Levy Economics Institute of Bard College

*Conference Proceedings*

# 21st

ANNUAL

HYMAN P. MINSKY CONFERENCE

ON THE STATE OF THE US AND

WORLD ECONOMIES

## *Debt, Deficits, and Financial Instability*

*April 11–12, 2012, New York City*

*A conference organized by the Levy Economics Institute of Bard College*
*with support from the*

FORDFOUNDATION

# Contents



*These proceedings consist of edited transcripts of the speakers' remarks and summaries of session participants' presentations.*

# Foreword

I am delighted to welcome you to the 21st Annual Hyman P. Minsky Conference, "Debt, Deficits, and Financial Instability," organized by the Levy Economics Institute with support from the Ford Foundation. As part of its monetary policy research, the Institute is partnering with the Ford Foundation to examine financial instability and reregulation within the context of Minsky's path-breaking work on financial crises.

This year's conference addresses the ongoing and far-reaching effects of the global financial crisis, including the challenge to global growth represented by the eurozone debt crisis, the impact of the credit crunch on the economic and financial markets outlook, the sustainability of the US economic recovery in the absence of support from monetary and fiscal policy, reregulation of the financial system and the design of a new financial architecture, and the larger implications of the debt crisis for US economic policy—and for the international financial and monetary system as a whole.

I look forward to seeing you again at future Levy Institute events.

Dimitri B. Papadimitriou
*President,* The Levy Economics Institute, and *Jerome Levy Professor of Economics,* Bard College

## Program

### Wednesday, April 11

| | |
|---|---|
| **9:00–9:30 a.m.** | **WELCOME AND INTRODUCTION**<br>Luis A. Ubiñas, *Ford Foundation*<br>Dimitri B. Papadimitriou, *Levy Institute* |
| **9:30–10:30 a.m.** | **SPEAKER**<br>Esther L. George, *Federal Reserve Bank of Kansas City*<br>"Looking Ahead: Financial Stability and Microprudential Supervision" |
| **10:30 a.m. – 12:00 p.m.** | **SESSION 1**<br>**Public Debt, Private Debt, and Financial Instability**<br>*Moderator:* Dimitri B. Papadimitriou, *Levy Institute*<br>Claudio Borio, *Bank for International Settlements*<br>Bruce C. N. Greenwald, *Columbia University*<br>Joseph E. Stiglitz, *Columbia University* |
| **12:00–1:00 p.m.** | **SPEAKER**<br>Roberto Frenkel, *Centro de Estudios de Estado y Sociedad (CEDES)*<br>"Classifying Crisis in the Financial Globalization Period" |
| **1:00–2:45 p.m.** | **SPEAKER**<br>Henry Kaufman, *Henry Kaufman & Company, Inc.*<br>"In the Aftermath of the Financial Crisis" |
| **2:45–4:15 p.m.** | **SESSION 2**<br>**Reporting on Financial Crisis and Financial Reform**<br>*Moderator:* Louis Uchitelle, The New York Times<br>Gillian Tett, Financial Times<br>Yalman Onaran, Bloomberg News; *author*, Zombie Banks<br>Jeff Madrick, Challenge, *Roosevelt Institute*, and *Bernard Schwartz Center for Economic Policy Analysis, The New School for Social Research* |
| **4:30–6:00 p.m.** | **SESSION 3**<br>**Ford–Levy Institute Projects on Financial Reregulation and Improving Governance of the Government Safety Net**<br>Jan Kregel, *Levy Institute* and *Tallinn Technical University*<br>L. Randall Wray, *Levy Institute* and *University of Missouri–Kansas City* |
| **6:00 p.m.** | **SPEAKER**<br>Andrea Enria, *European Banking Authority*<br>"Supervisory Policies and Bank Deleveraging: A European Perspective" |

## Thursday, April 12

**9:00–10:00 a.m.**

**SPEAKER**

Peter Praet, *European Central Bank*

"Deleveraging, Rebalancing, and Institutional Reforms in the Euro Area"

**10:00 a.m. – 12:00 p.m.**

**SESSION 4**

**Progress and Implications of Financial Reform Proposals**

*Moderator:* Deborah Solomon, Bloomberg View

Christine M. Cumming, *Federal Reserve Bank of New York*

J. Nellie Liang, *Office of Financial Stability Policy and Research, Federal Reserve Board*

Frank Partnoy, *University of San Diego*

**12:00–2:00 p.m.**

**SPEAKER**

Martin J. Gruenberg, *Federal Deposit Insurance Corporation*

"The FDIC's Role in the Resolution of Systemic Financial Institutions"

**2:00–3:00 p.m.**

**SESSION 5**

**Building Eurozone Financial Stability**

*Moderator:* Justin Lahart, The Wall Street Journal

Avinash D. Persaud, *Intelligence Capital Ltd.*

Adam Posen, *Peterson Institute for International Economics* and *Monetary Policy Committee, Bank of England*

Martin Wolf, Financial Times

**3:15–4:30 p.m.**

**SESSION 6**

**Central Bank Independence, Financial Reform, and Financial Stability**

*Moderator:* Peter Coy, Bloomberg Businessweek

Michael Greenberger, *The University of Maryland*

Bernard Shull, *Hunter College* and *NERA Economic Consulting*

P. Morgan Ricks, *Harvard University*

**4:30–5:30 p.m.**

**SPEAKER**

Cyrus Amri-Mokri, *US Department of the Treasury*

"Restoring and Maintaining Trust: Financial Reform Efforts and Lessons Learned from the Crisis"

## Welcome and Introduction

**LUIS A. UBIÑAS**
*President, Ford Foundation*

**DIMITRI B. PAPADIMITRIOU**
*President, Levy Economics Institute*

Luis A. Ubiñas

Dimitri B. Papadimitriou

**LUIS A. UBIÑAS:** It gives me great pleasure to welcome you here today for the 21st Annual Hyman Minsky Conference.

This is the third year we've had the honor of hosting this event here at Ford, and I have to say, it's been an astonishing three years. We've hosted you through collapsing financial markets, through the deepest recession since the Great Depression, and now through this tepid recovery and a eurozone crisis that seems to unfold in a new and different way every week.

What we've really done, and what makes this conference most interesting to me, is hosted you during a time when economic questions have shifted from the periphery to the center of the national and global public dinner table dialogue and debate. Who would have thought that a financial crisis filled with complex ideas would bring our youth—kids 18, 21—out into the streets in Athens, in London, in Paris and New York, in a way that two Gulf wars and a decade in Afghanistan wouldn't, in a way that democracy-sapping decisions like Citizens United didn't. Questions you all deal with every day are now front and center, at the dinner table and on the streets. It must be gratifying. These are important questions: What is the balance between short-term need for economic stimulus in order to drive economic growth, and the long-term burden of high debt levels? How do we set tax policy so that the government can function without beggaring the future, while being fair to those who've achieved financial success? What does income inequality mean for this country and our European partners, societies that had been defined and built by the notion of middle-classedness that are now finding those middle classes shrinking at an astonishingly rapid rate?

These questions, questions which you have been discussed at this conference over the last three years, are now public questions. They're not academic questions, they're not intellectual questions, they're not questions of the elite; they're questions of the common man and woman, of children in this country and other countries.

So why do we here at the Ford Foundation, with our historic—I can say this because I wasn't here—historic record in human rights, economic equity, education, even in the arts, why do we support a conference dedicated to the memory of Hyman Minsky?

The answer is that Minsky developed a unique perspective in analyzing the way the financial system operates and how we answer the kinds of questions society is now asking on a daily basis. He showed us that the extent to which the financial system is regulated, transparent, and accountable has a direct impact on political and economic stability and on our ability to create fair and equitable societies. He understood that without a sound financial system, credit, loans, investment, and jobs are simply harder to come by—the kinds of things I dealt with in the private sector for 20 years at McKinsey—simply harder to come by. Without a sound financial system, income and wealth disparities grow. Indeed, we know from experience that in the United States and much of the eurozone the impact of ill-conceived economic policy, poorly executed, has devastated poor and low-income families and has put into question the viability of middle classes in those societies. Like Minsky, the Foundation has long believed that sound financial governance and oversight is the lynchpin of economic and social stability, and it is at the core of our work in this field.

Let me pause here, because I want to thank Leonardo Burlamaqui . . . , whom many of you know and who's led this work for us. Leonardo, I just want to thank you for making this important at the Foundation.

We believe that financial institutions need to be more transparent, more accountable, and more effective in delivering the financial stability we entrust to them. They need to be responsive to the communities affected by their decisions. And we believe that to achieve these goals, we at the Ford Foundation must support efforts like the efforts led by many of you to rethink the global financial regulatory regime and to expand the voices engaged in that global dialogue. That's why Leonardo does his work; it's why we've spent millions of dollars supporting his work.

These are, as you all know, personally and professionally, immensely fragile times. The United States is wrestling with the twin burdens of modest economic growth and debts that are unsustainable over the long term. In Europe, countries, including some that were considered fiscally prudent entering the economic crisis, are teetering at the edge of bankruptcy. India and China are seeing slowing growth. There are questions of political stability. We are in a unique time when it comes to rethinking global economic governance. And I know lots of people think the opportunity's passed; I think, unfortunately, it hasn't. We must seize this opportunity. We must seize this opportunity to rethink decades of policies which have weakened oversight and, as we all know, have not served even financial institutions well. Remember, Lehmann Brothers and Bear Stearns, places where my dear friends worked, . . . were bankrupted because deregulation allowed managers to take on new levels of risk they in the end simply could not manage: *that they in the end simply could not manage.*

We believe there's an opportunity today to rethink and restructure regulatory regimes in a way that puts financial institutions back at the heart of economic development, that reflects our democratic values and enables us to build a better economic future for everyone—not just 6-, 12-, 18-month payoffs, but long-term stability and economic well-being.

So with that let me close by wishing you the best in your two days of deliberations. Let me close by challenging you to take the ideas here and not to leave them here; to do what a few of you, but not many of you, are doing; just to bring voices that ask these questions into the public dialogue and debate, to join those people, at dinner tables and some of them in parks, who are asking these questions now for us.

It's my pleasure to have you here. Thank you.

**DIMITRI B. PAPADIMITRIOU:** Welcome to the Levy Institute's 21st Annual Hyman Minsky Conference on "Debt, Deficits, and Financial Instability."

We are especially pleased to have the president of the Ford Foundation open this year's conference. The Ford Foundation and especially Program Officer Leonardo Burlamaqui have been instrumental in their support of the Institute's program on Financial Instability and the Reregulation of Financial Institutions and Markets, and of this conference—not only by providing guidance and financial resources, but also hosting it here at the Foundation's attractive headquarters. The conference is an outcome of the Institute's research program on Monetary Policy and Financial Structure, headed by long time senior scholar Jan Kregel. Jan inherited this research endeavor from the late Hyman Minsky, who initiated it when he joined the Institute in 1990.

The Ford–Levy Institute project has undertaken an investigation of the root causes of the last financial crisis by drawing from Minsky's extensive work on financial regulation. Its focus is the assessment of the Dodd-Frank Wall Street Reform and Consumer Protection Act, enacted in the United States almost two years ago, and other similar initiatives in the European Union, Great Britain, and Latin America. It seeks to determine whether the new regulatory structures, once they become operational, will prevent a debt deflation and a systemic crisis from happening again. The guiding question is to what extent the Dodd-Frank Act . . . will be capable of identifying and responding to what Minsky believed to be the inherent generation of financial instability.

The theme of this year's conference is reminiscent of one of the first conferences we held at the Institute, in 1989, on "Profits, Deficits and Instability." At that time, the issues confronting the US economy were similar: rising levels of public and private sector deficits and debt, current account deficits, and the less developed country (LDC) debt crisis and its eventual restructuring—that is, the introduction of Brady bonds. The size and quantity of deficits and debt were quite high, and I remember Henry Kaufman worrying that the stock of debt in the United States in 1988 was getting close to $10 trillion.

Fast forward to 2012: we are confronted with large deficits and debt in the public sector and a stock of private sector debt that remains high despite an ongoing deleveraging process from the borrowing frenzy—a frenzy that resulted from what many assumed to be an infinitely increasing housing market, starting almost a decade ago, and [brought to an abrupt end] in 2007. On top of all this we have high unemployment rates, anemic growth rates, and a eurozone sovereign debt crisis that dwarfs the LDC debt crisis of the late 1980s. These phenomena urgently require policy responses that are aimed at aborting or containing potential debt deflations.

In a modern, complex economy, investment and financial transactions, in general, always entail an exchange of money in the present, used to pay for the creation of capital assets, for money in the future, as those capital assets are employed. Investment, then, depends on financing conditions in concert with the current views, held by the representatives of business and banking communities, of future cash flows. The economy can be distinguished by expectations of cash flows and realizations by the business community that use private capital assets and need to fulfill contractual payment commitments. One would observe that both the capital and financing structures to be dependent on the past, the present, and the future. Expectations and the consequent behavior are dependent on the economic model used: for instance, a model that assumes that economies like our own are normally successful will produce different behaviors compared to a model that assumes that what happened during the Great Depression or in the 2007–09 Great Recession were normal, albeit rare events that could happen again if the same circumstances were repeated.

Uncertainty in the minds of agents makes it difficult as to which of the two models is relevant in forming expectations, especially if many years have gone by since the last financial crisis associated with a significant economic correction. Memories fade fast, and evolutionary changes, whether legislated, administered, or both, transform the economy's institutional structure. The past becomes less of a guide to the behavior of markets and agents, especially in a world where a Big Bank (the central bank) intervenes to contain financial crises.

Subsequent to the shallow recession of 2001–02, a euphoric period for the US banking and financial community began. President George W. Bush's large tax cuts together with the Federal Reserve's Great Moderation approach to monetary policy changed the fiscal and monetary policy postures that helped increase both the government and private sectors' borrowing and debt, linked to the deterioration in the balance of payments. Indeed, there is a macroeconomic identity that links the internal (public and private sectors) and external (current account) balances, and although it is not a theory, it informs policy. Using this macro identity, the trajectory of the US economy can be predicted, and so it was. In late 2006, Levy Institute reports by the late Wynne Godley and others concluded that a recession was about to begin. In 2007, that prediction, unfortunately, came to pass.

Policy changes were suggested then, as they are being suggested now. In our latest Strategic Analysis report, although we recognize the very modest improvement in employment and conventional unemployment measures, we notice that employment nationwide has still not recovered to even February 2007 levels. As Joseph Stiglitz, one of the speakers on the next panel, recently noted in an article in the *Financial Times*, the present rate of job creation, despite its improvement, is still insufficient to recoup the employment lost since the recession began or to provide enough jobs for the average monthly number of new entrants into the labor force. At this pace it would take many, many months to reach full employment. Hence, achieving a big improvement in the labor market will require much higher growth rates than those we are presently experiencing, and this can only come from increasing private and/or public sector demand.

Scholars at the Levy Institute are currently offering alternative options to achieve higher growth rates that are different from those assumed by the Congressional Budget Office and the executive branch of government. The plausible options are: either resuming private sector borrowing in amounts that are large enough that they will most likely result in another Minsky crisis and a significant risk to the country's still-shaky financial system; or, more realistically, a short term public spending plan that includes the renovation of the country's tax structure. I won't go into the details of these policy options, but I ask you to visit the Levy Institute's website for the detailed assumptions and results of our intermediate run simulations.

Let me then return to Minsky, who recognized the need for reconstituting the financial structure to be always in concert with the evolutionary nature of financial innovation. In 1989, Minsky wrote that the trajectory an economy follows through time depends upon the interactions between endogenous dynamics that will not necessarily determine a satisfactory path for the economy, nor will the constraints and interventions that make up the structure of regulation produce tolerable or satisfactory outcomes.

It follows, then, that over the longer run the satisfactory performance of a capitalist economy depends upon the aptness of the structure of regulation. Profit seeking agents learn how a regulatory structure operates, and since regulation means that some perceived profit opportunities are not open to exploitation, there are incentives for agents to change their behavior to evade or avoid the imposed constraints.

This implies that, over time, the consequences of a structure and organization of intervention change. Interventions that start out being constructive can be transformed into sources of instability and inefficiency. The debacle of securitization of mortgage backed securities, together with the slicing and dicing of securities and the overlayering of derivative instruments, demonstrate that a structure of regulation and intervention that is initially successful can become perverse. The experience with mortgage backed securities, the assortment of off-balance-sheet special-purpose vehicles, and credit default swaps is certainly not an argument for laissez faire, but rather an argument that intervention cannot be frozen in time. It must adapt to evolutionary changes in institutions and usages. Successful capitalism requires both a structure of regulation and a sophisticated awareness of the way profit seeking activities drive the changing of business and behavior.

Drawing from Minsky, in December 2007, an Institute working paper written by my colleague Jan Kregel pointed out that while almost every analyst thought the financial crisis could be contained, that "the stage is set for a typical Minsky debt deflation in which position has to be sold to make position—that is, the underlying assets have to be sold in order to repay investors. This will take place in illiquid markets, which means that price declines and, thus, the negative impact on present value will be even more rapid. In this environment, declining short term interest rates can have little impact.

"When losses are reported to investors in sharply lower net asset values, they are certain to lead to massive redemptions by their institutional and pension fund clients. Since hedge funds are normally highly leveraged, this will put pressure on their lenders and their prime brokers—exactly the same banks that currently have to increase their lending in support of their Special Investment Vehicles and their holdings of senior tranches of collateralized obligations. They could choose to make margin calls on the declining value of the hedge fund assets pledged as collateral, but this would simply aggravate their existing problems . . . the damage from a debt deflation will be widespread—borrowers who lose their homes, hedge funds that fail, pensions that are reduced—so the net overall impact will be across a number of different sectors. However, in contrast to what Alan Greenspan argued in defense of financial engineering to produce more complete markets—that it provided for a better distribution of risk across those who are willing to bear it—the risk appears to be highly concentrated in core money center banks who, at present, are increasingly unable to bear it.

"The Fed's survey of lending conditions currently suggests that banks are curtailing lending and tightening credit conditions. This suggests that lending to households, whose spending in the current recovery has been financed by structured finance, is likely to decline dramatically. If the availability of household finance collapses, it is also likely that the long predicted, but never realized, retrenchment of consumer spending may become a reality, buttressed by the continued decline in the dollar, producing rising import prices. That, along with rising petroleum prices, will further reduce real incomes and make meeting mortgage debt service that much more difficult. The system thus seems poised for a Minsky Fisher style debt deflation that further interest rate reductions will be powerless to stop.

"The Fed has already stated that it will accept asset backed commercial paper as collateral for discount window lending, . . . allowing [banks] to increase their lending to affiliates over existing limits. These measures, are all meant to avoid a 'market' solution to the problem in the form of debt deflation. Given that the crisis appears to be similar to that which led to the breakdown of the financial system through debt deflation in the 1930s, a similar remedy in the form of a Reconstruction Finance Corporation and reregulation of the system would seem to be the most efficient means to prevent, in Hyman Minsky's words, 'IT' [the Great Depression] from happening again."

This was written in 2007, and what was predicted came to pass. Washington's response to the financial and economic crisis placed the government's full faith and credit on the line, became the subject of strong legislative debate, and changed the mood and makeup of Congress.

As we saw, as financial and economic uncertainties became more evident, the policy agenda turned to the creation of a financial structure that would be less subject to excesses of speculation and would promote the capital development of the economy. But it is doubtful that the Dodd-Frank Act will ensure control over speculation or ensure the support of enterprise.

So what do we do to establish a more stable financial system? Minsky had developed a set of ideas—a blueprint, if you will—to reconstitute the financial structure. The Ford Foundation–Levy Institute project concentrates on these very Minskyan ideas and has published a series of papers drawing from the published and unpublished works that are in the Minsky Archive, a digitized archive, maintained at the Levy Institute, that was made possible by financial support from the Ford Foundation and Andrew Sheng, president of the Fung Global Institute in Hong Kong. We especially want to bring to your attention this year's eBook on "Beyond the Minsky Moment: Where We 've Been, Why We Can't Go Back, and the Road Ahead for Financial Reform." As always, we invite your close scrutiny of it and will welcome your comments.

Thank you very much for coming, and enjoy the conference. . . .

## Speakers

**ESTHER L. GEORGE**

*President and Chief Executive Officer, Federal Reserve Bank of Kansas City*

**Looking Ahead: Financial Stability and Microprudential Supervision**

*The views expressed by the author are her own and do not necessarily reflect those of the Federal Reserve System, its governors, officers, or representatives.*

### Introduction

I am very pleased to be here. Once again, the Levy Institute has come up with an outstanding program and one that addresses a very timely and critical issue.

There are many views about what went wrong in the financial markets and global economy and what policy steps should now be taken to create a more stable and resilient financial sector. To date, we have implemented a number of changes in monetary, fiscal, and financial policies to contain the damage and prevent future crises. Some of these policies focus on short-term solutions, while others are more long-term focused.

In my remarks, I will look at this issue largely from the longer-term need to build a stronger financial system structure. I will first discuss our recent experience in the financial markets and where we may have gone wrong from a supervisory and institutional perspective. Then I will turn to what we must do from a long-term perspective to create the type of financial system that will be better positioned to weather the next crisis.

### Our Recent Experience

This crisis is following much the same pattern of previous financial crises—an inability or unwillingness to see the warning signs and take preventative action, followed by massive damage, and then working through the emergency policy steps and the rebuilding of our financial system. The aftermath of this crisis left no question about the enormity of damage that could be inflicted by a financial sector with too much leverage and risk. As a result, the steps we are taking to clean up the damage and begin long-term rebuilding take on added importance because the policies we put in place now will influence—for better or worse—the likelihood, nature, and severity of the next crisis. While we know we cannot prevent the next financial crisis, public policy and preventative steps play an important role in establishing the overall stability and resiliency of our financial system. Consequently, getting these steps right is essential if we are to avoid setting the stage for an even more severe crisis.

We must also recognize that our resolve in dealing with financial crises unfortunately tends to diminish after a crisis passes. Understandably, financial institutions want to get back quickly to a more profitable state, and the public wants a prompt and painless return to the prosperity they enjoyed before the crisis. As a result, policymakers and regulators can face substantial pressure to back off from implementing tighter oversight, especially if such oversight interferes with financial institutions going back to their usual operating parameters.

Many policymakers and market participants thus become reluctant when it is time to make the hard judgments about effective reforms and instituting greater risk restraints. Signs of this are already occurring with the efforts by financial institutions and others to weaken or delay stronger capital standards and other provisions of the Dodd-Frank Act. Before elaborating on those issues, though, it is instructive to examine some of the factors that led to this crisis.

Indeed, the housing bubble was a major factor in the crisis, but there is one thing that stands out to me as a banking supervisor: both the private marketplace and regulators had become complacent and greatly underestimated the risks taken on by our financial system.

Too many were convinced that we had entered a new era and fully believed that we had new tools that could more accurately measure, price, and control risk, even as financial instruments became far more complex and often were untested. This belief, for instance, led some to think that lower credit standards were simply another factor that could be priced into the terms of a subprime loan, thereby making such loans an acceptable risk. Or that bank leverage ratios were a thing of the past, especially because financial institutions and regulators could risk-weight assets and off-balance-sheet exposures and use quantitative risk models to come up with "better," "more accurate," and, invariably, lower measures of capital needs.

Another factor in the crisis was misguided incentives to take on more risk. These included low short-term interest rates that encouraged financial institutions and other market participants to "borrow short and lend long" and to "search for yield." These funding and lending incentives, along with other factors such as the low Basel risk weights assigned to certain financial instruments, further motivated major institutions to adopt very similar risk exposures. These exposures, in turn, contributed to the liquidity and funding breakdowns that were central to this crisis. Other misaligned incentives included the belief that larger institutions were "too big to fail" and the implicit guarantees behind the government-sponsored enterprises and certain other parts of the financial system—all of which gave creditors and stockholders added protection from default and less reason to be concerned about risk.

We also have had numerous changes in the structure of our financial markets over the past few decades, which have left us with a much different corporate culture in banking and finance. In fact, the new structure has brought with it a greater focus on short-term performance and more aggressive attitudes regarding risk-taking. These changes include a rapidly rising concentration in the banking industry, withering away of the Glass-Steagall constraints on banks engaging in securities activities, and the growth of securitization and money and capital markets.

Cultural change in investment banking began to occur more than 40 years ago, when the New York Stock Exchange relaxed its rules to allow member securities firms to break away from their partnership structure and adopt a corporate framework. With partnerships, the driving force had always been to safeguard the value of partnership interests by maintaining the long-run prosperity of the firm and developing new partners with similar objectives. Bringing in outside capital through conversion to a corporate structure—which all major securities firms did by 1999—put these firms under greater investor pressure to exploit short-term opportunities and engage in riskier strategies. As banks took on more investment banking activities, competitive pressures then led to similar changes in the culture of banking. The outgrowth of all these changes in the financial system was a complacency and false confidence in new risk- management practices and a substantial and largely unrecognized buildup in leverage and risk that laid the groundwork for this crisis. Unfortunately, the pendulum swung from confidence that we could measure and control virtually any risk to the opposite—an environment during the crisis where market participants had virtually no idea how to price many financial instruments nor how to determine which institutions were still sound.

## Looking to the Long Run

If we are to construct a stronger financial system, we must address the significant problems and obvious shortcomings that led to the crisis. First and foremost is to correct the misaligned incentives and the improper expansion of federal safety net protections that encouraged and enabled institutions to take excessive risks. In addition, I believe we must return supervision to its traditional role of exercising sound judgment and making informed decisions. In recent years, the supervisor's role has become a more passive one, with examiners spending much time monitoring regulatory compliance and tracking the risk-management practices adopted by financial institutions.

With regard to correcting the incentives in banking, the most important challenge we face is in constructing an appropriate, but carefully limited, public safety net. During this crisis, our safety net was stretched far beyond anything we had previously done, and this expansion in safety net protections has left us with a broad and pervasive range of moral hazard issues. Not only did we expand deposit insurance coverage during the crisis, but we also guaranteed bank debt instruments, used the discount window to lend to nonbank institutions and conduct special lending programs, and bailed out large institutions and segments of the financial markets not covered by the traditional safety net. The largest financial institutions in the United States further received significant injections of public capital through TARP. Some would argue the only ones not protected from losses were the taxpayers.

It is hardly a coincidence that at the center of this crisis were a substantial expansion in public safety nets and the presence of major financial institutions, which were treated as being too big to fail (TBTF). This linkage between expanded safety nets and TBTF institutions has increased in importance over the last few decades, with the growth of one linked to the growth of the other—all in a cycle that poses a significant threat to financial stability.

This link between large institutions and special public support has left us trapped in a pattern in which public authorities believe they must expand the safety net each time a crisis is brought on by excesses in risk-taking at large institutions. This broadening of the safety net facilitates the next and even more severe crisis, as new moral hazard issues are introduced and major institutions are left with greater incentives for taking on risk. The critical and defining question for us is how to break this pattern of growing safety nets and escalating crises, while restoring much-needed market discipline to the financial system.

I believe the first and most important step that we can take is to eliminate TBTF policies. This crisis provided overwhelming evidence that the ingrained response of policymakers is to treat our largest institutions as being TBTF. With the help of bailouts, TARP money, the discount window, accommodative monetary policy, and other actions, our largest institutions not only survived the crisis, but in many cases, emerged as even larger players in the financial system.

The funding, capital, and other advantages that TBTF provides are enormous, and such advantages—as seen in this crisis—remove important constraints on risk taking that financial institutions would otherwise face from their stockholders, creditors and uninsured depositors. One simple example of these advantages is that the five largest US banking organizations in June 2009 were given ratings on their senior long-term bank debt that on average were four notches higher than what they would have received based on their actual condition alone. One of these organizations even received an eight-notch upgrade for being TBTF. In a very competitive marketplace, such advantages are enormous and highly unfair to those institutions not receiving them. These ratings advantages continue to exist after the crisis—albeit at a notch or two less now, and investors have reason to believe that similar advantages may yet exist.

What can be done to address these moral hazard and TBTF issues? The Dodd-Frank Act provides an orderly liquidation authority for resolving the failure of a systemically important organization, thus adding to the existing framework for closing insolvent or nonviable commercial banks. Having this legal framework, though, is only the first, and perhaps easiest, step in dealing with TBTF. In fact, during the recent crisis we had a number of powers that might have been used on TBTF institutions, but were not employed to any notable extent. I'll offer just one example.

Part of the discipline associated with taking on expanded powers under the Gramm-Leach-Bliley Act was that all depository institutions in a financial holding company were required to remain well capitalized and well managed. If not, the company would have 180 days to correct the deficiencies or face divestiture of its depository institutions or termination of newly authorized financial activities. To the extent that such divestitures or terminations might be difficult to do in the midst of a crisis, the Act gave the Federal Reserve the flexibility to grant additional time for such restructurings. One might fairly ask whether all of the major financial holding companies were in strict compliance with these provisions throughout the crisis or whether pursuing such actions might have been justified.

Thus, as we can see from this crisis, the most critical issue in addressing TBTF concerns is having policymakers with the resolve to follow through. In a crisis, there will always be concerns about creditor or depositor panics, public confidence issues, interconnections with other institutions, and disruptions in financial services. While I believe these concerns often are exaggerated and can be minimized through the resolution frameworks we now have in place, others will almost certainly have different views. What we must remember, though, is that ending TBTF is the only sure way to curtail the expansion of public safety nets and break the pattern of repeated and ever-escalating financial crises.

A second step we must take is to strengthen bank capital standards with particular emphasis on leverage requirements tied to equity capital. In addition, we should weigh carefully the lengthy transition period contemplated by Basel 3. There is risk that banks will be caught short again if we adopt a lengthy phase-in period and let banks manage their capital down to the minimum transition standards through substantial dividend payouts and stock buybacks.

I am cautious about relying heavily on risk-based capital standards for two reasons. First, banks have been quick to arbitrage whatever risk-based standards are in place, and second, it is hard to say that our risk weights have been accurate measures of risk. For example, many mortgage-backed securities were constructed to marginally meet the requirements for lower risk weights. These risk weights, moreover, bore little relation to the losses banks took on such securities during the crisis. Instead, we must insist on capital standards that can fully protect against losses—both expected and unexpected—and we must avoid creating standards that give institutions incentives to adopt more concentrated risk exposures.

I am also in favor of some constraints on the type of activities that can be conducted by institutions protected by the safety net. The expansion in activities conducted by banking organizations over the past few decades has greatly increased the level of complexity in such organizations, making effective management and supervision of these entities much more difficult. In addition, this growth in activities has brought with it a changing culture in banking—one that is more characteristic of investment banking and other parts of the capital markets. Accordingly, the major banking organizations have become much more concerned about exploiting short-term opportunities and expanding their risk exposures, and many of the financial incentives provided to key personnel in banking organizations have become more closely aligned with those in investment banking. For these reasons, I support the goals of the Volcker rule in eliminating proprietary trading by bank and thrift organizations, and I hope we can develop an appropriate regulatory and supervisory framework to implement these provisions. We should also take a careful look at other financial activities and their compatibility with public safety nets to avoid a replay of the expanded safety nets and the public assistance that was provided to financial institutions in this crisis.

My final comments concern the role of bank examiners. Increasingly, examiners have had to spend more time reviewing risk-management practices at banks and compliance with a wide variety of regulations. These demands will grow as examiners become more involved in stress tests, enhanced supervision, living wills, and other features of the Dodd-Frank Act.

While I recognize these aspects of supervision warrant examiner attention, they should not detract from the more traditional and time-tested efforts of examiners in verifying the quality of a bank's assets, understanding the bank's business model and evaluating lending standards and other factors that shape risk within a bank. In my experience, the judgments and decisions by examiners typically provide the earliest warning signal of problems at a bank, and we must continue to provide examiners with the independence and authority to fulfill this role. Also, as impartial observers, examiners are likely to be in the best position to identify the type of risk exposures and conditions that could lead to a crisis, particularly in the case of examiners who have dealt with previous crises. In fact, during my career in supervision, I have seen no substitute for the judgment of experienced examiners. This crisis further indicates the need to have examiners with the ability and knowledge to distinguish between institutions that are viable entities capable of withstanding significant financial distress and those that can no longer continue in their current condition.

The breakdown of risk models and risk-management practices during the crisis also tells me that we must not view stress tests, other forms of quantitative analysis, and models used by macroprudential supervisors as being a substitute or replacement for examiners and on-site supervision. In particular, the breakdown we have seen in models-based approaches suggests that we should not develop a false sense of security from the stress tests and other new supervisory tools we are now putting in place. While these tools can be useful additions to supervision, we must recognize the very important and unique role that examiners have in supervision and their ability to bring a strong sense of reality and caution to the oversight of the financial system. Microprudential supervision must remain an essential and central part of our supervisory framework.

## Concluding Comments

We now face a real challenge in rebuilding our financial system and its supervisory framework. The steps we take today will either serve us well in the inevitable future financial shock, or they will sow the seeds of the next crisis. If we are to be successful, though, we must stop and ask ourselves what really went wrong this time and what we can do to construct a more stable and resilient financial system.

I would like to conclude with a thought very aptly expressed in the Central Bank of Norway's 2009 Financial Stability Report: "It is difficult to estimate the probability and price the risk of all possible outcomes in financial markets. This particularly applies to events that occur rarely and have not occurred for a long time. . . . In the long term, public authorities have an important role to play in maintaining a collective memory of previous crises."

I would be happy to take some questions or to hear your comments.

### Q&A

**Q:** Would you comment on . . . what role the government played as [far as] being the catalyst for this entire mess—especially since the government threw the red meat to the wild animals and then were shocked that they ate it?

**EG:** I'll take that as a comment and not a question *[laughter]*. I think your question really has to do with my concern about public safety nets. There is a role for them. But I think as we look back over the history—if I go all the way back to the formation of the Federal Reserve and the application of a discount window that was designed to help smooth panics and liquidity—as you move forward in time, those safety nets began to expand with deposit insurance. And even as we have expanded those, we don't always step back to say, "What's changed in this environment that would cause us to limit and focus and preserve the stability that those safety nets are required to have?" So your point is taken.

**Q:** How do we go about resolving too-big-to-fail?

**EG:** [This] is clearly one of our largest challenges. I think what can often distract in this discussion is, in fact, defining "too big." I think we need to be careful that this isn't simply a function of size, which is why I tend to focus on the nature of activities and the application of capital that serves to temper, if you will, the amount of risk that an institution takes on. I think we should focus first on capitalization and the quality of capital in these large institutions, and second, take a careful look at the activities. I think we have moved away [from relationship banking]. Some would argue, there's no going back in this financial system structure. But if you look at the nature of banking, historically, this has been a trusted relationship, with a long-term focus in terms of their interactions with customers; as opposed to capital markets and financial markets that are providing, again, a very important function for our economy but, I would argue, have a different purpose. I think we need to step back and look at whether the decision to combine these two things [is] consistent and [has] created a set of incentives that may have been unintended in the long run for us.

**Q:** I'm Martin Wolf. I write for *The Financial Times*. I'd just like to follow up on one aspect of the subject you discussed.

You pointed out, which I think many people would agree with, that risk weighting turned out in essence to be worthless in the run-up to the crisis, and many banks were showing—it was true in the UK and I think here too—that risk was falling as, in fact, it was actually rising. So if, nonetheless, risk weighting remains central to all the regulatory capital requirements in Basel and elsewhere, and the true leverage ratios that are being imposed on banks remain extraordinarily high—although, depending on whether you look at the denominator or the numerator (i.e., ratios of 30 to 1 are still expected)—many commentators have concluded from this that banks remain fundamentally and structurally undercapitalized under the present regulatory regime. I'd be very interested in your comments on that.

**EG:** My firm belief is that, because we cannot set at a point in time an appropriate risk weighting, certainly we have to do that. . . . I am not naive to understanding that banks vary in their risk profile. We see that from the smallest institutions to the very largest. . . . That's why we have to find what I call a stabilizer. I think the leverage ratio is that stabilizer, and I think it must be calibrated in a way that it provides that cushion across varying risk profiles, even as you develop other types of capital, even as you try to calibrate risk weights. I think it is the one buffer, if you will, in a financial system that we know historically is there to absorb losses. And I will tell you from my experience in the '80s, when hundreds of banks closed in this country—banks that were subject to the same risk exposures in terms of an industry exposure, that were exposed to the same economy—one survived and one did not. Typically, that had to do with the depth of capital in those institutions and their ability to weather that crisis. I think we have to keep an emphasis on leverage, however difficult and costly. Some may argue that it is. I think that ends up being the real shock absorber for us in the long run.

**Q:** I'd just like to ask a follow-up question related to the capital standards. You suggested that perhaps the United States should adopt Basel 3 sooner rather than later, limit dividend payouts and stock buybacks, etc. Some of that has merit. But what about the unintended consequences of these higher capital requirements? I'll give you just one example: in the old Basel scheme, trade finance was 20 percent risk weighted; now it's 100 percent risk weighted. As a result, many companies, especially smaller companies, have trouble getting credit from traditional sources. Credit spreads have opened up pretty wide, and there've been limits to growth. Similarly, we're seeing European banks withdraw from that marketplace because of the higher capital requirements needed by June 30. So, sometimes these higher capital requirements actually have the unintended consequence of reducing the growth potential of the various economies.

**EG:** My reaction is not that we don't have a transition phase. Clearly, there are costs. When you begin to raise the requirements for capital, we know those will have consequences. My concern is that we not provide such a lengthy transition, given where we come from; that we allow the payout of capital . . . even [when] we're asking banks to build it.

It's also why I think we should be careful about focusing on risk weighting. As you've noted, we have shifted the trading book to be a higher risk weight. I can assure you, over time the analyses behind that will change. We'll have to rethink how to calibrate those. So my objective would be to systematically build a high quality in our banks sooner rather than later, and not to allow the time frame to extend so long that our memories get cut short about why we were pushing for capital to begin with.

**Q:** In your very laudable call to strengthen the backbone of supervisors and bank examiners, isn't there much more of a crisis within? I mean, a lot of them were often hired away. At least, that was the path—that you were more lenient because you were hired by banks, consulting firms, and others. So how do you, in this very competitive professional culture, really strengthen your own background, your own profession? That seems to be a key cultural battle that has to be won in order for your plan to succeed. And I'd be interested in what you would write in your memoirs about it, not in your current position. Thank you.

