Levy Economics Institute of Bard College

Conference Proceedings

22nd ANNUAL HYMAN P. MINSKY CONFERENCE ON THE STATE OF THE US AND WORLD ECONOMIES

Building a Financial Structure for a More Stable and Equitable Economy

April 17–19, 2013, New York City

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

FORD FOUNDATION

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 22nd Annual Hyman P. Minsky Conference, "Building a Financial Structure for a More Stable and Equitable Economy," 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 the reregulation of financial institutions and markets within the context of Minsky's path-breaking work on financial crises.

In 2008–09, the world experienced its worst financial and economic crisis since the Great Depression. Global employment and output collapsed, and an estimated 84 million people fell into extreme poverty. Given the fragility and uneven progress of the economic recovery, social conditions are expected to improve only slowly. Meanwhile, austerity measures imposed in response to high government debt in some of the advanced economies are making the recovery even more uncertain.

It's time to put global finance back in its proper place as a tool to achieving sustainable development. This means substantial downsizing, careful reregulation, universal social protections, and an active, permanent employment-creation program. This year's conference, therefore, addresses both financial reform and poverty in the context of Minsky's work on financial instability and his proposal for a public job guarantee. Panels will focus on the design of a new, more robust, and stable financial architecture; fiscal austerity and the sustainability of the US economic recovery; central bank independence and financial reform; the larger implications of the eurozone debt crisis for the global economic system; improving governance of the social safety net; the institutional shape of the future financial system; strategies for promoting poverty eradication and an inclusive economy; sustainable development and market transformation; time poverty and the gender pay gap; and the policy and regulatory challenges facing emerging-market economies.

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

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

Program

Wednesday, April 17

8:45–9:30 a.m.

WELCOME AND INTRODUCTION

Leonardo Burlamaqui, *Ford Foundation*

Dimitri B. Papadimitriou, *Levy Institute*

9:30-10:30 a.m.

SPEAKER

James Bullard, *President and CEO, Federal Reserve Bank of St. Louis*

"Some Unpleasant Implications for Unemployment Targeters"

10:30 a.m.-12:00 p.m.

SESSION 1

Five Years After: Is There Progress in Financial Regulation?

Moderator: Floyd Norris, *Chief Financial Correspondent,* The New York Times

Robert J. Barbera, *Co-director, Center for Financial Economics, The Johns Hopkins University*

José Antonio Ocampo, *Professor of Professional Practice, Director of the Economic and Political Development Concentration, and Member of the Committee on Global Thought, Columbia University*

Frank Veneroso, *President, Veneroso Associates, LLC*

12:00-2:00 p.m.

SPEAKER

Eric Rosengren, *President and CEO Federal Reserve Bank of Boston*

"Risk of Financial Runs—Implications for Financial Stability"

2:00–4:15 p.m.

SESSION 2

Measures and Implications of Inequity in Income and Wealth

Moderator: Dimitri B. Papadimitriou, *President, Levy Institute*

Branko Milanovic, *Lead Economist, Development Research Group, The World Bank*

Edward N. Wolff, *Senior Scholar, Levy Institute, and Professor of Economics, New York University*

Thomas Masterson, *Research Scholar, Levy Institute*

4:30-6:30 p.m.

SESSION 3

Minsky on Ending Poverty: Jobs, Not Welfare

Moderator: Justin Lahart, *Reporter, "Heard on the Street,"* The Wall Street Journal

L. Randall Wray, *Senior Scholar, Levy Institute, and Professor, University of Missouri–Kansas City*

Dimitri B. Papadimitriou, *President, Levy Institute*

Jan Kregel, *Senior Scholar, Levy Institute, and Professor, Tallinn University of Technology*

6:30 p.m.

SPEAKER

Thomas M. Hoenig, *Vice Chairman, Federal Deposit Insurance Corporation*

"Choosing a Banking Model for the US Economy"

Thursday, April 18

8:50–9:00 a.m.	**SPEAKER** Luis A. Ubiñas, *President, Ford Foundation*
9:00–10:00 a.m.	**SPEAKER** Narayana Kocherlakota, *President and CEO, Federal Reserve Bank of Minneapolis* "Low Real Interest Rates"
10:00-11:00 a.m.	**SESSION 4** **Systemic Sources of Inequity and Instability** *Moderator:* John Cassidy, *Financial Writer,* The New Yorker Alan S. Blinder, *Professor of Economics and Public Affairs, Princeton University* Steven M. Fazzari, *Research Associate, Levy Institute, and Professor, Washington University–St. Louis*
11:00 a.m.-12:00 p.m.	**SPEAKER** Benjamin M. Lawsky, *Superintendent of Financial Services, New York State Department of Financial Services* "Regulating in an Evolving Financial Landscape"
1:00-3:00 p.m.	**SESSION 5** **Legal Implications of Measures to Improve Financial Stability** *Moderator:* Paula Dwyer, *Editor*, Bloomberg View Emilios Avgouleas, *Chair, International Banking Law and Finance, School of Law, University of Edinburgh* José Gabilondo, *Professor of Law, Florida International University* George S. Zavvos, *Legal Adviser, European Commission; formerly, Member of European Parliament and European Commission Ambassador*
3:15-4:15 p.m.	**SPEAKER** Sarah Bloom Raskin, *Member, Federal Reserve Board of Governors* "Reflections on Inequality and the Recent Business Cycle"
4:15–6:15 p.m.	**SESSION 6** **Regulation and Supervision of the New Financial Structure** *Moderator:* Yalman Onaran, *senior writer, Bloomberg News, and author,* Zombie Banks Jan Kregel, *Senior Scholar, Levy Institute, and Professor, Tallinn University of Technology* L. Randall Wray, *Senior Scholar, Levy Institute, and Professor, University of Missouri–Kansas City* Walker F. Todd, *Research Fellow, American Institute for Economic Research*
6:15 p.m.	**SPEAKER** Mary John Miller, *Under Secretary for Domestic Finance, US Department of the Treasury* "Progress towards a Stronger Financial System"

