large, complicated, and interconnected financial institution—certainly not if they had the ability to avoid it and if there were systemic ramifications to the failure. If you accept this premise, and I believe the failure of Lehman Brothers is the counterexample that proves it, then it becomes imperative to construct an environment that prevents our economic and financial system from again reaching the crisis state we have seen over this past year.

In my earlier speech I stressed the need for policy reforms, such as the introduction of an orderly and efficient failure resolution process that would create a credible regulatory environment in which firms and their creditors would not expect rescues or bailouts. This would reduce the moral hazard issues associated with the too-big-to-fail perception. It also would better align the incentives of the stakeholders of financial firms with those of society at large. In addition it would allow a larger role for financial markets to oversee and regulate firm behavior. However, even though I think we can significantly strengthen the role of market discipline, regulation will continue to play a very important role in ensuring financial stability.

The kinds of events that lead to our recent interventions inevitably occur during periods of financial exuberance. One way or another, asset prices rise beyond conservative fundamental valuations and risk premiums fall well below appropriate compensation levels. We typically use the loose term "asset price bubble" to describe such situations. Although I will continue that tradition, we should keep in mind that not all increases in asset prices represent departures from fundamentals, and not all asset bubbles need be disruptive.<sup>1</sup> Definitions aside, it seems clear that we need to find a way to deal with potential exuberance in financial markets if we want to ensure financial stability.

Some seven years ago, at an earlier International Banking Conference, which was also cosponsored by the World Bank, we discussed the implications of asset bubbles.<sup>2</sup> The typical view expressed at the conference, which aligned well with much of the research literature at the time, was that central banks should not use monetary policy tools to "manage" or lean against the inflated prices associated with asset bubbles. In the event of a sudden collapse in asset prices, central banks were expected to respond with their standard policy tools to address any adverse impact on real economic activity. In other words, monetary policy should be prepared to "clean up" ex post rather than try to prevent ex ante a run-up in asset prices.<sup>3</sup>

However, given the enormous costs of the recent financial crisis, as well as new research suggesting an increase in the frequency and amplitude of asset price cycles,<sup>4</sup> many commentators are reassessing the proper role of the central bank in monitoring and trying to deflate rising asset prices.

In reevaluating the effectiveness of monetary policy for this purpose, two approaches are typically considered. One is for the central bank to take an activist role and directly incorporate asset price fluctuations into its monetary policy deliberations—that is, explicitly putting asset prices into the policy response function and "leaning against the wind." As an alternative, policymakers could incorporate asset prices into the price indexes used in determining the future direction of monetary policy.

While recent events have indeed imposed significant costs on society, I fear that monetary policy tools may be too blunt for such a fine-tuning policy.<sup>5</sup> Central bankers have imperfect information, and for many asset classes, sudden price declines may have minimal impact on the real economy.<sup>6</sup> So, my concern is that using monetary policy to "lean against bubbles" could end up causing more harm to the economy than good.

To elaborate a bit, taking an activist role would likely have policy aim at explicitly hitting some target range for asset prices or risk premiums. So, we would first have to determine those target ranges. I don't know of any economic theory or empirical evidence we currently have in hand that would give us adequate guidance here. In addition, there is the "bluntness" of monetary policy. Using wide-reaching monetary policy to slow the growth of certain asset prices could have significant adverse effects on other sectors of the economy. In normal times, we use our policy instrument, the short-term federal funds rate, to try to achieve our dual mandate goals of maximum sustainable employment and price stability. Adding a third target—asset prices—would likely mean we couldn't do as well on the other two.

The desirability of incorporating asset prices into the inflation measures targeted by central banks is also not obvious. Some claim that standard consumer price indexes do not adequately incorporate inflationary expectations; rather, they only account for past price adjustments. Certain asset prices, for example, those of equities or real estate, may better incorporate such expectations. Thus, some argue that to the extent these asset prices are predictors of future price changes, including them in the target price indexes provides a reasonable operating procedure that leans against rising asset prices and adds an automatic stabilizer to monetary policy.