**EG:** Well, I certainly speak as one who was trained in this profession. I think an important part of the process of finding individuals who are well suited to the position of regulation and supervision comes from what their own incentives are around this work. Certainly, we must hire people that are very competent in the analytics of a financial institution; but I would argue that we should not overcomplicate, in many respects, where we ask people to focus. We have always, . . . at the Federal Reserve Bank of Kansas City, encouraged people to be highly marketable, and I say that in the context of [our wanting] people that are not just performing well for the function they have, but have other options. Those are the kinds of people you want to have working in these roles. They are always subject to a better offer, and we're not going to be able to overcome that. I think what's important is to give people the sense that their judgments can be well informed and that they will be listened to when we calibrate rules or regulations that we ask them to follow through on—no easy challenge.

**Q:** What is the optimal level of capital reserves?

**EG:** . . . I think we know from this experience that higher capital levels are needed. I would argue that the caution is, if you believe that we have a period of time that is relatively lower risk in terms of the potential for a crisis, in terms of the potential for a shock, that we should give institutions more time to get where their destination is. . . .

**Q:** You mentioned that one of the problems that underlay this crisis was the decision in the 1980s for investment banks to transition from a partnership structure to a corporate structure. You then didn't include any mention of that in your recommendations. Is it too late to go back to the old days of partnerships? [Or] can't [we] put the toothpaste back into the tube?

**EG:** I often hear that. I often hear that, which is, "We've come too far, and there's no going back." And I sense that if we [do], that we will not have the kind of experience we just had—that that should certainly be on the table. For example, at the Federal Reserve Bank of Kansas City, Tom Hoenig and one of our senior economists, Chuck Morris, have proposed in a white paper how we might go about stepping back and breaking apart some of these activities that we think in their combination have not been the right incentives and created more instability than stability. I think it's fair, and I think it would be responsible for us to look back and say, "What would going back mean?" We often associate going back with meaning we will have less efficient markets; that we will somehow handicap the financial markets in this country. But I would argue that we went through a 50-year period in this country where we didn't see these issues—that it was only after we began to combine some of these activities. . . . Doing a complete diagnosis is essential if we're going to address our concerns about stability.

**Q:** I've noticed that many of the people such as yourself who are in favor of much tougher regulation of too-big-to-fail institutions are also in favor of a tighter monetary policy. I find this a little curious in the sense that I think a lot of people at this conference would say, on the one hand, we got into trouble because of the laxity with which regulators treated large financial institutions; but, on the other hand, now that we're in a debt deflation, where effective interest costs are not engendered in recovery, we need accommodative monetary policy for the foreseeable future. Just why do you think it is that a lot of the same people within the Fed system who are regulatory hawks are also monetary hawks?

**EG:** I'm not sure I could speak for my colleagues on their views on that. I think if you look at all the conditions leading up to this crisis, you see many parts, and I mentioned them this morning. I'm not going to argue that easy monetary policy caused the crisis; it was one of the conditions that existed in going forward, so I don't know that I can connect the two for you in that straight of a line. I will tell you that the price of credit is always a factor in the stability of an economy, in the long-term equilibrium of an economy. I'll leave it at that.

**Q:** Professor Randall Wray—I don't know if he's here or not—recently visited my school, and we had a discussion about the validity of capital requirements as an effective regulatory measure. Given the propensity of safe assets to be correlated with unsafe assets during extreme financial crisis—like a triple-A-rated tranche of a CDO that was determined to be triple-A during 2007—[doesn't] the severe devaluation in their value [make even] a 30 or 40 percent asset requirement invalid during a period of financial crisis? Even if a bank had a 30 percent capitalization ratio, if their assets are depreciated by even more than that during a time of financial crisis, doesn't that kind of make it difficult to use that kind of regulation?

**EG:** Well, I suppose you're right. If risk is unbridled and we've missed the entire exposure, then no amount of capital will save the bank. That's a different issue, I think.

The issue about getting risk right, though, goes back to my point about not relying entirely on models to tell us where the risk is, but also testing the quality of assets. We know that the higher leverage is, the more susceptible you are to a downturn in the quality of those assets. So having a base that we have tested through experience, through analytics, to show us what can provide a cushion there, combined with good supervision to understand the quality and confirm the quality of those assets—I think those two have to go hand in hand.

**Q:** I was wondering if you'd place hedge funds or private equity funds into the too-big-to-fail component that you've been talking about?

**EG:** Hedge funds and private equity, are they too big to fail? For me, the question is, To what extent does their funding and their business model create any instabilities in the system? For example, people often argue, if you're going to shrink banking down to something that's more vanilla in terms of its traditional lending, you just push activities outside, and we have the same issues we had with the shadow banking system. I think we cannot step back in that way to the past and not look more holistically at what the sources of instability are; for example, we know that some of the funding sources—money market funding, the repo market—proved to be sources of instability, and looking at how we address that, either through how we value those assets or, . . . in the instance of the repo market, [looking at] the exceptions that were made under the bankruptcy rules around certain assets that serve as collateral to repos. I do think we have to step back and holistically look at what the sources of instability are, and be careful not to too broadly stretch this moniker of "too big to fail."

**Q:** You said that the extent of the emergency measures determines and sets the stage for the inevitable coming crisis. What is your opinion on the current state of the emergency, the liquidity and monetary accommodation, and how do you see that going forward? What would be the possible repercussions of what we have now, what we could see going forward, and what would happen with that?

**EG:** So, the question of where we may be setting ourselves up in terms of some of the safety nets, some of the actions that we took, I think you only need to look at the issues in front of us now. We expanded deposit insurance, expanded deposit guarantees, and there is a debate now about where these guarantees should go. The Federal Reserve's lending, of course, was curtailed in the Dodd-Frank Act as it relates to lending to nonbanks. But the fact that these extensions of accommodation and other things exist, just as in the calculation about too-big-to-fail, makes the hurdle even higher in terms of setting a boundary or a bright line, that we're not going back there, we're not going to do that again. If you look back in the past, that's why I say the expansion of the safety net, once the crisis passes, seems to lose our attention, and as we make reforms, we tend to leave some of those things in place. So I think it's important to look at what those things are we've done now, . . . how will we shrink them back and how will we signal that they're no longer available is one of the real challenges that we face right now, for sure.

**Q:** When Lehmann collapsed, it was discovered that a lot of the assets seemed to have disappeared, particularly because out of the London branch they had been rehypothecated in a system where the UK has no limits on rehypothecation, as opposed to the United States, which lets only 140 percent of the margin in an account be rehypothecated. So what the big banks' brokerages did was put in their contracts with the hedge funds and the other big accounts that their assets could be accessed by any of the branches—meaning subsidiaries, including London—where suddenly they had total control, and it just went on and on and on. Do you think that the United States should require that money or assets that are deposited with the US broker banks must abide by the 140 percent rule, and not be allowed to get out of that just by having the book entry of the assets move to London?

**EG:** I'm not going to have a specific answer to your question, and I know what your question is. I will answer it more broadly, though, which is to say, one of the challenges that has surfaced most prominently in this process of resolution, in thinking about our response to this crisis, has been in the global dynamics of it. We've talked about the global financial system through Basel rules, and we have known for some time some of the challenges that poses. But I think in the more recent instance we have seen a number of challenges where we are trying to harmonize rules, legal frameworks, supervisory approaches across countries that really are going to continue to challenge us going forward. So even as the United States thinks about the posture that it wants to take with regulatory reform—and I think we have to move ahead—we cannot wait for world peace in terms of harmonizing these international rules. But even as we work on that system, I think we have to be focused on the requirements we will have of US institutions that will create the challenge. That's not answering your question directly in terms of the specific level of hypothecation you talked about, but it is in a sense one of the broader challenges we have in the global context of trying to write regulatory reform.

**Q:** I was wondering specifically where you stand with respect to the derivatives market. A large part, as I understand it, of the derivatives market is a counterparty offset. Given the size of the derivatives market—$740 trillion, I think, at last count—does that not create an environment where too-big-to-fail is, in fact, systemic?

**EG:** . . . I think the challenge for our financial markets going forward as it relates to financial innovation, to derivatives, is that we have to have more transparency in these markets. I think the key to this, without carving off what's permissible and not permissible, is really to provide more daylight and more transparency in the clearing of these instruments and making sure that there's more daylight around the transactions that are taking place. In that way, you can see counterparty exposures, you can see pricing of these instruments. And I agree with you: I think that's critical in understanding the risks that are exposed to the entire system.

Let me take one more question before I go. This has been great.

**Q:** Over the years, the Federal Reserve approved mergers of banks that became too big to fail, and augmented those banks. Have you noticed any change in merger policy since Dodd-Frank?

**EG:** My observation is that, through the crisis, for all the reasons that people know in terms of concerns about stability, we in fact created much larger institutions. Now we have criteria that we are to look at around financial stability. And I think, always, the case is that the criteria at the moment when you're out of the crisis . . . [do not] suggest that size is the contributor to the problem. So when you raise the question of, has there been a change, we've had a couple of sizable applications to merge institutions. Those have been approved. You've seen the rationale of the board of governors around how they apply to the new criteria we have. So I think, going forward, this is very much the issue of saying, do we understand what we're setting in motion when we combine these entities to a size that requires some of the risk strategies that are inherent in what they do to yield a return to their shareholders?

Thank you very much. It's been my pleasure to be here.

**ROBERTO FRENKEL**

*Principal Research Associate, Centro de Estudios de Estado y Sociedad (CEDES)*

**Classifying Crisis in the Financial Globalization Period**

. . . Taxonomy is the activity of grouping individuals into species, arranging species into larger groups, and giving those groups names, thus producing a classification. It is the first step in the construction of scientific knowledge and has been practiced since the beginning of history.

We can apply this methodology to the collection of financial crises that took place in the second period of financial globalization, which lasted from the late '60s of the 20th century up to present days. Our collection comprises the many crises experienced by emerging market economies from the early '80s, the recent United States crisis with global repercussions, and the crisis that eurozone economies are suffering nowadays. Instead of the form or shape of the individuals recorded by the naturalists, we shall point out stylized facts of the critical process.

Let me start by presenting the collection of crises. In the last three decades of the last century, expanded to include the first two years of the 2000s, there were two waves of financial crisis in emerging market economies. The first was the tsunami that swept almost the entire region in the early years of the '80s. The second wave began with the 1995 Mexican crisis, which was followed in Latin America by the Brazilian crisis in 1998 and the crisis in Argentina and Uruguay in 2001–02. Between the . . . Brazilian and Mexican crises, five economies in East Asia and Russia experienced crises, in 1997 and 1998. The Asian and Russian episodes had important financial spillovers and impacts in Latin America, and helped trigger the mentioned Brazilian and Argentine crises. Each wave of crisis was preceded by booms of capital influx to developing countries.

The crises in the eurozone were triggered by the United States crisis, and . . . the initial national impacts were proportional to the degree of exposure of the national financial system to toxic assets in the United States, irrespective of their balance-of-payment positions. For instance, the initial impact was greater in Germany, which showed a current account surplus, than in other eurozone economies showing current account deficits but less exposure to United States assets. We are particularly interested in this presentation in the further development of the critical process in the peripheral eurozone economies—Greece, Ireland, and Portugal, and also in Spain and Italy, the so-called GIPSI [economies]. In these countries, a second surge of critical developments led by Greece started around April 2010.

Let me first point out a stylized fact shared by the whole collection of crises: the Minskyan cycle. The first stylized fact I would like to point out has been shared by all the individual [crises in] the collection. In all cases, the crises were preceded by macroeconomic cyclical dynamics with an initial phase of expansion, followed by growing financial fragility and, finally, ending up in financial crisis. . . .

These cyclical dynamics are clearly related to the work of Hyman Minsky. Minsky stressed that unregulated market economies are systems cyclical in nature, in which crises are not unusual events. A key element of this cyclical pattern is the endogenous behavior of agents' risk perceptions and expectations. In the development of the boom phase, optimism spreads and confidence increases. Optimism and confidence tend to reduce the perception of risk, and agents and intermediaries take riskier positions. Asset price bubbles that support the financial expansion inflate in the process.

In the booming phase, the balance sheets become increasingly fragile. At some point, a negative episode draws people's attention to the high degree of risk exposure, and a period of distress begins. Concern about exposure to risk leads many players to prefer liquidity. . . . Bubbles deflate, and many agents are forced to assume wealth losses. Pessimism replaces the previous optimism and . . . the development of the downturn leads to the systemic crisis.

It was impressive to realize how accurately the Minskyan cycle described the pattern followed by the American economy in the period preceding Lehmann Brothers' bankruptcy. Minsky's insights were broadly recognized, and this helped to bring them back from intellectual exile, where they had been previously relegated.

Actually, this cycle is observed everywhere. The processes that led to financial crises in the emerging market economies and the eurozone economies exhibited similar Minskyan features to those verified in the US economy in the 2000s. Both in the emerging market and eurozone economies, crises were preceded by booming periods in which financial activity expanded and risk taking increased. Analysis suggests that these crises emerged as the culmination of the same processes that caused a growing optimism and encouraged greater risk taking in the boom phase.

With regard [to] this cycle, the collection of crises in the post–Bretton Woods period complements the set of financial crises studied by Charles Kindleberger, illustrating the general explanatory power of Minsky's model.

We go now to the stylized facts shared by the crises in the emerging market economies and eurozone economies. Besides the mentioned cyclical dynamics, the comparative analysis of the set of emerging market and eurozone crises reveals other common stylized facts. First, the booming phase in the emerging market economies was generated by relatively drastic changes in macroeconomic policies and regulations, in contrast with the endogenous character of the cycle emphasized by Minsky. These changes typically included the liberalization of the capital account, of the balance of payments and local financial markets jointly, with implementation of some sort of exchange rate fixation. The implementation of new regulations and macroeconomic arrangements operated as an exogenous shock on the financial system, which quickly established incentives for arbitrage between domestic and foreign assets, and led to booming phases.

The initial booming phase in the eurozone economies also resulted from a drastic change in macroeconomic policies. The introduction of the common currency operated as a shock on the national financial systems, which established stronger incentives for arbitraging between core and peripheral countries' assets and led to the booming phase in the periphery of the eurozone.

Second, the regulation of local financial markets was weak, both in the emerging market economies and the eurozone economies. In the emerging market economic cases, it may have been because local financial markets had been recently liberalized, or because the . . . rapid expansion of financial intermediation during the boom exceeded the existing regulatory capacity. In the eurozone cases, the introduction of the common currency [increased] the incentives to international capital flows, . . . [but] without a contemporaneous reinforcing in financial regulation.

Third—this is an important point also—international capital movements played a crucial role in the boom and in the contracting phase in both the emerging market economies and the eurozone economies.

These three elements gave rise to the following stylized cyclical dynamics in the emerging market economies and the eurozone economies. The combination of a credibly fixed or predetermined exchange rate and capital account liberalization generated important arbitrage opportunities by exploiting significant spreads between the yields of foreign and domestic assets. Capital influence expanded liquidity and credit in the economy and fed bubbles in financial and real assets. As a result, output and employment growth accelerated. The expansion of aggregate demand led to nontradable price increases, which under fixed or predetermined exchange rate regimes provoked an appreciation of the real exchange rate. The real appreciation trend reinforced capital inflows seeking to obtain gains by holding domestic assets. This in turn [fed] back into the real economy, accelerating the expansion of credit and output growth. In this context, domestic agents' financial positions became increasingly fragile in the Minskyan sense.

Simultaneously, the combined effect of the real rate of appreciation on economic growth stimulated the demand for imports, while exports tended to weaken. The worsening of the trade balance, together with increasing the interest and dividend payments, turned the current account [toward] deficit. A steady increase in the current account deficit was typically observed, since, initially, capital inflows were higher than the absolute value of current account deficits and foreign exchange was self-accumulated during the booming phase in the emerging market economies. At some point, however, current account deficits became larger than capital inflows, turning . . . the balance of payments [negative] and inducing a contraction of liquidity in an already fragile financial system. This [was] the beginning of the contracting phase. Asset price bubbles gradually began to deflate, and episodes of illiquidity and insolvency emerged, first as isolated cases and then as a systemic financial crisis. In the case of emerging market economies, financial tensions . . . tended to precede currency crises.

Let's go now to the stylized facts exclusive to the emerging market economies—these are not shared with the eurozone economies. Beyond the mention of stylized facts shared by both sets of economies, the critical process showed different evolutions in developing countries and in the eurozone. A key differential factor relates to the existence or not of a lender of last resort able to dissipate the full risk of the debts in international currency issued during the booming phase. Country risk and its price, the country risk premium, are central to the analysis of foreign debt sustainability in emerging market economies. These debts have a specific default risk associated with the currency in which the debt is nominated. The default risk of the debts issued in foreign currency affects both public and private debts. A private debtor may be liquid in domestic currency and able to service its debt without difficulty at the current exchange rate. However, if liquidity in foreign currency becomes insufficient to serve all debts in the country, private agents may be forced to default on their debts.

On the other hand, if sufficient liquidity in foreign currency is available, it is highly unlikely that the public sector [will fail] to fulfill its commitment in international currency due to the lack of liquidity in domestic currency—there are central banks there. . . . Consequently, public debt is the lower risk between the debts in foreign currency issued by domestic agents. This is why country risk in the emerging market economies is typically indicated by the sovereign risk premium and measured as the difference between the yield on a sovereign bond in US dollars and the equivalent yield on a US bond, which is taken as a risk-free asset.

It is not difficult to understand why the stated and expected evolutions of the balance of payments are crucial in the assessment of sovereign country risk in emerging market economies. The debtor country has financial needs in foreign currency, consisting of the sum of the current account deficit plus the foreign debt capital payments. A crucial [point] is that possibilities of adjusting the balance of payments are not unlimited, even after devaluing the domestic currency. Consequently, in emerging market economies the default risk is closely associated to the possibility that the country [will] not get all the foreign currency liquidity needed to meet its obligations. I would like to emphasize that this risk would disappear if emerging market economies had a lender of last resort able to provide the country with the needed foreign currency liquidity.

Under conditions of high debt in an emerging market economy, a large proportion of the financial needs must necessarily be covered with funds from capital markets, even after adjustment has been made in the external sector. The assessment of the debt and its sustainability depends on the interest rate faced by the debtor, and thereby on the risk premium determined by capital markets. Multiple equilibria scenarios are not uncommon. In the assessment of debts and sustainability, each investor has to guess the behavior of the rest of the market participants. The predominance of optimistic assessments may result in a relatively low risk premium and sustainable debt projections. On the contrary, predominantly pessimistic perceptions may result in high-risk premiums and unsustainable debt projections. Via the determination of risk premiums, market participants determine whether their debt is sustainable or not in a standard self-fulfilling prophesy.

Access to market financing becomes the most important and urgent goal of governments. Announcements of adjustment measures are signals to the market, mainly aimed at improving sustainability assessment and [reducing] risk premiums. The effects of the announcements . . . on the risk premiums should be seen well before the adjustment measures objectively show their results on economic variables.

So far, I have presented the similar role that the evolution of the current account and capital flows played . . . in emerging market and eurozone economies. Beyond this common stylized fact, the critical process took different paths in the emerging market economies and the eurozone economies. In the emerging market case, given the absence of a lender of last resort in foreign currency, . . . exchange rates and country risk are key determinants of the critical process. . . . The evolution of [external] accounts on foreign exchange highlights one aspect of the Minskyan cycle in the emerging market economies. As already mentioned, there is a steady increase in the current account deficit. When capital flows are higher than the absolute value of the current account deficit, reserves accumulate. At some point, the current account deficit becomes larger than the capital influx. The stock of international reserves reaches a maximum and then contracts, inducing the contraction of money created in a fixed exchange rate system, which is the common characteristic of all these crises. . . .

In the case of emerging market economies, the portfolio decisions of domestic and foreign agents regarding the portion of the portfolio exposed to currency and country risk are affected by the evolution of the balance of payments. The evolution of domestic interest rates reflects the financial aspect of this cycle in emerging market economies. The local interest rate tends to decline in the first phase and to increase in the second. As exchange rate policy initially enjoys credibility, arbitrage between domestic and foreign assets leads to a reduction of domestic interest rates. Low interest rates contribute to the real and financial expansion in the first phase.

In the second phase, the interest rates rise. The increase in nominal and real interest rates in the second phase is also explained by the arbitrage between domestic and foreign assets. The sum of the exchange rate premium [and] the country risk premium, the added price of devaluation, and default risks sets a floor for local real interest rates, and it's the main variable that drives their increase. The persistent increase in the current deficit and . . . the contraction in international reserves reduces the credibility of the exchange rate rule, on the one hand, while on the other hand increasing the probability of default of the debt issued in foreign currency.

The maintenance of the exchange rate rule and the regular service of external obligations require an increase in capital inflows; therefore, risk premiums tend to increase. Higher risk premiums and, consequently, higher interest rates are required to balance the portfolio and attract foreign capital. The economic activity contracts. An episode of high liquidity and insolvency further contributes to reducing the credibility of the exchange rate policy. At the end of the process, there is no interest rate high enough to sustain the demand for local financial assets, . . . [leading] to the collapse of the exchange rate regime. . . .

In contrast to the emerging market economies, private debts in the eurozone do not have an additional risk of default associated [with] the potential lack of foreign currency liquidity, because foreign currency is the same as domestic currency in the eurozone. This is so because the European Central Bank performs the role (a similar role, let's say, because there are some technical points that make the Fed different from the ECB, for instance) . . . of lender of last resort for commercial banks. . . . Public debts in the eurozone economies . . . have a specific liquidity, similar to that of public debt in emerging market economies issued in foreign currencies. Like emerging market economies, the governments of the eurozone do not have a highly credible lender of last resort able to dissipate these risks. The European Central Bank has played this role to some extent in the current crisis, but the rhetoric and weakness of its interventions did not eradicate the fears and uncertainty associated with the possibility of default on public debt.

The debtor governments in the eurozone have some financial needs made up by [their] current account deficit, the primary fiscal deficit plus interest, plus the principal maturities. . . . As the balance of payment for emerging market countries, the possibilities of adjusting public finance are not unlimited. Consequently, as in the case of an emerging market country, there is a risk that the debtor does not come with sufficient liquidity to cover his financial needs and [will] be forced to default on [its] obligations. The role of the default risk premium in the sustainability of public debt in the eurozone is similar to the role it plays in the sustainability of foreign currency debt, public and private, in the emerging market economy. As in the emerging market economies' case, a large proportion of the financial needs of these economies, of these governments, must necessarily be covered with funds from the market, even after adjustment has been made in the public accounts. The process that follows is also similar to the experience of an emerging market economy with a national foreign currency debt. The market assessment of risk tends to place the country in financial traps, with increasing public debt ratios and risk premiums.

In association with the different settings, the critical processes have evolved differently in the emerging market economies and the eurozone economies. In the emerging market crisis, the evolution of external accounts and international reserves feed back negatively in the second phase of the Minskyan cycle, throwing their effects on the . . . default risks of debts in international currencies, [both] private and public. This dynamic is absent in the eurozone economies and the eurozone crisis.

In the eurozone economies, the exchange risk has played no role in the evolution of capital outflows; neither have capital flows been directly influenced by the evolution of the external accounts. The eurozone payment system warrants the availability of liquidity to fulfill all private international payments. Eurozone countries do not carry stocks of international reserves, whose evolution could indicate risk of devaluation and default. The eurozone economy's balance-of-payment results—the sum of current account and capital account results—are approximately recorded in the TARGET2 balances of the European Central Bank and do not seem to have significant influence in the country's risk assessment. In the eurozone's economic crisis, the negative feedback effects in the second phase come mainly from the evolution of public debts that do not come with a highly credible lender of last resort. And they also are associated, it should be mentioned, to the procyclical fiscal measures intended to gain the favorable assessment of the financial markets. The availability of international liquidity is the weakest link in the emerging market economic critical processes, [and the reason] why public debtors that don't come with a lender of last resort are the weakest link in the eurozone economies. The latter seems to have an easier remedy than the former. . . .

The crises in both developed and developing countries have highlighted the shortcomings of poorly regulated domestic financial systems. The general lesson is that reinforcing and extending financial regulation is essential to avoiding instability and crisis. However, a specific conclusion from the study of crisis in emerging market economies is that prevention of crisis in these economies involves elements that go beyond the regulation of the domestic financial systems. In emerging market economies, the conjunction of macroeconomic policy with the developing economy's insertion into the international financial system plays a crucial role in its financial performance.

In summary, the study of crisis in emerging market economies suggests that, in addition to straightening and expanding financial regulation, countries first adopt exchange rate regimes that prevent the speculation and provide flexibility to policy makers; second, implement measures pointing to the regulation of capital flows; and third, implement policy that ensures the robustness of the external accounts, including the accumulation of foreign exchange reserves and the preservation of competitive or nonappreciated real exchange rates.

The emerging market economies seem to have taken advantage of those lessons. Significant changes took place in . . . many emerging market economies in the 2000s. . . . There were important changes . . . in macroeconomic policy regimes and in the regulation of national financial systems. Many countries adopted monetary floating exchange rate regimes, generated current account surpluses, and accumulated considerable foreign exchange reserves. These changes are consistent with the preventative measures suggested by the study of emerging market economies briefly presented before. So it can be concluded that the robustness exhibited recently by the developing economies can be seen as a posteriori confirmation of those recommendations.

Before the eurozone economic crisis, our suggestions of preventive domestic policy were usually accompanied by initiatives that should be implemented at the international level. The building of an institution able to perform the role of lender of last resort in foreign currency for emerging market economies was one of the most often mentioned recommendations. In fact, some of the domestic policy recommendations—for instance, the accumulation of large volumes of foreign exchange reserves—were mainly intended to play a substitutionary role for such an institution. The recent experiences in the eurozone show us how far we are from the possibility of constructing a more rational and stable international financial architecture. The reason is simple: if governments' coordination to set up an efficient international arrangement to prevent a monetary crisis is so difficult in the European Union, what will be the possibility of such an arrangement at the global level?

Let me conclude that the establishment of the eurozone resulted in a time of crisis [that] originated in both financial regulation and . . . macroeconomic policy failures, as in the case of a emerging economies. In developed countries, it had happened before, in the '30s. But from Bretton Woods on, these types of crises were exclusive to developing countries. Where developing countries seemed to have learned from their own experience, the European Union appears to be wasting the opportunity to take advantage of it. I am nonetheless optimistic. There is always time to learn.

### Q&A

**Q:** I'm just curious what you think of the . . . success or failure of the Chiang Mai [Initiative] in Southeast Asia. . . . It's an agreement in Southeast Asia that pools reserves, and it overcomes many of the problems that the European Union has faced; it overcomes the problems of reserve accumulation that Latin American countries and Southeast Asia are facing as well, but it's not been so successful because of political failures. What do you think of the economic possibilities of the Chiang Mai agreement?

**RF:** There have been other initiatives beside Chiang Mai, . . . but maybe for the same reasons that the European Union has not progressed much in coordination, the results of these have been very limited. And this initiative in no case replaces the accumulation of national reserves at the national level. I don't think in the foreseeable future [that] international initiatives of this kind—agreements between emerging market countries—[will] replace the national accumulation of reserves. I would never recommend leaving this policy waiting for an international agreement to replace it, even at the level of the IMF [International Monetary Fund].

Let me point out why: there is a problem of incentive. Imagine that an agreement is reached in the IMF to constitute something like a lender of last resort of international currency for countries with debt distress. But in any case, the lending will have conditionality. So this conditionality will leave a remaining uncertainty that will determine a significant country risk premium in any case.

**Q:** I have a question about globalization. What lessons should . . . emerging countries at various levels of development learn from the US financial crisis as well as the European financial crisis? How do they protect themselves from similar crises?

**RF:** My presentation touched directly on this point, that emerging market economies have from the beginning . . . suffered numerous crises. The first were the Latin American crises that started in the early '80s and lasted 10 years . . . —the so-called "lost decade" because of the debt crisis—and then in Asia, also following the opening of the capital account. . . . Particularly after the Asian crisis and the Russia crisis, . . . the governments show that they have learned the lessons from this last crisis, the end-of-the-'90s crisis both in East Asia and the contagion effects in Latin America—the last crisis before the 2000s. And there was no other crisis in Latin America, [nor] in the rest of the emerging market economies. Even with the contagion of the American financial crisis in 2008, when the contagion spread all over the world after the Lehman Brothers bankruptcy, there was no financial crisis in the emerging market economies. So we're much more resilient than the eurozone economies, for instance.

Why? Because they changed not only national financial system regulations but also the insertion into the international financial system. For instance, they changed the position. Many countries started to show current account surpluses—accumulated reserves that operate as a cushion against negative real financial shock. All these measures . . . show their virtues in [light] of the contagion of the American crisis in 2008.

So I think that emerging markets have learned a lot. What emerging market economies are suffering now is the pressure of capital inflows that tend to . . . weaken the solid macroeconomic configuration that they started to adopt in the early 2000s. Maybe my position is a bit pretentious, but I think that eurozone countries and the United States have a lot to learn from the experience of emerging market economies.

**Q:** I have two questions. First, . . . you mentioned that you have disagreements with current policies in Argentina and elsewhere in Latin America. I'd be curious to know what those disagreements are. . . . My second question is related to something Professor Kregel alluded to, . . . that a number of emerging market countries are benefiting from agriculture and commodity prices. What are your thoughts on this? Could it lead to susceptibility to crisis in the future?

**RF:** I think that Argentine management of the crisis and the default of part of the public debt in early 2002, followed by a very rapid recovery—six months after the default, the economy started to grow again—was exemplary up to 2007. But from 2007 on . . . , there have been a lot of mistakes and errors in policy, particularly the . . . inflation of GDP figures that distorted the whole scenario of macroeconomic policy and changed the characteristics of the policy. . . .

On the second point, . . . the much stronger position and international robustness of many emerging market economies, particularly in South America, are related to the high price of metal and food commodities. As we here all know, this depends on the activity level of China and India, basically on the impact that this activity, the rate of growth of this very big economy [China], had on the rest of the world, which is the main determinant of the demand for . . . minerals, metals, and food. The future is now more uncertain than ever before, so I will read what Martin [Wolf] says in the *Financial Times* to follow this situation more closely. . . .

**Q:** Throughout the 20th century, many countries have had currency collapses. Argentina—correct me if I'm wrong—had four currency collapses. But in every instance, all of these countries had an alternate currency, that being the dollar.

Now we have an unusual situation where the dollar is weakening against the Mexican peso. The issue I'd like you to address is, how can any of these countries protect themselves, particularly Argentina, in the event that the purchasing power of the US dollar should . . . just collapse altogether, against all the currencies. . . ?

**RF:** A devaluation—a huge devaluation in the United States?

**Q:** Yes. The US dollar . . . was unique for a long time. It's not unique anymore; it's just another irredeemable paper-ticket money. . . . In the case of Argentina, how do you protect yourself if this paper-ticket money goes the way of all paper-ticket monies?

**RF:** You need two to tango. Currencies are appreciated or devaluated against the other, so . . . on the other side of the devaluation of the dollar is the appreciation process that many of the emerging market economies have been suffering from [since] the early 2000s—2002 and 2003 were the years where the real rates of exchange of emerging market economies was the most devalued. From 2003, it was a persistent appreciation trend vis-à-vis the dollar, and the euro also, in the real exchange rate of . . . the most important emerging market economies. That's a description of what happened. Was it so huge a devaluation? I don't know—20 percent, in the case of the dollar against the rest of the currency basket? Will it continue? Will there be another wave? I don't know.

But on your first point, on the ability of an economy to determine and protect some real exchange rate target, it is possible if there is a situation in which there is a targeted exchange rate and the central bank wants to preserve a supply of international currency in the exchange market. In this situation, the central bank has two instruments to preserve the targeted exchange rate: intervention in the exchange market to determine the nominal exchange rate, and intervention in the money market to sterilize the monetary resources of these interventions in the foreign currency market. This drives the economy to accumulate reserves, as the Chinese have been doing as well for years, and other economies are.

So it's perfectly viable. . . . If the local real interest rate is too high, . . . this policy is not sustainable in the longer term. But if, as is the case of Colombia and Chile, the economy enjoys a small interest rate, the policy is permanently sustainable, as in China it is permanently sustainable. If the capital inflow pressure is too high, it's inevitable to implement capital controls—what Brazil is doing now. . . .

A recent example of a successful central bank intervention to determine the exchange rate: the Swiss central bank. At 1.20 [CHF per euro, they will] buy all the euros you want to bring to the Swiss economy and fix a floor to the exchange rate. Why is this possible? Because of inflows. It's impossible, as Great Britain [has] proved many times, to preserve the exchange rate when you have capital outflows, because in the end it depends on the availability of reserves. And the availability of reserves, as Hickman said, is . . . a passing bird.

**Q:** I have a comment on something you said about how developed countries should learn from the experience of South America. The point you were trying to make, as I see it, is that you need . . . an external surplus in order to have some freedom in defining your national policies; otherwise, you are forced to accept either IMF conditionality or, as it happens in Europe, ECB conditionality. The thing is, you seem to echo another debate within the eurozone, which is that peripheral countries such as Italy, Spain, Portugal, and Greece should start an aggressive recovery strategy in order to gain surpluses that would allow them to grow out of the situation they're currently in. However, I do not see how that change could be made at all without having further deflationary pressures on the world economy. And I can certainly not see how that could be sustainable without the United States running very big deficits, as it has been doing in the last years, and that's adding to pressure on the domestic side with further extensions of private debt leveraging—which . . . have been said to be the root cause of the present crisis. So my question is, why do you think that export-led strategies . . .

**RF:** I didn't say that. . . . *Did* I say that about export-led strategies?

**Q:** You did say that we should learn from South America running a surplus. . . .

**RF:** Yes, but I didn't say what lessons have to be learned. . . . Let me comment more broadly.

It's obvious that Italy and Spain—Spain is suffering an attack now—are not able by themselves to develop an export-led growth strategy. . . . Given the European Union rules and the eurozone rules—it's a different discussion if Spain or Italy or Greece have to abandon this system—the only way to recover a growing aggregate demand is [for Germany to lead] the recovery of the whole eurozone. What could Italy do except try to send signals to the market in order to gain a favorable assessment? Or Spain? They're all doing the same, and this will take them nowhere. . . . When Argentina fixed the nominal exchange rate one-to-the-dollar, I participated in an IDB [International Development Bank] meeting in which [it was] advocated that [Argentina should instead] wait for the deflationary effects that [would] reduce nominal wages and . . . nominal prices, and this [would cause] . . . a real devaluation of the peso, of the domestic currency, and then Argentina [would] recover competitiveness and then start to export, and [balance] its current account deficit. [I said that] if it happened, it [would] take a very long time, and with extremely high social and economic costs in the process.

The same is taking place [now]. Waiting for . . . what they call [an] internal devaluation has failed everywhere in the world. There's no case of a successful gain of competitiveness based on reducing wages, except maybe now in some of the [Baltic countries]. But even there [the results are] ambiguous. . . .

Imagine a country like Italy or Spain enduring years and years of contraction in order to gain the reduction in nominal wages [that would enable them] to put the economy in a more competitive position. . . . What is obviously needed is an expansionary policy for the economy that is leading the whole European economy and that has enjoyed the best results—the best results for Germany—since the introduction of the euro. It's time . . . for Germany to take responsibility for what has been done, or to discuss, really, a way of disarming the euro—which would be a disaster for the world, I think.

Thank you very much.

**HENRY KAUFMAN**

*President, Henry Kaufman & Company, Inc.*

**In the Aftermath of the Financial Crisis**


I am delighted to address this forum again. I knew Hy Minsky. We sought out each other from time to time. He sought me, I believe, because he wanted to understand financial markets beyond what was visible to him from his academic perch. His fertile mind was sharp and inquisitive; his hallmark was to probe beyond the conventional wisdom.

As a result, in his day Minsky operated outside the mainstream of economic and financial thought. He labored in the shadow of the dominant fashions and modes of analysis; most notably, monetarism, rational expectations, econometric modeling, and financial deregulation. His work began to attract some attention during the travails of the 1970s and 1980s. But it took the recent massive financial crisis to bring Minsky's ideas into prominence.

Some are even calling the crisis a "Minsky moment." This observation is incorrect, as Minsky would be the first to point out. A "Minsky moment" comes at the peak of a typical financial bubble, when some kind of shock to lender and investor confidence triggers a reversal and downward spiral. Fairly soon thereafter, financial markets return to normalcy, setting the stage for another phase of investor enthusiasm. Minsky's central insight was that credit overexpansion, followed by overcontraction, was endemic to financial markets.

Even though there are now signs that economic expansion has returned, this does not mean financial normalcy has returned. The financial and economic crisis of 2008 ushered in fundamental changes that will persist for years to come. That is my topic today.

To begin with, consider household debt. We know that the expansion of household debt helped drive the pre-2008 economy. The contraction of household debt, which began in 2008, now appears to be over. However, household debt remains at historically high levels. And the conditions favorable to renewed household borrowing—such as low unemployment and rising household income—are not yet in place. The housing sector, with its continuing debt write offs and huge inventory of unsold homes, is another restrictive force.

Business debt, which expanded at double digits before the crisis, is also unlikely to return anytime soon. Businesses might borrow heavily again to finance new capital investments or rising inventories, except that excess capacity remains very high, both domestically and abroad. More broadly, new economic activity is faltering not only in key parts of Europe but also in much of the developing world. None of this bodes well for expansionary business borrowing.

Compared with many previous expansionary cycles, the quality of both household debt and business debt is well below par. So in spite of indications that the economy is beginning to expand again, the quality of credit will not match that in previous recoveries. And if the expansion falters, credit quality will degrade even further. Here are a few points of reference: In the 1970s, about 15 major financial institutions boasted AAA credit ratings. Today, there are none. In 1982, Standard & Poor's rated 61 nonfinancial corporations triple-A. Today, there are only four triple-A nonfinancials. Indeed, many of today's key financial institutions have credit ratings far below those of their borrowers.

What also sets the current crisis apart in the post–World War II period is the huge overhang of sovereign debt. For much of this period, sovereign debt problems were confined mainly to the developing world. Now they are endemic throughout the industrialized developed world. Recently, markets have focused most of their attention on Europe, where a flaw in the structure of the European confederation contributed to large scale debt overload. Even though continental Europe possesses a centralized monetary authority, it lacks a centralized fiscal authority. As a result, in making lending arrangements, monetary authorities failed to recognize rather stark differences in the creditworthiness of member-nations, which in turn led to some European countries borrowing well beyond prudent limits.