Friday, April 19

9:00-11:00 a.m.

SESSION 7

Financial Stability and Inequality: Compatible or Contradictory?

Moderator: Stephan G. Richter, *Publisher and Editor-in-Chief,* The Globalist, *and President, The Globalist Research Center*

Robert Kuttner, *American Journalist and Writer; Co-founder and Co-editor*, The American Prospect

Alex J. Pollock, *Resident Fellow, American Enterprise Institute*

Jeff Madrick, *Director, Rediscovering Government Initiative, Roosevelt Institute; Editor,* Challenge*; Visiting Professor of Humanities, The Cooper Union; and Economics Columnist,* Harper's Magazine

11:15 a.m.-12:45 p.m.

SESSION 8

Inequality, Instability, Labor Markets, and the Fiscal Compact

Moderator: Peter Coy, *Economics Editor,* Bloomberg Businessweek

Nora Lustig, *Samuel Z. Stone Professor of Latin American Economics, Tulane University, and Nonresident Fellow, Center for Global Development and the Inter-American Dialogue*

Frank Veneroso, *President, Veneroso Associates, LLC*

Welcome and Introduction

LEONARDO BURLAMAQUI
Program Officer, Ford Foundation

DIMITRI B. PAPADIMITRIOU
President, Levy Economics Institute


Leonardo Burlamaqui


Dimitri B. Papadimitriou

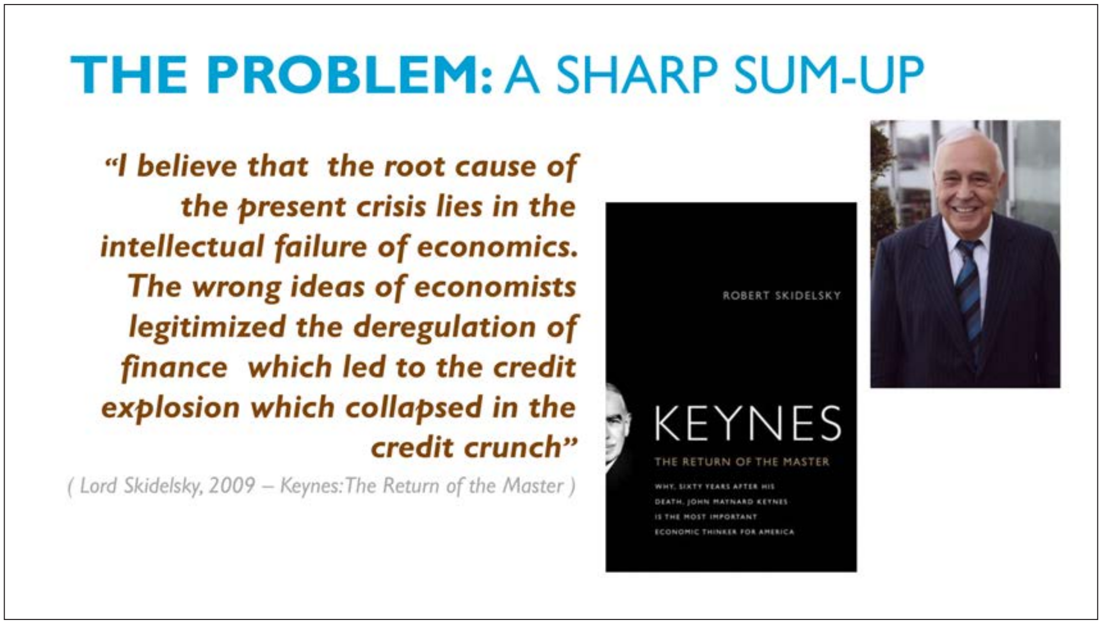
LEONARDO BURLAMAQUI: It's a great pleasure to be back here. I think it's the fifth time that we're doing the conference here at the Ford Foundation, so I'm already very much used to that; it's part of the calendar. And of course the expectation is the same, which is that we'll have a lot of interesting discussions and also a lot of out-of-the-box thinking, which is not very usual to have them in a lot of the places where we have these big conferences. I think here is one of the places that we can take for granted that we'll have that.

Let me thank Luis Ubiñas, Maya Harris, and Martin Abregú from the Foundation, and also Dimitri, Jan, and the many, many other people who helped to make this happen.