One potential issue with this argument is whether real estate or equity market prices accurately forecast future inflation rates. A bigger question, however, is how to operationalize such an index. What weights should be assigned to asset prices in the aggregate indexes? Index number theory provides the conceptual linkage between utility maximization and the expenditure weights used to construct consumer price indexes. I have not yet seen the theoretical work that says how to include asset prices in an aggregate index. I am open-minded to new research making the case for using monetary policy to address asset inflation. But as of now, I am skeptical.<sup>7</sup>

Fortunately, monetary policy is not the only tool that central banks have to deal with asset price swings and their potentially disruptive consequences. In my view, redesigning regulations and improving market infrastructure offer more promising paths to increased financial stability. This is the "prevention" that forms the first line of defense in our efforts to never be in this position again. Regulation may or may not be sufficient to avoid *all* of the market events that help to create excessive exuberance, but it should play a very large role in controlling the existence, size, and consequences of any bubble. For example, research suggests that a crisis caused by sudden declines in asset prices is less disruptive to markets when financial systems and individual bank balance sheets are in sound condition before the crisis.<sup>8</sup> Better supervision and a sound regulatory infrastructure can increase the resiliency of markets and institutions, enabling them to better withstand adverse shocks.

How do we promote such increased resiliency? First, we can make more effective use of our existing regulatory structure, tools, and authority. And second, a number of reforms of our current infrastructure—both market and regulatory—may help us to better address the type of problems we saw emerge during the recent crisis.

Within the existing structure, regulators have the ability to promote better, more resilient financial markets, either through rule-making or by serving as a coordinator of private initiatives.<sup>9</sup> They can also encourage more and better disclosure of information—a key element of effective risk management.

Regulators and supervisors are also often in positions to foresee emerging problems before they grow into crises. Along these lines, supervisors can do more "horizontal supervision," similar to the Supervisory Capital Assessment Program (SCAP) that was designed for the largest 19 U.S. banks. Using procedures similar to those in SCAP, the likely performance of banks can be

evaluated on a consistent basis under alternative stress scenarios. In addition to evaluating resiliency to future conditions, this type of "stress test" also enables supervisors to identify best practices in risk management and to push banks with weak risk management to improve.<sup>10</sup>

When emerging issues or practices that could lead to disruptions are identified, regulators can more effectively use tools such as memorandums of understanding or supervisory directives to dampen the adverse impact of a variety of financial shocks.<sup>11</sup> Indeed, we probably should have been more aggressive in utilizing this supervisory power during the period leading up to the recent crisis. It can be an effective and powerful tool.

Although I believe we can use existing regulatory tools more effectively, we may also need to address the shortcomings of current regulations. Already policymakers in the U.S. and elsewhere are exploring a variety of reforms.<sup>12</sup>

Introducing a systemic regulator who can identify, monitor, and collate information on industry practices across various institutions tops most of the reform agendas. While plans for systemic regulation vary in the structures they propose—for example, a single regulator versus a committee of regulators—they all envision macroprudential supervision and regulation as the key mandate of the new regulator. This would be a major component of what I called our first line of defense.

Reform proposals also typically include ways in which we can make capital requirements more dynamic and tailor them to the type of risks an institution poses for the financial system. Varying capital requirements and loan loss provisions over the cycle are examples of these proposals. History shows that during boom times, when financial institutions are perhaps in an exuberant state, they may not price risks fully in their underwriting and risk-management decisions. During downturns, faced with eroding capital cushions, increased uncertainty, and binding capital constraints, some institutions may become overcautious and excessively tighten lending standards. Both behaviors tend to amplify the business cycle. Allowing the required capital ratio to vary over the cycle could serve to offset some of this volatility and to partially offset the boom–bust trends we have seen in the past.

Varying loan loss provisions over the cycle is an alternative or complementary way to better cushion firms against sudden declines in asset prices.

Capital requirements also could be adjusted by extending risk-based weighting schemes to account for institutions' contributions to systemic risk. This could involve higher risk weights based on factors such as institution size and the extent of off-balance-sheet activities. It might also include some assessment of the degree to which the institution was interconnected with others. Such adjustments to capital requirements would make the decisions of financial institutions more closely reflect their impact on society. The information needed to account for the new risk factors—for example, the degree of interconnectedness—fits well within the framework of information that would be required by a new systemic regulator, and is now being considered in regulatory reform proposals in the U.S.

So, in order to fortify our first line of defense, we must make more effective use of the existing regulatory structure and tools, introduce a systemic risk regulator, and reform capital requirements to make them more dynamic and tailored to systemic risks. But adjustments to the current regulations and infrastructure alone are probably not enough. We also need to fortify our second line of defense—containing the disruptive spillovers that result from the failure of systemically important institutions without resorting to bailouts or ad hoc rescues. A necessary element of this is having a mechanism for resolving the failure of a systemically important institution. This is something we currently lack in many cases, though there are proposals now under discussion that would provide this resolution power.<sup>13</sup>

Another reform proposal that I think can play an important role in the resolution process of systemically important institutions is what is typically referred to as a "shelf bankruptcy" plan. Under this proposal, systemically important institutions would be required to provide the information necessary to determine how their failures could be handled in a relatively short period of time, as well as to design a plan to efficiently implement such a resolution.<sup>14</sup> I see a number of ways these plans can fortify both our first and second lines of defense.