The undeniable fact is that the European Central Bank—the ultimate guardian of the euro and of the institutions operating within the euro framework—failed to pursue policies to rein in the excessive growth of debt. So now we have this extraordinary conflict between debtors and creditors within Europe. There is no easy way out. If the European currency is reconstituted with mainly strong countries as members, the costs will be incalculable. If the discipline imposed by creditors prevails, Europe's economic recovery will likely be tepid at best. If creditors accept major debt reductions, leading financial institutions will be forced to absorb losses on a scale that will severely limit their capacity to finance economic growth.

Europe's financial conundrum ensures that the US dollar will remain the world's key reserve currency for some time to come. Japan will not assume that role. Along with trying to extricate itself from a decade long economic slump, its sovereign debt is very high and its currency does not float freely. None of the leading emerging economies yet possess the kinds of legal, financial, and political institutions that would enable their currencies to displace the US dollar. To be sure, US sovereign debt is a serious matter. But it is currently a less intractable problem than in other leading nations.

The much more pressing challenge for the developed world going forward is whether or not the monetary approach to restoring economic growth will succeed. The major central banks in Japan and the West have embarked on new tactics and, in some cases, very aggressive measures compared with previous periods of monetary accommodation. We have ventured into a monetary no-man's-land. While the previous record of monetary policy was checkered, the new approach is decidedly untested.

This is not to say that previous monetary tactics remained constant over the years. In the early post–World War II years, the principal approach in the United States—called "bills only"—confined open market operations to US Treasury bills and was generally unobtrusive rather than interventionist. In the early 1960s, operation "nudge" and operation "twist" were designed to influence the yield curve in order to defend the US dollar's international role while also encouraging economic recovery. After that, monetarism was popular for a while, but failed because financial innovation blurred the definition of money. All the while, the Fed tried to encourage price stability, foreshorten recessions, and ward off financial mishaps. Its record on inflation and recession has been generally positive, with the notable exception of the 1970s. Its record on restraining the overexpansion of debt—the central cause of most financial crises—has been poor.

Now central bankers are embarked on an aggressive monetary strategy. The central tenets of this strategy are: first, official economic forecasts stretching several years into the future; second, an inflation target of 2 percent; and third, quantitative easing through the purchase of longer dated government issues. Considering the enormity of the financial and economic problems that the United States faced in 2008, the Fed's actions have accomplished a great deal. They have slowed the fall in housing prices, narrowed the yield differential between low and high credit quality bonds, lifted stock prices, and improved the balance sheets of financial institutions. So far, so good.

Nevertheless, these monetary tactics come with some vexing issues and underlying uncertainties. The basic approach is analogous to dosing a patient with steroids. Financial markets have been weaned on these doses. Going forward, whenever a financial or economic crisis arises (however minor it may seem in hindsight), investors will expect another dose of central bank accommodation or other monetary stimulation. Even a policy of holding short term yields in place and ending the purchase of coupon issues will probably steepen the yield curve and constrain financing that would help revive the housing market. In short, like going cold turkey, it will be no easy matter for financial markets to return to normal conditions after years of monetary dependency.

I also question the efficacy of the Fed's embrace of inflation targeting. Central bank officials claim there is no need to worry about a return of inflation anytime soon. They point to cost containment by high unemployment, and to excess production capacity. True enough. Still, a portion of our high unemployment is the result of structural elements, such as barriers to labor mobility—elements that cannot be cured by monetary measures alone.

Moreover, the Fed's inflation targeting aims at the core index for personal expenditures, excluding the cost of energy and food. This is dubious at best. It is worth remembering that this approach dates back to the 1970s, when then–Fed Chairman Arthur Burns excluded energy and food to minimize public perception of an outbreak of inflation at the time.

Even if food and energy are more volatile than other cost indices, it is risky and misleading to exclude them. Prices of these essentials clearly affect household spending. Moreover, by excluding the price of energy—especially oil—the Fed's monetary policy serves to support the pricing practices of the international oil cartel by supplying sufficient bank reserves to justify those prices.

The value of the Fed's Summary of Economic Projections that underpins its inflation projections is moot. These projections—for economic growth, unemployment, and inflation—extend three years into the future. But the fact is, since these projections were introduced, they have not been very accurate.

Timing shifts in monetary policy have always required considerable judgment. When specific inflation targeting is added to the mix, the challenge of correct timing becomes especially acute. How long will the Fed allow inflation to breach the 2 percent level before it pulls back on the monetary reins? For one quarter, two quarters, or longer? Suppose the unemployment rate falls to 8 percent but the inflation rate reaches 3 percent. What then? At a minimum, the new Fed approach will increase financial market volatility.

Acceptance of a 2 percent annual increase in inflation raises a financial volatility issue. Even more important, Fed actions to encourage or even allow inflation could seriously undermine public trust in the central bank, as Americans are forced to accept a substantial depreciation in the purchasing power of their currency. A 2 percent annual depreciation equals a compound loss of 22 percent over 10 years, or a 33 percent loss if the inflation rate is 3 percent. So we are confronted with a dilemma. The current monetary accommodation, aimed at encouraging economic expansion, is at the same time encouraging us to become greater risk takers. But while the Fed promotes risk taking, it does not at the same time underwrite our maturity and credit quality risks.

Other major central banks have embarked on far greater quantitative easing than the US Federal Reserve. The Japanese central bank, for example, has included all kinds of private securities, including equities. The European Central Bank's latest accommodation includes three year loans to member banks. These funds are being deployed at a favorable spread within the European debtor nations. Through this mechanism, the ECB is indirectly assuring the survival of the borrowing institutions and the weaker debtor nations in Europe. That is a heavy burden to bear, for the outcome is far from certain. But the ECB is now so entangled in the process that it cannot easily withdraw. In essence, the European Central Bank has on its balance sheet massive assets of questionable value. The borrowing institutions in the aggregate are protected by the ECB and, indirectly, so are the new investments of the borrowing institutions.

This enlarged central bank role in the financial markets is an integral part of a broader transformation in the structure of the markets both here in the United States and around the world. This is the impact and future consequences of financial concentration. In the United States, financial concentration increased sharply in recent decades. It got a substantial boost with the demise of the Glass-Steagall Act in the 1990s.

The Federal Reserve neither opposed—nor recognized the long term consequences of—the end of Glass-Steagall. In the days leading up to the 2008 crisis, financial conglomerates gobbled up many financial institutions. Once the crisis hit, many smaller institutions failed, while larger ones were bailed out by the government. A very high proportion of US financial assets are now held by a mere handful of conglomerates that are deemed "too big to fail." On the margins, smaller firms hold a declining share of financial assets. Several figures help illustrate how far we have lurched toward financial holding concentration:

> In the 1980s, the five largest banks accounted for 29 percent of total banking assets, or 14 percent of GDP. Today, they account for more than half of total assets, or 86 percent of GDP.
>
> Five banks—JPMorgan Chase, Bank of America, Goldman Sachs, Citibank, and Wells Fargo—currently represent 96 percent of the notional amount of all derivatives.
>
> In 2009, the four biggest banks originated 58 percent of all mortgage loans and controlled 57 percent of credit card purchase volume.[1]

In investment banking, many of the most prominent heritage names are no longer independent, or have disappeared altogether: E. F. Hutton, Kidder Peabody, Paine Webber, Dean Witter Reynolds, Merrill Lynch, Salomon Brothers, First Boston, Shearson Lehman, Drexel Burnham, Bache & Co., and Bear Stearns.

One notable example of consolidation through merger is J. P. Morgan. Its holding company structure now includes such prominent former institutions as Chemical Bank, Manufacturers Hanover Bank, Chase Manhattan, Bank One, Bear Stearns, Washington Mutual, and First Chicago.

Now, how can anyone state with reasonable objectivity that these amalgamations have improved the efficiency of financial intermediation—that is, the effective allocation of credit? The market making power of these few remaining institutions is staggering. Consider how many dealers are available to execute a trade today as compared with a decade ago. And as the number of market makers decreases, so does the depth of the secondary mark. Meanwhile, market volatility increases.

Financial concentration has other unwelcome consequences as well. It privileges large firm over small firm financing. The incentives for branch managers to serve their local community are relatively weak. Managers with ambitions to climb the corporate ladder will seek out big firm financing, even if it means jumping ship for a larger employer.

Financial concentration also complicates monetary policymaking. When conditions call for monetary constraint, which firms will be affected the most? Surely not the too big to fail giants, which will be largely insulated from central bank restraint. Rather, the smaller firms will feel the brunt of Fed tightening, and as a result, some will fail or be forced to consolidate with their larger counterparts. The result: greater concentration.

The official designation "too big to fail" places much of our financial markets under the direct control of government authorities. A very large and complex official supervisory network is now being put in place. These bureaucratic networks will have great influence over the allocation of credit, and, in the long run, large financial institutions will essentially become financial public utilities. The many provisions of the Dodd-Frank legislation certainly point in that direction.

So the trend is toward constraining the judgment of leading financial institutions. This is because their structure and decision making conflict in many ways with the public interest. These institutions operate on both sides of the market—as portfolio managers and institutional investors on the buy side, as underwriters and dealers on the sell side, and as financial advisers on both sides.

The Dodd-Frank legislation calls for the orderly dissolution of a too big to fail institution that might become financially vulnerable. The law stipulates that a government organization will manage the process. But this process will be much more difficult to orchestrate than the authorities imagine. These conglomerates hold securities and participate in markets with other institutions around the world. How would their millions of positions be unwound to the satisfaction of all parties? It is also reasonable to assume that most of the assets and liabilities of the failing firm will be acquired by one or more of the surviving behemoths—that is, by one of the too big to fail institutions—or by the government itself. Again, the result will be greater concentration.

It is possible that new technologies will erode some of the dominance of the huge financial conglomerates. Perhaps in the future the entire deposit function will be handled by some giant cloud-computer facility controlled and guaranteed by the government. At a minimum, I do not expect children born today will write checks, make deposits, or withdraw funds as most of us do today. The thousands of bank branches that dot the landscape will be converted into other kinds of businesses. The armies of financial advisers will be disbanded if lasting financial recovery fails to materialize and boost the savings of the entrepreneurial middle class.

These remain real possibilities. Major governments around the world continue to favor financial concentration while failing to actively oppose concentration in nonfinancial sectors as well. At the same time, new regulatory constraints on financial conglomerates could encourage them to seek out opportunities in developing economies, where securitization and derivatives are allowed to flourish with little or no restrictions.

Ironically, excesses in foreign, relatively unregulated financial markets cannot be insulated from more closely supervised markets here and elsewhere in the developed world. A defining feature of recent financial crises is the degree to which they have been genuinely global. More than ever, financial markets know no national boundaries.

For the moment, we can all breathe a sigh of relief that the economic recovery has taken hold. Looking down the road, however, we will be forced to contend with a financial structure that will constrain both our financial freedom and the effective allocation of credit. It seems more and more likely that the future will be one in which credit is socialized and our major financial institutions are financial public utilities.

## Note

1. Ira M. Millstein, "Should Regulation Supplant the Applicability of Competition/ Antitrust Principles in Dealing with Systemic Risk?" conference on "Financial Risk and Regulation: Unfinished Business," Richard Paul Richman Center for Business, Law, and Public Policy, Columbia Business School and Columbia Law School, March 27, 2012.

### Q&A

**Q:** I wanted to agree with you about the opposition to inflation targeting and ask you this question: The Japanese have been at that for a long time, and have never once hit their 1 percent CPI target—never once. I would argue that that's eroded the credibility of the Bank of Japan with the Japanese government and to some extent with the Japanese people. I want to know if you think that possibility could be in the Fed's future of eroding its credibility if it can't hit its target on a regular basis.

**HK:** The answer to the Japanese is, maybe they didn't try hard enough *[laughter]*. I can't answer that. I don't know what that full answer would be for them. I do think the erosion of the credibility of the Fed comes into play when we have the inflation index going to 3 percent, 2 1/2 percent, 3 1/2 percent; and the economic growth is still very moderate, and so on. Then there is a dilemma, because the market will be expecting a response, and the Fed will be assuring everybody this is temporary. This is a matter of not only analytics, but also a lot of judgment. I think that's when the issue is. It isn't right now. It isn't right now, because the 10-year government bond is at around 2 percent and the long government bond is around 3.2 percent, so there isn't that . . . lack of credibility. That would come later on.

**Q:** I never thought I'd feel that Henry Kaufman was an optimist, but on your comment about banking turning into a public utility, from where I sit it looks like the business model that collapsed the economy is all too intact, and that Dodd-Frank's strictures are being unraveled daily by the rule-making process and by litigation. So you really have the worst of both worlds in that you have this very toxic business model with the government being in a position to have to backstop it. That's not quite the same as socialism.

**HK:** . . . Of course Dodd-Frank is being unraveled. That you could have projected easily, because the moment for the government to act, meaning political leadership on both sides, is really the moment of the real crisis. And that's what happened in the 1930s. When you go back to the 1930s, the banking acts that were created, the spinning off of investment banks and all of the rules and regulations that segmented the financial system—that fervor occurred to some extent in the depth of the crisis.

Here, I think either it was political planning or it was naïveté that we came in and started to talk about the Dodd-Frank legislation and started to legislate well beyond the depth of that crisis, at least in the United States. So, to me, this is a political out, the Dodd-Frank, for both sides of the aisle, and we're unwilling to act decisively. Now they say, "But we have created this, and therefore it isn't our problem anymore." It *will* be our problem, because in the 1930s, whether we like it or not, we segmented the markets. There were many financial institutions that were spawned afterward, and then we gradually tore away the fabric of regulation and didn't want to sense what the risks were going to be and how the system should be managed when institutions are more deregulated. . . .

**Q:** In 1994–95, Congress passed legislation requiring Fannie Mae and Freddie Mac to reduce their credit standards—everyone should own a home. How much of this crisis we've gone through do you think resulted from that legislation?

**HK:** I think it's very hard to quantify as to the drive and the push that occurred to politicize those two institutions, Fannie Mae and Freddie Mac. There certainly was pressure on them to do more loans for low-income groups and for marginal borrowers. That pressure was there for an extended period of time. How much of the crisis is due to that, I cannot give you a quantitative amount.

However, we cannot at the same time claim that the rise of the derivatives, the rise of securitization, was all due to that development. And the growth of credit cards, for example, in the United States had nothing to do with this. We created a system in which liquidity was deemed to be liabilities that you could access, and the traditional concept of liquidity was the assets that you had on the balance sheet, so to speak—the cash, the accounts receivable, liquid assets, and so on—relative to your liabilities. Most participants in this system forgot that concept because the question was, "How quickly can I access and increase my liabilities?" That was facilitated to a large extent by the capabilities and ingenuity of very large institutions, not by the corner bank or the S&L; and that, of course, contributed to enormous growth of profitability for them for a short period of time.

**Q:** Could you comment on what government policies you believe should be implemented to improve growth, or increase growth, especially in relation to how government policy should address the housing market and what role tax policy should play—in other words, increase taxes, lower taxes, whatever?

**HK:** I would say to you, that is an encompassing question of magnitudes *[laughter]*. I'll only address a couple of those, okay?

I would decrease the power of large financial institutions. I would break them up. Now, we did that many years ago. I don't think it's that difficult a chore. There will be some who will claim, "But we have to compete internationally." If my former partner, Mr. Bloomberg, were here, he would defend New York, and say we can't do that. But that was the slogan about eight, nine, 10 years ago—that we have to allow this conglomeration so that our institutions can compete with all the other institutions.

Well, where's the competition from all the other institutions today? They erred worse than we did. And the Japanese institutions erred before we did, so to speak. So I think that is not a rational argument, number one.

Number two: there is no easy way out of this situation. I do think in the United States we have to persist with some fiscal expansion to underpin the system for the time being. The difficult part is to put in place a fiscal approach that will be believable, because if you look at forecasts of federal budgets for five, 10 years out, they're even worse than the forecasts of business corporations five, 10 years out. So the question is, can you get some credibility in there that you can vote something into being that will stick where you need a 75 percent vote to override it? I don't know whether any new president can achieve that.

Those are two things that I would be very much in favor of.

**Q:** Following up on that, what advice would you give to the Fed on the monetary policy side of it?

**HK:** I would speak more cautiously. There is a considerable amount of uncertainty in the future, and the Fed is trying to cast an aura of certainty. So far, that hasn't been achieved with these forecasts. I would indicate that there are barriers here to what the Fed is capable of doing, and we don't know when we have to reverse judgment. But we will do what we can, rather than to have a schematic drawing of the next two to three years of what the profile will be. I would say, "We will do everything that we can to encourage economic growth within reasonable constraints." And I think that should be the approach rather than to say, "We're going to get there, because our target is this." And I would never advise that, because, while you can you have econometric models, financial models, they don't serve you well in emergencies and in periods of uncertainties. To some extent, the repetitiveness of financial markets and events and economic events—there are overlays and averages, and if you pull them apart, there are pretty good extremes in between them. So I would be more cautious in my pronouncements. . . .

Martin—oh gee, I shouldn't ask a financial journalist to ask a question *[laughter]*.

**MARTIN WOLF:** The question actually is not in my capacity as a financial journalist. For my sins, over most of 2010 and 2011, I was a member of the United Kingdom's Independent Commission on Banking, and we, after long discussions, recommended what you might call Glass-Steagall Light. . . . This has never happened before in the UK, so it was a revolutionary proposal for us. We recommended the split of all [our banks]—we have only five banks that are everything now—that's where we start. I won't go into why we didn't break them up—that's a long long discussion. But essentially, what we recommended is that the retail bank and the investment banks be put in fully independent subsidiaries, with completely independent capital and liquidity requirements, and independent boards in the case of a retail bank with an independent chairman, so it would be separate from the bank; that the retail bank could not lend to the investment bank in any other way than it can lend to any other third party or any other financial corporation that is related to its capital—i.e., a very, very small amount of its balance sheet. So this is fairly close to, but obviously not the same as, Glass-Steagall.

My question is, do you think this idea is irrelevant, unworkable, or actually quite intriguing and something that possibly even the United States should think about? I'd be really interested in that.

**HK:** I would say, drinking "lite" is better than drinking big. So if I would have no other choice, I would take lite, because lite would be a deterrent at least for some period and of some magnitude. It's better than having a free system where you have all this interchange.

Now, one of the aspects that always troubles me is what we're trying to do is try to control the deposit function, most importantly, because deposits are sacred, and the deposits of small and even large magnitudes tend to be guaranteed by the government. And perhaps I would go one step further than you and I would say I would just have a deposit function—a narrow bank within that confine with a big wall around it. But then every brochure that is published by that large conglomerate would have to say, "You're dealing with an institution that's outside the wall." *Outside the wall.* Not in minor print, but in big print. If that's the case, that would be quite helpful. But the trouble with a prospectus is that the good stuff is in small print and the bad stuff is in big print, and so you would have to require it.

**Q:** In connection with breaking up the large institutions, I think it was around 1992 that Jerry Corrigan, when he headed the New York Fed, wrote an essay titled something like "Why Banks Are Special." The essence of that essay, if I recall, was that, because banks control the payment transfer system, we can't let them fail. How could you let J. P. Morgan or CitiBank fail? What about all the checks that are floating around?

So what I'd like you to address is, is there any reason in your mind why the payment transfer system cannot be spun off from all the other stuff that banks do—loaning, proprietary trading, whatever, none of which in my mind deserves the support of the public—and just limit them to payment transfer? What would you say to that?

**HK:** Payment transfers involve a host of transactions, among many things. There is a time frame involved in payment transfers. It isn't instantaneous—we haven't reached that full stage yet. Banks still work on "float," which is unthinkable today. So I'm not sure whether technologically we can do that.

But I do think, as I tried to say in my remarks, that someday the deposit function will be run by a governmental entity, will be guaranteed by the government, and will be outside the purview of financial conglomerates—of any institution. . . . Technology is going to have a lot to do with what you're recommending, and we may someday have the technological capability of doing it. And I wasn't joking when I said that my great-grandchildren—or my grandchildren—are not going to be writing checks, they're not going to be depositing, they're not going to be going into a branch. So Starbucks will have the opportunity to open up new outlets in all of those branches that are now used by financial institutions *[laughter]*.

**Q:** One of the areas that has not been talked about at all in the discussion of what kind of regulations are needed is something that many people think was one factor in the collapse of Lehmann and, some people say, even MF Global; and that is rehypothecation. I wonder whether you feel there should be some kind of regulation. By which I mean, in the United States, the broker, which is now the banker-broker in the big cases, can take 140 percent of the margin in the account and do with it as he wishes; although, if it gets paid for by the client, then that has to be returned. But what they do is, they have part of their contract say "Anything in the account you set up with us in New York can be moved to our subsidiary anyplace in the world," except that always means London, where there's no restriction at all on rehypothecation, and they can do it multiple times. So in the end, one repo gets rehypothecated to somebody else, and to somebody else, and, in the end, nobody knows where the money is—what's happened. As I said, it seems to be one of the reasons why accounts went missing for Lehmann.

Do you think there should be some control—maybe not allowing American institutions to do anything other than is permitted in the United States, for example? What do you think of that as an issue?

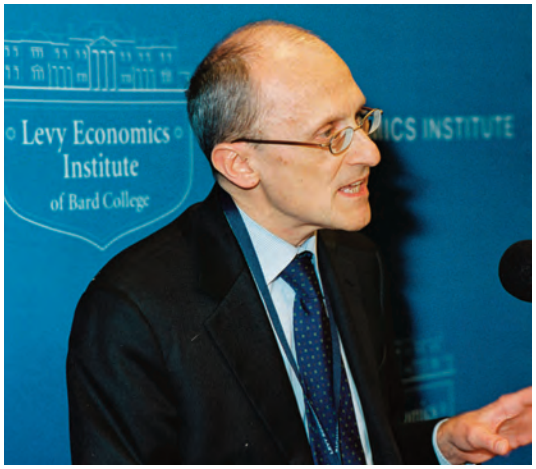
**HK:** I would agree with the recommendation. I have a good friend of long standing who many years ago said that the need is to put friction into the financing mechanism rather than to lubricate and lubricate it. I think that's still true—that some friction is very healthy. What the problem was over the last 10–20 years is that we lubricated the system more and more, and the machine was spinning and spinning. I don't think that is a prerequisite to a good financial system.

Anyway, thank you very much.

## ANDREA ENRIA

*Chairperson, European Banking Authority (EBA)*

**Supervisory Policies and Bank Deleveraging: A European Perspective**




This evening I would like to share with you some thoughts on the future landscape of the banking sector and discuss how policymakers could accompany the process of derisking that banks are undertaking.

I will present my assessment of what is currently happening in the EU banking sector and what we expect may happen over the next years. In particular, I will try to address three questions:

1. The first question is whether we are heading toward a significant deleveraging in the EU banking sector.
2. The second one is whether adequate policy measures can ensure that this process occurs without major damage to the real economy.
3. The third question is whether macroprudential supervisory tools can be designed to prevent excessive leverage [from building] up again in the future and operated in a smooth fashion when applied to cross-border business.

### 1. Do EU banks need to undertake a significant deleveraging process?

The financial crisis has its roots in multiple imbalances at the global level and has been triggered by the fall of asset prices. How a decline in asset value led to a major crisis at the global level has been vividly illustrated by Olivier Blanchard (2009):[1] first, the underestimation of risks and disaster myopia, something not really new in prolonged periods of benign market conditions; second, the difficulties in valuing some categories of assets and new financial products; third, the interconnections among financial institutions due to the growth of securitization and globalization; [and] finally, the increase of leverage, with financial institutions financing their portfolios "with less and less capital, thus increasing the rate of return of capital." It is clear that the higher the leverage, the more likely it is that [the] decline in asset values determines the depletion of capital. In fact, extensive research in this respect demonstrates that the procyclicality of leverage acts as [an] amplification mechanism propagating adverse shocks to the real economy.[2]

Encouraged by a low-interest-rate environment and by regulations lagging behind financial innovation, banks could boost the size of their balance sheets and activities. This process entailed the growth of trading activities and investment banking, but also of retail lending, primarily of residential mortgages. The main drivers of leveraging have been real estate and structured finance, and, more generally, trading book activities. For 70 of the largest EU banks, the exposures in the "held for trading" and "available for sale" portfolios increased by 68 percent between 2005 and 2008, with a sharp 24 percent decrease in 2009.

The different drivers were deeply interlinked and worked together, with optimism and the underestimation of risk contributing to banks' excessive leverage. Leveraging up was considered . . . a legitimate strategy to maximize earnings and, thus, to satisfy the search for yield of market investors. Indeed, until 2007, the banking sector experienced profitability levels well above any other economic sector and banks reported returns on equity exceeding their normalized earnings capacity on a risk-discounted basis.

Since 2007, confronted with an unprecedented financial crisis, banks have shifted to liability-driven strategies: obtaining the necessary funding in the form of deposits or of market resources became the paramount strategic goal. Both in the United States and the European Union (EU), deleveraging was seen as part of a necessary adjustment to remove excess capacity and restructure balance sheets, and to set the basis for a more stable and sound banking sector. Indeed, empirical research suggests that some deleveraging is unavoidable after a crisis: according to the Bank for International Settlements (BIS 2010), debt reduction followed 17 out of 20 banking crises that were preceded by a surge in credit.

However, the response to the crisis has been diverse on the two sides of the ocean. While US banks have reduced their leverage and reliance on wholesale funding, until recently, European banks remained, on average, more reliant on wholesale funding, and leverage levels—while decreasing—remained comparatively high. This makes the EU banking sector more prone to structural and cyclical deleveraging pressures.

In the United States, deleveraging has been significant. For the top 10 banks, the tangible common equity ratio (the ratio between tangible equity and tangible assets) increased from 5.7 to 7.8 percent between 2005 and 2011. In the EU, the same ratio shifted from 3.4 to 4.5 percent for the 70 banks participating in the EBA recapitalization exercise.

The figures on the level of leverage should be interpreted with great caution. There are in fact a few explanations for the difference between the United States and the EU that are not linked to banks' behavior but rather to the local regulations and the characteristics of the financial markets. Let me provide some examples.

First of all, off-balance-sheet exposures that are typically excluded from the computation of traditional leverage measures are of different size across banks, with US investment banks being typically outliers.[3] Moreover, and most important, accounting rules may hamper the comparison, as measures of leverage differ to a significant extent under US GAAP and IFRS standards. Finally, after the freeze in the securitization market, European banks have further developed the practice of funding mortgages through covered bonds. Therefore, European banks keep mortgage exposures in their balance sheets, as opposed to US banks, which can securitize and easily divest their mortgage portfolio, primarily via the government-sponsored entities (GSEs).

Furthermore, other factors may explain why the change in banks' leverage has been more pronounced in the United States than in the EU. In the United States, it is easier for banks to sell assets due to the disintermediated structure of the financial sector, where capital markets play a pivotal role. Bank deleveraging is therefore structurally easier, but indebtedness is in fact transferred from banks to other players [who are] often not subject to equally stringent regulations or not regulated at all. Also, as the crisis kicked in, we [witnessed] aggressive reduction in indebtedness levels by both households and businesses in the United States, which, so far, has not been the case in the eurozone. This suggests that demand factors also matter, and that they [were] intertwined with the debt level of the private sector at the onset of the crisis.

On the last point, the data provide a mixed picture. In the United States, households confronted the crisis with higher debt levels than the euro-area ones. In 2007, the debt-to-disposable-income ratio was about 140 percent, against 110 in the euro area. The divide is even clearer looking at the mortgage-to-disposable-income ratio (about 100 percent in the United States, versus 60 in the eurozone). In 2010, notwithstanding the debt reduction in the United States, the ratio was still at 120 percent. As for the corporate sector, in 2007, the leverage ratio (measured as the ratio of financial debt to financial debt plus capital) was about 30 percent in the United States, compared to 37 in the euro area (35 and 42 percent, respectively, in 2010).

It is also fair to acknowledge that deleveraging has been prevalent at financial institutions—larger banks and broker/dealers—that grew their balance sheets aggressively by increasing debt and assets in the upswing, a trend that has been more pronounced in the United States.

All these arguments point to a complex picture in deleveraging dynamics, but a simple fact still holds true: differently from their US peers, EU banks, until recently, . . . reduced their leverage almost exclusively through an increase in their capital levels, while the size of their balance sheets . . . remained almost unchanged—if anything, it [grew] further. . . .

All this has changed with the bursting of the sovereign debt crisis in the euro area. Strong pressure for deleveraging emerged in Europe during the final quarter of 2011, with the freez[ing] of the markets for medium- and long-term bank funding. While this has been a source of concern, at this stage there is no evidence that the deleveraging process has become excessive or disorderly, with disruptive consequences [for] the real economy. According to the BIS (2012),[4] European banks offered for sale a significant volume of assets, mostly those with higher risk weights, including low-rated securitized assets, distressed bonds, and commercial property. In the last quarter of 2011, credit to nonbank private sector borrowers in the eurozone fell by around 0.5 percent, while exposures toward non–euro area residents declined by almost 4 percent. The home/regional bias in deleveraging is partly the result of banks' deleveraging pecking order and partly of difficulties in US dollar funding, which [has] remained more expensive and less readily available than home-currency funding for many European banks due to the reduction of prime money market funds' exposure to euro-area banks.

I would suggest some of the rationales for bank deleverage in the EU.

Funding shortages have certainly been a key driver. We . . . all witnessed the dramatic market funding freeze during the second half of last year for EU banks, alleviated some months ago by new regulatory and policy initiatives, primarily the European Central Bank's three-year long-term refinancing operations (LTRO), but also state guarantees for new bank bonds.

EU banks are now facing longer-term challenges and deleveraging is the way for aligning the business model to markets' expectations and to the incentives posed by regulatory changes. Unquestionably, there is a need for derisking, bringing leverage to more conservative levels. Indeed, a number of European banks have not yet completed the cleanup of their balance sheets and shedding of legacy assets. In addition, those banks that received public support are required under EU state aid regulation to dismiss part of their business to minimize competitive distortions. Banks may also need to rethink their involvement in investment banking and related activities, as well as attempt to reduce their dependence on less stable sources of funding—such as short-term wholesale financing—as a response to the new rules introduced by Basel 2.5 and 3.

Hence, my answer to the first question is that the EU has so far avoided a disordered deleveraging process driven by a massive funding squeeze, thanks in particular to the actions taken by the ECB. But a downsizing of banks' balance sheets has started and has to take place, in order to unravel some of the processes that . . . triggered the financial crisis. This is necessary to bring banks back to sounder and more stable business models. Several estimates have been put forward by analysts on the likely dimension of this deleveraging process. I don't think regulators should have a view on the overall size of the adjustment, but they should be aware that there is still some way to go and they should keep putting pressure on banks to complete the repair of their balance sheets.

## 2. What policy actions [are needed] to avoid negative repercussions on the real economy?

A recurrent theme in the recent debate has been the claim of the banking industry that the regulatory reforms would have a major adverse impact on growth and employment. Deleveraging has often been characterized as "bad," as implying reduced flows of lending into the real economy. But deleveraging could be both "bad" and "good," simply because reducing the size of different components of a bank's balance sheet can have different impacts. The point is whether we can disentangle possible trajectories for deleveraging and deploy policies that favor an orderly deleveraging process, which does not hurt growth prospects.

For example, deleveraging is welcome when it entails dismissing or writing down troubled assets accumulated by banks before the crisis. In most postcrises periods, we have witnessed a massive deleveraging process, which often is simply reflecting the cleaning of the banks' balance sheets. The size of banks' balance sheets shrinks simply because losses are recognized and accounting values revised downward. This process has no adverse real impact, as it does not change in any way the amount of loans.

On the contrary, there is a good amount of evidence that if residual credit risk is not recognized and dealt with, it is likely that the economy [will remain] in a prolonged period of stagnation associated with a failure to address nonperforming assets. Forbearance can be a force for good where a loan has a reasonable prospect of an imminent return to performance. However, it can be pernicious for both the borrower and the lender to maintain nonperforming loans on balance sheets for prolonged periods.

When a universal bank with extensive activities in both investment and wholesale banking on the one hand, and retail and commercial banking on the other hand, decides to derisk away from market activities, the investment banking / trading portion of the balance sheet will naturally shrink. This may in fact be a good thing insofar as derisking is concerned, and, indeed, some regulators required banks to do that at the height of the crisis. [However], indiscriminately cutting lending to the real economy may lead to an economic slowdown and possibly to a credit crunch. And I include here not only lending to the domestic economy by the parent bank but also real economy lending in other countries where the bank has subsidiaries.

This is a very sensitive issue in the EU, where, for instance, subsidiaries of Western EU banks play a major role in Central and Eastern Europe.

Disentangling good and bad deleveraging is part of the usual dilemma for policy makers during a crisis. On the one hand, there is the willingness to prevent a sharp contraction in credit supply to firms and households, and, in turn, negative repercussion on economic growth. On the other, some adjustments and repairs in banks' balance sheets are vital to restore the confidence in the financial sector and restart credit markets. And the Japanese experience warns us that forbearance—late recognition of losses, delayed restructuring of balance sheets, deferred capital raising—can produce harmful consequences.[5] Tang and Upper (2010) remind us of this lesson: "Fix the banking system first."[6]

It has been noted that "getting rid of the non-strategic assets that normally hang around after a long merger-wave . . . is a responsibility of individual banks and their senior management, but moral persuasion from regulators and governments is also needed. Managers and directors can have a vested interest in preserving the present size, which can make it easier to extract private benefits and pursue rent-seeking behaviour."[7] In that respect, we should welcome the fact that the waterfall of deleveraging is also driven by regulation.

This leads me to the second question: what policy actions can be set up to ensure that only good deleverage takes place?

The first element of the policy tool kit should be an incentive-compatible regulation. If rules are properly designed, the cost, in terms of capital and liquidity requirements, of holding riskier assets is higher, providing the right incentives to what I called good deleveraging. And I assume there is still agreement on the fact that certain activities have contributed more than others to the buildup of vulnerabilities in banks' balance sheets. For example, deleveraging trading and investment assets is the consequence of a more demanding regulatory framework—Basel 2.5 and 3, and the Dodd-Frank Act—that affects primarily market risk and trading book exposures.

The second element is to put banks in the condition to keep granting credit to the economy. In Europe, the initiatives for restoring market confidence have been incisive. The operations to support liquidity approved by the European Central Bank have alleviated the pressure on bank funding, even though restoring the access to private markets for long-term funds remains an important policy objective. While easing funding pressures on banks was essential to avoid a disordered deleveraging process, policies need to be put in place that encourage banks to repair their balance sheets and strengthen their capital positions. The EBA required banks to form a capital buffer that [would] enable them to reach a Core Tier 1 ratio of 9 percent, after a prudent valuation of the banks' sovereign exposures. This is a temporary and exceptional buffer to address the systemic risk arising from the sovereign debt crisis. In order to discourage banks from complying with the recommendation by simply curtailing lending, we laid down precise guidelines and asked the banks to submit plans for recapitalization, describing the steps they intend to take in order to reach the required level of capital.

Only a limited number of measures to reduce assets are allowed to meet our request: while it will be possible to transfer certain categories of activities to third parties—since this does not reduce the leverage of the system as a whole—reductions in lending will not determine any capital relief for banks, unless they occur within restructuring plans required by the EU and the IMF [International Monetary Fund] or per requests by supervisors.

The plans submitted by banks—and currently being carried out under the scrutiny of national supervisory authorities and the—are encouraging. The actions that banks intend to put in place for reaching the target capital level focus predominately on direct capital measures—issuance of new capital, retained earnings, conversion of hybrid instruments into common equity. Overall, direct capital measures cover 96 percent of the shortfall. In a small number of cases, reductions in lending into the economy are included in the plans. The majority of these deleveraging activities correspond to conditions laid out in EU state aid rules or other official programs to ensure appropriate restructuring and [a] return to long-term viability. In practice, less than 1 percent of the total measures will be represented by [a] decrease in lending.

But let me turn to another important point. Over the last months, there has been some dispute on the role that supervisory pressure for strengthening capital levels played in the deleveraging process, particularly in the EU. In fact, asset deleverage has been primarily driven by a change in strategy and derisking, reduced credit demand, and funding constraints, much less by additional needs on the capital side.

In Europe, the deleveraging process began long before the EBA started to consider banks' recapitalization needs, and it was closely linked with the difficulties banks had in collecting funds on the market at a reasonable cost.

On this, I want to be blunt: I do not believe that high levels of capital are a deterrent to new lending. On the contrary, banks with low capital levels—or perceived by the market as being so—are those that have had problems in increasing lending. They either face major funding difficulties—which, in turn, do not allow them to grant loans—or focus primarily on preserving their meager capital. Banks with large capital positions, by contrast, are less sensitive to cyclical shocks and more likely to pursue lending growth strategies.

Indeed, last September, the IMF warned that "a number of [European] banks must raise capital to help ensure the confidence on their creditor and depositors. Without additional capital buffers, problems in accessing funding are likely to create deleveraging pressures at banks, which will force them to cut credit to the real economy,"[8] and the European Systemic Risk Board (ESRB) emphasized the need for coordinated efforts to strengthen EU banks' capital.[9]

The EBA's recommendation for temporary capital buffers is consistent with the lessons learnt from previous crises, responds to the IMF and ESRB warnings, and meets market expectations for higher capital levels. It has pushed a rebalancing of the deleveraging through a major increase in capital (€115bn) and, at the same time, it only allowed for good deleveraging.

Going forward, supervisors need to maintain their focus on asset quality, making sure that residual credit risk is properly addressed and losses are fully recognized. This should also help driving market values and book values closer to each other, thus supporting the issuance of new equity.

At the same time, supervisors need to work with banks to identify pathways to new and diverse sources of funding, with less reliance on short-term wholesale funding than in the past. This rebalancing in the funding models is a necessary component of a process that will lead banks to gradually exit from the extraordinary support measures provided by their central banks. An important component of this strategy could be supporting industry initiatives to reestablish a sound and well-controlled market for securitization. These actions on assets and funding should help banks refocus their business models so that their activities are sustainable and reflect their areas of comparative advantage.

### 3. Which policy tools [are needed] to prevent boom-and-bust cycles in integrated financial markets?

The final issue I want to tackle this evening is whether policymakers can reduce the probability of future boom and bust cycles devising effective preventive tools. The Basel 3 framework does envisage instruments that should contribute to smoothing the fluctuations in the financial sector. At the microprudential level, higher requirements in terms of quantity and quality of capital should structurally reduce banks' risk taking. In addition, the leverage ratio will set a ceiling to non-risk-weighted exposures in buoyant economic conditions. At the macroprudential level, the countercyclical buffer regime will require banks to build up capital cushions in good times—when risk is underestimated—to be deployed for covering losses when the cycle reverts and, thus, supporting the economy when this is most critical.