This year I chose to say something to you about the initiative itself, a quick overview of the Reforming Global Financial Governance initiative, because this is a very important component; but it's not all that we're doing under this rubric. So I'm going to try to give you a quick sum-up of this.

The first thing is that I think we came up with two diagnostics that were quite, I would say, on the money. The first one is that we have global markets, especially in finance, but we still don't have—and in 2013 I think this is still valid—global governance to oversee them. The second piece of the diagnostics—pretty much a Minskyan one—is that finance impacts everybody. It impacts all economic and social spheres. It's part of our daily lives, [whether] we like it or not. But the problem is that those who are most influenced don't have much of a say in that.

So with these diagnostics we came to our vision. And the vision, in a way, is also some part of the solution to the problem, if you will. What kind of solution? Well, the idea that, bottom line, financial stability and financial security are global public goods, and in that sense public institutions need to be the



vehicles by which leaders take public responsibility for the public interest. If we leave that to the markets, it doesn't work. If we leave that to the financial markets, it works even worse. And, of course, the financial crisis was a crystal-clear demonstration of that statement.

This is a very interesting and sharp sum-up of the problem, the one that Robert Skidelsky put down [Figure 1]. Actually, it began with . . . the wrong ideas—I just would say, not the wrong ideas of *all* economists. Some economists didn't have those ideas, but the mainstream had those ideas, and those ideas opened up the space for the deregulation of finance, which led to the credit explosion, which led to the credit crunch. It's interesting, because it's a statement in the spirit of both Keynes and Weber in the sense that we're talking about ideas as sources of power. This is an interesting point to remark on.

In a nutshell, the goal, not surprisingly, is to try to help … [achieve] a global financial system which is more democratic, is transparent, is accountable, and to get finance back to where it should be—meaning financial institutions providing finance for sustainable development and employment opportunities worldwide. Said a bit differently: not finance working for itself, but finance as part of a bigger system and working toward development, and in synch with the productive side of the economy.

More precisely, we had three ideas in mind: to reform, reshape, and resize the financial system in order to empower major civil society players—and that includes everybody, not only NGOs—and give them a credible voice, because we (back to the diagnostics) have no voice at all in terms of how we speak up against . . . what's wrong in the financial system.

The problem comes when, okay, we want [to do] that. How do we do it? Well, what we chose to do was to focus on three areas. Basically, regulation of domestic banks and private finance—we could call this reorienting financial reform—[is the first thing]. The [second] thing would be to reform the legal foundations of international finance and financial flows, which then we have to get from the banking system and the financial system and into international trade treaties—especially the WTO [World Trade Organization], but not only. . . . And [third], there is also a public dimension of this, which is to uncover and publicize the role and the functions of the public financial system, because, as we saw in the crisis, not only in the US, the UK, Europe—everywhere—it was the public financial system that really took charge in terms of bailing out the corporations, in terms of organizing the way to fight the crisis. And if we look at places like Brazil or China, it was because of the public financial system that both countries didn't really have a financial crisis. So this is something that I think should be underlined, because it's not sufficiently debated, at least the way I see it, in the conversations since the beginning of the crisis.

Okay: reorienting financial reform. If we look at what was there in 2006, or precrisis, I would suggest financial chaos, NINJA loans, fraud everywhere, credit rating agencies acting as global regulators—they're private: they just give their opinion, nothing more than that, but they in fact were acting, and still do act, as global regulators—leverage ratios of 40 to 1, 50 to 1, banks betting against their clients, Goldman Sachs and so many others' deals that we should be looking at. Wow, can this happen? It *did* happen.

So, a few proposals here: [address] synthetic leverage, of course; leverage on top of leverage; derivatives; contagion. A few proposals have come and they are on the table; they're being discussed. Some of them are in Dodd-Frank; some are not. But it's not rocket science. I would say it's more criminal law than rocket science, if you will. . . . So: radically decrease leverage, decrease synthetic leverage in terms of derivatives, develop a system of systemic risk regulatory apparatus to avoid contagion, because the whole idea of regulation was to focus on individual corporations, individual banks—what about the system? Closely supervise the big banks' balance sheets—actually police the banks better. This is what we do, for example, in Brazil—I come from Brazil. In Brazil there are not too many big banks. It's a big country, but there are few very big banks. The central bank calls the banks very often to get a better understanding of what's going on: "Can I see your balances? Something weird happened yesterday; I want to understand it." Well, again, it's not rocket science. It's close supervision, close regulation.

And, of course, the more difficult thing to do would be to get rid of—at least the way they are structured now—the credit rating agencies, or make them liable for what now are only their opinions. They should be liable for giving their opinions and obliging people to just sell or buy and sell [securities] because they're not triple-A rated anymore.

The most difficult proposal, of course, would be extremely useful: de-institutionalize lobbying. Because this system of governing by lobbying is clearly not the best one. It's not effective. I would say it's not even democratic.