Requiring systemically important institutions to identify and think through their organizational structure and interactions with various parties can improve the risk-management practices of their institutions. By developing plans to address systemic problem areas ex ante, the need for an ex post "too-big-to-fail" action could be reduced.

In addition, should the first line of defense fail, these plans could provide an initial blueprint for the resolution of large interconnected institutions and, in so doing, improve our second line of defense. Currently, individual institutions may not have an incentive to make such plans—after all, they would bear the costs of the planning and see little of the benefits.<sup>15</sup> But, society as a whole would benefit from such contingency planning. Another way to cushion financial firms against sudden asset price declines would be to require them to hold contingent capital.<sup>16</sup> Under these proposals, systemically important banks would be required to issue "contingent capital certificates." These would be issued as debt securities that would be converted into equity shares if some predetermined threshold was breached.<sup>17</sup> It would provide firms with an additional equity injection at the very time that equity would be difficult to issue, thus enabling firms to better withstand sudden shocks and potential spillover effects.

These new policy options, while not easy to implement, would enhance the ability of banks and other financial intermediaries to survive shocks—whether from a sudden fall in asset prices or from some other source. I am fully aware that the challenges in reforming regulatory structures and practices are not insignificant. But, given the magnitude of the cost incurred in the wake of the recent crisis and the possible benefits that would arise from making our economy more resilient to such events, it is imperative that we take on these challenges.

Thus, I think we need to strengthen our existing regulatory infrastructure and give strong consideration to making the adjustments that could reduce the likelihood of a crisis similar in magnitude to the one we have seen over the past two years. We also need to devise mechanisms to dampen the adverse effects of any disruption that might occur.

This year, as in others, this conference invites us to examine and discuss financial crises and asks whether the rules of finance have changed. I've argued that in order to avoid a situation like the one we have faced in the past two years; we need to fortify our regulatory lines of defense. We need to have the rules of regulation change. Not necessarily through more regulation, but through better regulation that is more efficient and effective in its design and implementation. I hope this conference serves as a platform to inform your thinking and stimulate good debate about the issues I've laid out.

Thank you.

---

**Note: Opinions expressed in this article are those of Charles L. Evans and do not necessarily reflect the views of the Federal Reserve Bank of Chicago or the Federal Reserve System.**

---

<sup>1</sup> Evidence of the disagreement concerning what constitutes an asset bubble can be found in Peter M. Garber, 2000, *Famous First Bubbles: The Fundamentals of Early Manias*, Cambridge, MA: MIT Press, and Ellen McGrattan and Edward Prescott, 2003, "Testing for stock market overvaluation/undervaluation," in *Asset Price Bubbles: The Implications for Monetary, Regulatory, and International Policies*, William C. Hunter, George G. Kaufman, and Michael Pomerleano (eds.), Cambridge, MA: MIT Press.

<sup>2</sup> See William C. Hunter, George G. Kaufman, and Michael Pomerleano (eds.), 2003, *Asset Price Bubbles: The Implications for Monetary, Regulatory, and International Policies*, Cambridge, MA: MIT Press (hereafter HKP).

<sup>3</sup> See Ben Bernanke and Mark Gertler, 2001, "Should central banks respond to movements in asset prices?," *American Economic Review*, Vol. 91, No. 2, May, pp. 253–257; Ben Bernanke, Mark Gertler, and Simon Gilchrist, 1999, "The financial accelerator in a quantitative business cycle framework," in *Handbook of Macroeconomics*, Vol.1C, John Taylor and Michael Woodford (eds.), New York: Elsevier Science-North Holland, pp. 1341–1393. A quick aside, it should be emphasized that policymakers do currently take asset bubbles into account to the extent that they affect the real sector of the economy. Thus, it is not a question of whether policymakers address bubbles. At issue is whether they should or can address asset price increases ex ante to avoid a resulting sudden decline in prices that more adversely affects the real economy than would have occurred without the bubble.