The effectiveness of this tool kit in preventing excessive leveraging and abrupt deleveraging is still debated at the global level and particularly in the EU, with some jurisdictions claiming that the current steps toward strengthening prudential rules may not be sufficient.

In the EU, we are working for completing the implementation of Basel 3 in our legislation as soon as possible. Indeed, we realize that the breadth of the regulatory reform is such that it is producing some degree of uncertainty in the marketplace. Our priority is thus to reduce this uncertainty and provide an environment in which banks—and investors providing banks with the necessary funds—can again do their planning [from] a long-term perspective.

What makes Europe—I believe—an interesting case study is the fact that we are committed to achieving a single rule book for financial markets—that is, a common set of fully harmonized rules that will be binding and directly enforceable in all EU member-states. While the single rule book remains a shared goal, there is at the same time a call for greater flexibility at the national level, in order to favor the implementation of macroprudential policies.

Undoubtedly, there are strong arguments in favor of some flexibility in the use of macroprudential instruments. First, systemic risk may materialize in different ways and no predetermined rules could address it. Second, since credit and economic cycles are not fully synchronized across EU countries and financial markets are still heterogeneous, member-states may necessitate some room for maneuver in the activation of policy measures. Third, the development of macroprudential instruments is still at an early stage and some flexibility may contribute to the learning-by-doing process.

At the same time, the establishment of any flexible macroprudential framework in Europe should not jeopardize the single market. What happened during the crisis has warned us that the integration of financial and banking markets cannot be considered a permanent accomplishment if it is not underpinned by effective harmonization of the legal framework and its consistent application throughout the Union. We have all witnessed how the single market may well prosper when the economic cycle is upward, but it may well implode in downturn cycles if no coordinated responses are developed. We are currently witnessing a major retrenchment of banking business within national borders. Cross-border banking is significantly downsizing. The money market, which was the most integrated market since the introduction of the euro, has virtually disappeared, and the limited signs of recovery in interbank transactions that materialized since the ECB's LTRO are remaining mostly within national borders.

The deleveraging process is being driven by the requests of authorities to hold significant capital and liquidity levels in domestic markets and to refinance the local economy. At the moment, we are facing a high likelihood that the deleveraging process will occur with a segmentation of the single market in banking. This might well endanger its ultimate goal: wider and deeper financial markets offering better and more financing opportunities for real economies.

This does not imply that no discretion should be left to the national authorities in shaping their macroprudential tool kit, but rather that this should happen under a coordinated approach based on strong ex-ante guidance and credible ex-post reviews of the measures adopted at the national level.

The level of flexibility to be left to the macroprudential supervisors is also linked to the objectives that macroprudential policies are expected to achieve. And it is fair to acknowledge that there is no clear agreement on this. According to a first viewpoint, macroprudential policy plays primarily a passive role, complementing traditional microprudential supervision, which neglects the time dynamics of credit markets, and ensuring that capital resources are adequately allocated across time, building reserves in good times that can be run down when economic conditions deteriorate. The second perspective regards macroprudential tools as an effective and wide-ranging mechanism for leaning against the wind—i.e., for reducing banks' incentives to expand credit and leverage in buoyant economic conditions, thus avoiding credit bubbles.

While the two perspectives are not necessarily mutually exclusive, they have different consequences in terms of design and use of the policy tools. In the first case, they aim at being neutral and rule based. Some discretion may be left to the policymaker, but it is typically residual. In the second case, much more discretion is needed and the policymaker is endowed with a significant degree of freedom in adapting the policies to the specific juncture. In this case, however, it is crucial to preserve consistency in the activation of macroprudential tools and to avoid unintended consequences when they interact with microprudential tools. In a nutshell, greater discretion needs to be balanced with some pre-agreed principles on how discretion can (or cannot) be exercised.

The functioning of the countercyclical buffer—a key element of the Basel 3 macroprudential toolbox—is a good example. As currently foreseen, national authorities will be given the possibility to activate additional buffers reflecting the conditions of the credit cycle in their jurisdiction. In Europe, the ex-ante guidance, to be issued by the . . . ESRB, coupled with an effective ex-post peer review process, should guarantee that these tools do not alter the level playing field and are compatible with the single rule book. The approach followed for designing such a tool could be followed also for the introduction of other components of the macroprudential suite.

My answer to the initial question is therefore mixed. We have some tools—the leverage ratio and the countercyclical buffers—but we still do not have a well-structured suite of macroprudential tools and specific rules of engagement for their employment. In addition, all measures have been focusing so far on the banking sector, while a sizable share of the leveraging up of the system in the past was driven by other financial institutions.

Looking at the implementation, we are running the risk [of opening] a wide area for discretion in national supervisory implementation, with national policymakers—not only in Europe—potentially able to hide everything under the macroprudential umbrella. In that respect, a constrained discretion regime for macroprudential policies—along with harmonized microprudential rules and homogenous supervisory practices—is the only avenue for ensuring that the same sources of systemic risk are addressed in a consistent way across countries, leveling the playing field and reducing spillover from less to more conservative jurisdictions. Systemic risk [can no longer] be contained within national borders and requires coordinated policy responses.

## 4. Conclusions

Today, I tried to argue that a deleveraging process is needed in the banking sector. It has already started, with a different pace in different areas of the global financial system. The first step has been the increase in capital levels, long overdue and one of the cornerstones of the regulatory reforms endorsed by the G-20 leaders. The second step implies a reduction in [the] size of balance sheets, especially by addressing nonperforming assets and derisking in areas such as capital market activities and real estate lending, which grew too much in the run-up to the crisis. The third step entails a refocusing of business models, especially toward more stable funding structures and the gradual exit from the extraordinary support measures put in place by central banks.

I have seen no compelling evidence supporting the industry's argument that the regulatory reforms will bring about an unwarranted deleveraging process, badly hurting the real economy. On the contrary, I am convinced that without an ordered deleveraging process, through a significant strengthening of capital and a selective downsizing of asset levels, we would fail addressing the fragilities that are preventing banks from performing their fundamental functions.

A point I acknowledge in the industry's criticism is that in the path to the new equilibrium, authorities need to provide for regulatory certainty and close coordination of actions.

Supervisors and central banks have to carefully coordinate their actions to accompany this process and make sure that it occurs in an orderly fashion, without hampering the continued flow of lending into the real economy. In particular, in deploying their armory of tools, including the new macroprudential instruments, national authorities should avoid policies too narrowly focused on domestic objectives: if the deleveraging process is shaped by policies aimed at maintaining domestic assets while derisking in foreign jurisdictions, we risk triggering a segmentation of financial markets that may well hamper growth and employment. This is particularly true in the euro area and the EU, but has a more general relevance for global financial markets.

Thank you for your attention.

## Notes

1. O. Blanchard (2009), "The Crisis: Basic Mechanisms and Appropriate Policies," IMF Working Paper 09/80, 2009.
2. B. S. Bernanke and M. Gertler, "Inside the Black Box: The Credit Channel of Monetary Policy Transmission," *Journal of Economic Perspectives* 9, no. 4 (Fall 1995).
3. S. Kalemli-Özcan, B. E. Sorensen, and S. Yesiltas, "Leverage across Firms, Banks, and Countries," NBER Working Paper No. 17354, August 2011.
4. Bank for International Settlements, *BIS Quarterly Review*, March 2012.
5. R. J. Caballero, T. Hoshi, and A. K. Kashyap, "Zombie Lending and Depressed Restructuring in Japan," *American Economic Review* 98, no. 5 (December 2008).
6. G. Tang and C. Upper, "Debt Reduction after Crises," *BIS Quarterly Review*, September 2010.
7. M. Onado, "Restructuring European Banking Systems," VoxEU.org, September 2, 2012.
8. International Monetary Fund, "Global Financial Stability Report," September 2011.
9. European Systemic Risk Board, Press Release, September 21, 2011.

### Q&A

**JAN KREGEL:** Andrea has kindly accepted to take questions. Before we do that, I'm going to ask him to give a brief explanation of the existence of what are a series of new authorities within the European regulatory structure, because those of you who are familiar with European regulation, you know that we have a European Central Bank that creates a common currency. Every country maintains its own national regulatory authority and, as a result of the crisis, Europe has created a series of authorities that cover the wide range of financial institutions. The question is, just exactly what is the power of these particular institutions?

There are some people who have argued that Andrea himself may be willing to circumvent the European process of going through a national parliament and to impose regulations on financial institutions directly from the EBA. So I think before we start the discussion, it would be useful to have a simple explanation of just exactly where the EBA sits in terms of the European regulatory structure, and just exactly how powerful, in fact, it is or eventually will become.

**AE:** Thank you. A simple explanation of EU arrangements is a sort of oxymoron, but I'll try to do my best *[laughter]*.

[There] are three new . . . regulatory authorities: one in banking, which is the European Banking Authority; one in insurance and occupational pensions; and one in securities markets. Then there is the European Systemic Risk Board, . . . a sort of macroprudential authority closely related to the ECB that is more, let's say, the counterpart of the FSOC [Financial Stability Oversight Council] here in the United States.

What are the powers of the regulatory authorities? Well, we are not trying to circumvent the regulatory process. There are deliberate institutional decisions that some regulatory powers will be delegated to us by the European Parliament and the council and member-states, which means that the technical aspects of regulations—basically, the rules that we will write will directly bind in the 27 member-states without any need for passage in the national regulatory process. To give you an example, let's say, for the Basel 3 process, we showed a few days ago a consultation package on . . . the definition of capital. . . . Once approved, these standards will define what is common equity Tier 1, what is additional Tier 1, and what is Tier 2, in all the member-states across Europe. So the first point is rule making and a single rulebook—having a common set of rules that are exactly the same across the board in the single market.

Our powers become less clear and a bit more nuanced when we move to supervisory responsibilites. Day-to-day supervision remains with the national authorities; the day-to-day supervision of individual banks is not our responsibility. But we do have some powers and responsibilities there as well; for instance, to coordinate stress tests at the European level. As the US Fed has done here, we are [following] the same process—we did it last year—and also the recapitalization process I mentioned in my speech. Also, there are some cases—for instance, in an emergency or when there is a breach of European law—where we can recommend a set of actions to the national authorities, and if they don't take these actions, we can override them and directly impose these actions on the banks; but it's a very narrow set of actions. So the day-to-day supervision remains with the national authorities, and we have more of a coordinated function and role in the colleges of supervisors.

I hope this gives a rather simple picture.

**JK:** As you say, in Europe nothing is ever simple; but . . . the transition toward the increased centralization of regulation seems to be quite clear.

I think we have probably half an hour for questions.

**Q:** Given your description of various European institutions and the emergence of new ones, and since you were a student of Minsky, my question is, do you think the European institutions today, as they have evolved, ensure financial stability in Europe?

**AE:** Well, that's our mandate, so we're doing our best. Whether we will succeed, that's a different question.

**Q:** You mentioned the use of guarantees by national authorities of bank liabilities. Do you think there could be more use of that in the current situation?

**AE:** To be completely honest with you, it is not a secret that the EBA and I myself have pushed a lot for European guarantees of bank funding. That's because, in a sense, national guarantees are not of great use. The funding problems for the banks have been triggered by this sovereign debt crisis, so in most cases the banks that were under the most extreme funding pressures were the banks headquartered in the countries that were perceived to be the weakest and that were under stress as sovereign; so the sovereign guarantee was not of great value to them honestly. This process has created an interconnection between the banks and their sovereigns that is at the base of the current phase of the crisis. So in my view, the only way to disentangle this vicious cycle is to have a European, let's say, type of guarantee on bank funding.

I would have viewed positively a European guarantee on bank funding also, because it could have come with attached conditionality. So, in granting guarantees to the banks, you could have also attached . . . to these guarantees some conditions in terms of repair of the balance sheets by the banks; this is not the case when you go through national processes. Honestly, I think they have been useful to some extent. They have helped in generating, in any case, eligible collateral. We are now in a situation where shortage of collateral is probably less likely, and this was important for the situation we were in in the second half of last year. But [these guarantees] were not as powerful as a European guarantee would have been.

**Q:** You mentioned that there might be a need to mark to market the sovereign debt that's being held by the European banks. I'm wondering if this might cause a problem for countries like Spain and Italy [in auctioning and refinancing] their debt, given that potential buyers would know that the debt would immediately be discounted by the markets. Also, it appears that the central banks have been very active in expanding their balance sheets and buying sovereign debt. The second part of my question is, is this an attempt to support the market price of that sovereign debt?

**AE:** The decision to . . . ask the banks to build up . . . a capital buffer, which was also based on the mark-to-market of the sovereign exposures, has been very controversial, both at the supervisory table and in the debate with the central banks. . . . I'm not . . . convinced that mark-to-market is the [solution] and should always be applied. I'm also sometimes concerned that there could be some procyclical effects of mark-to-market. But in the case we were in in the second part of last year, I think this was a choice that was unavoidable.

There was great concern about the exposures of the banks to sovereigns. The crucial point was liquidity—the funding—and if banks have to use their stock of treasuries as their liquidity buffer, they need to be able at any moment to liquidate it in the market at the current price. So if you want to really ask banks to, let's say, beef up their capital levels, it was difficult at that stage when the main concern about bank solvencies was referring to their sovereign exposures. It was difficult not to go through the buildup of a sovereign buffer that was also taking into account the mark-to-market of the exposure.

Going forward, probably we will have to apply the regulations as they are. For instance, . . . if I look at stress tests to be performed in the future, I think that we should apply the Basel 3 framework, which envisages that all the assets in the trading book and the available for-sales are mark-to-market, and the assets held in the held-to-maturity book are not. . . .

In the recent [crisis], . . . all the books were mark-to-market because it was really the elephant in the room. It was really the major concern in the markets, and so we had to apply [it] to all the exposures of banks. I still think that this was the reasonable thing to do at that stage. What we did, however, was to fix the date in which this was done, which was the end of September 2011; [these were] very stressed valuations, in any case. But we fixed the date in terms of pricing and stocks so that there was no incentive for the banks to download their sovereign book with a view to reducing the capital requirement in a sense. We tried, in any case, to avoid this requirement becoming too procyclical.

**Q:** I may be treading on a path of imperfection of information, but reading some of the news, I read that European national banks were heavily involved in securitized markets, and that was one of the problems. I was wondering, now and in the future, do you see local banks in each nation following the example of America and creating securitization markets, and selling the securities within their own nations and the system of euro nations?

**AE:** The experience of European banks has been very diverse with reference to the reliance on securitization and special-purpose vehicles, and structured financing in general. Again, it's a case in which you had the same directive decline in very different ways in different countries. You have had some supervisors that have pushed the banks to consolidate the special-purpose vehicles, and through this channel they have put a great constraint on the extent of the banks' ability to download assets outside their balance sheets and increase their leverage. Then, when the risks materialized, all these assets came back on the banks' balance sheets. In other countries, these constraints were not there. So the first point I want to make is that it is important to have a single way of doing that, and that this is a conservative way of doing that.

In terms of securitization, though, let me say that, personally, I think . . . securitization by itself is not necessarily a bad thing if you have proper disclosure, for instance, of what assets you are securitizing—if there is a proper control on the quality of the assets and if there is a market that is sending the right signals. It could be a way for banks to finance activities in an orderly fashion and, in a certain sense, also to help some borrowers that wouldn't be able to tap capital markets to indirectly access debt sources of funding. For instance, in Europe we have a huge sector of small and medium enterprises that cannot issue debt in organized markets, so they rely mainly on bank funding. But if these bank loans are of good quality, if there [is] good information about what these loans are and they are sold in the market to third parties who understand the type of risk they are buying, I don't see anything bad in that, and, actually, maybe we should even make some efforts to restart this market.

**Q:** Obviously, your responsibility is much broader than just simply eurozone countries. That may be why you mention the euro only two or three times in your speech. But economists like some kind of quantitative benchmarks. What is your personal opinion, maybe off-record, of what is supposed to be the real exchange rate? Because the official rate of about one euro for 1.3 dollars is artificially kept at this rate because of the debt in international trade. But what's supposed to be the real rate? One to one . . . ? Because . . . the lion's share of the $11 trillion that has been provided by the Federal Reserve to support the European banks also means that the euro's strength is right now on the shoulders of the US economy. So what, in your opinion, is the benchmark? . . .

**AE:** I would be very surprised as a supervisor to have an opinion on that. I think a supervisor should [not] have an opinion on the appropriate level of the exchange rate. What we should do is to make sure the banks are not taking positions that are putting their capital and their depositors' at risk, but it's definitely not my task and responsibility, I would say, to have a specific opinion on that.

On the US support, I think that this also goes in both directions. There are lots of banks outside the euro area that have benefited from the long-term refinancing operations of the ECB in terms of liquidity support. When you are in an open economy, of course, these type of measures are very difficult to keep within borders—which, to me, is a strong argument to have a much closer coordination of supervisory policies. Because when things go wrong, the cost is going to be footed not only by your taxpayers, but also by the taxpayers of other jurisdictions.

**Q:** My question is very simple: how do you measure financial stability in the market?

**AE:** Well, I think it's very easy to know when you don't have it *[laughter]*. And I can tell you, since I started my new job, I've never seen financial stability.

**Q:** I have a question from more of a supervisory standpoint, just in terms of banks' ownership of derivative portfolios and the concept of netting—how they net their derivatives exposures. Typically, that's done based on sort of a correlation framework, and in a crisis, correlation goes to one and what used to net out potentially no longer nets out, so you have a risk framework when banks are using correlation as a netting tool, if you will, or as a risk model, that is procyclical. Have you thought about that and have you looked at that? I mean, I guess it's a variation of value-added risk.

**AE:** Yes, it is an important issue. We have done quite a lot of work on that. For instance, in the analysis we did on the CDS [credit default swap] market for sovereign exposures, we looked at both gross and net positions, and we published them, actually. We gave full disclosure of all the gross and net positions of each bank in our stress test sample, which covered basically 90 banks—more than two-thirds of the assets of the European banking sector. We gave full disclosure of all the exposures, net and gross, in derivatives vis-à-vis each sovereign. We also performed some exercises in terms of checking for potential, let's say, ripple effects, . . . because it's a very concentrated trading market of course. The point is that, if somebody goes under, you risk having ripple effects throughout the system. So we also tried to capture that. It's very difficult when you move to bilateral trades to try to understand the potential channel for contagion, and also when you try to shock correlations and see that all correlations move in the same directions. But we tried to do some exercises, and we are trying to collect as much data as possible in this area to follow it. So we do our best there.

**PETER PRAET**

*Member, Executive Board, and Chief Economist, European Central Bank (ECB)*

**Deleveraging, Rebalancing, and Institutional Reforms in the Euro Area**

Good morning. It's a pleasure to be here. I [was] asked yesterday to speak a bit informally. I had a choice: reading a boring speech or improvising a little bit. . . . So I wrote a few notes for my presentation.

I think the good way to start is to go a little bit beyond the eurozone and to remind us that the overall situation remains extremely complicated—not only in the eurozone. If you asked my opinion now, I would tell you immediately that I'm very worried about a number of issues in the world economy. One would be the state of public finances in the United States, and other issues like this. So I think it's important to look at the eurozone, which is to some extent at the epicenter of the problems today—of the preoccupations today—but to place that episode, I would say, in the overall context. We should not be diverted in our willingness to reform the financial system. . . . I've been informed about yesterday's presentations, and that was forcefully defended by Claudio Borio, for example, here. That's my very first point.

My second point is, five years into the crisis, there are no simple solutions. As central bankers or public authorities, we continuously get blueprints for reforms—what we should do and what we should not do . . . . It's a very complex situation, and we have to get the balance right between pragmatism and principles. That's not a very easy thing to do—and I will elaborate a little bit how we can get through that—but we need both, and that's very difficult to do. I fully understand that some would say, "You are a little too much on the pragmatic side"—authorities, I mean, in general—"and not enough on the principle side," and things like that. It's a sound debate . . . but it very often brings a sort of confusion to the debate. So there are no simple solutions, and we need what we called some years ago a holistic approach. . . . When we look through very quickly and I tell you my impression, you may rightly have different views on that.

I will go through the different stages of the crisis. I remember very well, I was still teaching in the summer of 2007, when it really it started, and . . . was not very far from Brussels at that time, because we were working on war games . . . for the euro system, preparing for the crisis. But then the crisis came. . . .

When it started there, really, in the summer, it was considered a liquidity shock. It was very simple: for a liquidity shock, you would provide central banking liquidity. And I remember, it was—what, 98 billion [euros]?—less than 100 billion euros of liquidity that made the headlines of the *FT* and other newspapers. . . . That's a huge discretionary power. . . . That's the first thing, because it was purely a liquidity shock, and basically it was related to problems of asymmetry of information. It was a relatively mild shock—the fundamental shock was relatively mild related to the subprime [crisis], as you know. The estimates of . . . expected losses in the subprime [crisis were much higher] at that time. But, basically, because of asymmetry of information, this sort of little shock was magnified. Nobody knew exactly where the risks were, so everybody was suspect.

So the policy was quite easy: you provided liquidity to give time to disclose where the good banks, or the good institutions, were—where the risks were located—and then the problem would be addressed in that way very quickly. That was the end of 2007. We worked a lot on transparency, understanding where the risks were, and all that.

But to tell you again, referring to the discussion of yesterday, a shock of this magnitude—we look back at that and we say, "We didn't really realize what was going on five years ago, when the shock really started." We were clearly behind the curve—with a few exceptions. . . . .

Now the other, . . . of course, is the Lehmann episode. But the Lehmann episode, for me, was basically the revelation, I would say, [of] the fragility of secured funding. In my mind, secured means secured. So . . . when I saw that, I said, "It's not as secured as I thought." So that was the first thing, with Lehmann: the term "secured funding."

The second is—and this came much later—we started to grasp [what it meant] when we heard market participants talking about [ample liquidity]. We, as central bankers, had difficulty in grasping this concept. When you go . . . inside the repo market, and you see how it works, with auto-collateralization, with rehypothecation—reuse of collateral in a chain of reuse—then you understand what is meant in the markets by [ample liquidity]. You also understood at that time how liquidity cycles could change very quickly, with the perception of asset price valuations. So at the same time as we understood better, . . . we started to grasp better the concept of global liquidity, [not only] in its quantity but also in its variations—in its cyclical behavior. This issue actually is not resolved at all. . . . Should we lean against the wind when securities are brought as collateral for repo, or should we bring . . . anticyclical haircuts and things? That debate is totally open. . . .

The second thing with Lehmann, of course, was the absence of a resolution, of a solid . . . resolution framework for SIFIs—for systemically important financial institutions. That was absolutely the demonstration of many of us . . . when we worked on these issues a few years before the crisis, to say, "What if a big institution should collapse?" I remember a workshop I had the honor to chair at the New York Fed, where we discussed with market participants, within the framework of the CGFS [Committee on the Global Financial System] of the BIS [Bank for International Settlements], what if a major market participant—this was in 2006—should collapse? And the sense was, it's easier for authorities to manage if the market is very concentrated among a few big players than if the market [is] spread among hundreds of participants. So the coordination problem would be much easier if you [did] it in that sort of environment.

But the sense that liquidity conditions could suddenly change was very present in 2006, and in the Basel Committee on Banking Supervision we started to work actively on these issues. [Then] the shock came, and of course all these efforts came too late, as you know.

Later, it became . . . increasingly clear that what was at stake was much more profound, a fundamental correction of . . . different lending booms in different parts of developed, mature economies—a Minskyan sort of cycle—and also, basically, in the household sector.

What made the issue of a banal lending boom in the real estate sector . . . very complicated and magnified very much was the way it was funded of course. It was very often funded with foreign savings via the wholesale market and, in a transformation process, via the securitization industry. So the way it was funded was one of the important factors of contagion—a magnification of the shocks. Also, it appears clear, as was explained yesterday by Andrea Enria, that the . . . intermediaries became excessively leveraged and engaged in maturity transformation, etc. . . . But the idea that there was . . . a fundamental correction of a lending boom in a number of countries, with a contagion effect because of the funding characteristics, came relatively later, and they still discuss it today. To give you just one hint: if you look, for example, at the eurozone as a whole—and I insist, *as a whole*—you will see that the classical leverage figures you see for households or for nonfinancial corporations . . . are quite good in general. . . . If you looked, before the sovereign debt crisis, at the leverage ratios of households and nonfinancial corporations in Greece, for example, you would find that those ratios were the lowest in the eurozone—*the lowest in the eurozone*. So, at that time, when you go backward and you look at the sequence, which is very important, of the information we got from markets' search processes, trying to discover what was at hand, a lot of signals that we got were still very unclear until very late.

I think now it's relatively well understood that it is a fundamental correction of a lending boom, and we're not yet out of that; so we have to go via painful deleveraging in a number of countries. Since there is a cross-border linkage for institutions themselves that are leveraged, it is a complicated thing to do. When you talk about banks being in that process, you talk about the lender of last resort, and you talk about central banking. So the process is well advanced, we know, in the United States; it's under way. Authorities have stepped in very forcefully—monetary policy and fiscal authorities. Good.

Then came the Great Recession—2009. . . . In November–December 2008, before the recession of 2009 . . . [there was the perception that] our complex economic organization was getting frozen—not only the banking system, but the whole IO, the whole industrial organization, which is based on division of labor, based on just-in-time deliveries, based on complex changes of production. Everything started to freeze, and there was an instant—I wouldn't say a "Minsky moment," but it was a sort of Minsky moment in terms of public coordination. It was a sort of collective coordination to react to that all over the place on the planet. Then . . . you see that under extreme circumstances authorities can [join hands], and we should not forget that, even in the context of the eurozone. Unfortunately, it's not optimum; you should intervene earlier. But there is also this sense that when things really become dramatic, . . . the time is there to find solutions together, because the world is organized in such a way that there are so many . . . negative externalities related to the problems of other countries. So we should forget that when people say, "Are you crazy? Why aren't you coordinating more?" There is always a limit there where authorities at some point know what is at stake. Of course, when you recognize it, then it's too late. . . .

The Great Recession of 2009 . . . crystallized all the weaknesses of our economic and financial systems. Of course, the first . . . was the sovereign debt fragility. Here, again, we should recognize that sovereign debt issues, fragilities, were very much [evident] before the crisis. A number of countries entered the recession with significant problems in public finances. So the automatic stabilizers [were already activated]—it was not discretionary measures to support the economy during the recession of 2009, or even to support the banks, because the support of the banking sector was definitely with providing guarantees of funding and things like that, but not really in spending real money; that was relatively limited in most of the countries.

But what really happened is, the recession of 2009 was really the first big recession since . . . '79, '80, '81, depending on the country—a sort of double dip that we had after the monetary squeeze of October '79—so . . . many were not prepared for that. Value-at-risk models, public finance assimilations, . . . were really not stressing the system . . . for as big a recession as we had. So it's a big recession, but it's not a catastrophic recession, that we had in 2009. It is as big a recession as we had in '75, for example, in most countries, but the system was too fragile and not prepared for that sort of stress.

Now some people say—rightly, I think, today—that . . . if the government wants to play a countercyclical role, it has to build much stronger public finances in good times than what had been thought before the 2009 shock. That means that the adjustment effort, if you want to do that, is tremendous. It's not only [putting] your public finances in order in normal times, but having a margin of security above that, which is extremely challenging.

I've been sitting on [the boards of] many organizations, as you say, and I was also on the High Council of Finance in Belgium, where we looked at the state of public finance in an independent way—this sort of "wise man" committee—and I was always giving signals to authorities that "You have to put your house in order. You have maybe 10 years because of the aging of the population, because of health care evolutions. You have to put your house in order because you have a maximum of 10 years before the problems get worse and worse." It's very familiar to the United States; it's the same story here. It's always "You don't have many years."

So for governments in general, the possibility . . . of risk-shifting the problems to the next generation became more and more delicate. The moment was coming closer, but they had a little margin to maneuver beyond the political cycle of, let's say, four or five years, because we talked about [it being] five to 10 years before the problems would really materialize. It's stupid that a simple recession in 2009 shortened this period from, . . . , let's say, 10 years to zero, minus / plus a few years, in many.

Of course, the fact that many societies were shifting the problems to the next generation via debt was the revelation of profound societal problems, of disagreeing on the budget. The debate in the United States—when I expressed my preoccupation in my first two minutes, that's what I had in mind: what will happen by the end of this year in the United States, . . . with the US budget? And what is the vision we have on that?

So we had all that. Governments lost the time, the little comfort they had, to manage to find a social-political consensus to put the house in order—that disappeared. Markets understood that very quickly. And, of course, you had political tensions, social tensions. It was difficult, and some countries had more difficulties than others of course.

If you look at, for example, the eurozone—and again, to say the situation in the eurozone was that the budget deficit at the beginning of the crisis was close to balance, and at that time we authorities said okay, there are longer-term challenges because of the level of public debt; but on a cyclical basis, progress was being made trying to [point] fiscal policy in the eurozone . . . in a good direction. So you'd think you would muddle through. You had a number of years to do that, and the pressure was there; not very strong, but it was there. Then . . . the debt-to-GDP ratios, as you know, jumped from 66 percent for the eurozone as a whole to 85 percent in 2012 (which is lower than the US or Japan of course) for the eurozone as an average; but it gives us a 20 percentage point jump in the public debt–to-GDP ratio, which is a very big shock and change—very much your debt dynamics for the future.

As I said before, . . . when we were in different committees with Andrea, preparing . . . the new supervisory institutions, . . . we looked at Greece. At that time, Greece was considered—its banking system was considered—relatively good. Italy would have been the same, you remember? When we and all the other supervisors there discussed the situation, it was more [about the] Dutch banks, Belgian banks, German banks, French banks a little bit. . . . But it was basically that these more traditional banking systems were a little bit old and were considered—Spanish banks as well, by the way—better supervised, more resilient, and all that. . . . Many of us had the preoccupation about the lending boom and the fear of a bust [in Spain]. We had a lot of presentations from colleagues saying that, because of the dynamic provisioning system, the banks would have sufficient buffers to accommodate a shock in the country's housing sector. So that was a sort of reassuring message that we'd been given on that side.

The other, less traditional banking systems . . . were not very profitable in general. They didn't have the high return on equity figures, which was considered not too good at that time; but they were considered relatively . . . low-risk anyway, and there was not a big preoccupation [with them]. And, as I said before, . . . the [Greek] leverage ratios, for households and all that, were among the lowest.

Of course, the big issue that you had in these countries was that the banks were very much exposed to sovereign debt. That's the next point: *sovereign debt*. . . . The [International Monetary Fund] has a chapter in [its] *Global Financial Stability Report* . . . on the role of "safe" assets in our financial system, which I think is a very good theme . . . and, personally, something I find fascinating. . . . What is "safe"? As we know, when we teach, we always start with a risk-free curve. It's usually based on . . . credit risk–free debt—sovereign debt—and with the sovereign problems that were emerging, one started to realize how deep, how important, these safe assets are in our financial system. That's the situation we have to manage.

As is explained in the IMF report, the demand for safe assets is very strong, but what is highlighted in the report is that there has been a big reduction in the volume of safe assets suddenly. But there was already a very strong demand compared to the supply in safe assets—private, for example. And you also remember, in the United States there was a discussion in the peak of the cycle that there would be a shortage of Treasuries, and . . . also a shortage of safe assets because of better evolution of public finances in the United States and in other countries that would perhaps create a supply-demand problem. Then came the production of [structured] triple-A assets . . . —which, as you know, was one of the elements of the catastrophe, because one realized how unsafe these "safe" . . . triple-A structured assets were—because there were not many simple triple-As left and there were problems of [insufficient] volume.

But then we realized, for many reasons, the role of sovereigns in all financial systems. When you get this sort of shock in a country where the financial system is very linked in the pricing—[where pricing benchmarks are used as] a source of liquidity management in banks, as one of the elements you can use when you have an excess of deposits compared to your lending—you carry some [sovereign risk-free] assets. Your maturity [mismatches] your books because you know that your retail deposits are relatively sticky and you can go with liquid assets in the repo market, and if not, to the central bank. . . . So you have a whole model that is built around sovereign risk-free assets.

Then you get this shock by saying no, for a country as a whole, there are no safe assets anymore. I think this is key to understanding the issues and the behavior of the central bank, what we did and also the attitude we took when we talked about Greece. It was not because—how can you deny the problem! That was not really the issue. The issue was that it is really a paradigm change if that sort of safe asset disappears. It's not like a triple-A structure, which is already a big shock to the system; but it's a paradigm change if what is considered the safe asset is not safe anymore and your whole financial system is constructed around that.

That's why the central bank intervenes when you get liquidity shock on private assets, which was the case massively by the Federal Reserve for MBSs [mortgage-backed securities] as another structured product, because liquidity dried up and the central bank created liquidity . . . by taking them on the balance sheet and providing the liquidity. It's the same sort of issue that you have with the sovereigns—but with some complications that I will explain later—in the euro system. . . . After the big recession of 2009, sovereign debt problems that . . . were latent for a number of years crystallized, materialized, and led to some political difficulties. You didn't have time to go through the next elections, and at the same time, the next episode . . . created a huge shock in the financial system because safe assets suddenly . . . became questionable. That's how the central bank had to intervene in the traditional role of lender of last resort—not of states, but of the banks—because we have this two-tier system with the central bank and the commercial banks. The commercial bank [carries] assets that are less liquid, and some of these assets certainly lose their liquidity in a central bank against collateral with haircuts, etc.—haircuts, by the way, that are largely based on market prices. . . .

The third point with sovereign debt . . . is that the Great Recession that we had in 2009 revealed design weaknesses in the European Economic and Monetary Union. So that will be a little bit late, but that's my third point: it's a euro system, it's a single currency, problems that are designed in, issues that are revealed by the Great Recession.

Before I go into that policy, not only in the eurozone but in general, when you look at policy reaction, policy responded pragmatically, forcefully, to exceptional circumstances—I said it in the beginning: pragmatism—but at the same time, authorities had and have to take into account that policy responses, the way they respond to the shock, to the circumstance, are shaping expectations for the future. That's the moral hazard issue. If markets start to expect that if things go wrong, authorities will intervene anyway, it weakens market discipline. And we know, at the basis of the crisis what we have is a big failure of market discipline in debt markets. You cannot solve a problem of weak incentives in debt markets by replicating that, because you just confirm all the moral hazard that was deep in the system before.

How do you get the right balance between pragmatic response, which you have to do, and the need to discipline the system? That's where the debate is, and I think it's a fair debate, a normal debate, and people have different views on that. [We try] to do our best to do them both, to respond but at the same time to keep up pressure as the central bank. I would say, the European Commission, the IMF, and other authorities are well aware of that. . . . As I say, this is a fair debate. It's normal that there's a discussion. It should not be considered a conflict, really. It's a normal debate. It's very difficult to tell where the right balance is. No, it's not finished. The authorities have just been engaged in this balancing act. Basically, it's to facilitate—this was discussed yesterday—the orderly deleveraging. But what is orderly deleveraging? That's really where one has to go into the details. Very often, one says that the pressure is not strong enough. That was Claudio's point of view, for example, yesterday: the pressure should be stronger. That, for example, when the central bank provides liquidity systematically, it's not episodically but for a repeated period of time to the banks. The central bank should also have the means to exert pressure on the funding plans—to request funding plans from the banks and to exert pressure on the banks. So that's a debate that is still going on. There is pressure, indeed, on the banks. Some people say it's not enough, so I don't want to be too specific here. But this is the debate.

For example, one of the things that the central bank has to have, without necessarily being supervisors (I'm not too enthusiastic about central bankers being combined in their responsibilities with supervision) is, they need to have access to information, and not sort of aggregated information, but very specific information—to have the right to go to the banks and request the information and explanations about, for example, funding plans, how they are going to see the reduction of recourse to the central bank liquidity and things like that. This is something that is going on. You cannot solve it immediately, but this is something we are very conscious of.

So you have this facilitating the orderly deleveraging, and at the same time, reinforcing the disciplining forces in the debt markets. When you [apply] disciplining force in the debt markets, you can do it at the micro level—as I say, on the banks themselves that come to you as a central banker—but you can also try to influence the design of institutions in general. Central bankers have been very active in trying to influence disciplining institutions; for example, at the euro system level. I will conclude by repeating some of the things we are doing.

But the next point is, when . . . fiscal policy became very much under stress in general, the next problem, of course, came; that, with fiscal policies reaching their limits, or even exceeding the limits, central banks have been facing new challenges. And the challenge, as you know, abundantly discussed in the literature now, is the risk of fiscal dominance and the risk of financial dominance. . . . Recently, the two have been closely linked, because if banks are linked with states, it is clear that fiscal dominance and bank dominance under central banks are close, similar problems. That also led to a lot of ambiguities about the interventions, for example, that we did as central bankers in the markets: are you supporting the states or supporting the banks? No, you are supporting the banks—this is a transmission story that we explain abundantly. But at the same time, the banks are very much linked to the states. It is clear that . . . among politicians there was some ambiguity about the actions of the central bank. It's basically designed to restore the transmission mechanism, but it is true that when banks are very linked to states, there is some ambiguity there which the market stresses very often.

When . . . fiscal policies reach their limits, the risk of fiscal dominance and financial dominance [increases], obviously. So central banks [by] design . . . are usually protected from the risk of fiscal dominance. But let's talk about fiscal dominance. We are protected because when we designed our new constitution for the euro system, for example, the ECB was taken into account. . . . If you read it, you have, for the ECB, independence. Like me, a member of the board—we are independent people nominated for eight years, etc. I'm not giving the details of my contract, but . . . it's extremely clear and simple, . . . and the objectives are there, the instruments you may wish to use. It's clearly written. So all these things have been done to respond to the question of time inconsistency: how can the central bank be time-consistent and have sufficient credibility in its action? Everything was designed for that. So on the risk of fiscal dominance, . . . I think the institutional setting protects us very much about that, but still, the risk of fiscal dominance has increased.

My next point . . . is that central banks have a strong stake in promoting structural reforms and institutional reform as a result of what I just said. You cannot just say, "I'm protected. I'm independent." Because the state, being in that situation, will always have the temptation to ask the central bankers to . . . give us some time, to help with funding or these sorts of things.