On a positive note, I think we can say that, obviously, the task is not over, but some reforms are being implemented. Dodd-Frank is being implemented. There are a lot of controversies about it. Alan Blinder, who is, I believe, going to be speaking here, just published a very interesting book [*After the Music Stopped: The Financial Crisis, the Response, and the Work Ahead*], which is a little bit more optimistic than other statements in terms of what Dodd-Frank can bring. It's a debate. But anyway, reforms are there, but I think that the whole thing, it still has to be deeper. More radical reforms, I think, are still needed to get the system back where it should be.

The legal foundations—let's speak about reforming the WTO financial rules. What is the problem there? Well, the problem is that if we look at international trade right now, it has become much more complicated than the idea of trading in goods. It's mostly trading in services—intellectual property and other kinds of services—and more and more financial services. And unregulated trade in financial services creates risk and increases volatility. You can see that there is a lot of that, and banks are at the forefront of these movements; but there is no study that really states their contribution for development, so it's basically a speculative game. So speculative capital movements continue to grow fast and—again, let me repeat—the banks are at the forefront of that. So to properly regulate the banks and private finance, you have to get into the international trade treaties that allow that to happen. That is a very important link between two pieces of financial reform that I think have to be more profoundly studied, if you want, but especially advocated.

Because of the binding rules of those international trade treaties, domestic policy space has shrunk. There is a problem in that. You can see that in the eurozone, you can see that everywhere—you can see that in every single bilateral trade agreement and in the GATT provisions under the WTO. On the other hand, policy space for corporations has increased tremendously. They can move their money all over the place, as they wish. So there is a mismatch there, right? What has to be done?

One of the things, obviously . . . , is to make the management of capital flows a core rule, or piece, of international finance or international regulation: to require quarantine periods for capital inflows and capital outflows. To delink trade agreements from financial liberalization. But in order to do that, reforms of those international trade agreements are necessary, because the mismatch is that there is sort of a consensus emerging, at least in terms of the usefulness of regulating cross-border financial flows; but the commitments inside a major international trade agreement still are very much in terms of deregulating them. So this is a mismatch that obviously has to change.

The third, . . . public dimension of the initiative is shaping—or reshaping, if you will—financial institutions for innovation and development. If we look at, not the precrisis, but the postcrisis situation in the West, you can see no, or very few, job creations; austerity policies are undermining the recovery in Europe, but also here in a way. Speculative finance is again at the top of the game; you can see the earnings are back, but employment is lagging, and investment and growth. The BRICs are obviously a new player in that scene, which doesn't see the sort of casino capitalism way of doing things, or with the same sympathy or empathy that others do so. So the BRICs are a clear demonstration of a new, different view in terms of how the state and how the public financial system works with, and in a way subsumes, private finance to the major goals of development, innovation, and employment creation.

If you look at this again, even precrisis there is a big difference, of course, as we all know. Where is the growth? The growth is in Asia, and, especially, the growth is in China. And so again, Asia and the BRICs tell us that we have new players on the scene, new players where—again, let me repeat—the public financial system is at the forefront of crafting industrial strategy and financing development projects. So the best responses to the crisis were in Brazil and China. What do they have in common? Capital controls, robust financial regulation, and strong public financial systems. So BRICs collaboration is growing. The China Development Bank, BNDES—those are public banks, development banks. And, if you will, . . . a new form of state capitalism might be emerging, like it or not. . . . In a way, the question I'm posing is, is there a BRICs-plus development deal that is leaning much more toward public financial institutions? I would say there's a good chance. And if you look at that picture [of President Obama and then-President Hu Jintao of China], who looks like the banker? Who *is* the banker, actually? It's China, right? China is the US banker right now.

To very quickly sum up the results that we've achieved: first, in order to [launch] a global initiative like that we had to network. We had to build an active and global network. . . . Most of the projects are carried out as collaborations and joint ventures among grantees, which gives them leverage in terms of trying to get some of these ideas to the table. Right now, the initiative being generated in 2013 has 32 active grantees in 13 countries, with ramifications for more than 20 countries, if taken altogether, on four continents. So it's an interesting achievement. . . .

We also had [an early success with] Elizabeth Warren, when we helped her in the very beginning of her crusade with the Financial Products Safety Commission—and this, I think, was nice, because now she's a senator, and [a Consumer Financial Protection Bureau has been established].

In terms of the third set of impacts, I think that since 2006 or 2007 we have been advocating for the idea that the public financial system is . . . a critical player in terms of how to fund innovation and development, not only in the South, if you will, but also in the US and in Europe. So several of those projects are dealing with that. What I think we can claim is that four years ago the idea that the private financial system was getting out of control and needed to be reshaped by the visible hand of the government was not at the table, and now it is current thinking, and I think that this initiative contributed [to] that change in the conversation.

We're not reinventing the wheel. I think that both Lula [former Brazilian President Luiz Inácio Lula da Silva] and Jintao, they were both empowered in 2003. They sort of knew something about that. Again, let's [remember that] in both China and Brazil the public financial system was always and still is quite robust, and this is something to think about.

Finally, the Minsky Conference clearly became a . . . place for globally oriented policy dialogues, so in that sense I have to thank you. I owe you a big thank-you, because you did it—you produced that. Now I think what's happening is that you're helping to push for the implementation of more progressive financial reform. . . .