<sup>4</sup> For example, see Randall Kroszner, 2003, "Asset price bubbles, information, and public policy," in HKP, pp. 3–12; and Claudio Borio and Philip Lowe, 2003, "Imbalances or bubbles? Implications for monetary and financial stability," in HKP, pp. 247–263.

<sup>5</sup> There is broad literature on this issue. See: Friedman, Goodfriend, Meltzer, Mishkin and White, Mussa, and Trichet, in HKP (2003); Kroszner (2003) previously cited in footnote 4; Bernanke, Gertler, and Gilchrist (1999); Bernanke and Gertler (2001) previously cited in footnote 3; Frederic S. Mishkin 2008, "How should we respond to asset price bubbles?," speech to the *Wharton Financial Institutions Center and Oliver Wyman Institute's Annual Financial Risk Roundtable*, the Wharton School of the University of Pennsylvania; and Janet L. Yellen 2009, "A Minsky meltdown: Lessons for central bankers," speech at the 18th Annual Hyman P. Minsky Conference on the State of the U.S. and World Economies—"Meeting the Challenges of the Financial Crisis," Bard College, New York City, April 16.

<sup>6</sup> See Mishkin in footnote 5. Mishkin makes the argument that not all bubbles have the same impact on the real economy. In particular, he argues that bubbles associated with credit booms are more dangerous because they put the financial system at risk and may result in negative spillover effects for the real economy. Thus, these bubbles may deserve a more activist approach.

<sup>7</sup> For an alternative discussion of potential problems, see Trichet (2003) in footnote 5.

<sup>8</sup> See Frederic Mishkin and Eugene White, 2003, "U.S. stock market crashes and their aftermath: Implications for monetary policy," in HKP, pp. 53–76.

<sup>9</sup> An example here would be the central bank serving a coordinative role encouraging banks to address operational risks associated with back-office operations in credit default swap contracts.

<sup>10</sup> For a further discussion of SCAP, see Daniel K. Tarullo, 2009, "Bank supervision," testimony before the U.S. Senate, Committee on Banking, Housing, and Urban Affairs, Washington, DC, August 4.

<sup>11</sup> For example, memorandums could have addressed the rising role of commercial real estate in bank portfolios, or they could have addressed practices in mortgage lending that may have contributed to poor underwriting.

<sup>12</sup> See U.S. Department of the Treasury, 2009, "Financial regulatory reform—A new foundation: Rebuilding financial supervision and regulation," proposal, Washington, DC, June 17, [available online](#). I have previously discussed these policy issues in somewhat more detail: see Charles Evans, 2009, "Too-big-to-fail: A problem too big to ignore," speech to the European Economics and Financial Center, London, July 1. Also see the Squam Lake Working Group proposals, available at [Squam Lake Working Group proposals](#).

<sup>13</sup> See U.S. Department of the Treasury (2009).

<sup>14</sup> See Raghuram Rajan, 2009, "Too systemic to fail: Consequences and potential remedies," presented at the *Proceedings of a Conference on Bank Structure and Competition*, Federal Reserve Bank of Chicago, May; and see the Squam Lake Working Group proposals, available at [Squam Lake Working Group proposals](#).

<sup>15</sup> Not only would the banks not see the benefits of disclosing this information, they could actually benefit from keeping this information from the supervisors. The more opaque the operations and risk of institutions, the more likely they could be considered too-big-to-fail if they encounter difficulties. Thus, the "shelf plan" could force these issues to be on the table for discussion.

<sup>16</sup> See Mark Flannery, 2005, "No pain, no gain? Effecting market discipline via reverse convertible debentures," in *Capital Adequacy Beyond Basel: Banking, Securities, and Insurance*, Hal S. Scott (ed.), Oxford: Oxford University Press, chapter 5; see also the Squam Lake Working Group on Financial Regulation, Squam Lake Working Group proposals, available at [Squam Lake Working Group on Financial Regulation](#).

<sup>17</sup> This would be somewhat similar to previous proposals to require banks to hold subordinated debt to better discipline bank behavior and to be able to absorb losses when difficulties are encountered. See Douglas Evanoff and Larry Wall, 2000, "Subordinated debt as bank capital: A proposal for regulatory reform," *Economic Perspectives, Federal Reserve Bank of Chicago*, Vol. 24, No. 2, Second Quarter, pp. 40–53. However, the convertibility of the new instrument would most likely occur when the bank is better capitalized, thus augmenting equity capital and providing an earlier cushion against losses. The trigger to convert the debt would most likely also be supervisory instead of market induced.