This is very clear in . . . the European constitution. Central bankers have been very clear in their mandate: . . . there is a prohibition of monetary finance—that's very clear in our treaty. That's to avoid the pressure of the government on the central bank. It's simply forbidden, and actions can be sued in courts on that.

So central banks have a . . . strong stake in promoting structural reforms and institutional reforms. But basically, they do that via the traditional roles of expertise. Usually we provide a lot of expertise in helping other authorities to design institutions and new rules, including for banks; but also the moral situation, trying to explain to the population why it would be good for countries to have balanced budget rules in the constitution, just to tie the hands of the politicians. I know this is a hot debate, certainly, among several of you. What is new is trying to get much more ownership, a deep involvement of

Parliament, and probably also constitutional protection that [guarantees] balanced budget rules [are] taken seriously in the future.

So central banks have been very much involved. You heard about the fiscal compact. [ECB President] Mario Draghi [proposed] this idea, which was taken [up] by the heads of state and has been very much discussed in Parliament and implemented in many countries [in] Europe. . . . So central banks play that role. The other thing they are doing now, which is much more difficult, I think, [and] was discussed yesterday, is to what extent should you [allow] the central banks to be independent, and so independently protect fiscal dominance or financial dominance? To what extent should you provide additional tools to the central banks and tools of a macroprudential nature that they can use in an independent way? Because that's the key issue. Macroprudential tools are very difficult, as we discussed yesterday. I think they are necessary, but they are still difficult. We know some that have been experimented with in some emerging markets. But the question, I think, is, [should they be wielded] independently by the central bank? That's an open question. I will not answer that. But that's a key question, because if you don't have independence, then you have to coordinate the implementation of these tools—for example, leverage ratios in the housing sector— . . . with other authorities. And the fact that there is, of course, a link with your interest rate policy—because that's also a tool . . . that you can use . . . to influence the financial cycle—you will have . . . to coordinate with other authorities, which is a very difficult question when we put it in the context . . . of fiscal dominance. . . .

To finish on some of the eurozone issues more specifically, when we talk about the financial cycle, I think it's right, what has been defended [for] years in the BIS is that the financial cycle has to come closer to the center of public policy, . . . much closer than it has been in the past. I looked some weeks ago a little bit at the past of the ECB, because at the ECB we always had monetary strategy—what we called the two pillars. We had, let's say, the classical analysis of the economy, the business cycle, and all that that everybody's doing; but at the same time, we also [gave] the same level of attention to what we call the second pillar—the monetary pillar, or the money and credit pillar. [We would] look at the . . . aggregated balance sheet of MFIs, monetary financial institutions, and . . . have a sort of parallel analysis about what sort of signals [we got] from money and credit. I looked backward because we had very strong money and credit figures in the period 2005 to 2007; in '08, the correction started. To one extent, even when you attach great importance to the way you conceive your policy, why is it that we still have issues now?

The conclusion is again in line with recent studies: that the signals we get from the second pillar were quite clear, worrisome, and recognized as such. But basically, in terms of upside risks to price stability—which is, when you go back to all the statements of the ECB—you can see that. It led to actions in terms of interest rates, but at the same time, the problems of boom and bust that we have known could not be addressed satisfactorily. . . . When you look at these episodes, you look at the signaling content, which was quite good, I think, from this approach but not sufficient. That's where the macroprudential tools come back into play. We have to announce the analysis, and we have to discuss the tools, and . . . you have to see, are they more in coordination? What is in the framework of the central bank itself? As . . . was explained a little bit by Andrea Enria, the European system was [designed] with this sort of macroprudential body that we have put in place. But it provides basically recommendations and warnings. So standard monetary policy instruments are clearly insufficient to deal with these issues, and I think that's recognized.

It's extremely important for the eurozone, especially because we have experienced regional booms and busts—as you know, in Spain and Ireland [and a] very few other countries, because it's relatively limited in the eurozone—and when you have one interest rate policy, already it's very difficult to master the financial cycle with your interest rate policy. But when . . . , in a single monetary union, you have regional booms and busts, obviously, it's even more problematic. So it's really . . . a sort of existential question for the future; that these macroprudential tools [must] really be developed in a monetary union, and especially in a monetary union where public finances have reached their limits, where the degree of solidarity across countries is very limited, and when there is a very weak resolution scheme for cross-border banks. I think it's of key importance to go into that. But that's more for the future. Now we have to get out of the problems that [we have now].

Sovereign debt: we have the question of sovereign debt, and this is the latest episode. I will not be too long, because [you will] want me to say things on that which are not easy. Let me go backward a little bit. It's very interesting that, when we think about when the eurozone was conceived—I think it's very important to remind us—there were two approaches. One was called the monetarist [approach, but] not in the US meaning. The monetarist approach was more sort of a French-based view: *l'Europe par la monnaie*. You put the currency [in place], and the rest will have to adjust, to adopt. So the "E" of EMU, the Economic and Monetary Union, [means just that]: you first [establish] the currency, and the rest will adjust. So that was one view: *l'Europe par la monnaie*—Europe through the currency. . . . The partisans of that approach basically dominated, and finally that was the approach that was taken: basically, the approach that . . . you lock in the countries with the currency and the rest will have to adjust. . . .

The other strategy was a bit more on the German side, and more in the spirit of what you know in Germany: the realpolitik was the "E." You have to deepen the economic integration and the economic governance . . . before you go into a single currency, and the currency would be the crowning of vast efforts of convergence, integration of markets, and more economic governance, let's say, in the union.

The final measure was a little bit a mix of both, but still it was [to establish] a currency and the rest would follow. To be sure that the currency would lead to discipline, the members of the Union added a few things. First, there was the Stability and Growth Pact, which was weakened very quickly, so that was not a major disciplining factor. But the others were quite interesting when you look backward. There were strict institutional constraints, and also there was the idea that [market] forces would, of course, naturally lead to discipline. For example, if you have a single market—an open market with a single currency—there's no currency risk. You can compare wages, . . . and so competition will make sure that countries would be very careful about the wage evolutions and costs, and you get this sort of convergence. So the internal market was one of the means to get this harmonious union.

The second constraint that you had is basically that there was what I mentioned before: the prohibition of monetary finance, Article 123 of the treaty, which is very important. . . . So states are on their own, they cannot just—the fiscal dominance no way. You have to find your way. You have to go to the market, and the market will punish you or not, and you need to defend your credibility to the market. And no privileged access for government finance (Article 124). . . . I remember that because at the [time] when we had a hot debate [about this issue] I was in the private sector . . . , and it was the no-exit rule. There is no exit, so you better be careful. . . . If you get into a mess, there is no exit, so you better ex-ante internalize that institutional characteristic.

It is clear nowadays that . . . the "E" has been too weak, but it has been too weak from the beginning, and now this is what is happening. People may be skeptical and say, okay, fine; but . . . when you go back to people, those promoting . . . monetary support, they may say that's a bit tough, but they would say . . . not in a very pleasant way. This is actually a little bit in an unpleasant way, what is happening now—that you have to make a choice: either you reinforce or . . . [get] out of the Union or whatever. [But] there is no option, because people recognize . . . that a destruction of the eurozone would be extremely costly and all that. So there is a lot of work that is being done today in the eurozone to reinforce the "E." It's a painful process, but this is a process that is really happening. It's chaotic, it's painful, and all that, but the direction, I think, is very clear.

It's based, essentially, on three things. I always say, when you take a historical perspective and all that—and I know history is not deterministic, and so things can happen . . .—but when you take a historical view of that, you take a little bit of the dust off . . . and you see that it's based on three things. The first would be at the national level; that, really, at the national level, countries [that want] to stay in the eurozone have to do the work. And this is happening. When you look at decisions that have been taken [regarding the] budget, in Italy, Spain, Greece, Ireland, and Portugal, you get in a very few years—I think it's two years now, because we made a calculation—10 percentage points of GDP. Greece must be something like 20 percent, according to us. So you just simulate the measures they have taken.

Of course, a lot of this you don't see in the fiscal figures because of the impact on growth. So a big part, a relatively important part . . . , is taken by the recessionary effects of fiscal consolidation, and there is a net that remains. That's another discussion you have in the market, of course: to what extent is it counterproductive or not? And you need a growth strategy, and all these things are there. But when you look at the importance of the measures that have been taken, it's absolutely incredible. You get something like 20 percent of GDP in measures in Greece, and for the average of the countries I mentioned you get something like 10 percent of GDP in a very few years. And that's acceptable socially. I know there are some tensions in some countries, but it's basically accepted by parliaments, and this is the way that it's going. So that would be the fiscal consolidation strategy.

The second—and this is a key question; I would say, personally, it's even a more difficult issue—is to combine the fiscal consolidation with structural reforms. What the crisis has really revealed, things we knew more or less but it has revealed, is a number of extremely weak institutions in some countries— . . . the functioning of labor markets in Italy, for example. We knew [about these], more or less. We are educated people, we are economists; we more or less follow the situation. But now, because of the crisis, we go very much into the details of the labor laws in Italy, to take just this example, where [Prime Minister] Mario Monti, I think, is very forcefully trying to change it. It's much more difficult even than the fiscal adjustment. It tries to address . . . some of the fundamental weaknesses in these countries. This is not easy to do, because you do all the things at the same time, and then people discuss it and say, "Adjust your budget a little bit and address a little bit more the structural [aspect of things]," and everybody has his opinion on that. But these things are happening, and of course the big story is that it relies on the idea that you find sufficient consensus—political consensus, social consensus—to pass through.

But the strategy is very clear there. So the first thing about the [two] pillars of the approach is structural reform and fiscal consolidation—the combination of those. How you sequence the two is indeed an issue, and it's why markets are very volatile. Sometimes they are positive, then negative, and you get this sort of impression. But the direction is quite clear to me. I've seen the same in Portugal, for example; you have seen it in Greece, in spite of all what people say, and a number of profound reforms in Spain as well.

The second building block is stricter rules. It's a rule-based system, as I mentioned before, for fiscal imbalances and reinforced surveillance of competitiveness, positions, and actions, and possibly sanctions, if countries do not do what they committed to do. So you have a rule-based system that is very deep, which has to get sufficient ownership at the national level; that means they have to . . . be supported by a vast majority of the parliament, to get credibility there. This has been voted on in a number of countries already, so a number of rules [exist] there.

The third one is the firewalls that are being put in place. Again, markets are impatient; they want to see how much money you have there, can it be activated, in what conditions? All this has still to be done and has to gain in credibility, but the building blocks are being [put] in place. I know it's still fragile, but they're being put in place, and that's the message I wanted to give there. . . .

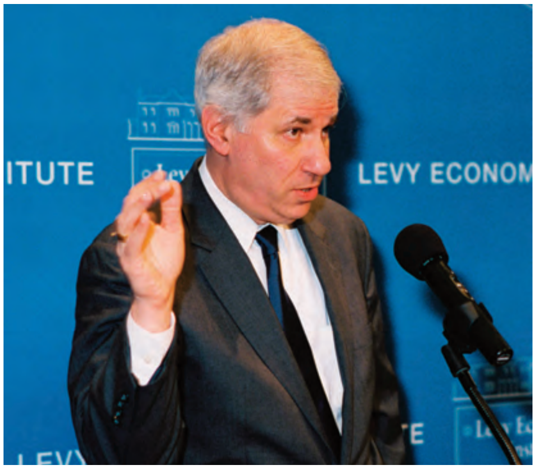
Monetary policy has often accommodated liquidity shock. Monetary policy is not there to accommodate fundamental institutional or economic weaknesses in general. That's very clear. Some people say monetary policy can buy time, but I know personally that politicians always want time. I always have known that in my life: *give us more time, give us more time.* We hear the same story from the banking sector. So I think the pressure on governments to [do] what is necessary, what has been delayed for too long, has to come one day, and asking again for delay . . . would be counterproductive. That's my intimate conviction. I've done policy in Europe for many, many years in my life, working from the private sector and from the public sector—I know how it works. Unfortunately, very often you do these measures and you find a consensus only in the worst environment. In a good environment, nobody has an interest. You see that also very clearly when conditions improve a little bit—the willingness to push through the reforms goes down very quickly. So when the pressure is there leading to reactions, I think the direction is, for me, quite clear.

Thank you.

MARTIN J. GRUENBERG

*Acting Chairman, Federal Deposit Insurance Corporation (FDIC)*

**The FDIC's Role in the Resolution of Systemic Financial Institutions**




Senator Sarbaines, whom I worked for for nearly 20 years, had a very close personal relationship with Dimitri and was a strong supporter of the Levy Institute; so it's a particular privilege for me to be here. And as I mentioned to Dimitri, if I hadn't come, I know I would have gotten in considerable trouble with the senator, and that's something I've always tried to avoid; so I'm particularly pleased to be here.

As I was coming . . . up on the train this morning from Washington, . . . I was reviewing the list, both of the speakers on the agenda as well as the attendees here at the conference. As I was going through the list, it dawned on me that there a lot of people here in this room that know at least as much as I do, if not more, about the issues I'm going to try to talk about. So I must say, as I rode the train up here, my trepidation increased a bit. But I'll do my best.

There are two things I really wanted to talk with you about this afternoon: just briefly, to give you the FDIC's take on the condition of the banking industry in the United States right now; and then I'm going to spend most of the time talking about the new authorities that the FDIC has under the Dodd-Frank legislation for the resolution of systemically important financial institutions [SIFIs], and talk with some specificity, not just about the authorities that we have, but the actions we're undertaking to develop an operational capability to actually carry out those authorities. It's one thing to have the authorities; it's another to actually be able to execute them, and that's what I want to try to focus on this afternoon.

First, let me start with the condition of the banking industry in the United States. Twenty eleven represented the second full year of improving performance of the banking system in the United States. The latest data from the FDIC's quarterly banking profile indicate that banks have continued to make gradual but steady progress in recovering from the financial market turmoil and severe recession that unfolded from 2007 through 2009. During the past two years, the industry has undergone a difficult process of balance sheet strengthening. Capital has been increased, asset quality has improved, and banks have bolstered their liquidity. The industry, I think it's fair to say, is now in a much better position to support the economy through expanded lending. However, levels of troubled assets and problem banks remain high, and while the economy is showing signs of improvement, clearly, downside risks remain.

The FDIC data do show a continuation during the fourth quarter of last year of a trend in overall improvement in the condition of insured financial institutions. Industry earnings have grown over the past eight quarters; the percent of noncurrent loans on the books of FDIC-insured institutions has declined for seven consecutive quarters, reflecting improved credit quality. The number of institutions on the FDIC's problem bank list declined for the third consecutive quarter. (Our problem bank lists are the lists of institutions in the United States that are rated at the lowest levels on our supervisory scale. We have a scale of one to five, one being the best, five being the worst. Four- and five-rated institutions make up the number on our problem bank list.) That list had increased steadily for five consecutive years, until the second quarter of last year, when, for the first time, that problem list declined. The problem bank list declined again in the third quarter and in the fourth, although the overall level of over 800 institutions still remains quite high.

The Deposit Insurance Fund of the FDIC moved into positive territory as of June 30 of last year, and continued to increase in the third and fourth quarters. Our Deposit Insurance Fund, because of all the bank failures, had been as much as $20 billion in the red during the course of this crisis. As of June 30 of last year, it moved into the black for the first time in several years, and the reserve ratio of the fund increased in the third and in the fourth quarter.

Whenever I say that to banks, their immediate first question is, "Well, when are you going to be able to lower deposit insurance premiums?" And we indicate to them that the fund's in the black, but just a little bit. As of the fourth quarter, . . . the reserve ratio—that's the amount of money in the fund relative to insured deposits—was 0.13 percent. Under the law, we have to get that reserve ratio up to 1.35 percent, and we have until 2020 to do it—the idea being, it's going to be a gradual buildup of the fund so as not to burden the industry during a weak economy, but to gradually build the fund up to a stronger position. So what I say to the institutions is, deposit insurance premiums aren't likely to come down anytime soon, but they're not likely to go up, either. Slow and steady is, I think, the approach really called for in the legislation. And I would also note that the FDIC is forecasting significantly fewer failing banks this year than last year.

The trend on failing banks has been very clear. In 2010 we had 157 institutions fail in the United States; in 2011, last year, we had 92 failures, and we're projecting substantially fewer—perhaps 50 or 60, but don't hold me to it—this year. I guess the bottom line is, if we can sustain even a modest level of growth in the economy, which is the consensus forecast, it's reasonable to expect these generally favorable trends for the banking industry as a whole can continue.

The point I'd leave you with, though, on the condition of the industry, is that most of the improvement in earnings over the last two years has been the result of loan loss provisions, reflecting improved credit quality; but future earnings gains will have to be based to a greater extent on increased lending consistent with sound underwriting. Prudent loan growth will be a necessary condition for a stronger economy, and that's obviously the key issue. You can only generate income off of reduced loan loss reserves for so long. At some point, the banks are going to have to expand their lending activity.

And that's why we view the fourth quarter growth in the industry's loan portfolio, which is a third consecutive quarter of growth, as a hopeful sign. That loan growth that has occurred so far has been led by lending to commercial borrowers. Loans to medium and large commercial and industrial borrowers have increased in each of the last six quarters, and in the fourth quarter of last year we saw growth in small commercial and industrial loans as well. The FDIC began collecting data on small loans in the C&I category just in March of 2010, so our data series here is relatively recent; but nevertheless, that uptake in the fourth quarter was the first we've seen since we started collecting that data in 2010. So you don't want to put too much weight on it, but it's obviously an encouraging sign, and it's something we will be following closely. That's really going to be the key.

Thus far, income for the industry has really been driven by the positive factor of improving credit quality and resulting reductions in loan loss reserves, but that's only going to carry you so far. We'll have to see if we can continue to make progress in terms of growth in loan balances in the industry going forward.

Now let me turn to the issue of the resolution of systemically important financial institutions, which, for the FDIC, is clearly the big-ticket item in the Dodd-Frank legislation.

At the end of the day, the FDIC carries the principal responsibility under the act for managing an orderly resolution of a systemically important financial institution; and the FDIC has been given significantly expanded authorities under Dodd-Frank that did not exist before to carry out that responsibility. I want to talk, really, about three things in regard to that.

(1) I want to place this new systemic resolution authority in the broader context of banking supervision in the United States. Because it's not merely a question of providing new authority to manage an orderly resolution of a systemic company. It's really [about] putting in place what I would describe as an integrated process of supervision, which allows you early intervention with these institutions to avoid a worst-case scenario, integrated with an extensive process of resolution planning for these systemic plannings, which we really did not do before—so that you have an integrated process of supervision and resolution planning [that], in the best case, allows you to avoid the resolution outcome, and, in the worst case, leaves you in a position to manage an orderly resolution of a company without putting the system at risk. At the end of the day, that's the trick. Can we actually close one of these institutions, hold them accountable to the discipline of the marketplace, without putting the financial system as a whole at risk? That really is what this is all about.

I want to talk about the integration of supervision and resolution. I want to talk about what the FDIC has done organizationally to develop new capabilities to carry out these resolution authorities. And I want to just make a final comment about the crucial cross-border resolution issues that will need to be addressed if you're going to think in a realistic way about an orderly resolution of a systemic financial company.

As I indicated, the FDIC has been given significant new responsibilities under the Dodd-Frank Act to resolve systemically important financial institutions. Specifically, these include an orderly liquidation authority to resolve the largest and most complex bank holding companies and nonbank financial institutions, if necessary, and a requirement for resolution plans that will give regulators additional tools with which to manage the failure of large, complex financial enterprises. Before discussing our efforts to carry out these new responsibilities, . . . I want to try to place these responsibilities within the broader framework of the way the FDIC's resolution activities regularly work together with bank supervision in responding to the financial difficulties of FDIC-insured institutions.

It's important to recognize up front that resolution is always the option of last resort. The purpose of the supervisory process is to make sure that institutions manage their risks so that the risk of failure is minimized. The goal is to have a supervisory process that can recognize problems early and encourage management to address problems in a proactive way. When an institution's supervisory rating or capital adequacy is downgraded, the institution is subject to a variety of supervisory responses intended to encourage management to take prompt action. These supervisory actions may include specific criticisms of risk management practices, formal or informal enforcement actions, and orders to raise capital or seek merger partners that can bring in new capital and management expertise.

Under the current arrangement, should the condition of the institution deteriorate, the FDIC begins its resolution planning process in conjunction with the ongoing supervisory process, and in close coordination with the primary supervisor of the institution. This would include undertaking a deposit download for deposit insurance purposes and developing a detailed resolution plan for the financial company. The goal, as I indicated, is to have an integrated process of supervision and resolution that will hopefully avoid closure of the institution, but that will enable the FDIC to prepare to carry out an orderly resolution if necessary. In such a process, motivated by the credible threat of failure, the managers and investors of problem institutions have an incentive, first, to work with regulators to address their problems sooner rather than later; access new sources of capital if available; or to sell the institution in whole or part if necessary to salvage some value in the institution.

Our goal in regard to the FDIC's new systemic resolution responsibilities is to adapt this framework to systemically important financial institutions, including their holding companies and affiliates, as well as designated nonbank financial companies. This will obviously pose significant new challenges that I will discuss in a moment. But the basic goal is the same: resolution is the option of last resort. What's needed is an integrated process of supervision and resolution planning for systemically important financial institutions that will provide for early supervisory intervention to avoid resolution, but that will be prepared to carry out an orderly resolution if needed.

Now, if I may, let me turn operationally to what the FDIC has been doing to put [itself] in a position to actually carry out these new authorities. First, the FDIC has established a new Office of Complex Financial Institutions within the FDIC to carry out three core functions: first, to monitor risk within and across these large, complex financial firms from the standpoint of resolution; second, to conduct resolution planning and the development of strategies to respond to potential crisis situations; and third, to coordinate with regulators overseas regarding the significant challenges associated with cross-border resolution.

For the past year—I should say year-and-a-half now—this office within the FDIC has been developing its own internal resolution plans in order to be ready to resolve a failing systemic financial company. These internal FDIC resolution plans developed pursuant to our orderly liquidation authority under Title II of the Dodd-Frank Act apply many of the same powers that the FDIC has long used to manage failed bank receiverships to a failing systemically important financial institution. If the FDIC is appointed as a receiver of such as institution, it will be required to carry out an orderly liquidation in a manner that maximizes the value of the company's assets and ensures that creditors and shareholders appropriately bear any losses. The goal, as I earlier indicated, is to close the institution without putting the financial system itself at risk.

This internal resolution planning work is the foundation of the FDIC's implementation of its new responsibilities under Dodd-Frank, and I will tell you, the internal planning work is in a fairly advanced stage of development. In addition, the FDIC has largely completed the basic rulemaking necessary to carry out its responsibilities under Dodd-Frank. In July of last year, the FDIC board approved a final rule implementing the Orderly Liquidation Authority. The rule making addressed, among other things, the priority of claims of the treatment of similarly situated creditors. And in September of last year, the FDIC board adopted two rules regarding resolution plans that systemically important financial institutions themselves will be required to prepare. These are the so-called "living wills."

The first resolution plan rule, which the FDIC issued jointly with the Federal Reserve Board, implements requirements of section 165-D of the Dodd-Frank Act. This section requires bank holding companies with total consolidated assets of $50 billion or more, and certain nonbank financial companies that the new Financial Stability Oversight Council will designate as systemic, to develop, maintain, and periodically submit resolution plans to the regulators. The plans will detail how the top-tier legal entity in the enterprise, as well as any subsidiary that conducts core business lines or critical operations, would be resolved under the US Bankruptcy Code. And complementing this joint rule making with the Fed, the FDIC also issued a rule requiring any FDIC-insured depository institution with assets over $50 billion to develop, maintain, and periodically submit plans outlining how the FDIC would resolve it through the FDIC's traditional resolution powers under the Federal Deposit Insurance Act.

This all gets a little confusing, so let me try to make it clear. These two resolution plan rule makings are designed to work in tandem and complement each other by covering the full range of business lines, legal entities, and capital structure combinations within a large financial firm. Both of these resolution plan requirements will improve efficiencies, risk management, and contingency planning at the institutions, and supplement [how] the FDIC's own resolution planning works.

Just to be clear in case I've confused you, we're talking about, in effect, three resolution plans: (1) the internal plan—which, frankly, is the one that counts—that the FDIC is preparing in order to carry out our new authorities under Title II of Dodd-Frank; (2) in addition to that, the companies themselves have to prepare a plan for the consolidated entity for the holding company, as well as a plan for its insured institution within that holding company; (3) those two plans would be put together, and those company plans would really serve as a source of additional information to the internal plan that is really the basis of the FDIC's strategy for managing an orderly resolution of these companies. This whole planning activity simply did not exist prior to the enactment of Dodd-Frank.

Let me just say a word about the "living will" process, which we are really in the early stages of developing. We expect that the process of developing these living wills will be a dialogue between the regulators and the firm. It won't be a simple check-the-box exercise, and it will take into account each firm's unique characteristics. The planning process will be an interactive dialogue with the firms, especially for the largest and most complicated ones; and they will ensure a comprehensive and coordinated resolution planning process for both the insured depository and the holding company and affiliates. We and the Fed—the FDIC and the Fed—are now in the process of engaging with the firms. A final rule was issued last year. Under the rule, the first set of plans for the largest companies—that will be the holding companies with assets over $250 billion—that first round of plans will be due in July. So that whole process . . . of producing what will be, in effect, the first draft of those plans [is under way]. Once those initial drafts are submitted, there will be a further engagement between the regulators and the institutions to gain more information, to make modifications to the plans, to get to a final plan that can gain regulatory approval. So that process is actively under way, but at the end of day, it will largely serve a supportive function to the internal planning process that the FDIC has been engaged in now for some period of time.

Now, finally, let me turn to this cross-border resolution issue for large, systemically important financial institutions. Section 210 of the Dodd-Frank Act requires the FDIC to coordinate to the maximum extent possible with appropriate foreign regulatory authorities in the event of a resolution of a covered financial company with cross-border operations. And the FDIC has been working actively on both a multilateral and a bilateral basis with our foreign counterparts in supervision and resolution to address these important cross-border issues. We have participated in the work of the Financial Stability Board of the G-20 countries—we're part of the resolution steering group of the FSB—as well as the cross-border crisis management groups that have been established for each of the global SIFIs. The FDIC has also co-chaired the Basel committee's cross-border bank resolution group since its inception in 2007.

Since these global SIFIs present complex international legal and operational issues, the FDIC is also actively reaching out on a bilateral basis—and I really view this as quite crucial—to the foreign supervisors and resolution authorities with jurisdiction over the foreign operations of key US firms. The goal is to be prepared to address issues regarding cross-boarder regulatory requirements and to gain an in-depth understanding of cross-border resolution regimes and the concerns that face our international counterparts in approaching the resolution of these large international organizations. It's worth noting that, although US SIFIs . . . have foreign operations in dozens of countries around the world, those operations tend to be concentrated in a relatively small number of key foreign jurisdictions—in the case of the United States, particularly the United Kingdom. So while the challenges to cross-border resolution are formidable, they may actually be more amenable than is commonly thought to effective management through bilateral cooperation.

The focus of our bilateral discussions is to identify impediments to orderly resolution that are unique to specific jurisdictions, and to discuss how to mitigate those impediments through rule changes or bilateral cooperation; and also to examine possible resolution strategies and practical issues related to implementation of such strategies with respect to particular jurisdictions. I would note that our initial work with foreign authorities has been encouraging. In particular, US financial regulatory agencies have made substantial progress with authorities in the UK in understanding how possible US resolution structures might be treated under existing UK legal and policy frameworks; and we have engaged in in-depth examinations of potential impediments to efficient resolutions and are on a cooperative basis in the processes of exploring methods of resolving them.

Quite frankly, if you look at the global operations of our systemically important US institutions, the UK is the large majority of the ballgame. To the extent we can develop an effective working relationship with the UK, we really go a significant way down the playing field in developing a capability to address these issues. Among countries of the world, quite frankly, the US and the UK are ahead of the curve in terms of putting in place important new statutory authorities to manage an orderly resolution of a systemic company and, if I may say, having leaders of our responsible regulatory agencies with a strong commitment both to carrying out those new authorities and to cooperating on a cross-border basis in managing the issues raised by institutions with cross-border operations.

So let me conclude, if I may, with this point: developing a credible capacity to place a systemically important financial institution into an orderly resolution process is essential to subjecting these companies to meaningful market discipline. Without this capability, these institutions, which by definition pose a risk to the financial system, create an expectation of public support to avert failure. That distorts the financial marketplace, giving these institutions a competitive advantage that allows them to take on even greater risk and exacerbating the systemic issues that they present. And it obviously creates an unlevel playing field for other financial institutions that are not perceived as benefiting from potential public support.

There's a very strong public interest, I would suggest to you, in the FDIC developing the capability to carry out its new systemic resolution responsibilities in a credible and effective way.

Thank you all. If we have a couple of minutes, I'd be glad to try to respond to a question or two.

### Q&A

**Q:** Perhaps you could develop the much more day-to-day kind of workings of the Financial Stability Oversight Council. As I understand it, when a bank is identified as in trouble or about to go broke—and again, you should correct me on all this; I don't have any notes with me—two-thirds of the FDIC board has to vote to shut down the institution. Then it goes to the FSOC, and then two-thirds of that votes to shut it down. Then the process begins. I'm thinking of this in the context of, like, Bear Stearns opened Monday morning with $10 billion in assets and was broke by about three o'clock on Thursday. And then

I think about how long it takes us to have a faculty meeting at my college, and . . . I just don't see this happening in that time frame, given how fast money can drain out, especially if word gets out on the street that you guys are going to make a move—which it almost certainly will.

**MG:** You've actually raised a bunch of issues. Let me see if I can sort them out a little bit.

First of all, the Financial Stability Oversight Council that you mentioned—you all understand, that's a new council that's been established under the Dodd-Frank Act that's made up of all the US federal financial regulators— . . . has been given authority that did not exist prior to the legislation to designate nonbank financial companies as systemically important, and once designated, were subject then to the full prudential regulatory authorities of the Federal Reserve Board. That's actually quite important, because, as you indicated, . . . Bear Stearns was a nonbank financial company and, frankly, was subject to no meaningful prudential supervision prior to the crisis. There was no authority under the law to subject Bear Stearns to prudential supervision of the kind we associate with insured financial institutions. So one of the important new authorities of the Dodd-Frank Act is to provide the ability to designate nonbank financial companies, to subject them to a system of prudential regulation. And the FSOC, as it's called, the Financial Stability Oversight Council, just completed a final rule making and guidelines laying out the criteria for making those designations, and will now move forward over the course of this year in terms of making those designations.

You raised the question of being in the dark about Bear Stearns. The reason we were in the dark about Bear Stears was, they were not subject to any prudential supervision, which is really one of the key points I was trying to make. The issue is not simply subjecting them to a resolution authority; it's subjecting them to a system of prudential supervision, so that you know the condition of the institution well ahead of time and that you have the capability to intervene before the institution reaches a state of crisis. At a minimum, if it reaches a state of crisis, you actually want to know the condition of the institution with some confidence—which was not the case previously. There's been an extensive resolution planning process, so that you actually have a capability and set of authorities to manage an orderly resolution, if it comes to that. So that's the FSOC.

But that is actually a different process from the decision to place a company into an orderly resolution authority. The FSOC process—and this will get very confusing, so I'll try to lay it out, but I'm not confident I'll make it clear—the FSOC has the authority to designate the nonbank [in order] to subject it to prudential supervision. The process for designating a company for the new Title II systemic resolution authority is *not* an authority of the FSOC. Rather than an authority of the oversight council, it is actually a shared authority, as you started to indicate, of the Federal Reserve, the FDIC, and the Treasury secretary in consultation with the president. This is actually a process that existed previously to Dodd-Frank . . . in order to place a company into the Title II orderly resolution. And that would apply to a bank holding company or any nonbank financial company. I would point out to you that that is also an important new authority, as I indicated, under Dodd-Frank. Prior to Dodd-Frank, there was authority to place into a public resolution process only *insured* financial institutions. There was no authority to place the holding company or the affiliates of the insured institution into a public resolution, and there was of course no authority to place a nonbank financial company into a public resolution authority. That authority now exists, and the process for exercising it requires a two-thirds vote of the board of governors of the Federal Reserve and a two-thirds vote of the board of the FDIC to recommend to the Treasury secretary to make that determination in consultation with the president. It's obviously an extraordinary judgment, engaging the most senior levels of our regulatory authorities and the Treasury. But that would be the process. Once designated, once that determination has been made, then in effect [the firm] would be turned over to the FDIC to manage a public receivership process. So that's a long way of trying to sort out the issues that you've raised.

**Q:** In order to monitor these large organizations, will you have to have a presence in them continually? And in monitoring them, if necessary, do you have the ability to cause them to divest one or another of their affiliates or subsidiaries?

**MG:** The answer is, in terms of the monitoring process, we actually do have several FDIC staff on a full-time basis in these largest companies to monitor them for resolution purposes, to complement the supervisory responsibilities of the Fed and the OCC [Office of the Comptroller of the Currency] in the United States. In terms of the divestiture issues, that does go to the authorities under the new resolution plans that will be required. These large companies will be required to prepare their own plans, and they'll be subject to review and approval by the Federal Reserve and the FDIC jointly. If the plans are deemed insufficient, the Federal Reserve and the FDIC jointly have broad authorities to require compliance; and, ultimately, if compliance is not provided, the authorities do include, if so judged, requiring divestiture of subsidiaries and other actions as well. That obviously would not be something done lightly, but the authority is provided.

**Q:** Given the complexity of these institutions in international issues and interconnectedness, it seems obvious, and maybe you can comment on it, that systems for monitoring data and analyzing data that can be used in common by the many agencies that have an interest are critically important to avoiding resolution and then completing resolution. At the same time, there are many who believe that the OFR [Office of Financial Research], for instance, is many years from actually getting into operation and providing the systems that would be useful across the many agencies. Is that correct? Is it a concern? Should *we* be concerned?

**MG:** Data and information, as you indicate, are crucial in the foundation of any supervisory or, ultimately, resolution actions. The OFR is the Office of Financial Research that's been established in the Treasury Department under Dodd-Frank that has broad new responsibilities in terms of data gathering for the financial sector. And you're right: it's in the process, really, of being set up and running. It'll take time. And it'll be, from my standpoint, an important new addition in terms of an information source on the financial industry broadly. But, of course, the institutions we're talking about, for the most part, are currently regulated entities at both the bank and holding company level. They're subject to extensive supervision by the Federal Reserve and the OCC in regard to nonbank financial companies. The SEC [Securities and Exchange Commission] and CFTC [Commodity Futures Trading Commission] also have significant information relating to these companies, as well as additional authorities in regard to them now. So information will be crucial.

I think we are much better positioned now with the expanded authorities under Dodd-Frank to get a handle on the condition of these institutions for both supervisory and resolution purposes, and I place great value, if I may say, on the development of the Office of Financial Reseatrch. I think that's an important new institution that needs to be made effective.

**Q:** What do you expect to happen to Dodd-Frank in the process that you're talking about if Romney wins the election?

**MG:** That's sort of over my pay grade, if I may say, so I don't want to comment on that *[laughter]*. But . . . I guess the short term is too-big-to-fail, but what you really mean by that is those institutions, as I indicated before, that are not accountable to the discipline of the marketplace and, because of their size and systemic significance, the market believes there's an expectation of public support [for them], because the failure of the company would put the system as a whole at risk.

Concern about that issue, of addressing too-big-to-fail, is, I think, shared across, if I may say, the spectrum of views, and the need to address that shares fairly broad support. So I would hope, regardless of the outcome, that these are really an important new set of authorities that need to be developed and have the capability of being implemented. We've actually had broad support for it, and I'm hopeful we can continue that.

Thank you all very much.

**CYRUS AMIR-MOKRI**

*Assistant Secretary for Financial Institutions, US Department of the Treasury*

**Restoring and Maintaining Trust: Financial Reform Efforts and Lessons Learned from the Crisis**

Good afternoon. It is a privilege to address the distinguished audience at the Hyman Minsky Conference.

Today, I would like to present an overview of how recent financial reforms are designed to maintain financial stability, and thereby promote confidence in our financial system.

One of America's great institutions has been its financial system. Over the years, this system has enjoyed a degree of openness, transparency, safety, dynamism, and creativity unmatched by any other. People from all over the world have trusted this system with their money. They have come to America to open businesses, to seek investment, and to see their investments grow.

This system, which has served as a foundation for America's global leadership and prosperity, nearly collapsed during the financial crisis. Financial institutions lost trust in [one another], and consumers, investors, and businesses lost trust in financial institutions and the markets. And thus the financial system was unable to perform its most basic credit intermediation function, which is of vital importance to the real economy.

## New Products, Changed Firms, and Expanding Linkages

Often, the starting point for speaking of restoring trust in the financial system begins with the years immediately preceding the financial crisis. To appreciate fully what the Dodd-Frank Act seeks to accomplish, it helps to take a step back and to trace some important developments in the financial industry over the past three decades.

Those decades witnessed significant innovation in the world of finance. Many aspects of this innovation were positive and contributed to our growth and prosperity. But some of this change was also accompanied by peril.

Today, I touch on four developments that I believe were significant:

First, we saw an increase in the size and complexity of some financial institutions.

Second, there was a significant degree of financial product innovation.

Third, new financial actors outside of the bank regulatory framework became increasingly involved in credit intermediation.

Fourth, this changed landscape contributed to an unprecedented level of interconnectedness between financial firms.

The story of the increase in the size and complexity of many financial firms is undoubtedly familiar to this audience. In 1980, for example, the top four banking organizations accounted for about 15 percent of industry assets. By 2007, the top four banks held 46 percent of industry assets. As this statistic suggests, with increasing size came increasing concentration.

Financials firms also became increasingly complex. The concept of the "business of banking" was expanded from its earlier, more circumscribed definition. The banking legislation enacted in the 1990s both enabled and reflected the underlying changes in the business. These years witnessed the expansion of interstate banking and the ability of bank holding companies to engage in businesses such as investment banking, which allowed them to own broker-dealers.

Thus, firms grew along multiple dimensions. They began to manage a more diversified portfolio of assets and a greater number of lines of business. They also became more reliant on the capital markets for both shorter-term and longer-term financing. Many firms relied on leverage to expand their balance sheets. In 1979, broker-dealers had on average total liabilities to equity capital ratios of 18 to 1. By 2007, this ratio had increased to about 37 to 1.