Just raising a few lessons very quickly: the most important of them, I think , . . . is that it takes money and politics to confront money *in* politics; meaning, the whole thing of lobbying is devastating in the sense that we don't have the same tools. So we can be smart, we can have a first-class team—it helps. But it's very difficult to fight this governing-by-lobbying of not only the financial system, but this poses a problem, I would say, even for democracy. And if we ask the ultimate question—*Are we safe?*—let me just remind you of Gretchen Morgenson in *The New York Times* last week: no, we're not safe. *Be afraid.* And she's not talking about 2008 or 2009; it's 2013. Why? The financial system, thanks to aggressive traders and bumbling regulators, is at greater risk than you know.

So with that in mind, I want to thank you again. I want to wish all of us a great conference. And I want to ask Dimitri to properly introduce the conference itself. Let's begin. Thank you very much.

DIMITRI B. PAPADIMITRIOU: First of all, good morning. I, too, want to welcome you to the Levy Institute's 22nd Annual Hyman Minsky Conference this year on the theme "Building a Financial Structure for a More Stable and Equitable Economy." I certainly want to thank the Ford Foundation and especially Leonardo Burlamaqui for making us part of this great initiative, and also to thank him for his guidance, and for making it possible for us to use again, for the fifth year, the Ford Foundation headquarters for this conference.

Of course, my thanks also don't stop here. I must mention my colleague, Senior Scholar Jan Kregel, who runs our research project on financial structure and monetary policy, for putting this conference together along with me.

Every year, we find that many more colleagues in the academy, on Wall Street, and in the policymaking arena recognize Minsky's important theoretical contributions to economics in helping us understand the workings of the modern and complex capitalist economy. The Levy Economics Institute continues to sharpen its focus on strategic issues of economic policy relating to achieving long-term economic growth and higher employment in a period of low inflation and decreasing public expenditures in research and development, education, and other public goods. We continue our research and writings and outreach on monetary and fiscal policies, on systemic risk and reform of the financial services sector, and on the evolving structure of regulation necessitated [by] the advances of financial innovation.

The Levy Institute – Ford Foundation project offers policy proposals for reforming the financial structure, drawing from Minsky's research and writings that we have at the Levy Institute in the archives. We are very pleased to report that aside from the Institute's scholars, more than 3,000 visitors have drawn their support from the Minsky Archive. There have been many downloads of published and unpublished papers that are contained in the archive. Our web traffic has surpassed 800,000 page views per month.

It has been almost three years since the Dodd-Frank Wall Street Reform Act was passed, with a struggle over its shape still ongoing. Dodd-Frank is based on the idea that financial markets are normally stable with the exception of an alarming event. The New Deal's Glass-Steagall Act and the Clinton-era Financial Modernization Act shared those assumptions.

All of these efforts were conceived as system-wide overhauls. In reality, though, they were designed only to remedy random ad hoc crises, not shocks like the 2008 meltdown otherwise known as a "Minsky moment." Ironically, Hyman Minsky actually believed that these moments were anything but random or ad hoc. The increasingly risky practices that fueled danger and instability are still happening and being rewarded, and the shocks will still come in. Each new threat to stability is destined to be different from the last.

Dodd-Frank aims to identify the most volatile institutions and practices. But that approach is too brittle to contain the disastrous effects of risks that are always morphing. Even constructive aspects of the Act could have perverse consequences unless the rules are subject to sophisticated reexamination as the financial world develops. Banks carry an urge to evolve in a way that maximizes revenues. We're frequently witnessing how quickly markets create riskier and more profitable instruments. It is the very nature of modern finance to transform its structure in response to the prevailing regulation, and to evade it successfully.

Under Dodd-Frank, banks will function more or less as they did in the past. Their enormous size and multifunction operations will be subject only to trivial changes. The Act's most significant measure, the Volcker rule, continues to be diluted, and many of its other regulations are tied up in delays. Instead of fundamental changes that would caution our fragile system from instability, Dodd-Frank's centerpiece is a limit on the use of public funds to rescue failing banks. The Act, by enabling rapid dissolutions, aims to avoid a repeat of 2008, when the Lehmann Brothers bankruptcy virtually froze capital markets. It is also an understandable response to TARP [Troubled Asset Relief Program], which capitalized insolvent financial institutions at a great cost while allowing failing households to fall into foreclosure.

But limiting taxpayers' exposure to the next bank breakdown is not the same as preventing a system-wide collapse. Tweaking Dodd-Frank isn't a solution. Glass-Steagall contained features worth preserving, but reviving an outdated and unfeasible law would not help. Neither will blaming Gramm-Leach-Bliley [the Financial Modernization Act], which, profound as it was, merely reflected the new status quo of its day. It institutionalized the changes that had already emerged in the markets.

We need banks that can earn competitive rates of return while they focus, not on the big risks or the big deal, but on financing capital development. Reforms that promote enterprise and industry over speculation will have to be innovative, flexible, and opportunistic in terms of the markets they aim to improve.

Minsky had proposed, and Jan Kregel, my colleague, will discuss tomorrow, that regulators could begin by breaking down banks into smaller units. A bank holding company structure with numerous types of subsidiaries, each one subject to strict limitation on the type of permitted activities, would be a valuable deterrent to risky behavior. Restrictions on the size and function would allow a reasonable shot at understanding esoteric subsidiaries and a chance to react quickly to mutations.

Finally, Minsky long argued that there is complementarity between financial stability and full employment. Indeed, this was the main objective of Minsky's research at the Levy Institute. His proposal for financial stability was to shift the emphasis from capital-intensive investment growth to investment in jobs as a means of ensuring both stability and an equitable income distribution. Employment, Minsky argued, should be the major objective of economic policy, with government acting as an employer of last resort. A direct, federally funded employment guarantee program, while providing a job opportunity to any individual willing and able to work, would act as an automatic economic stabilizer, enabling households to meet their financial commitments and subsequently reduce the impact of financial shocks. The purpose of this year's conference is to explore this linkage further.

As you have undoubtedly noticed, the Levy Institute has come out with a new book, the title of which is *Ending Poverty: Jobs, Not Welfare*, describing the government's larger and more proactive role. The book contains Minsky's published and unpublished papers on the subject. We invite your close scrutiny and would welcome your comments.

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

Speakers

JAMES BULLARD

President and CEO, Federal Reserve Bank of St. Louis

Some Unpleasant Implications for Unemployment Targeters

Good morning. . . . It's a pleasure to be here today. I really love this conference and this venue. I think you've got a great lineup over the next two-and-a-half days, and I think there'll be a lot of really excellent discussion.

I'm going to be provocative here and get us started off on the right foot, because I know that this is a feisty crowd. So I'll talk for about 30 minutes on this subject, and then we'll have plenty of time for Q&A on this. But I do want to try to get this point across. This is not going to be the simplest matter, because I'm going to refer to front-line research in macroeconomics. So we'll see if we can keep the slides from going back and forth on us here.

So it's called "Some Unpleasant Implications for Unemployment Targeters." The bottom line will be, really, don't push unemployment targeting onto the monetary policymaker; you've got to look to other types of policies, labor market policies, to get the right policy there. So we'll see if we can get to that point.

We'll start off with policy advice. This is just the standard policy advice as it exists in the literature. The standard policy advice from the New Keynesian macro literature has been sort of wildly influential. . . . It's headed up by Michael Woodford at Columbia University here in town and his coauthors—a wonderful work, very influential. It's really informing central banking around the world. . . . The key thing is that you assume sticky prices at the beginning, and that's kind of the key problem in the economy.

So what are sticky prices? It just means that the prices that you see out there are not really the ones that reflect supply and demand at every instance. So supply-and-demand conditions are changing often, but the prices aren't changing as often as the supply-and-demand conditions.

That's a controversial assumption, and you can go into the literature and argue about that. But I'm not going to argue about that today; we're just going to take that as a given—that the sticky price problem is the key problem—because that's what the literature assumes.

Then there's the central bank that controls a short-term nominal interest rate, which sounds like the Federal Reserve. And you can mitigate the sticky price problem, and you can get better outcomes than you would get if you just stayed out. So this is an argument for intervention of the type that central banks actually do. We move short-term nominal interest rates around to try to mitigate the detrimental effects of the sticky prices.

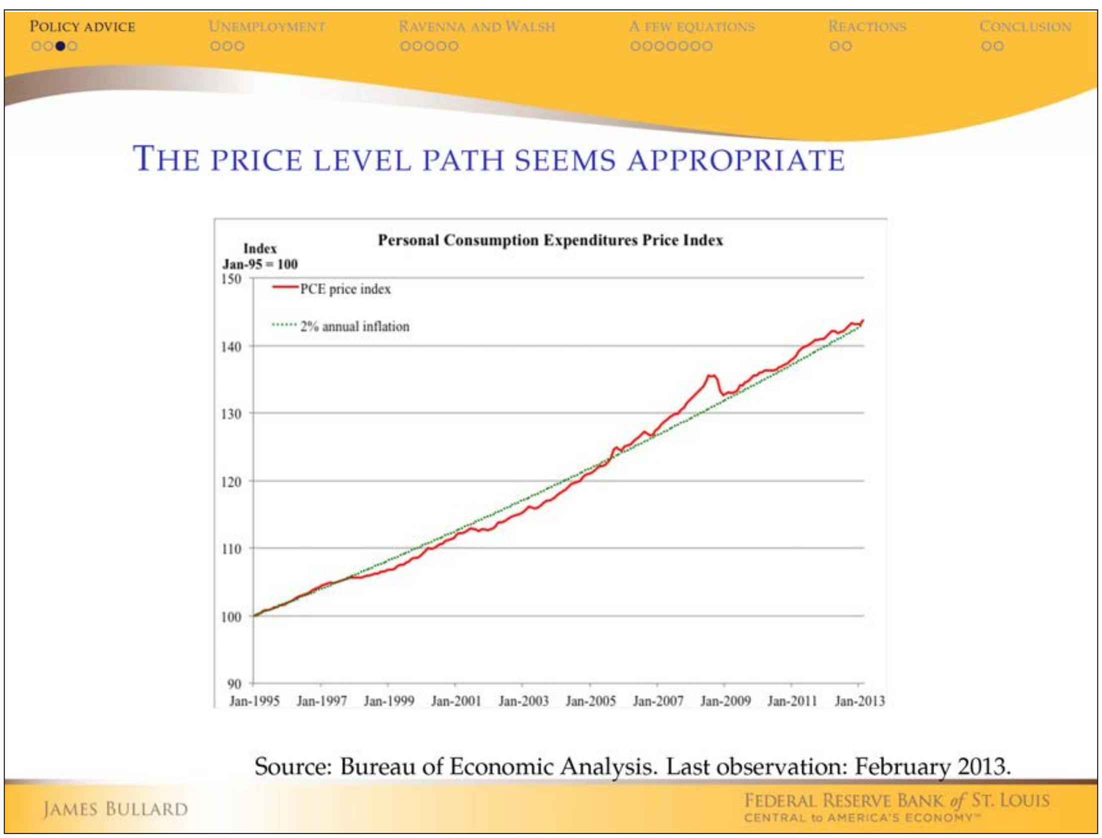
What about the zero bound? That's taken care of as well, because when you're at the zero bound on the policy rate you can also promise to stay at the zero bound even longer than you otherwise would, and this also helps to create a boom today, and helps to mitigate the sticky price problem. So in some sense, even the zero bound is not a problem in this literature.