Second, this time period witnessed a tremendous outburst of creativity, resulting in the introduction of many new financial products, many of which were designed to manage and disperse risk. The first interest rate swap was arranged in 1981 for risk management purposes between the World Bank and IBM. The credit default swap was conceived in 1997 as a hedging tool to mitigate risk for bank loan portfolios. Notwithstanding their recent creation, over-the-counter derivatives transactions today represent $600 trillion in notional amount and involve increasingly complex products used for a broad variety of purposes.

This time period also saw the development of asset-based securitization, which improved the availability of credit and lending capacity by distributing the underlying credit exposure to third parties. Securitized products were tailored to meet investor risk and duration appetites. By the mid-1990s, securitization had spread from mortgages to other asset classes, and structured products became increasingly complex. As it turned out, however, the risks of these new products were poorly understood in many cases. Many overlooked the risks posed by the illiquid, long-term assets upon which the securitized products were collateralized and the nature of the support offered from private credit and liquidity enhancement.

Third, as firms and products evolved, new financial actors—outside of the existing bank regulatory structure—became increasingly prominent in credit intermediation. For example, money market funds grew from $76 billion in financial assets in 1980 to $3 trillion in 2007. The number of hedge funds, and the amount of assets under management by those firms, also expanded. Between 1990 and 2007, hedge funds grew from 530 firms with $39 billion under management to 7,600 firms with $1.9 trillion under management.

During this period, practices of established actors also changed. Further innovations in securitization led to the growth of structured investment vehicles and attracted a broad new set of investors, ranging from traditional banks to insurance companies. Structuring to achieve advantageous credit ratings fueled the growth of these investment vehicles and the access of otherwise conservative investors.

Fourth, these developments and others, such as vast improvements in technology, contributed to an unprecedented degree of interconnectedness. The new products linked regulated, unregulated, and differently regulated firms in unfamiliar ways. For example, by selling a credit default swap, a firm became potentially liable to another firm, but in a way unlike traditional liability relationships. Credit default swaps created not only a "jump-to-default" liability, but [also] the possibility of a "double default," whereby the protection buyer was now exposed to the counterparty credit risk of the protection seller.

These risks were not only poorly appreciated, but [also] largely hidden due to the absence of adequate reporting rules and record-keeping requirements. Even so, credit default swaps and other derivative contracts tied the fates of our largest financial firms to [one another]. In a moment of stress, even strong firms could be vulnerable to the failure of a weaker firm.

### The Failure of the Regulatory Framework

The regulatory framework did not keep pace with these innovations. Both the institutional structures, and the substance of our rules, proved insufficient.

One fundamental shortcoming of the regulatory structure was that there was no requirement that regulators collectively and collaboratively monitor the financial system as a whole. At different points in American financial history, circumstances had demanded the creation of specific regulatory agencies to perform specific tasks and to solve specific pressing problems. When these agencies were created, financial firms and markets were not as complex or interconnected. Thus, the foundations of the old regulatory system were based on assumptions about the nature of financial firms, their activities, and their relationships that would be outgrown during these three decades.

To be sure, during this period, regulatory practice and legislation recognized the increasing need for interaction and coordination between the agencies. What we did not sufficiently appreciate was how quickly the world was changing, and how much more robust that interaction and coordination would need to be. As a most basic example, the largest financial institutions were not subject to consolidated supervision.

Second, financial regulation did not keep up substantively with the many issues presented by the firms and markets. Firms did not hold sufficient capital or liquidity. Risk management was outdated. Securitization incentives were misaligned. Credit ratings proved to be unreliable. The list is lengthy. The lack of proper regulation and oversight resulted in deteriorating market discipline and it skewed incentives so as to reward excessive risk taking.

### Establishing Macroprudential Supervision

The financial crisis revealed that the risks facing our system can be correlated and crosscutting, and that they could affect multiple firms and markets simultaneously. The crisis laid bare the weaknesses of the financial regulatory infrastructure: insufficient coordination among regulators; limited tools to understand complex financial firms; inadequate authority to regulate for safety and soundness outside the core banking system; and no provisions for orderly resolution.

To preserve financial stability, it thus became essential to establish a regulatory structure that could properly assess the financial system as a whole, not simply its component parts—a regulatory structure in which the failure of one firm, or problems in one corner of the system, would not risk bringing down the entire financial system.

The Dodd-Frank Act responds to this need by creating a dynamic, forward-looking regulatory apparatus that seeks to restore market discipline. While we cannot predict precisely the threats that may face the financial system in the future, we can put in place a modern regulatory framework to help keep pace with financial sector innovations and safeguard financial stability.

## The Financial Stability Oversight Council

The Financial Stability Oversight Council was created to require financial regulators to regularly convene to monitor financial stability. While each agency plays an important role in maintaining a stable and well-functioning system, the crisis revealed that no single agency had sufficient authority to manage a financial crisis on its own. Acting in the collective, the council's function is to identify risks to the financial stability of the United States and respond to emerging threats to the stability of the US financial system.

The council was created to be the central point of coordination across the regulatory system. By statute, it must meet officially no less frequently than once a quarter. Thus far, it has met much more frequently. The council must also release an annual report that assesses the impact of significant financial market and regulatory developments on financial stability.

The council possesses both general duties and specific authorities. Among the council's general duties are to monitor the financial services marketplace to identify potential threats to financial stability. The monitoring duty is fulfilled partly by relying on the council's constituent agencies, but also by drawing on the work of the Office of Financial Research (OFR), which supports the council and its member agencies.

The OFR is charged with developing tools for risk measurement and monitoring; collecting data and providing these data to the council; and standardizing the types and formats of data reported and collected. The OFR's work will enable regulators to aggregate and analyze the data, to see more clearly the interaction between developments in our financial system and the global economy, and to understand the risks faced by financial firms, including their interconnectedness.

An example of the OFR's recent work is advancing the establishment of a Legal Entity Identifier. The LEI aims to create a global standard for the identification of parties to financial transactions. This standard will improve data quality, allowing regulators and firms better to manage counterparty risk, improve the integrity of their business practices, and lower processing and transaction costs.

Two other general duties of the council are, first, to facilitate information sharing and coordination among the member agencies and other regulators; and, second, to monitor financial regulatory proposals, identify gaps in regulations, and recommend supervisory priorities to agencies. Both sets of duties are core to the council's intended role as the central point of coordination across the financial regulatory infrastructure.

## Modernization of Oversight through Designation

Financial stability requires conditions wherein system-wide financial intermediation is preserved and payment services are not disrupted. Some of the council's specific authorities go to addressing these two components of financial stability. The financial crisis taught us that the failure of one significant firm can destroy confidence in the financial system and disrupt financial intermediation.

Accordingly, Dodd-Frank has given the council specific authority to designate nonbank financial companies for supervision by the Federal Reserve under enhanced prudential standards. In addition, financial market utilities provide market participants with the fundamental confidence that our system is safe and sound, and that the terms of their transaction obligations will be honored. Although this fact is often overlooked, the statute gives the council the authority to designate these utilities systemically important for enhanced supervision.

Last week, the council approved the final rule that lays out the criteria and process for designating certain nonbank financial companies. The council has now begun the three-stage designations process. In addition, the council also issued a final rule in July 2011 establishing criteria by which financial market utilities may be designated for enhanced prudential standards. The designation process outlined by that rule is also under way.

## Other Essential Tools to Preserve Financial Stability

Other major tools of Dodd-Frank to strengthen system-wide oversight and mitigate threats to financial stability include: stronger regulation of large bank holding companies, a comprehensive approach to oversight of the derivatives market, and a new orderly liquidation authority for financial companies.

The crisis showed that large bank holding companies are potentially vulnerable to major counterparty credit, liquidity, and other risks in the midst of market stress. Accordingly, the statute requires all bank holding companies with at least $50 billion in assets to be automatically subject to enhanced prudential standards by the Federal Reserve Board.

The Federal Reserve issued its Notice of Proposed Rulemaking for enhanced prudential standards in January, and is currently collecting comments. The proposed standards will include more stringent regulations for liquidity and capital; single-counterparty credit limits; and overall risk management protocols, including risk committees and stress tests.

The crisis also showed that links between firms created by derivatives contracts could exacerbate a crisis. The statute adopts a comprehensive approach to reform of the derivatives markets, which had previously lacked oversight. The flaws attendant to this area of financial transactions were many: poor documentation, such that, at critical times, neither supervisors nor counterparties knew who owed what to whom; poor risk management, such that firms were not able to satisfy their contractual obligations with respect to collateral; and a generally fragmented and opaque market.

To reduce these risks, financial firms will now be subject to important recordkeeping and transaction documentation requirements. They will also be required to submit standardized contracts to central counterparties for clearing. The reforms also include trading and transaction reporting requirements designed to make the derivatives markets more transparent. Finally, transaction information will be recorded in data repositories, which will allow regulators to monitor this market better.

Third, the experiences with Lehman Brothers showed the potentially devastating consequences to financial stability of the disorderly bankruptcy of a significant financial firm. Thus, the statute provides for orderly resolution.

The FDIC and Federal Reserve have already adopted a number of rules related to the resolution authority, including a "living wills rule" that requires large bank holding companies and designated nonbank financial companies to prepare resolution plans. The largest bank holding companies will submit the first living wills in July. Recognizing the interconnected nature of the financial system, [the] resolution authority will serve to prevent the failure of one institution from taking down the entire system. And it should play an important role in restoring market discipline, by reducing reliance on government backstops.

Finally, administering reforms to maintain financial stability is important not just for the US financial system, but for the global financial community. There should be a level playing field for all firms and regulatory coordination. We continue to work with our partners in the , and the Financial Stability Board to ensure that the financial reform agenda is global in scope.

## Conclusion

Over the past three years, we have made substantial progress in restoring trust to our financial system and to improving financial stability. Bank balance sheets are stronger. Tier 1 common equity at large bank holding companies increased by more than 70 percent, or by $560 billion, since the first quarter of 2009.

Additionally, at the four largest bank holding companies, for example, reliance on short-term wholesale financial debt has decreased from a peak of 36 percent of total assets in 2007 to 20 percent at the end of 2011. The firms' liquidity positions are more robust and their funding sources are more reliable. Firms have significantly reduced leverage. Recent stress tests showed that the largest financial firms are better able to withstand significant shocks.

While our financial system is growing stronger and more resilient, we should not rest on current successes. Rather, we must remember two important caveats.

First, financial stability is not static. Firms change, products change, and so does the locus and nature of risk. Constant vigilance is needed, which is why the Dodd-Frank Act conceives of a forward-looking, dynamic approach to monitoring risk and maintaining financial stability. When fully implemented, these new rules of the road will provide regulators with better tools, promote market discipline, and better protect all market participants, from retail consumers to institutions.

Second, we should not simply assume that better regulation will prevent all future crises. Confidence in the financial system also depends on the integrity of both the private institutions that operate within it and the individuals who run those institutions.

The task of maintaining financial stability thus is ultimately a collective responsibility.

Thank you.

# Sessions

**SESSION 1**

## *Public Debt, Private Debt, and Financial Instability*


Dimitri B. Papadimitriou, Claudio Borio, Joseph E. Stiglitz, Bruce C. N. Greenwald

**MODERATOR:**
**DIMITRI B. PAPADIMITRIOU**
Levy Institute

**CLAUDIO BORIO**
Bank for International Settlements

**BRUCE C. N. GREENWALD**
Columbia University

**JOSEPH E. STIGLITZ**
Columbia University

**CLAUDIO BORIO** explored the question of how policy (prudential, fiscal, and monetary) should respond to a balance sheet recession. He elaborated on three central points: (1) that balance sheet recessions are different from normal recessions; (2) that when recovering from a balance sheet recession the key policy challenge is to address debt and capital stock overhangs through balance sheet repair; (3) that appropriate prudential, monetary, and fiscal policy need to be reconsidered in this context. Borio concluded that while traditional rules of thumb for policy might be adequate for the crisis management phase of a balance sheet recession, they are less effective for crisis resolution. While they may buy time, traditional policy approaches contain pitfalls that can delay necessary balance sheet adjustments and cause imbalances elsewhere in the global economy.

Borio outlined what he characterized as the consensus view: that the most recent recession was different from typical postwar recessions, which were caused by tight monetary policy designed to control inflation. The most recent recession, by contrast, was the result of a major financial bust following a major financial boom, against a background of low and stable inflation. And, said Borio, the historical evidence suggests that such busts are followed by weak recoveries and accompanied by permanent output losses larger than those associated with normal recessions. Why, he asked, should that be the case?

Borio suggested that four factors are at work: (1) overestimation of potential output and growth during the boom; (2) misallocation of resources (of the capital stock in particular); (3) the effects of debt and capital stock overhangs; and (4) disruptions to financial intermediation. The upshot of all of this, he argued, is that we are left with little room for maneuver on prudential, fiscal, and monetary policy. And this constrained policy space is no coincidence; it is largely the result of the mishandling of, or failure to respond to, the boom that preceded the crash. The boom "flatters" the accounts of financial institutions and the sectors to which they lend. This, according to Borio, is the paradox of financial instability: the financial system looks strongest when it is most fragile. The boom also flatters the fiscal accounts in the form of the generation of "unsustainable" revenues, which is part of the overestimation of potential output and growth Borio associates with financial booms. And as for monetary policy, since inflation is low and stable, there is no apparent need to respond to financial imbalances.

When it comes to addressing the bust phase of this cycle, Borio insisted that we need to distinguish between crisis management and crisis resolution. The overriding purpose in the crisis management phase is to prevent the implosion of the financial system, which in the context of monetary policy means providing backstops to the system. In the crisis resolution phase, balance sheet repair is the priority. Here Borio contrasted Japan's lost decade with what he regarded as the successful approach of Nordic countries in the early 1990s. In the case of the Nordic countries, the crisis management phase, in which the financial system was quickly stabilized with liquidity support and guarantees, was followed by a quick transition to a crisis resolution phase in which balance sheet problems were addressed. This was accomplished through forced write-downs, recapitalization of institutions, the sorting of institutions based on viability, a reduction of excess capacity in the financial system, and a promotion of operational efficiency. Both public money and public control are essential to these strategies.

Borio then outlined the pitfalls for prudential, fiscal, and monetary policy in the context of the crisis resolution phase of a balance sheet recession. The potential pitfall in the case of prudential policy is a misguided attempt to avoid a credit crunch by focusing entirely on recapitalizing institutions with private sector money, without enforcing loss recognition. For fiscal policy, Borio argued for the superiority of direct balance sheet repair—a substitution of public for private sector debt, including through debt relief—over pump priming in the context of scarce fiscal capacity. While pump priming would have an effect on output and expenditures, according to Borio this may only be a one-off effect that has little impact on the balance sheets themselves. Finally, Borio argued that while aggressive monetary policy easing can buy time, it can also delay necessary balance sheet adjustments. The problem, according to Borio, is that while monetary policy normally operates by raising asset prices and encouraging borrowing and risk taking, a balance sheet recession features conditions in which there is already too much debt, overly high asset prices, and excessive risk taking.

Turning to the international dimension, Borio noted that, while export-driven, credit-less recoveries are a typical way out of financial crises, there are limitations to this strategy for large, more closed economies. An induced exchange rate depreciation may result in undesirable capital flows and, if financial cycles are not synchronized, exchange rate pressures elsewhere in the world. Borio speculated that we might be witnessing the latter dynamic, with some emerging market economies appearing to develop symptoms similar to those found in the industrialized countries during their precrisis buildup of financial imbalances.

**BRUCE C. N. GREENWALD** took issue with some aspects of Borio's remarks. All cycles, Greenwald insisted, are to some degree balance sheet cycles. Institutional and incentive effects drive firms to strip themselves of equity capital and accumulate debt, making them vulnerable to sudden shocks. In a perfectly transparent market, in response to these shocks firms would sell equity at a reasonable price to retire debt, restoring balance sheets and alleviating the need for real adjustment. But the reality, said Greenwald, is that secondary markets dry up in recessions and the ability to recapitalize disappears. Hence, the adjustment takes place through reduced investment and output, restoring balance sheets only over time. Greenwald thus described this "classic Minsky recession" as featuring a sharp downturn followed by a slow recovery. As firms regroup and recapitalize, they begin to extend their balances sheets again and the whole process repeats itself.

According to Greenwald, because these balance sheet recessions are self-correcting, when we see a case in which there is no self-correction, we know that something else is going on. Greenwald also cautioned that when discussing the effects of financial crises we need to be careful about getting the causality right. Financial crises occur when there are deep real recessions, and deep real recessions last longer than shallow real recessions, and therein lies the proper association, according to Greenwald. There are long-term economic difficulties when there are financial crises because financial crises are associated with deep recessions, and deep recessions take longer to repair. So in the case of Europe, for instance, Greenwald noted that financial crisis occurred fairly late in the cycle, and, he argued, the same can be said for the United States' recent experience.

The other theme of Greenwald's presentation centered on the question of what policy, and in particular monetary policy, can do in such circumstances from a Minskyan perspective. If the challenge is to fix balance sheets, Greenwald argued, then policy needs to provide equity to firms, either directly or indirectly through banks. He noted that there used to be an automatic system for restoring bank equity in the form of a zero interest rate ceiling on demand deposits. These old interest rate ceilings provided a mechanism whereby the Federal Reserve could effectively tax depositors and transfer the money to bank equity. Greenwald pointed to evidence that, up until the ceiling was lifted, there was a tight correlation between the money supply (M1) and nominal GDP growth, presumably demonstrating a powerful equity effect. But this tight correlation disappeared after the zero interest ceiling on demand deposits was removed; the monetary policy "steering wheel had been disconnected from the wheels," as Greenwald put it. After the late 1980s, countries following traditional monetary policy (Japan, Thailand, and Indonesia) have had worse results than countries that chose direct equity transfusions (Korea, Malaysia, and the Nordic countries). Policymakers, said Greenwald, have to think about alternative sources of providing direct equity injections so that monetary policy functions effectively.

The most recent crisis has not, according to Greenwald, been a Minskyan balance sheet crisis. As in the case of Japan, the United States has seen an improvement in companies' balances sheets but historically low growth levels still persist. Looking at what sustained the US economy prior to the crisis, in the 2005–07 period, Greenwald noted that, while there was a modest investment boom in housing, what was most critical in supporting aggregate demand was an unsustainable household savings rate that was effectively zero. Given the characteristic savings rate of the top 20 percent of households, which control at least 40 percent of the income, the bottom 80 percent of households had to be spending 110 percent of their income every year in order to approach full employment and generate even modest growth. This is not a description of a financial crisis, Greenwald insisted, but of a sustained real imbalance.

In the context of describing what such a sustained real imbalance might look like, Greenwald turned to an analysis of the Great Depression. Looking at agricultural productivity and labor force levels, he pinpointed what he described as a rare situation in which there was high productivity growth against a slow-growing, inelastic demand, ultimately undermining farm incomes. And when farm incomes are undermined to a sufficient extent, the transition to the cities can no longer be financed. Being stuck, geographically, then makes these dynamics worse, as output drives down prices even further. In the 1930s, people who were already poor had their incomes reduced further, and because they had a higher marginal propensity to consume than the people who benefitted from the low farm prices, demand was dragged down in the economy as a whole. In that context, said Greenwald, World War II was excellent industrial policy, since it financed the transition of people from farms into the army or war production, and when the war ended there was enough urban demand to keep them employed in the cities.

The parallel to today, suggested Greenwald, is manufacturing. Manufacturing is dying globally, and this traps people in manufacturing areas, while the transition to services, which is partly geographical but also a matter of skills and infrastructure, cannot (or will not) be financed. Greenwald observed that competition for a share of the global manufacturing market is increasing, exacerbated by flexible exchange rates. In this context, there are countries (including Germany, Japan, and China) with large surpluses that are not going away, and the mirror image of this are countries like the United States with stubborn external deficits. And, Greenwald suggested, this is part of the reason why, there must be all these unusual demand elements in order to sustain full employment. Moving back to the financial situation, he explained that when countries like China run a current account surplus they acquire a lot of dollars, which are then invested in the United States. This drives down interest rates, such that the availability of this money creates bubbles and ultimately contributes to financial collapse. Greenwald concluded that it is these underlying real imbalances, which have been going on since 1990, that are the cause of continuing economic problems.

**JOSEPH E. STIGLITZ** began by asking why, if we have the same human capital, physical capital, and natural resources today as we had before the crisis, we do not have the same output. If anything, he continued, we should have higher output today because we no longer have the price distortions we had before the crisis. There is no standard economic theory, Stiglitz argued, to explain why the economy must operate below potential just because we owe money. Globally speaking, we owe the debt to ourselves, so why should the mere fact that one person is richer and another poorer have the negative macroeconomic effects we are witnessing? This is partly a comment on standard economic models, said Stiglitz, particularly those featuring a representative agent model, which assume there are no significant redistributive effects. In these models, there is no reason indebtedness should have any effect.

Jumping off from Bruce Greenwald's discussion, Stiglitz raised the question of why excessive indebtedness and credit build up. Part of the explanation, Stiglitz argued, is that when you take agency issues into account, the levels of indebtedness that entail debt-to-equity ratios high enough to be vulnerable to disturbances are actually optimal for firms. It is part of the endogenous financial structure of firms that it would not be optimal to have a level of debt low enough to avoid such problems. Stiglitz then turned to other possible explanations, including irrationality. The presence of irrational exuberance is important, he explained, because it clashes with most mainstream macroeconomic models' assumptions of rational expectations.

Another set of issues is raised by problems with incentive structures in the financial sector that led to excessive risk taking in the run-up to the recent crisis. This was partly connected, Stiglitz noted, with firms' awareness that they were too big to fail (TBTF). Repeal of Glass-Steagall exacerbated this problem by leading to even bigger banks, worsening the problem of TBTF, and also affecting the culture inside financial institutions. But the problem is not just TBTF, according to Stiglitz; it is also a matter of too interrelated and too correlated to fail, which is part of the incentive structures within firms. These are instances of individually rational decisions leading to undesirable outcomes in the economy as a whole. The job of regulators is to try and identify the externalities involved. Poor corporate governance and a misguided reliance on self-regulation are all part of the problem. But, Stiglitz maintained, even if there were none of these problems of irrationality, market failure, and regulatory failure, there are still innate incentive structures that would lead to excessive credit.

When analyzing deep economic downturns, there are three questions we need to ask, said Stiglitz: What is the source of the shock (the question he touched on above)? Why do the effects of the shock get amplified? And, Why are the effects of the shock so persistent? As for amplification, Stiglitz argued that diversification actually had the opposite of its intended effect and wound up being an agent of amplification. Pushing on the notion that globally integrated economies diversify risk, Stiglitz turned to other examples in which more integrated systems are not more stable. For one, he remarked, diversification enabled contagion. Continuing with this metaphor, Stiglitz suggested that just as the appropriate response to contagious disease is quarantine, the analogue in financial markets is to use capital controls to limit interdependence.

But the hardest question, he insisted, is the problem of persistence. Although renegotiating and writing down debt, particularly for homeowners with underwater mortgages, would help, this is not happening. One of the reasons it is not, according to Stiglitz, has to do with accounting problems. We have gone, he said, from "mark-to-market accounting to mark-to-hope accounting," allowing banks to carry impaired mortgages on their books as if they would be paid back. If restructuring were to occur, banks would have to recognize the loss—something they do not want to do. Stiglitz also noted the problems raised by the presence of first and second mortgages with very different terms, such that restructuring would entail complicated distributive consequences. Despite having recognized the difficulties this causes for potential renegotiation, Stiglitz remarked, we have not tried to change the way we organize our mortgages to avoid these problems.

Stiglitz observed that many so-called financial innovations were not welfare enhancing, focusing in particular on securitization. The rationale behind securitization was risk diversification, but taking mortgages and creating a new entity is not necessary to achieve such diversification, he argued. Banks specialize in risk assessment, but by shifting this to public markets securitization led to a deterioration of risk assessment, making this an innovation that worsened the effectiveness of financial markets and may have contributed to excessive indebtedness. And the key problem in the run-up to the crisis was not that regulators were constantly trying to catch up with innovation, but that they were cognitively captured by the financial industry.

Finally, Stiglitz argued that monetary policy is not only going to be ineffective in the current context and under current institutional arrangements, but may also be counterproductive. He maintained that fiscal policy, by contrast, can be successful. On the question of bank recapitalization, he highlighted the importance of ensuring that the public sector gets appropriate compensation, something that did not happen in the case of TARP. Getting full value for recapitalization can mean that the government's balance sheet would be unaffected, said Stiglitz. He concluded by stressing that even though the underlying problems are structural and financial, fiscal policy can be a key part of stimulating the economy and bringing about a recovery.

## SESSION 2

*Reporting on Financial Crisis and Financial Reform*


Louis Uchitelle, Jeff Madrick, Gillian Tett, Yalman Onaran

**MODERATOR:**
**LOUIS UCHITELLE**
*The New York Times*

**GILLIAN TETT**
*Financial Times*

**YALMAN ONARAN**
*Bloomberg News*; author, *Zombie Banks*

**JEFF MADRICK**
*Challenge*, Roosevelt Institute, and Bernard Schwartz Center for Economic Policy Analysis, The New School for Social Research

**GILLIAN TETT** kicked off the discussion of the media's role in the financial crisis by insisting that, in addition to the usual suspects (bankers, ratings agencies, policymakers, and so on), the news media should also be considered part of the problem. Relying on the image of a "financial iceberg," Tett explained that what the media were writing about prior to the financial crisis covered only a tiny portion of what was really going on in the financial sector in terms of financial flows. There was a part of the financial system receiving extensive media coverage, including equity markets and foreign exchange markets, but the larger part of the "iceberg"—debt, derivatives, and credit—was being more or less ignored. Although there were radical changes going on within the world of finance—including, chiefly, the move from "originate and hold" to "originate and distribute"—very little of this was being covered by the press, according to Tett.

Tett noted that it became popular after the outbreak of the crisis to suggest that the dearth of coverage of what was going on in the financial sector, precrisis, could be explained by a coverup engineered on the part of financiers. However, she insisted that the reality was much more complex than a conspiracy story—and much more damning. Tett pointed to cultural factors, some of which persist today, that affected the ways in which the news media covered the financial sector. The first such factor is rooted in how the media define a story. Journalists fixate on personalities and easily verifiable facts—which meant, prior to 2007, more coverage of equity markets, with their colorful CEO personalities and easily quotable share prices. By contrast, debt markets featured more media-shy personnel, more subtle and elliptical stories, and information that was relatively difficult to come by. In addition to this "people problem," Tett said, there was a "complexity problem": a lot of what was going on in debt and derivatives, for example, prior to 2007 involved concepts that, compared to other areas of finance, were hard to explain to an audience with little appetite for such complexity. Moreover, most people capable of understanding these complex financial instruments were working for the banks.

Finally, this was all reinforced by what Tett described as the "silo problem." One of the reasons so few people anticipated the financial crisis and the bubble grew so large without many noticing was that there was a fragmentation, both structural and cognitive, in the financial system. Banks were divided into trading desks, regulation was compartmentalized, and very few people were analyzing the system as a whole. This fragmentation also affected the world of journalism, making it hard to write stories taking in the big picture and connecting all the dots.

This was not a conspiracy, Tett reiterated, but looked much more like what Pierre Bourdieu called "social silences." According to Bourdieu's social-anthropological idea, the way that elites stay in power is not so much by controlling the means of production in the Marxist sense, but by controlling the way that people think; not in terms of what is stated, but in terms of what is unstated. From a similar angle, Tett referenced Upton Sinclair's well-known aphorism that "it is difficult to get a man to understand something when his salary depends on his not understanding it." Institutionally speaking, it was much easier for most actors to not understand the big picture on finance.

Tett argued that this is not just a story about the past; that there are two areas in which fragmentation and social silences continue to affect the way the media operate. For instance, she noted how odd it is that a financial system that caused so many problems due to its complexity is now being addressed by a regulatory regime that is, if anything, even more complex and opaque. Ideally, journalists would cut through the complexity in order to explain to the public what is going on in the worlds of finance and financial reform. But, according to Tett, this goal runs up against the problem of limited resources and the aforementioned "silo problem": specialization means that very few people are connecting all the dots. On top of all that, there is, said Tett, a kind of cultural agreement that financial reform is "geeky and dull," which effectively obscures the entire issue for the wider public.

Tett finished by voicing a concern that these "silo" and resource problems are not limited to the issue of the financial sector. While we live in an increasingly interconnected world, we are becoming even more structurally and cognitively fragmented. The way to deal with this problem, said Tett, is to develop "silo busters" who will be able to operate across diverse technical fields and translate what is going on for the public. However, the institutions most likely to provide such silo busters—the media, universities, and other research facilities—are having their resources eroded.

**YALMAN ONARAN** began by arguing that the financial crisis in the United States was not altogether different from earlier financial crises elsewhere in the world, including those of Argentina and Turkey, the latter of which he was covering as a reporter at the time (2001). But one of the problems in the media, said Onaran, is that little attention is paid to the lessons learned from other countries' crises. This is partly because of a belief in a stark dichotomy between the developed and the underdeveloped world, but even the lessons learned of the Japanese crisis are not emphasized enough in the press. Despite a globally integrated world, Onaran observed, there is not enough coordination between different parts of the media that are located in different parts of the world. He also echoed Gillian Tett's claim that technical specialization stands in the way of such coordination.

Turning to financial reform, Onaran argued that the most effective regulation is the simplest, and that this is one of the reasons why Glass-Steagall worked so well. Attempts to do "Glass-Steagall Light," in the form of ring-fencing in the United Kingdom and the Volcker rule in the United States, have not been as successful, in part due to their complexity. This complexity not only makes these recent regulatory reforms difficult to report on in the media, but also hard to implement.

On the question of why the media did not see the crisis coming, Onaran commented that when most of the people being covered, including executives in the financial sector as well as regulators and outside analysts, are claiming there is no imminent problem, it is difficult for a journalist to report otherwise, despite the presence of dissenting voices. And the challenge for journalists in this context, when so many market players are claiming everything is fine, is twofold, according to Onaran: it is difficult to even be able to see that there is a problem, and an additional challenge to then write about that problem in a credible way that builds readership.

When covering Lehman Brothers and Bear Stearns, Onaran recognized how much of a "silo problem" existed in those institutions as well. Not only did the executives not understand what was going on in different departments, but the departments themselves did not understand either. Within individual departments, very few people at the top of the hierarchy understood, for instance, the financing mechanisms that were being used to sell a specific product. This makes it impossible, said Onaran, for the person running such a massive financial firm to understand what's going on within it; to understand even just the on-balance-sheet risk to which the firm is exposed (to say nothing of the additional off-balance-sheet risk). And if journalists are talking mainly to these executives, Onaran continued, how can they hope to understand what's happening inside these financial firms? Onaran commented that he was encountering similar problems in covering the Basel Accords: the more detailed the investigation became, the less likely it was that the regulators he was speaking to understood the issue.

Onaran concluded by noting that the number of public relations officials in the United States far outstrips the number of journalists. Because of this inequality of resources, the public is getting a distorted picture. The "spinning," said Onaran, is more powerful than the "truth digging."

According to **JEFF MADRICK**, one of the problems with financial journalism is that it is too respectful and trustful of Wall Street sources. Journalists also often use regulators as sources of information, but regulators, Madrick contended, weren't doing their jobs (digging into the books, questioning risks, and subpoenaing records) in the run-up to the crisis. The financial press and regulators both uncritically accepted efficient markets theory and laissez-faire ideology in general, reinforcing a belief that competition would weed out the "bad guys" and result in rational prices. Moreover, said Madrick, as a journalist you cannot continue to predict a crisis right around the corner and be wrong every day, and still keep your job.

Madrick then turned to the question of whether the attitudes of the press have changed since the crisis. He contended that, indeed, there had been changes; that there is now more skepticism of the value of speculation, recognition of the conflicts of interest at ratings agencies, and criticism of the opacity of derivatives markets. Madrick also highlighted the absurdity of asymmetric incentives in the financial sector, in which certain actors are paid to take risks but are not generally penalized financially when things go wrong. And journalists should not be singled out for their uncritical acceptance of many of these ideas prior to the crisis. Pointing to the consensus on free trade, Madrick argued that economists can have power, but they were for the most part nowhere to be seen during the precrisis period; orthodox economists in particular rarely raised a dissent. In general, the press are subject to the conventional wisdom, and as a result, they (for the most part, Madrick qualified) supported deregulation. Madrick pointed to a *New York Times* editorial supporting the last phase of ending Glass-Steagall, and noted that there was also little pushback on the elimination of derivatives regulation in the 1990s.

While the press tend not to cover stories until they're exciting, said Madrick, the "wild and crazy" mortgages that were being written ought to have qualified. And you did not have to be an expert to realize that something dramatic was going on with mortgages in places like California, Florida, and Arizona. But the problem, Madrick noted, is that the English-speaking press is often too focused on financial markets, and therefore too New York and London–centric. Madrick argued that if the Consumer Product Safety Commission (CPSC) had existed 15 years ago, the crisis could have been avoided, because under CPSC rules the mortgages would have been more clearly written, or would have been stopped altogether.

**SESSION 3**

## *Ford–Levy Institute Projects on Financial Reregulation and Improving Governance of the Government Safety Net*

Jan Kregel

L. Randall Wray

**JAN KREGEL**
Levy Institute and Tallinn Technical University

**L. RANDALL WRAY**
Levy Institute and University of Missouri–Kansas City

**JAN KREGEL** presented the latest report (*Using Minsky to Simplify Financial Regulation*) of the Ford–Levy Institute Project on Financial Instability and the Reregulation of Financial Institutions and Markets. He began by highlighting a contradiction at the heart of the Dodd-Frank Act's approach to the problem of "too big to fail" (TBTF) that may exacerbate bank industry concentration: the liabilities of failing banks will have to be transferred to banks that are already large and stable, which means that the more successful we are in failing TBTF banks, the more successful we will be in creating more banks that are TBTF. This contradiction, along with a number of challenges, legal and otherwise, that stand in the way of fully implementing Dodd-Frank, lead one to the question of whether there is a simpler alternative.

Hyman Minsky noted that simplicity was one of the virtues of the 1933 Glass-Steagall Act. The separation of investment and commercial banking was such that the scope of permissible activities for a depository institution was limited to what regulators and supervisors could understand and monitor. But Dodd-Frank, Kregel suggested, fails to provide comparable simplification. Given its complexity, it will be difficult for both supervisors and management to determine whether banks are complying with Dodd-Frank's regulations. Kregel asked whether it makes sense to continue with this "casuistic" method of trying to write a regulation for every shortcoming or piece of fraud that emerged from the crisis, rather than trying to create a more straightforward regulatory approach that could be effectively implemented.

Proposals that attempt only to limit the size of financial institutions are incomplete, according to Kregel, if they neglect to address the question of the structure of the smaller financial institutions. Stability will not be promoted if institutions, after being reduced in size, are permitted to continue engaging in the same activities. The challenge is to come up with a proposal for the structure of the smaller institutions that would result from breaking up big banks—a proposal that would deliver stability and simplification.

Kregel addressed two different possible simplifications. The first, a narrow banking proposal, is drawn from a series of 1995 papers in which Minsky speculated on the outcome of possible post-Glass-Steagall reforms. The second simplification relates to a change in the way we approach the regulation of liquidity, one that relies on a concept Kregel calls "fictitious liquidity." Kregel explained the he prefers this concept as a substitute for the better known but less helpful euphemism "shadow banks." The problem is not best thought of in terms of "shadow banks," Kregel explained, but rather as financial institutions and structures that create liquidity that is outside the control of the regulator. While there have been a number of proposals calling for the imposition of liquidity ratios on financial institutions, Kregel proposes regulating the creators of liquidity rather than the liquid assets themselves.

Returning to Minsky's 1995 conjectures about possible post-Glass-Steagall reforms, Kregel discussed Minsky's consideration of a narrow banking system in which there would be a clear separation between the payment and financing subsidiaries of bank holding companies. Kregel noted that this reflected Minsky's view of the two basic functions of the financial system: a stable and secure payments system, and the financing of the capital development of the economy. The assets of the payment subsidiaries would not include business and household liabilities, and this post-Glass-Steagall bank holding company structure would lead, thought Minsky, to 100 percent money. One of the benefits of this system would be that, if the subsidiaries in this structure were separately capitalized, the speculative activities of the financing subsidiary would not need to be bailed out to save the payments system. There would be no possibility of using customer deposits for speculation and trading—the problem aimed at by the Volcker Rule, for example.

This narrow banking structure would effectively feature banks with a 100 percent reserve requirement and financing institutions with 100 percent capital ratios. The problem with this structure, Kregel argued, would be that it would eliminate the deposit credit multiplier, leverage, and the creation of liquidity. In such a narrow money system, there would be a tendency for savings to always run ahead of investment, thus tending toward deflation or recession. What this means, said Kregel, is that a narrow banking system of this sort would have an even greater need for aggregate demand support, either from deficit spending or from having the central bank engage in the funding of investment projects. The narrow banking system, because it would be structurally deficient in aggregate demand, would have an even greater need for Minsky's "Big Government" and "Big Bank."

This narrow banking system is not, however, what emerged from the 1999 Gramm-Leach-Bliley Act. What we ended up with, Kregel explained, were augmented liquidity-creation structures that had been generated during the breakdown of Glass-Steagall; it was a system that encouraged increasing leverage and increasing liquidity creation outside of standard mechanisms. Dodd-Frank confirmed Minsky's view that the rescue of the financial system ends up validating the practices that originally created the crisis, since the 2010 Act does not, said Kregel, attempt to fundamentally change the practices used by banks, but merely tries to make particular practices safer by applying "Band-Aids." Because we did not end up with a narrow banking system, Kregel continued, the alternative is to try and regulate liquidity creation.

Kregel borrowed Minsky's understanding of what banks do to explain how liquidity is created in the system. The fundamental activity of banks is not money lending, Kregel explained, but the "acceptance function." A bank loan is equivalent to a bank buying a note that it has accepted. Banks can provide a liability that is a substitute for means of payment and they do this by accepting customer deposits, such that every bank has two kinds of deposits: it creates deposits that represent loans to firms, and it also creates deposits that are simply the acceptance of government currency. Banks could not engage in the acceptance function if they could not convince people that their liabilities could be used as means of payment. Therefore, banks have to engage in both of these activities.