The Fed has experimented with this forward guidance policy advice that has come out of this literature, so it has been very influential. Recently, the FOMC [Federal Open Market Committee], decided to link that to economic conditions. I think that was an improvement in the way we do our forward guidance. That's not really here nor there for this talk, [but] you can handle the zero bound even inside this literature. So this has all been very influential.

The essence of the NK—"NK" does not stand for "Narayana Kocherlakota," who'll be here later; it stands for "New Keynesian"—the New Keynesian policy advice is, if you just took at it from a layperson's level, is to say, let's just keep inflation close to target and . . . that'll be the good policy. And indeed, the FOMC adopted an inflation target in January of 2012, but we were perceived to have an implicit target long before that. But I thought it was a good move to actually adopt an official inflation target. We reiterated that in January of 2013.

Now, technically, the policy advice is not the inflation rate, but the price level path; it's really price-level targeting, which is optimal in the New Keynesian framework. You might ask, has the Fed been a long ways off on its price level path? Has the Fed maintained such a price-level path? The answer to that is yes, . . . [and it's] a singular achievement of recent monetary policy.

I think this comes through in this picture here [Figure 1]. This is a personal consumption expenditures (PCE) price index since 1995, and 1995 is indexed to 100. The green line is if you just had a price-level path dictated by a 2 percent inflation target. The red line is the actual path of PCE inflation during this whole period.



So we're basically right on the path. And let me tell you, this does not always happen. If you look at Japan over this period, this certainly did not happen for Japan. Or if you look at the US in the Great Depression, it did not happen. So whatever's going on, we didn't maintain the price-level path, which is sort of the optimal policy coming out of the New Keynesian literature.

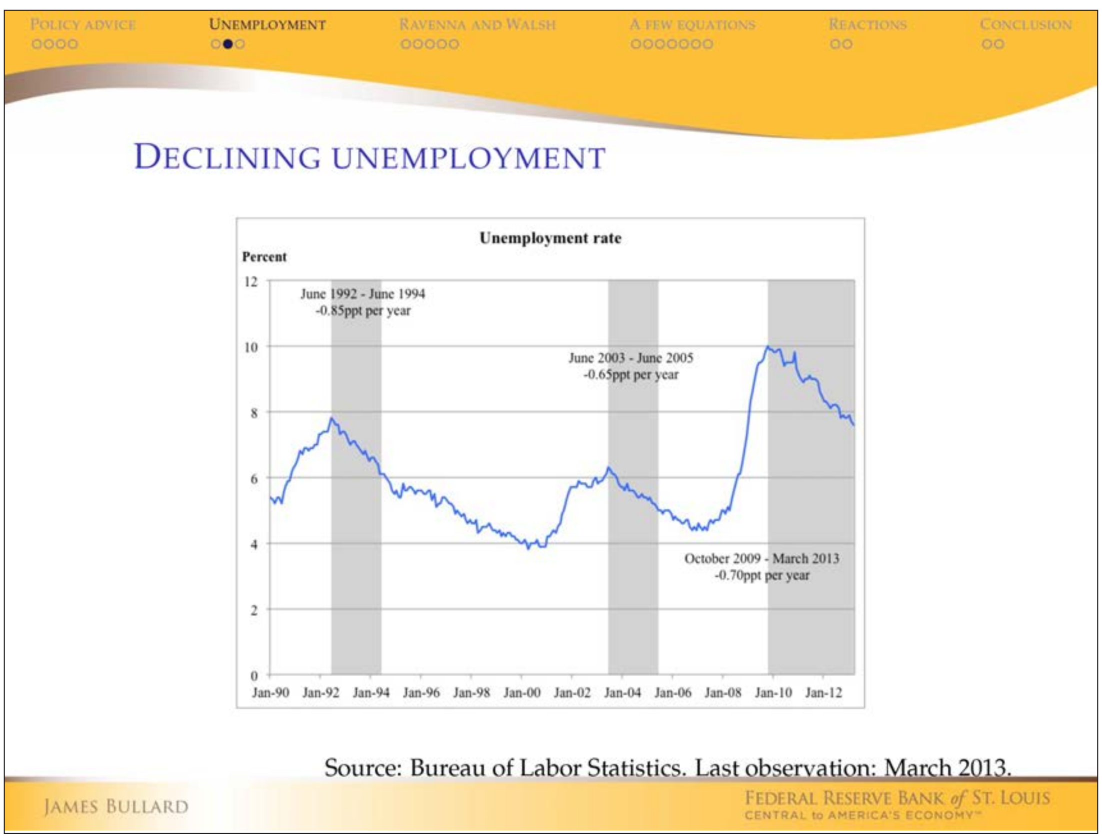
Actual policy since 1995 seems to have mimicked the policy advice emanating from the New Keynesian literature, and that's despite all that happened during that 18-year period. You've got the tech bubble, the recession; you've got the financial crisis and everything that happened. Nevertheless, you're right on the price-level path, which is right where the literature says you should be.