"Fictitious" liquidity creation is performed by institutions that can create liquidity and engage in the same activity as banks, but for one key difference: they do not have the ability to accept deposits from the public—and therefore they cannot offer their own liabilities as a substitute for means of payment. The issue is not that whether these institutions are regulated or not regulated, hence the issue is not "shadow banks," but that these fictitious liquidity creators cannot issue a liability that is convertible into real assets in the transactions system. Fictitious liquidity therefore always depends on bank liquidity. Kregel emphasized that if we take a consolidated view of the financial system, every liability in the nonbank financial system is ultimately dependent on the liquidity created by insured deposit-taking banks.

Kregel explained that these creators of fictitious liquidity emerged from the competition between investment and commercial banks in the context of the Glass-Steagall segmentation. However, since Gramm-Leach-Bliley was meant to eliminate such competition and create a level playing field, Kregel asked whether these fictitious liquidity creators are still needed; whether they ought to have been eliminated when the level playing field was created. The examples he touched on included money market mutual funds, structured investment vehicles, securitization, the repo market, derivatives, and rehypothecation.

Instead of setting fictitious liquidity requirements, Kregel asked, why not simply regulate fictitious liquidity creation? He suggested that these fictitious liquidity-creating structures could be eliminated by reversing the judicial and administrative rulings that created them. Securitization, for instance, exists because it has exemptions from Securities and Exchange Commission regulations. If securitization had to comply with normal financial reporting and regulations, it would likely no longer be profitable, said Kregel. The Financial Stability Oversight Council (FSOC), he concluded, likely has the ability to restrict the financial activities of bank holding companies, such that the FSOC could create the regulation of liquidity without having to go through any further implementation or writing of any other regulation in Dodd-Frank.

**L. RANDALL WRAY** presented results from a second Ford–Levy Institute grant related to democratic accountability and governance of the Federal Reserve. The report summarizes the nature and causes of the global financial crisis and provides an accounting of the Federal Reserve's response to the crisis, comparing and contrasting the most recent Fed response with historical responses, and analyzing how these approaches have evolved over time.

The recent past has featured a series of crises conforming reasonably well to Minsky's financial instability hypothesis, said Wray. Each was also followed by a government rescue that essentially validated previous financial innovations, with the cycle of innovation and crisis then starting all over again. These crises, Wray noted, seem to be coming more frequently and in more severe forms. However, they have not been the traditional business investment-driven crises Minsky was describing in his 1975 book on Keynes. Instead, Wray has based his interpretation of the global financial crisis on Minsky's later work in the late 1980s and '90s. This work involves a stages approach that spells out the long-run transformation of the economy and financial system toward what Minsky called "money manager capitalism." We moved from commercial capitalism in the 19th century, the era of commercial banks, to finance capitalism, the era of investment banks, which then collapsed with the onset of the Great Depression. Emerging from the Depression and the New Deal reforms, we then entered a phase Minsky called "paternalistic" or "managerial welfare-state capitalism"; finance did not matter much in this early postwar period. But memory of the crisis faded over time, as risk taking and financial innovation, and thus financial fragility, began to grow again.

Wray outlined the postwar transformation of the economy toward money manager capitalism, also partly captured by the common term "financialization." This transformation featured the growth of financial assets, the flipside of which is financial liabilities, and therefore a growth of debt over time, all under the control of money managers. This process was accompanied by securitization and globalization, which are two sides of the same coin according to Wray, and the move to self-supervision. Wray presented data showing the postwar decline of commercial banking and growth of managed money, and explained how pension funds played a big part in the story of managed money's rise. A growing share of profits began flowing to the financial system and debt became layered on top of debt, with positions in assets financed by short-term overnight borrowing.

In terms of the cause of the crisis, another piece of the puzzle was the move to a new home-finance model. The old system was simple, involving a loan officer, bank teller, home appraiser, and public recorder, and represented an "originate and hold" model. The more "efficient" Wall Street system, representing a move to "originate and distribute," magnified the complexity involved and added multiple layers of new actors. Moreover, said Wray, every link in the chain of this new mortgage model involved fraud.

An additional piece of the puzzle was the shredding of the New Deal reforms, something with which Minsky was concerned in the mid-1990s. In addition to deregulation and self-supervision, Minsky was also worried about rising inequality, the falling wage share, and rising consumer debt.

In the 1990s and 2000s, US economic growth depended on a series of financial bubbles, Wray contended, including the biggest equity, commodity, and real estate bubbles in history. He argued that the "Clinton Goldilocks economy," marked by the buildup of federal government budget surpluses, partly set the stage for the global financial crisis. Pointing to Wynne Godley's three balances approach, Wray explained how the surpluses led to the explosion of private debt. Because in the aggregate the private balance, government balance, and foreign balance must all sum to zero, the private sector started to run unsustainable deficits as the government moved to surplus.

Turning to the bailout, Wray outlined two ways of measuring the Fed's intervention. One common method is to look at peak lending at a given moment in time, which occurred in December 2008 at roughly $1.7 trillion. This gives us some measure of the risk to which the Fed was exposed and of the maximum amount of intervention required at a particular point. But we can also measure the Fed's effort over the entire period. Presenting the results of a recent study conducted under his supervision, Wray noted that when all the Fed's lending and spending (asset purchases) is accumulated, the total comes to $29 trillion.

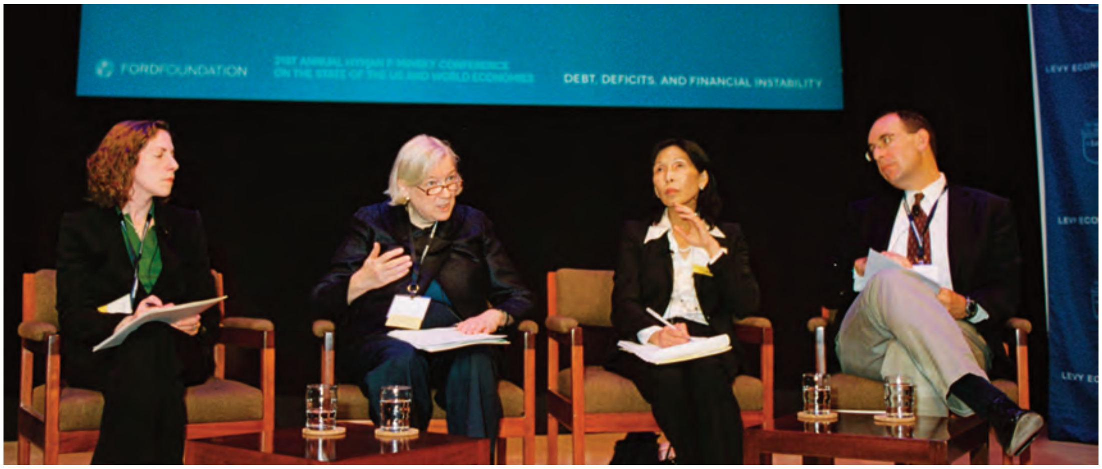
Wray's reading of the crisis is that banks had used extremely short-term finance to purchase questionable assets, and when there was a problem with these assets, those who held banks' short-term liabilities refused to roll them over. As such, a suspected insolvency crisis then turned into a massive liquidity crisis. In response, the Fed provided liquidity through an "alphabet soup" of special facilities detailed in the aforementioned study, including the creation of special purpose vehicles, or SPVs (which is ironic, said Wray, because of the involvement of banks' SPVs in creating the mess). The Fed created its SPVs, according to Wray, in order to get around section 13(3) of the Federal Reserve Act, which requires that the Fed lend at a discount to a trouble party that cannot otherwise secure loans. The Fed lent to its SPVs so that the SPV could make loans or purchase troubled assets.

Breaking down the cumulative data, Wray noted that 20 percent of the $29 trillion was "conventional," while 80 percent was "unconventional" lender-of-last-resort activity in which, for example, funding was provided to nondepository institutions and directed at propping up particular kinds of assets. About 40 percent was, according to Wray, questionable by the standard of the Section 13(3) restrictions. The assistance was also highly concentrated among the biggest domestic and foreign institutions; 84 percent went to 14 US and foreign institutions.

Looking forward, Wray speculated on the possibility of renewed problems at the big banks and shadow banks that could spark another financial crisis. Moreover, if the new Dodd-Frank rules are adhered to, Wray noted, there are a number of things the Fed did in response to the last crisis that it would not be permitted to do the next time around. In a crisis, managed funds will fail because they are heavily invested in the biggest institutions, and we will have to choose, said Wray, which of these we are going to bail out. But to the extent that we "wipe out" managed money, as he put it, this will be a good thing, because the fundamental problem of money manager capitalism is too much money chasing too few good investments. We would emerge with a simplification of the financial system, little private sector debt, and a huge government debt, which would lead to a robust financial sector. In the aftermath of the next crisis, new laws and supervision and a return to underwriting and hold-to-maturity would align the incentives of lending institutions and borrowers. Finally, said Wray, "financialization" should be replaced with a new New Deal, featuring higher wages and full employment.

**SESSION 4**

*Progress and Implications of Financial Reform Proposals*




Deborah Solomon, Christine M. Cumming, J. Nellie Liang, Frank Partnoy

**MODERATOR:**
**DEBORAH SOLOMON**
*Bloomberg View*

**CHRISTINE M. CUMMING**
Federal Reserve Bank of New York

**J. NELLIE LIANG**
Office of Financial Stability Policy and Research, Federal Reserve Board

**FRANK PARTNOY**
University of San Diego

**CHRISTINE M. CUMMING**'s presentation orbited around the theme of what she called "the endgame," focusing the discussion on two topics in particular: the resolution of financial institutions and the role of central counterparties in financial market infrastructure. Cumming dealt with the international dimensions of each of these issues.

Cumming began by observing that the resolution of financial institutions has worked reasonably well in cases in which the targets were small- to medium-size banks, and offered suggestions as to why the process works as well as it does in these cases. First, she said, the Federal Deposit Insurance Corporation (FDIC) has a broad range of powers, allowing it to move very rapidly. Cumming stressed in particular the FDIC's ability to restructure banking institutions and create bridge institutions, giving it the ability to keep a company together under temporary government ownership. Cumming also noted the importance of the fact that banks' franchise value usually exceeds their book value, and, finally, that the FDIC can provide funding as institutions enter the resolution process.

Cumming then turned to the question of why it is so difficult, comparatively speaking, to resolve larger banking institutions. Among the reasons she suggested were that typical large bank or financial holding companies include very large parts that are nonbank. The ability to take apart or restructure a large bank holding company faces serious impediments. Finally, there are significant difficulties raised by the cross-border dimensions involved in resolving these institutions. Lehman Brothers, said Cumming, was the poster child for all of these problems.

In the context of discussing some new resolution-related powers conferred on the FDIC by Dodd-Frank, Cumming turned to work being sponsored by the Financial Stability Board (FSB), highlighting a document published by the FSB titled *Key Attributes of Effective Resolution Regimes for Financial Institutions*, which lays out a set of international standards for resolution regimes. It is difficult, said Cumming, to address cross-border challenges without the sort of resolution powers outlined in *Key Attributes* being in place in all the major countries in the world. These powers, which, according to Cumming, are similar to those the FDIC possesses, are now being adopted by many countries. One of the particular challenges addressed in *Key Attributes* is the issue of how to develop better foundations for cooperation.

Cumming noted that *Key Attributes* also deals with recovery and resolution planning. She observed that recovery strategy—encouraging institutions to find a private sector solution through merger or sale—has always been a key part of dealing with financial institutions that are in trouble, and argued that if management are willing and able to do the restructuring themselves, this is an approach that best preserves shareholder value. While the United States has had some experience with this approach, Cumming noted, there needs to be more advanced planning developed, with the goal to have written plans setting out a menu of options for recovery.

The first significant obstacle to resolution planning is simply talking about it, Cumming said. Having conversations about recovery planning with principal regulators in more than just the home country is necessary, but difficult; and although such conversations were far more difficult prior to the most recent crisis, there remain impediments even after the crisis. The second significant challenge is to identify the core businesses of the financial institution, its franchise value, its critical operations (from a central bank regulator's perspective), and the structure of the firm. Because of the complex structures involved in international banking—where, for instance, a trade may be booked in one country but risk managed out of another, a certain amount of opacity is created. Although these discussions will not happen overnight, Cumming pointed to a commitment on the part of senior officials across the G-20.

Cumming closed with a discussion of resolution issues related to financial market infrastructures. She noted that we will need to develop resolution procedures for dealing with the possible failure of a large counterparty in clearinghouses serving many countries, along with cooperative oversight and more transparency for central counterparties.

In the context of the Federal Reserve's expanded responsibilities, **J. NELLIE LIANG** talked about developing a framework to monitor financial stability. According to Liang, the regulatory reforms in the Dodd-Frank Act and other reforms in the international community increase the importance of such monitoring, since the more rules that are written, the more incentives are created for the system to rapidly evolve in response, requiring ever more vigilant supervision.

Liang began by highlighting some of the key features of Dodd-Frank. First, she noted a number of reforms to the financial architecture designed to prevent another collapse, including stricter capital and liquidity standards for strategically important financial institutions (SIFIs), derivatives reform, and a resolution regime. The Act also removes some previously used crisis management tools, with the intention, said Liang, of reducing moral hazard. Liang noted Dodd-Frank's creation of a new mandate for financial stability, to be reinforced by the creation of some new organizations like the Financial Stability Oversight Council and the Office of Financial Research. However, the Act fails to adequately control financial innovation, particularly in short-term funding markets, with the result that many activities will continue to be carried out outside the banking system and without the backstop of a lender of last resort. Such missing pieces mean that sources of systemic risk will continue to be difficult to identify, said Liang, making an effective and agile monitoring program critical to maintaining financial stability.

Liang laid out some lessons learned from the financial crisis that might help to flesh out such a program for monitoring systemic risk. First, given less than 100 percent capital ratios, microprudential supervision is not enough. She also emphasized that systemic risk emerges from periods of stability and low volatility, when inadequate measurement tools fail to provide signals of distress, and that problems in the shadow banking system ultimately end up striking the regulated banking sector. According to Liang, a successful monitoring framework would be preemptive and identify potential channels through which shocks could be transmitted or amplified; structural vulnerabilities that could spread distress throughout the system by turning small shocks into bigger systemic risks. Since the shocks themselves are difficult to predict, said Liang, monitoring frameworks should focus more on these amplification channels.

Liang broke the financial system down into three broad areas: (1) SIFIs, whose failure can disrupt the financial system more broadly, and financial market utilities (FMUs), which provide the infrastructure for the system; (2) the shadow banking system; and (3) the provision of credit to the real economy. She then discussed some examples of the sort of data that would be essential for a monitoring framework in each of these areas. For SIFI and FMU monitoring, said Liang, we need measures of default risk and liability risk, including data on capital and leverage and the results of stress tests. In addition, she pointed to some relatively new work on developing measures of systemic importance that looks at factors like size, interconnectedness, complexity, and the provision of critical services, and noted that questions remain as to how these concepts should be understood and how easily they can be measured. Liang called the stress tests (Comprehensive Capital Analysis and Review) a "huge step forward" in the way supervision is being conducted and ran through some firm-specific publicly available data on those test results. On the monitoring of shadow banks, Liang noted that data are, by necessity, more scarce, but there are a number of things to monitor for evidence of trouble, including asset price levels, leverage in the financial system, and, finally, financial innovation; obtaining information about the latter is less research based and requires more on-the-ground communication and fact finding. On the real economy, Liang spoke about how more leverage in the nonfinancial sector and more reliance on short-term funding can mean that a financial shock increases the likelihood of damaging systemic consequences. Sometimes the macroeconomy is more susceptible to these shocks to credit availability, and Liang noted ongoing research on these sorts of linkages between finance and the real economy.

**FRANK PARTNOY** discussed financial innovation and its role in financial crises in the context of some "big picture" behavioral themes regarding human decision making. The two areas of financial innovation Partnoy touched on were related to derivatives and credit ratings. To begin with, said Partnoy, it is important to distinguish financial innovation from real innovation, with the former featuring little of the

"Schumpeterian" creative destruction and other benefits that derive from real innovation. Part of the reason for this difference, said Partnoy, is that financial innovation has been driven almost entirely by taking advantage of asymmetries of information or regulatory arbitrage, neither of which is as productive as real innovation.

Beginning with the "big picture," Partnoy discussed human nature and the timing of decision making in the context of regulatory reform. What distinguishes human beings, said Partnoy, is their ability to think long term and delay gratification. In his view, this issue of the timing of decision making ought to be central to discussions of regulatory reform. In the context of decision making in general and regulatory reform in particular, Partnoy championed the benefits of procrastination; of waiting until the last possible moment to make decisions. In terms of the policy response to the global financial crisis, he said, we did the opposite of procrastinating. The United States Congress reacted before it had gathered sufficient information, for instance, and part of the problem here was that the Financial Crisis Inquiry Commission was politically divided and did not have sufficient subpoena power. Partnoy suggested that the theme of human overreaction (not just by regulators, but also by financial market participants) fits into Minsky's story about financial instability, and that policy ought to be aimed in part at mitigating these tendencies toward overreaction.

At the level of the "middle picture," Partnoy turned to the substance of financial regulatory reform. Much like the period preceding the recent global financial crisis, the 1920s featured a great deal of financial innovation, including plenty of off-balance-sheet transactions and precursors to derivatives. But the difference in the regulatory reactions, according to Partnoy, is that, contrary to 1933 and 1934, we have not emphasized the "twin pillars" of disclosure requirements or measures to control fraud. Partnoy argued that if, for instance, Citigroup had been forced to disclose information about its synthetic collateralized debt obligations, things might have turned out differently, perhaps due to market pressures or Citigroup's board being made aware of the level of risk involved. Going forward, Partnoy argued that we ought to require public disclosure of the results of stress tests, and these tests ought to measure variables that actually matter to banks—such as an estimate of the amount of money that would be lost if, say, housing prices were to fall by 30 percent—rather than tests that focus on variables such as unemployment that do not significantly affect most banks' portfolios.

As for the second pillar, the reinforcement of an antifraud regime, Partnoy stated that prosecuting fraud can change the behavior of financial market participants by creating expectations regarding how judges will respond to certain questionable financial transactions, and that part of the post-1934 stability can be attributed to the creation of such expectations through robust antifraud actions. By contrast, he noted that in response to the latest crisis there has been an almost complete absence of criminal prosecution of senior Wall Street personnel.

Partnoy then moved to what he called the "small picture," looking at derivatives and the regulation of credit ratings agencies. Since the 1970s, a number of legal rules have depended substantively on credit ratings, and, in what Partnoy called a regulatory "miracle," the Dodd-Frank Act (at least in its language) curbs this influence. Transactions driven by credit ratings, featuring the search for allegedly triple-A instruments (but which in this case were not), played a large part in the crisis, so it is significant that (the language of) Dodd-Frank has addressed this. Partnoy observed that it has been difficult to find alternatives to relying on credit ratings and suggested that if regulators and the private sector had been relying on credit default swap numbers rather than credit ratings agencies, we would have been better off. Partnoy then threw some cold water on one of the supposed benefits of Dodd-Frank: moving derivatives to regulated exchanges in centralized clearinghouses. Partnoy contended that this was bound to happen even without Dodd-Frank, and that it will not work because the Act's large exceptions mean that many of the financial instruments that actually played a big part in the crisis will not be centrally traded.

The closest thing to the antifraud pillar of financial reform to be found in Dodd-Frank, in Partnoy's view, is a set of rules requiring business conduct standards that are designed to prevent clients from being defrauded. A number of entities, such as municipalities and private pension plans, are singled out for special protections in Dodd-Frank. This is in part justified by the asymmetries of information between clients and financial institutions, said Partnoy. However, he noted, the details are largely left up to regulators, so it remains to be seen how far this particular part of the reform will go.

**SESSION 5**

*Building eurozone Financial Stability*


Justin Lahart, Avinash D. Persaud, Adam Posen, Martin Wolf

**MODERATOR:**
**JUSTIN LAHART**
*The Wall Street Journal*

**AVINASH D. PERSAUD**
Intelligence Capital Ltd.

**ADAM POSEN**
Peterson Institute for International Economics and Monetary Policy Committee, Bank of England

**MARTIN WOLF**
*Financial Times*

**AVINASH PERSAUD** criticized the push for a fiscal union in the eurozone as a solution in search of a problem. Pursuit of fiscal union, featuring tight budget limits on member governments, appeals to both "Europhiles" and "Europhobes," said Persaud, with the former seeing fiscal union as another step toward completing the euro project, and the latter seeing the impossibility of attaining such a fiscal union as a feature rather than a bug—since they hope its impossibility will hasten the end of the euro project.

Although many people feared that the single currency would encourage fiscal profligacy in the absence of market discipline, Persaud pointed out that eurozone governments did not engage in a spending spree. He noted that in 2007, the last year before the crisis began, eurozone public debt-to-GDP was 66 percent—lower than it was when the euro was initially adopted. In fact, argued Persaud, there was far less fiscal discipline on display *outside* the eurozone. Within the eurozone, the problem was not a lack of fiscal discipline in the public sector but the private sector, where (private) debt-to-GDP ratios rose dramatically in a number of eurozone countries. For this reason, Persaud drew connections between the eurozone crisis and Hyman Minsky's financial instability hypothesis. National current account positions, said Persaud, reflect excessive private sector debt-financed consumption in some countries relative to others, and the private flows financing the current account positions halted when confidence in the assets underpinning those private debts disappeared.

Persaud focused on the question of what institutional changes would be needed to ensure greater stability in the eurozone. If the real problem was private sector debt, Persaud asked, how would a fiscal compact featuring tighter public deficit and debt limits have changed outcomes? If anything, he argued, such a compact would have made the crisis worse. In the context of (national) asset bubbles, a single international interest rate is procyclical, Persaud said. Given wide differences between countries in the movements of asset prices, a single rate would end up widening, rather than compressing, labor costs, wages, and house prices. Policies making it harder for depressed regions to pursue stimulus and booming regions to curb lending worsen the economic situations of each region. Creating more space for countercyclical fiscal and regulatory policy is necessary, said Persaud.

Persaud responded to the anticipated objection that it would not be possible to run different regulatory policies in different regions of a single currency area. In response, he contended that much the same thing occurs every day among the group of countries that share the US dollar, and that as long as national taxpayers have responsibility for local lenders, national regulators will need to exercise discretion even within a single regulatory framework.

Persaud observed that credit spreads have risen in the eurozone and that fiscal restructuring is being undertaken without a devaluation of the euro. On the basis of price competitiveness, said Persaud, the euro is actually overvalued. He noted that the countries that have recovered the fastest have been the ones that engaged in some form of debt restructuring. And although there should be a "converging framework" for fiscal policy at the European level, this should not preclude allowing space for pursuing countercyclical policy. Diversity in national fiscal and regulatory policy must be maintained. Persaud also advocated a stabilization fund for eurozone governments that would be able to cover the rollover of debt for half the eurozone over a period of 12 months, which he estimated would require roughly $2 trillion (US). The cost of funding should rise over time, said Persaud, to indicate that this stabilization fund is a liquidity facility and not a bailout fund.

In the context of a research project on which he had been working, **ADAM POSEN** focused on policy challenges dealing with restructuring a financial system after a crisis. Posen described his project as deriving lessons from Japanese policy responses in the 1990s and 2000s and applying those lessons to the United States, the United Kingdom, and the eurozone. In his presentation, he focused on applications for the eurozone in particular. The Japanese "example" is useful, said Posen, not just as a cautionary tale, as it is customarily viewed, but also because Japan essentially conducted what amounts to a series of policy experiments over the 1990s and early 2000s. From 1992 to 1998, Japan adopted a policy of "forebearance," he said, as they allowed their financial problems to fester. From 1998 to 2002, policymakers engaged with the crisis but did little to resolve underlying issues, and from 2002 on, a set of difference-making reforms were adopted. These examples allow us to see what worked and what did not, said Posen.

Posen highlighted a collection of lessons from the Japanese experience and examined how they could be applied to an assessment of eurozone policy. The first lesson: in the wake of a crisis it is better to move quickly on cleaning up undercapitalized banks. Looking to the eurozone, Posen observed that there has been a diversity of approaches on this issue. Posen credited Spain with having moved aggressively on recapitalization and restoring functionality to their banking system, though he noted that they have a long way to go given the scale of the problem.

Posen argued that, despite some "counterintuitive" calls for monetary tightening, accommodative monetary policy is helpful when responding to a banking crisis. Monetary policy needs to be loosened, he said, and regulatory policy needs to be tightened. Posen lamented that too much of the policy debate in the United States has been preoccupied with concerns about overregulation and purportedly overly loose monetary policy. Japan, said Posen, essentially lost the years from 1995 to 2001 by adopting a light touch on regulating banks and being too timid on macroeconomic stimulus.

On the issue of "zombie" banks and companies—firms that ought to be shut down but live on with continued funding—Posen argued that in a crisis response period supervisors ought to take advantage of the unusual amount of access they have to banks and use the opportunity to address this problem of zombie companies, by, for instance, shutting down nonperforming loans.

Posen also argued that policy needs to aim at getting the right amount of competition in the financial sector. As the example of 1990s Japan demonstrates, crises often occasion concentration in the banking sector as failing institutions are absorbed into a smaller number of healthy "megabanks." To compensate for or offset this increasing consolidation and regulatory tightening, Posen argued that deregulating other parts of the financial markets could be useful. Even as Japanese policymakers tightened regulation on big banks, they pushed deregulation elsewhere in financial markets, loosening the ways companies could issue bonds and ensuring greater access to stock market listings. In Posen's view, these offsetting regulatory moves helped.

Recapitalization, Posen emphasized, needs to be forced. In much the same approach taken by the Troubled Asset Relief Program in the United States, Japan's economy minister, Heizo Takenaka, forced all major banks to accept capital. Balance sheets need to be put in order without too much deleveraging or shrinking of the balance sheets, said Posen, and the best way to accomplish this is to force capital on companies and dilute current owners. It is regrettable, though predictable, he said, that there has been resistance to this sort of approach in the eurozone. Posen also argued that a certain amount of debt restructuring in which lenders accept losses is helpful in recovering from a crisis, and that one of Japan's biggest mistakes, causing its economic difficulties to linger, was that policymakers did not make any major debt restructuring moves of this sort.

In the context of noting current policy discussions about how to shape new institutions and assign various levels of institutional responsibility for crisis response and resolution, Posen contended that institutions are overrated. We spend too much time, he concluded, thinking about who does what on regulatory action. Institutions, said Posen, reflect underlying interests, and it is these interests that really matter in driving action.

**MARTIN WOLF** began by insisting that assembling all these diverse European countries in a monetary union was a bad idea from start. These countries' economies were not sufficiently similar in any of the relevant respects, and there were no adjustment mechanisms built into the setup of the eurozone for dealing with the problems that would inevitably flow from such dissimilarities. But if forming the eurozone was a bad idea, breaking it up would be just as bad, said Wolf. The question then becomes whether the eurozone's defects can be remedied, so that a breakup, and all the fallout that would entail, can be avoided.

One of the biggest challenges, Wolf noted, is that addressing the structural deformities of the eurozone requires a shared understanding of what actually went wrong, and of what structural flaws, for instance, are causing the difficulties in the eurozone. Unfortunately, he said, there is no such shared understanding of what has gone wrong. Furthermore, Wolf argued, the one country whose opinion holds the most sway—Germany—has an entirely false view of the problem. This poses a huge barrier to fixing the eurozone. Despite all the evidence to the contrary, said Wolf, Germany's view (a view it held when creating the eurozone and that it continues to hold) is that the one potential pitfall for the eurozone is fiscal irresponsibility, and the purported solution derived from this view is that one need only ensure that member governments always balance their budgets.

The problem with the fiscal compact—a "child" of the European Growth and Stability Pact, as Wolf described it—is that it is both irrelevant and ineffective. The fiscal compact establishes tight budget limits for member-states, but, Wolf emphasized, the eurozone crisis is not a fiscal crisis. Instead, he said, it is a combination of a balance of payments and a financial (or credit) crisis. In the context of a currency union with no currency adjustment possible for national governments and no federal backstop for individual countries' financial systems, a balance-of-payments crisis will inevitably become a financial crisis. In 2007, Wolf continued, this is precisely what happened when the cross-border financial flows that supported the balance-of-payments deficits stopped. Wolf noted that there have been several such "stops," with the fourth and current version affecting Spain, and he speculated that the next country to be affected in this way might be France. These sudden stops occasion implosions in the financial and nonfinancial sectors of the economy, as well as in the government's fiscal position.

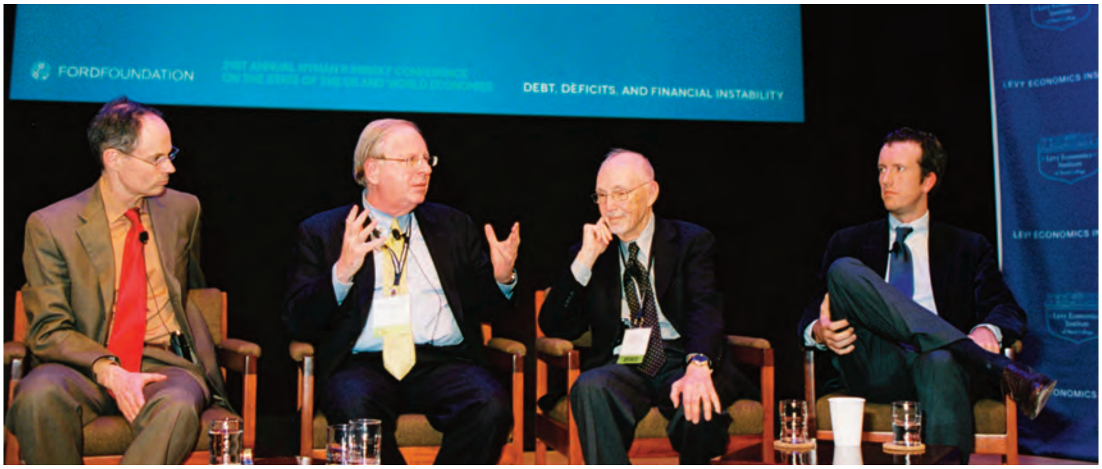
Wolf observed that precrisis fiscal performance was irrelevant to a country's crisis outcome, noting that among all the countries experiencing the most serious difficulties, only Greece had a substantially weak fiscal position prior to the outbreak of the crisis. Both Ireland and Spain had superior precrisis fiscal performances as compared to Germany, with Ireland's precrisis net fiscal debt-to-GDP ratio at 10 percent, or "basically nothing," as Wolf described it (and climbing above 100 percent of GDP three years after the crisis began).

The immediate challenge for the eurozone is to find some way to survive over the next few years, and Wolf laid out the steps that would be necessary for such survival. Financing needs to be provided for both governments and the banking sector for a period of time sufficient to allow external adjustments to take place for surplus and deficit countries. This implies large shifts in relative prices and demand across the eurozone. According to Wolf, these are the only conditions—short-term financing facilitating external adjustments—under which fiscal adjustment will work; without them, fiscal adjustment will lead only to deeper recessions (and therefore worse fiscal outcomes).

Wolf then looked at what would be needed if the eurozone survived this short- to medium-run period of managing and pulling out of the crisis, which he estimated would take five to ten years. At that point, he said, the eurozone would need to think about the minimum institutional changes needed to make the project function properly. On this score, Wolf suggested the importance of creating a banking system with eurozone-wide support. The fiscal compact, he said, needs to be abandoned. Among its many problems, Wolf highlighted the juridical difficulties with legally enforcing a structural balanced budget on individual countries, given that there is little agreement on how to even define or measure a structural balanced budget. He concurred with Avinash Persaud on the need for a rescue mechanism or safety net for troubled countries, and that it would have to be four to five times bigger than what was then available. Wolf said that existing resources were inadequate for dealing with Spain (to say nothing, he added, of what would be required for the likelihood of financing Italy as well), and that without an increase in the available funding, the eurozone will fail.

**SESSION 6**

## *Central Bank Independence, Financial Reform, and Financial Stability*




Peter Coy, Michael Greenberger, Bernard Shull, P. Morgan Ricks

**MODERATOR:**
**PETER COY**
*Bloomberg Businessweek*

**MICHAEL GREENBERGER**
The University of Maryland

**BERNARD SHULL**
Hunter College and NERA Economic Consulting

**P. MORGAN RICKS**
Harvard University

**MICHAEL GREENBERGER** began the session by touching on a number of themes that had been raised by previous panels. In the context of the question of whether, in the absence of strict regulation and prosecution of fraud, we are left merely hoping for financial market participants to be ethical, Greenberger commented on a presidential task force that had been announced in January 2012 and was set up to investigate, under the leadership of New York Attorney General Eric Schneiderman, financial fraud in the subprime mortgage meltdown. The task force, said Greenberger, appeared not to have taken any action to that point. He speculated that announcing the task force was partly a matter of attempting to appease the state-level attorneys general in the context of a mortgage document fraud settlement being pushed by the Department of Justice.

Greenberger pivoted to discuss another task force, announced in 2011, that was intended to investigate price manipulation in the market for crude oil. As a former prosecutor, Greenberger contended that merely threatening to prosecute crime in a certain area can sometimes have an ameliorative impact, and he argued that the announcement of the oil speculation task force itself had an observable effect in dropping the price of oil. However, by January 2012, a news story revealed that the task force had done little more than hold some conference calls, and Greenberger noted that three reported members of the group were not even aware that they had been appointed. The price of oil soared back to the level it was at prior to the announcement of the group's formation, and Greenberger implied that the signals sent to speculators by the revelation that it had done so little contributed to this climb in prices.

Turning back to the financial crisis, Greenberger observed that there had been no serious indictment connected with the subprime mortgage meltdown. He commented that the MF Global scandal, in which $1.6 billion in client money was lost, was having a negative effect on futures markets, and objected to characterizations of the scandal as involving immoral but not criminal activity. In general, said Greenberger, since the crisis broke there has been a remarkable absence of calling individuals to account, or even investigating activity that looks to the average American like criminal conduct.

Greenberger expressed some optimism for sections of the Dodd-Frank Act (mentioned earlier by Frank Partnoy) that set business conduct standards and require swaps dealers, those who sell the "naked" credit default swaps or synthetic collateralized debt obligations that played a key role in the recent crisis, to hold capital to support what they are selling. These requirements could do a lot to improve transparency and capital adequacy, said Greenberger. However, when it came to defining the relevant swaps dealers who would be subject to these regulations, Greenberger pointed out that in the course of the rule-making process the definition continued to change in such a way that more and more swaps dealers would be left out. Initially, dealers with assets in excess of $100 million were to be included in the definition, but that was gradually raised to $3 billion, and then $8 billion.

This is but one example, said Greenberger, of the ways in which Dodd-Frank's regulations are slowly being weakened. Part of the reason for this, he argued, is that as Dodd-Frank moves from the legislative to the rule-making and judicial processes, the influence of consumers, investors, taxpayers, and other groups with an interest in resisting efforts to weaken the Act is waning. As a result, he concluded, the forces chipping away at Dodd-Frank through such technical amendments are winning.

**BERNARD SHULL** focused his talk on the topic of central bank independence. In the context of the sort of instability envisioned by Hyman Minsky, Shull began, the Federal Reserve faces an enormous burden and set of expectations. The Fed needs to promote growth while remaining vigilant against the threat that such growth could lead to euphoria, but must also be careful to ensure that tamping down euphoric expectations does not trigger a crisis—and must then be prepared to act as lender of last resort should such a crisis erupt.

In the context of what Shull described as recent, widespread rhetorical assaults on the Fed's independence and exercise of discretion, he said that we need to understand the Federal Reserve's institutional arrangements and motivations, and he turned to the historical record for such insight. Looking at the recent record, Shull argued that the Fed had failed to maintain the "great moderation" when it could not prevent a real estate bubble, financial crisis, and Great Recession. Moreover, despite the use of unconventional policies, it has been unable to accelerate a weak recovery in the aftermath of all this. Given the more than threefold expansion of its asset purchases and the unprecedented extension of credit, Shull said, it is no surprise that the Fed's discretion is coming under increasing scrutiny, and that proposals are being championed to either reorganize the Fed in order to make it less responsive to bankers, or to alter its mandate so that it aims at a single target (typically price stability).

Shull noted that proposals to reign in the Fed are not new. The last time such calls were heard with comparable frequency was in the 1970–90 period, beginning with the experience with stagflation. Shull pointed to a 1980s proposal by Milton Friedman, who argued that, unless the Fed adopted a monetary rule, it should be placed within the Treasury or directly under congressional control. In the 1930s, the criticism centered on its failures to adequately respond to the Depression, and on its close ties with bankers. And the earliest such "assault" was in the 1919–21 period, when the Fed responded to a deep depression and collapsing agricultural prices with high discount rates, earning it the condemnation of the comptroller of the currency. Shull observed that none of these criticisms had the effect of ultimately diminishing the Fed's independence. In fact, the Fed emerged from most of these episodes with increased powers. It emerged from the 1920s with a new policy tool—open market operations—and from the 1930s with adjustable reserve requirements.

Shull then turned to the origins of the Federal Reserve's independence. When the Fed was first being devised in 1913, it was not imagined as a fully functioning central bank. The Federal Reserve System was not meant to control inflation or support growth (the business cycle, he noted, was a new idea at the time). It really started to establish itself, said Shull, as a war financing vehicle during World War I.

After the recent financial crisis and as a result of the Dodd-Frank Act, there have been some changes to the way the Fed operates. For instance, there were some minor alterations to the way reserve bank presidents are to be elected, and the General Accountability Office was given increased authority to audit the Fed. According to Shull, however, none of these changes is likely to have much impact on degrading the Fed's independence or discretion—far from it. Once again, he reiterated, the Federal Reserve is emerging from this crisis with growing, not contracting, influence. It obtained a new policy tool when it secured the authority to pay interest on reserve requirements, and Dodd-Frank gave it new authority to supervise and regulate systemically important financial institutions—not to mention, said Shull, the Fed's creation of a number of new programs in its crisis response efforts.

What accounts for the Federal Reserve's evident organizational resilience? It has not been the quality of its policies, said Shull, but rather the critical services it has provided over the course of its history, from war financing to responding to financial emergencies. Perceptions of its policy mistakes, he explained, have been overwhelmed by the value placed on the Fed by Congress and the executive branch due to its provision of these emergency or exceptional services. As a result, Congress has rarely acted to curb the Fed's authority, but instead has filled in the perceived blanks in its ability to deliver these critical services—by increasing the Fed's authority. As such, Shull observed, the Fed has seen its influence grow even when it has been perceived to have made policy blunders. In other words, he said, it has a great deal of experience in "failing upward."

**P. MORGAN RICKS** began his presentation with an assessment of two propositions: (1) that excessive political influence leads to expansionary monetary policy; and (2) that expansionary monetary policy tends to generate financial instability. The upshot of accepting both these propositions, Ricks pointed out, is that the Fed's independence is crucial to maintaining financial stability. There is a substantial amount of empirical literature backing up the truth of the first proposition, said Ricks, which basically reflects the government's inflationary bias and represents the traditional rationale for central bank independence. But the second proposition, he contended, is more debatable.

Ricks then turned his attention to the lender-of-last-resort function, broadly speaking; which is to say, as carried out in the recent financial crisis by a broad range of authorities, not just the central bank. The most important authority was the Federal Reserve, which carried out its function under section

13(3) of the Federal Reserve Act, allowing the central bank to act, under "unusual and exigent circumstances," without the signoff of Congress. Other authorities involved in this broadly understood lender-of-last-resort function included the Treasury, which guaranteed, under its own discretion, the money market funds; and the Federal Deposit Insurance Corporation (FDIC), which provided guarantees to senior bank debt and uninsured transaction deposit accounts. All of this, Ricks stressed, was carried out under the existing discretion allowed each of these organizations. And, finally, Congress provided capital through the approval of the Troubled Asset Relief Program.

But what often goes overlooked, he pointed out, is the degree to which this discretionary space has shrunk for most of these organizations since the passage of the Dodd-Frank Act. The Federal Reserve's lending discretion under 13(3) has been curbed. This means no more transactions like those provided for Bear Stearns and AIG. And even more significantly, lending under 13(3) now requires Treasury approval, which, said Ricks, really means administration or presidential approval. The authority used by the Treasury to guarantee the money market funds, derived from an obscure 1930s statute, has been removed by Congress. We now have a situation, said Ricks, in which neither the Fed nor the Treasury has the authority to guarantee the money funds. The FDIC's bank guarantee programs now require a joint resolution of Congress—and the likelihood of such a resolution emerging promptly from a future Congress under emergency conditions does not inspire confidence. In other words, there have been significant barriers placed in the way of pursuing the sort of actions that were part of the financial crisis response in 2008 and 2009.

Part of the justification for these changes, said Ricks, was the establishment of the FDIC's Orderly Liquidation Authority (OLA). However, Ricks pointed out that this authority can only be used with the approval of the Treasury Secretary in consultation with the president, along with two-thirds of the Federal Reserve board and two-thirds of the FDIC board. In other words, he explained, a significant political dimension has been injected into the use of this authority.

Even more significant, Ricks argued, are the funding constraints placed on the OLA. Rather than coming from the Federal Reserve, the funding comes from the Treasury, which cannot print money and must issue bonds. But since use of the OLA then essentially requires the issuing of bonds, Ricks pointed out that if a major institution like Citigroup were in trouble in the future, use of the OLA to address this emergency would effectively be subject to the debt ceiling—and therefore to the approval of Congress. Once we have inserted these political hurdles into the process, he argued, big questions are raised as to whether we will be able to respond to financial distress in an optimal or timely fashion. Are we stuck, asked Ricks, in this dilemma between accountability and effectiveness?

Ricks then discussed a different kind of independence: the independence of the functional money supply from the monetary authority. The functional money supply includes "money-like" instruments, such as the money market and short-term, fixed-principal IOUs that function like money. For accounting purposes, said Ricks, these are almost all the equivalent of cash. Anticipating some resistance to that proposition, he pointed to a recent paper that looked at Treasury yields over a long period. The authors of the paper noticed that the yields on short-term Treasury securities were lower than expected, and they attributed this discrepancy to the "money-ness" quality of short-term IOUs. In other words, Ricks explained, economic agents allocate a portion of their assets to instruments, like short-term IOUs, whose value does not fluctuate significantly in relation to currency. Another way of putting this point, said Ricks, is that shadow banking is a monetary phenomenon. These short-term IOUs play a big role in financial crises, he continued, and Dodd-Frank does not deal with the problem in any significant way. On this issue, Ricks sketched a proposal he said he had been sharing with audiences for several years. Issuing these money-like instruments, he offered, is a privilege, but that privilege ought to be accompanied by a prohibition: one ought to have a license to be able to issue them. One of the upshots of this proposal, said Ricks, is that an institutional securities firm would no longer be able to fund itself in the overnight markets; it would have to fund itself in the long-term or capital markets.

## Participants

**CYRUS AMIR-MOKRI** serves as the US Department of the Treasury's Assistant Secretary for Financial Institutions, with responsibility for developing and coordinating Treasury's policies on issues affecting financial institutions. Amir-Mokri most recently served as senior counsel to the chairman of the Commodity Futures Trading Commission (CFTC), where he also was the agency's deputy representative to the Financial Stability Oversight Council. Prior to joining the CFTC, he was a partner at the law firm of Skadden, Arps, Slate, Meagher & Flom LLP. His practice focused on complex securities and antitrust litigation. He has also clerked for the Honorable Bruce M. Selya of the US Court of Appeals for the First Circuit. Amir-Mokri received a JD from the University of Chicago Law School, a Ph.D. in history from the University of Chicago, and an AB in biochemistry from Harvard College.

**CLAUDIO BORIO** is deputy head of the Monetary and Economic Department (MED) and director of research and statistics for the Bank for International Settlements (BIS). He joined BIS in 1987, holding various responsibilities in the MED, including as head of the secretariat for the Committee on the Global Financial System and the Gold and Foreign Exchange Committee (now known as the Markets Committee). From 1985 to 1987, he worked as an economist in the country studies branch of the Economics and Statistics Department of the Organisation for Economic Co-operation and Development. Prior to that, he was a lecturer and research fellow at Brasenose College, University of Oxford. Borio is the author of numerous publications in the fields of monetary policy, banking, finance, and issues related to financial stability. He holds a D.Phil. and M.Phil. in economics and a BA in politics, philosophy, and economics from Oxford.

**PETER COY** is economics editor of *Bloomberg Businessweek*. He writes on a wide range of domestic and international issues, and contributes frequently to the magazine's "Opening Remarks" column, feature section, and cover stories. Coy joined *BusinessWeek*, the predecessor to *Bloomberg Businessweek*, as telecommunications editor in 1989. He was named technology editor in 1992 and associate economics editor in 1997, before becoming economics editor in 2001. Coy joined *BusinessWeek* from The Associated Press in New York, where he had served as a business news writer since 1985. He was previously a correspondent in the

AP's Rochester, N.Y., bureau, and began his career at the AP in 1980 as an editor in the Albany bureau. Prior to that, Coy was a reporter for the Waterbury (Conn.) *Republican*. He holds a BA in history from Cornell University.

**CHRISTINE M. CUMMING** is first vice president of the Federal Reserve Bank of New York, the second-ranking officer in the bank, and serves as its chief operating officer as well as an alternate voting member of the Federal Open Market Committee. Prior to being named to her new position, Cumming was executive vice president and director of research, with responsibility for the bank's Research and Statistics Group. She assumed these responsibilities in September 1999. From March 1994 until September 1999, she was senior vice president responsible for the bank analysis and advisory and technical services functions in the Bank Supervision Group. Cumming joined the bank's staff in September 1979 as an economist in the International Research Department, and spent several years leading units in Research that covered the industrial countries and the international financial markets. Later, while part of the bank's International Capital Markets staff, she worked on topics such as the liquidity of banks and securities firms, the international competitiveness of US financial institutions, and the implications of financial innovation. In January 1992, she was appointed vice president and assigned to Domestic Bank Examinations in Bank Supervision. A major focus of Cumming's work in Supervision involved capital markets issues. While in Supervision, she also was active in the work of the Basel Committee, including participating in the development of the market-risk amendment to the Basel Accord and co-chairing the Risk Management Group for two and a half years. She also chaired task forces on supervisory matters for the Joint Forum, made up of banking, securities, and insurance regulators. Cumming holds both a BS and a Ph.D. in economics from the University of Minnesota.

**ANDREA ENRIA** was confirmed as the first chairperson of the European Banking Authority (EBA) on February 3, 2011, and took office on March 1. His prior appointment was as head of the Regulation and Supervisory Policy Department at the Bank of Italy. He is a former secretary general of the Committee of European Banking Supervisors, where he dealt with technical aspects of European Union (EU) banking legislation, supervisory convergence, and cooperation within the EU. He has also served as head of the Financial Supervision Division of the European Central Bank (ECB), and as secretary of the European System of Central Banks' Banking Supervision Committee. Before joining the ECB, Enria worked for several years in the Research and Supervisory Departments of the Bank of Italy, covering issues such as competition policy, bank ownership and group structures, implementation of European Community legislation, supervisory cooperation, analytical issues relating to banking supervision, and financial stability.

**ROBERTO FRENKEL** is principal research associate at CEDES and professor at Buenos Aires University (UBA). He is also director of the Graduate Program on Capital Markets at UBA and teaches graduate courses at the Di Tella and FLACS–San Andrés Universities in Argentina. He is a member of the academic board of CEFIDAR (Argentina) and a member of the board of the United Nations University World Institute for Development Economics Research. He is an associate researcher at the Center for Economic Policy Research in Washington, D.C., and the International Economic Policy Institute, Laurentian University (Canada). He is a past undersecretary adviser to the Argentine Ministry of the Economy and a member of the board of directors of the Banco de la Provincia de Buenos Aires. He has served as a macroeconomic consultant to the governments of Colombia, Uruguay, Bolivia, and Venezuela, and has taught at the Universidad de Chile; Pontificia Universidad Católica de Chile; Universidad Central de Venezuela; University of California, San Diego; and Universidad Católica de Rio de Janeiro. He has also taught courses and given academic speeches at other Argentine and foreign universities. Frenkel regularly does research work for organizations such as the International Labour Organization, UN Conference on Trade and Development, UN Development Programme, and UN Economic Commission for Latin America and the Caribbean. He has also worked for the OECD Development Center, Inter-American Development Bank, and UN Industrial Development Organization. He has published numerous books and articles in academic journals on macroeconomic theory and policy, money and finance, inflation and stabilization policies, and labor market and income distribution, with special focus on Latin America.

**ESTHER L. GEORGE** is president and chief executive officer of the Federal Reserve Bank of Kansas City and a member of the Federal Open Market Committee, which has authority over US monetary policy. Before being appointed president on October 1, 2011, she had been the bank's first vice president and chief operating officer since August 2009, responsible for directing the bank's operations throughout the Tenth Federal Reserve District. Additionally, she recently served as the acting director of the Federal Reserve's Division of Banking Supervision and Regulation at the Board of Governors of the Federal Reserve System in Washington, D.C. In January 2009, George was named executive vice president in charge of the bank's Division of Supervision and Risk Management, a division she had led as senior vice president since 2001. In that position, she was responsible for the supervision and regulation of the district's 170 state-chartered member banks and nearly one thousand bank and financial holding companies, as well as the bank's discount window and risk management functions. During her tenure in banking supervision, she was directly involved in the Tenth District's banking supervision and discount window lending activities during the banking crisis of the 1980s and post-9/11. She is a former chair of the Federal Reserve System's Community Banking Organizations Management Group.

Beyond the Tenth Federal Reserve District, George's experience in international central banking issues includes presentations at the Bank for International Settlement's Financial Stability Institute programs in Lima, Peru, and Abu Dhabi, UAE. She has also served as the Tenth District's lead officer for international partnership programs involving the central banks of Morocco and Iraq. Additionally, she participates in the Federal Reserve Bank of Kansas City's annual economic policy symposium that is attended by central bankers from around the globe. George joined the bank in 1982 and was appointed to the official staff in 1995. She has held various leadership positions with the bank, including in the bank's research support functions, public affairs, and human resources. She is a native of Faucett, Missouri, with a BSBA degree in business administration from Missouri Western State University and an MBA degree from the University of Missouri–Kansas City. She is a graduate of the American Bankers Association Stonier Graduate School of Banking and the Stanford University Executive Program.

**MICHAEL GREENBERGER** is a professor at the University of Maryland Francis King Carey School of Law, where he teaches a course titled "Futures, Options, and Derivatives." He has served as technical adviser to the UN Commission of Experts on Reforms of the International Monetary and Financial System; and as a member of the International Energy Forum's Independent Expert Group, providing recommendations to the IEF's 12th Ministerial Meeting. In 1997, Greenberger left private law practice to become director of the Division of Trading and Markets at the Commodity Futures Trading Commission (CFTC), and through 1999 he served under CFTC Chair Brooksley Born. He also served on the steering committee of the President's Working Group on Financial Markets, and as a member of the International Organization of Securities Commissions' hedge fund task force. Greenberger worked with Americans for Financial Reform, a coalition of over 250 nonprofit organizations, on the passage and implementation of the Dodd-Frank Wall Street Reform and Consumer Protection Act; and has also consulted with the Commodity Markets Oversight Coalition, an alliance of business end users advocating the timely and rigorous implementation of Dodd-Frank-mandated financial reform. Prior to the passage of Dodd-Frank, Greenberger testified numerous times before the House and Senate committees about that legislation. Following the bill's passage, he was asked to testify before House and Senate oversight committees on the implementation of Dodd-Frank and to present at three different roundtables sponsored by CFTC and Securities and Exchange Commission staffs. He has filed over 20 comment letters on proposals by regulators implementing Dodd-Frank, many of which have been cited by the CFTC in its final Dodd-Frank rules. He has also authored several chapters and scholarly articles about Dodd-Frank.

Greenberger has conducted over 150 media interviews to discuss financial regulation, including appearances on CNN, ABC's *World News Tonight*, *CBS Evening News*, *NBC Evening News*, CNBC, MSNBC, *The Jim Lehrer News Hour*, NPR's *Fresh Air*, PBS's *Frontline*, BBC Radio, and C-SPAN. His recent testimony and related media can be found at www.michaelgreenberger.com. He has also been featured in films such as *Inside Job* (Academy Award for Best Documentary Feature in 2011) and *American Casino* (2009), as well as the *Frontline* episode "The Warning" (2009 Emmy Award).

**BRUCE C. N. GREENWALD** holds the Robert Heilbrunn Professorship of Finance and Asset Management at Columbia Business School and is the academic director of the Heilbrunn Center for Graham & Dodd Investing. Described by the *New York Times* as "a guru to Wall Street's gurus," Greenwald is an authority on value investing, with additional expertise in productivity and the economics of information. He is the recipient of numerous awards recognizing his skill as a teacher, including the Columbia University Presidential Teaching Award. His classes are consistently oversubscribed, with more than 650 students taking his courses every year in subjects such as value investing, economics of strategic behavior, globalization of markets, and strategic management of media. Since 2007, Greenwald has served as director of research and is currently senior adviser for First Eagle Funds, a division of Arnhold and S. Bleichroeder Advisers, LLC. In addition, he consults worldwide on a variety of issues concerning capital markets, business strategy, corporate finance, and labor performance. Greenwald is the author of *Competition Demystified: A Radically Simplified Approach to Business Strategy* (with Judd Kahn; 2005), *Value Investing: From Graham to Buffett and Beyond* (with Judd Kahn et al.; 2001), *The Curse of the Mogul: What's Wrong with the World's Leading Media Companies* (with Jonathan A. Knee and Ava Seave; 2009), and *Adverse Selection in the Labor Market* (1980). Greenwald has received a BS and a Ph.D. from MIT, and MPA and MS degrees from Princeton University.

**MARTIN J. GRUENBERG** is acting chairman of the Federal Deposit Insurance Corporation (FDIC). He was sworn in as vice chairman of the FDIC board of directors on August 22, 2005. Upon the resignation of Chairman Donald Powell, he also served as acting chairman from November 15, 2005, to June 26, 2006. On November 2, 2007, he was named chairman of the executive council and president of the International Association of Deposit Insurers. Gruenberg joined the FDIC Board after broad congressional experience in the financial services and regulatory areas. He served as senior counsel to Senator

Paul S. Sarbanes (D-MD) on the staff of the Senate Committee on Banking, Housing, and Urban Affairs from 1993 to 2005, advising the senator on issues of domestic and international financial regulation, monetary policy, and trade. He also served as staff director of the Banking Committee's Subcommittee on International Finance and Monetary Policy from 1987 to 1992. Major legislation in which he played an active role during his service on the committee includes the Financial Institution Reform, Recovery, and Enforcement Act of 1989, the Federal Deposit Insurance Corporation Improvement Act of 1991, the Gramm-Leach-Bliley Act of 1999, and the Sarbanes-Oxley Act of 2002. Gruenberg holds a JD from Case Western Reserve Law School and an A.B. from Princeton University, Woodrow Wilson School of Public and International Affairs.

**HENRY KAUFMAN** is president of Henry Kaufman & Company, Inc., a firm established in April 1988, specializing in economic and financial consulting. For the previous 26 years, he was with Salomon Brothers, Inc., where he was managing director, a member of the executive committee, and in charge of the firm's four research departments. He was also a vice chairman of the parent company, Salomon, Inc. Before joining Salomon Brothers, Kaufman was in commercial banking and served as an economist at the Federal Reserve Bank of New York (FRBNY). He holds a BA in economics from New York University (NYU), an MS in finance from Columbia University, and a Ph.D in banking and finance from New York University Graduate School of Business Administration. He also holds an honorary Doctor of Laws degree from New York University and honorary Doctor of Humane Letters degrees from Yeshiva University and Trinity College. He is the author of *The Road to Financial Reformation* (2009), *On Money and Markets: A Wall Street Memoir* (2000), and *Interest Rates, the Markets, and the New Financial World* (1986), for which he was awarded the first George S. Eccles Prize for excellence in economic writing by the Columbia Business School. He is a member and chairman emeritus of the boards of the Institute of International Education and NYU's Stern School of Business, and sits on the board of governors of Tel-Aviv University and the international advisory committee of the FRBNY. He is also a fellow of the American Academy of Arts & Sciences and a life trustee of NYU and The Jewish Museum.

**JAN KREGEL** is a senior scholar at the Levy Economics Institute of Bard College and director of its Monetary Policy and Financial Structure program. He also holds the position of professor of development finance at Tallinn University of Technology and Distinguished Research Professor, University of Missouri–Kansas City. He is co-editor of the *Journal of Post Keynesian Economics*. In 2009, Kregel served as Rapporteur of the President of the UN General Assembly's Commission on Reform of the International Financial System. He previously directed the Policy Analysis and Development Branch of the UN Financing for Development Office and was deputy secretary of the UN Committee of Experts on International Cooperation in Tax Matters. He is a former professor of political economy at the Università degli Studi di Bologna and a past professor of international economics at Johns Hopkins University's Paul Nitze School of Advanced International Studies, where he was also associate director of its Bologna Center from 1987 to 1990. Kregel has published extensively, contributing over 200 articles to edited volumes and scholarly journals, including the *Economic Journal*, *American Economic Review*, *Journal of Economic Literature*, *Journal of Post Keynesian Economics*, *Economie Appliquée*, and *Giornale degli Economisti*. His major works include a series of books on economic theory, among them, *Rate of Profit, Distribution and Growth: Two Views* (1971); *The Theory of Economic Growth* (1972); *Theory of Capital*, 1976; and *Origini e sviluppo dei mercati finanziari* (1996). His most recent book is *Ragnar Nurkse: Trade* *and Development* (with R. Kattel and E. S. Reinert), published in 2009. Kregel studied under Joan Robinson and Nicholas Kaldor at the University of Cambridge, and received his Ph.D. from Rutgers University under the chairmanship of Paul Davidson. He is a life fellow of the Royal Economic Society (UK) and an elected member of the Società Italiana degli Economisti. In 2010, he was awarded the prestigious Veblen-Commons Award by the Association for Evolutionary Economics; in 2011, he was elected to the Italian Accademia Nazionale dei Lincei.

**JUSTIN LAHART** is a "Heard on the Street" reporter at the *Wall Street Journal*, with a particular emphasis on how different sectors interact with the macro economy. He previously wrote the "Ahead of the Tape" column for the *Journal*, and has also penned columns for CNNMoney and TheStreet.com.

**J. NELLIE LIANG** is the director of the Office of Financial Stability Policy and Research (OFS) at the Federal Reserve Board. OFS is responsible for conducting and coordinating work at the board relating to analyzing emerging and structural financial risks to financial stability and evaluating alternative policies to mitigate systemic risks. Liang's recent research has focused on short-term funding markets, debt covenants on employment risk, corporate payout policies, defined contribution pension plans, and company stock. Her research has been published in the *Journal of Finance, Journal of Financial Economics, Journal of Financial and Quantitative Analysis,* and *Journal of Public Economics*. She received her Ph.D. in economics from the University of Maryland.

**JEFF MADRICK** is editor of *Challenge* magazine and director of the Rediscovering Government Initiative at the Roosevelt Institute. He is also a senior fellow at The New School's Schwartz Center for Economic Policy Analysis (SCEPA). A regular contributor to the *New York Review* and the *Nation*, he is the author of a half-dozen books. The latest is *Age of Greed: The Triumph of Finance and the Decline of America, 1970 to the Present* (2011), a *Washington Post* political best seller and one of its 50 notable books of the year. His previous book, *The Case for Big Government* (2008), won a Pen America nonfiction award. He regularly contributes to a variety of blogs, including NewDeal2.0, Triple Crisis, and Age of Greed on the SCEPA website.

**YALMAN ONARAN** was born in Istanbul, Turkey, and came to the United States in 1987 to attend college in Ohio. He moved to New York for graduate school, finishing Columbia University's School of Journalism and School of International and Public Affairs. Onaran taught at junior high schools in New York before becoming a correspondent for The Associated Press and moving back to the Middle East to cover wars and politics. He switched to financial journalism in 1998, joining Bloomberg News, where he has served in many capacities. He was covering Lehman Brothers and Bear Stearns when they became the first to fall in the financial crisis of 2008–09. He now writes feature articles about banking issues worldwide, comparing the problems of European banks to their US counterparts as well as identifying the effectiveness of new bank regulations. Onaran's first book, *Zombie Banks*, about the unresolved troubles of the banks on both continents, was published in December 2011.

**DIMITRI B. PAPADIMITRIOU** is president of the Levy Institute and executive vice president and Jerome Levy Professor of Economics at Bard College. He has testified on a number of occasions in committee hearings of the US Senate and House of Representatives, was vice-chairman of the Trade Deficit Review Commission of the US Congress (1999–2001), and is a former member of the Competitiveness Policy

Council's Subcouncil on Capital Allocation (1993–98). He was a Distinguished Scholar at the Shanghai Academy of Social Sciences in fall 2002. Papadimitriou's research includes financial structure reform, fiscal and monetary policy, community development banking, employment policy, and the distribution of income, wealth, and well-being. He heads the Levy Institute's macroeconomic modeling team studying and simulating the US and world economies. In addition, he has authored and co-authored many articles in academic journals and Levy Institute publications relating to Federal Reserve policy, fiscal policy, financial structure and stability, employment growth, and Social Security reform. Papadimitriou has edited and contributed to 12 books published by Macmillan, Edward Elgar, and McGraw-Hill, and is a member of the editorial boards of *Challenge*, the *Bulletin of Political Economy*, and the *Journal of Economic Analysis*. He is a graduate of Columbia University and received a Ph.D. in economics from The New School for Social Research.

**FRANK PARTNOY** is George E. Barrett Professor of Law and Finance and the founder and co-director of the Center for Corporate and Securities Law at the University of San Diego School of Law, where he has taught since 1997. He worked as a derivatives structurer during the mid-1990s and wrote *F.I.A.S.C.O.: Blood in the Water on Wall Street* (1997), a best-selling book about his experiences there. He has published more than two-dozen scholarly articles in academic journals, most recently in the *University of Chicago Law Review*, *University of Pennsylvania Law Review*, and *Journal of Finance*. His last book, *The Match King: Ivar Kreuger, the Financial Genius Behind a Century of Wall Street Scandals* (2009), about the 1920s markets and the father of modern financial schemes, was a finalist for the *Financial Times* / Goldman Sachs Business Book of the Year Award. Partnoy writes regularly for the *New York Times* and *Financial Times*, and has appeared on numerous media programs, including *60 Minutes*, *PBS NewsHour*, *Fresh Air*, and the *Daily Show with Jon Stewart*. He has degrees in mathematics and economics from the University of Kansas, and a JD from Yale Law School. His new book, *Wait: The Art and Science of Delay*, which explores the role of delay in decision making, will be published in June 2012.

**AVINASH D. PERSAUD** is currently chairman of Elara Capital PLC, an investment bank based in London and Mumbai; chairman of PBL, a real estate development company in the Caribbean; chairman of Intelligence Capital Limited, a London-based financial advisory firm; and board director of RBC Latin America and the Caribbean. He was formerly a senior executive at UBS, J. P. Morgan, State Street, and GAM Holdings. Persaud is emeritus professor at Gresham College, London; a senior fellow at London Business School; a visiting fellow at the Centre for Financial Analysis and Policy, Judge Business School, Cambridge University; 2010 president of the British Association for the Advancement of Science (Section F); and past governor of the London School of Economics and Political Science. He was ranked as the number two public intellectual in the world on the financial crisis by an expert panel for *Prospect Magazine*. He is a member of the UK Treasury's Audit Committee and the National Council of Economic Advisors in Barbados, and a senior adviser to the Financial Services Law Reform Commission in India. Formerly, he was chairman of the Warwick Commission on Financial Reform, chairman of the regulatory sub-committee of the UN High Level Task Force on Financial Reform, co-chair of the OECD Emerging Markets Network (EmNet), and a member of the Pew Task Force to the US Senate Banking Committee.

**ADAM POSEN** joined the Bank of England's Monetary Policy Committee on September 1, 2009. He is also a senior fellow at the Peterson Institute for International Economics, which he joined in 1997. His policy and research work focuses on macroeconomic policy and performance, European and Japanese political economy, central banking issues, and the resolution of financial crises. He has been a consultant on economic and foreign policy issues to several US government agencies, the European Commission, the UK Cabinet Office, and to the International Monetary Fund. Posen is in his third two-year term as a member of the Panel of Economic Advisers to the US Congressional Budget Office, and was previously a visiting scholar at central banks worldwide. He is a member of the Council on Foreign Relations, the Trilateral Commission, and the Bellagio Group of international economic academics and officials. Posen is the author or co-author of six books and numerous articles, including widely cited studies of inflation targeting, Japan's Great Recession and recovery, the economic impact of asset price bubbles, and of central bank independence. He has been the recipient of major research grants from the European Commission, the Ford Foundation, the German Marshall Fund of the United States, and the Alfred P. Sloan Foundation. Posen holds a Ph.D. and an AB from Harvard University.

In 2011, **PETER PRAET** joined the European Central Bank (ECB) as a member of the executive board. He is responsible for economics, human resources, budget, organization, and TARGET2-Securities. Before joining the ECB, Praet was executive director of the National Bank of Belgium from 2000 and 2011, with responsibility for international cooperation, financial stability, and oversight of financial infrastructures and payments systems. Between 2002 and 2011, he was also a member of the management committee of the Belgian Banking, Finance, and Insurance Commission (CBFA), where he was responsible for prudential policy for banking and insurance.

Praet served as chief of cabinet for the Belgian minister of finance from 1999 to 2000, as chief economist of the Générale de Banque and Fortis Bank from 1988 to 1999, as professor of economics at the Université Libre de Bruxelles from 1980 to 1987, and as an economist at the International Monetary Fund from 1978 to 1980. He earned a Ph.D. in economics from the Université Libre de Bruxelles in 1980, and later held the Chair of Business Ethics at the Université's Faculté Polytechnique and Solvay Business School. He has also served on several high-level international committees, including the Basel Committee on Banking Supervision (BCBS), the Committee on Payment and Settlement Systems, the Committee on the Global Financial System (CGFS), and the European Banking Authority. Praet has chaired the Banking Supervision Committee of the European System of Central Banks as well as a number of task forces and working groups, including the CGFS working group on fixed income strategies of insurance firms and pension funds and the BCBS Research Task Force. He was first alternate on the board of directors of the Bank for International Settlements. He served on the board of the European think tank BRUEGEL (Brussels European Global Economic Laboratory) from 2004 and 2011, and now sits on the International Advisory Council of the International Centre for Financial Regulation.

**P. MORGAN RICKS** is a visiting assistant professor at Harvard Law School. From 2009 to 2010, he was a senior policy adviser and financial restructuring expert at the US Department of the Treasury, where he focused primarily on financial stability initiatives and capital markets policy. Prior to joining Treasury, he was a risk-arbitrage trader at Citadel Investment Group, a Chicago-based hedge fund. He previously served as a vice president in the investment banking division of Merrill Lynch & Co., where he specialized in strategic and capital-raising transactions for financial services companies. He began his career as a corporate takeover lawyer at Wachtell, Lipton, Rosen & Katz.

**BERNARD SHULL** is professor emeritus, Hunter College, City University of New York, and a special consultant to National Economic Research Associates. Previously, he held various positions with the Board of Governors of the Federal Reserve System, including associate adviser, chief of the Banking Markets Section, and director of research studies for the Reappraisal of the Federal Reserve Discount Mechanism. He has also been a senior economist and visiting scholar at the Office of the Comptroller of the Currency, and an economist at the Federal Reserve Bank of Philadelphia. He is the author of a number of books and articles on the structure and performance of the banking industry, financial regulation, and the Federal Reserve, including *The Fourth Branch: The Federal Reserve's Unlikely Rise to Power and Influence* (2005); *Bank Mergers in a Deregulated Environment: Promise and Peril* (with Gerald A. Hanweck; 2001); "Mergers and Competition in the Banking Industry," in *Competition Policy and Merger Analysis in Deregulated and Newly Competitive Industries,* Peter C. Carstensen and Susan B. Farmer, eds. (2008); and "The Separation of Banking and Commerce in the United States," *Financial Markets, Institutions & Instruments* 8, no. 3 (1999). He has recently prepared two working papers (2010, 2012) for the Levy Economics Institute on "too big to fail," one of which reviews elements of the Dodd-Frank legislation.

**DEBORAH SOLOMON** is an editor with *Bloomberg View* in Washington, D.C., where she focuses on economic policy and regulatory issues. She previously worked at the *Wall Street Journal* for more than 10 years, most recently covering economic policy in the Washington, D.C., bureau. She has also covered the Securities and Exchange Commission and financial regulation. Solomon joined Bloomberg in February 2012. In 2003, she was a member of a team of *Journal* reporters awarded the Pulitzer Prize in explanatory reporting for a series of stories that exposed corporate scandals. She was also part of a team that won the 2003 Gerald Loeb Award for the paper's coverage of the WorldCom scandal. In 2009, Solomon and other *Journal* reporters won an award from the Society of American Business Editors and Writers in the breaking news category for articles that ran in the paper covering the collapse of Lehman Brothers. More recently, she and other *Journal* reporters were finalists in the National Affairs category for the 2009 Pulitzer Prize. Solomon began her journalism career as a reporter at the *Birmingham Post-Herald* in 1994. Before joining the *Journal*, she had been a reporter for *USA Today* since November 1999. She holds a bachelor's degree in journalism from George Washington University.

**JOSEPH E. STIGLITZ** is University Professor at Columbia University, the winner of the 2001 Nobel Memorial Prize in Economics, and a lead author of the 1995 International Panel on Climate Change report, which shared the 2007 Nobel Peace Prize. He was chairman of the US Council of Economic Advisers under President Clinton and chief economist and senior vice president of the World Bank from 1997 to 2000. Stiglitz is a past recipient of the John Bates Clark Medal, awarded biennially to the American economist under 40 who has made the most significant contribution to the subject. He was a Fulbright Scholar at Cambridge University, held the Drummond Professorship at All Souls College, Oxford, and has also taught at MIT and at Yale, Stanford, and Princeton Universities. Stiglitz helped create a new branch of economics, "The Economics of Information," exploring the consequences of information asymmetries and pioneering such pivotal concepts as adverse selection and moral hazard, which have now become standard tools not only of theorists, but also of policy analysts. His work has helped explain the circumstances in which markets do not work well, and how selective government intervention can improve their performance. At Columbia, Stiglitz co-chairs the Committee on Global Thought and is founder and co-president of the Initiative for Policy Dialogue. He is also president of the International Economic Association, co-chair of the Commission on the Measurement of Economic Performance and

Social Progress, and chair of the Commission of Experts of the President of the United Nations General Assembly on Reforms of the International Monetary and Financial System. He is the author most recently of *Freefall: America, Free Markets, and the Sinking of the Global Economy* (2010).

**GILLIAN TETT** is the US managing editor of the *Financial Times*. She leads the editorial development of the paper's US edition and of US news on FT.com. Previously, Tett was assistant editor responsible for the FT's markets coverage. She has also served as capital markets editor, deputy editor of the "Lex" column, Tokyo bureau chief, Tokyo correspondent, London-based economics reporter, and a reporter in Russia and Brussels. Tett was named Journalist of the Year (2009) and Business Journalist of the Year (2008) by the British Press Awards and Senior Financial Journalist of the Year (2007) by the Wincott Awards. She is the author of the *New York Times* best seller *Fool's Gold: How Unrestrained Greed Corrupted a Dream, Shattered Global Markets and Unleashed a Catastrophe*, published in May 2009; and *Saving the Sun: A Wall Street Gamble to Rescue Japan from Its Trillion Dollar Meltdown* (2003). *Fool's Gold* won Financial Book of the Year at the Spear's Book Awards in 2009. Before joining the *Financial Times* in 1993, Tett was awarded a Ph.D. in social anthropology from the University of Cambridge based on fieldwork in the former Soviet Union. While pursuing her Ph.D., she freelanced for the *FT* and the BBC. She is a Cambridge graduate.

**LUIS A. UBIÑAS** is president of the Ford Foundation, the second-largest philanthropy in the United States, with more than $10 billion in assets and $500 million in annual giving. The foundation operates worldwide and has offices in Asia, Africa, and Central and South America. Since taking leadership at Ford in 2008, Ubiñas has built a program strategy focused on increasing the participation of poor and marginalized individuals and communities in the economic, social, and political opportunities afforded by their societies.

Prior to joining the Ford Foundation, Ubiñas was a director at McKinsey & Company, leading the firm's media practice on the West Coast. He serves on several nonprofit, government, and corporate boards and advisory committees, including the World Bank Advisory Council of Global Foundation Leaders, the Advisory Committee for the US-China 100,000 Strong Initiative, and the boards of the New York Public Library and the Collegiate School for Boys. He also serves on the Board of Electronic Arts and on the US Advisory Committee on Trade Policy and Negotiation.

Ubiñas is a graduate of Harvard College, where he was named a Truman Scholar, and Harvard Business School, where he graduated with highest honors. He is a fellow of the American Academy of Arts and Sciences, and a member of the Council on Foreign Relations.

**LOUIS UCHITELLE** writes on economics for the *New York Times* and other publications, focusing on labor and manufacturing issues and traveling widely in the United States. He shared a George Polk award for a series of seven articles, "The Downsizing of America," published in the *Times* in 1996, that explored the layoff phenomenon. He was a visiting scholar at the Russell Sage Foundation in New York in 2002–03, where he began the research for his book, *The Disposable American: Layoffs and Their Consequences* (2006). He taught journalism for many years at Columbia University's School of General Studies. Before joining the *Times* in 1980, Uchitelle worked for The Associated Press as a reporter, editor, and foreign correspondent in Latin America. Returning to the United States, he served for three years as the head of AP's business news operation. He and his wife, Joan Uchitelle, live in Scarsdale, N.Y.

**MARTIN WOLF** is associate editor and chief economics commentator at the *Financial Times*, London. He was awarded the CBE (Commander of the British Empire) in 2000 for services to financial journalism, and was made a Doctor of Science (Economics), honoris causa, by the London School of Economics in 2006. He is an associate member of the governing body of Nuffield College, Oxford; honorary fellow of Corpus Christi College, University of Oxford; an honorary fellow of the Oxford Institute for Economic Policy (Oxonia); and a special professor at the University of Nottingham. He was a joint winner of the Wincott Award for excellence in financial journalism in 1989 and 1997, and winner in the Accenture Decade of Excellence and Commentator of the Year categories at the Business Journalist of the Year Awards in 2003 and 2008, respectively. In 2009, he was named Commentariat of the Year at the Comment Awards, sponsored by Editorial Intelligence. That same year, he received the Ludwig Erhard Prize for economic commentary and was a joint winner of the award for columns in "giant newspapers" at the 15th annual Best in Business Journalism competition, sponsored by the Society of American Business Editors and Writers. Wolf has been a forum fellow at the annual meeting of the World Economic Forum in Davos since 1999 and a member of its International Media Council since 2006. He has appeared on *Foreign Policy*'s annual list of the "Top 100 Global Thinkers" since its inception in 2009. In June 2010, he was appointed a member of the UK government's Independent Commission on Banking. His most recent publications are *Why Globalization Works* (2004) and *Fixing Global Finance* (2008).

Senior Scholar **L. RANDALL WRAY** is a professor of economics at the University of Missouri—Kansas City. A student of Hyman P. Minsky while at Washington University in St. Louis, Wray has focused on monetary theory and policy, macroeconomics, financial instability, and employment policy. He has published widely in journals and is the author of *Understanding Modern Money: The Key to Full Employment and Price Stability* (1998) *and Money and Credit in Capitalist Economies* (1990). He is the editor of *Credit and State Theories of Money* (2004) and co-editor of *Contemporary Post Keynesian Analysis* (2005), *Money, Financial Instability and Stabilization Policy* (2006), and *Keynes for the Twenty-first Century: The Continuing Relevance of* The General Theory (2008). He has served as a visiting professor at the University of Rome, the University of Paris, and UNAM (Mexico City).

**Levy Economics Institute of Bard College**,

founded in 1986, is a nonprofit, nonpartisan,

research organization

devoted to public service.

Through scholarship and research

it generates viable,

effective public policy responses to

important economic problems

that profoundly affect the quality of life

in the United States and abroad.

These proceedings were prepared by

Barbara Ross and Michael Stephens of

the Levy Economics Institute of Bard College.

LEVY ECONOMICS INSTITUTE OF BARD COLLEGE
Blithewood
Annandale-on-Hudson, NY 12504-5000
Telephone: 845-758-7700 or 202-887-8464 (in Washington, D.C.)
Fax: 845-758-1149
E-mail: info@levy.org
Website: www.levyinstitute.org