However, as you guys know and I know very well, gosh, there's no unemployment in this model. No unemployment—you can't be serious, right? And today's level of unemployment looks quite bad in the US. So what's going on? *What's going on?* Should we trust this literature, or not?

Let's talk about unemployment. Unemployment is certainly high by historical standards in the US. It has declined from a postrecession peak at a rate of .7 of 1 percent per year. That occurred during several years of relatively weak economic growth of around 2 percent per year. That's very similar to the US experience in the '90s and again in the 2000s, in the aftermath of the two previous recessions. If we stick with that kind of pace, we'll be in the low 7s by the end of this year.

So here's the picture: here's unemployment since January of 1990 in the US [Figure 2]. The shaded regions show the periods of decline in unemployment after the peak level of unemployment, and the current pace of decline is not too different from the pace of decline after the '90–'91 recession or after the 2001 recession. So whatever's going on, these three episodes are not very different in that dimension.

So the idea would be—the key question in my talk here is—should the Fed adopt a monetary policy that puts more weight on unemployment?



Well, if you look at . . . the leading literature on this, the answer is no. That's a very surprising answer, and that's what I'm going to talk about here today. I'm going to mostly say, how can we understand this finding that you should not put more weight on unemployment, even when unemployment's high?

You're going to have to get used to these guys: these are Federico Ravenna and Carl Walsh, and I'm going to mostly use their research on this topic. They're leaders in this field. Federico Ravenna is at HEC Montreal; Carl Walsh is at UC Santa Cruz. They've got a state-of-the-art paper trying to investigate this question ["Welfare-Based Optimal Monetary Policy with Unemployment and Sticky Prices: A Linear-Quadratic Framework"]. It's a published paper in the *American Economic Journal: Macroeconomics.*

What are they trying to do? They want a fully optimal monetary policy in a model that has the sticky-price problem from the previous literature and . . . what we're going to call search-theoretic unemployment. They've also sharpened their conclusions in more recent work. I'm going to talk about that.

What do they want to do in their research? They're asking very much the question that's in your head right now: you're saying, If we included unemployment in the model, then surely you'd put some weight on unemployment when you're trying to do monetary policy. So what you want to understand is whether this "maintain price stability" advice survives in a New Keynesian framework with explicitly modeled unemployment.

If you're not used to this, you have to understand that unemployment is actually a difficult topic for macroeconomics. It's a difficult topic for macroeconomics because . . . you can't just say, workers and employers all meet in one big market and everybody's happy. No. That doesn't work if you want to talk about unemployment. You've got to go to search-based ideas. The search-based idea is, we're all in matches with our employers. Those matches dissolve. You don't get a job instantly. It's hard to find a job. You've got to go search for a job. That's the search-theoretic part. The match breaks up; you've got to go look for a job.

This line of research, search-theoretic unemployment, led to a Nobel Prize for Peter Diamond, Dale Mortensen, and Chris Pissarides. What you want to do is bring that idea into the New Keynesian sticky-price framework, and then see what the optimal policy is in that world. . . .

A last part of the focus of the research is, we don't want outsiders to the model coming in and dictating what they want to do; we want to ask the people that live inside the model, "What would you have us do? Given that you face unemployment problems and given that you face sticky prices, what would you have the monetary policymaker do?" So you want to do it from the perspective of those guys; not somebody else that might have something else in mind. What would be the best monetary policy from the point of view of a household facing both sticky prices and unemployment?

So they've got both these things in the model, and it means that what you're living in this model is, you're facing prices that don't move one for one with supply-and-demand conditions and, if you lose your job, it's going to be hard to find another job because of the search friction. So it's hard to find a job, and we know that if this economy is all done very carefully to match up with the previous literature—this is a strength of Ravenna and Walsh—we know that if you just had the sticky-price problem in the economy, price stability would be the general advice that you would get out of that framework.

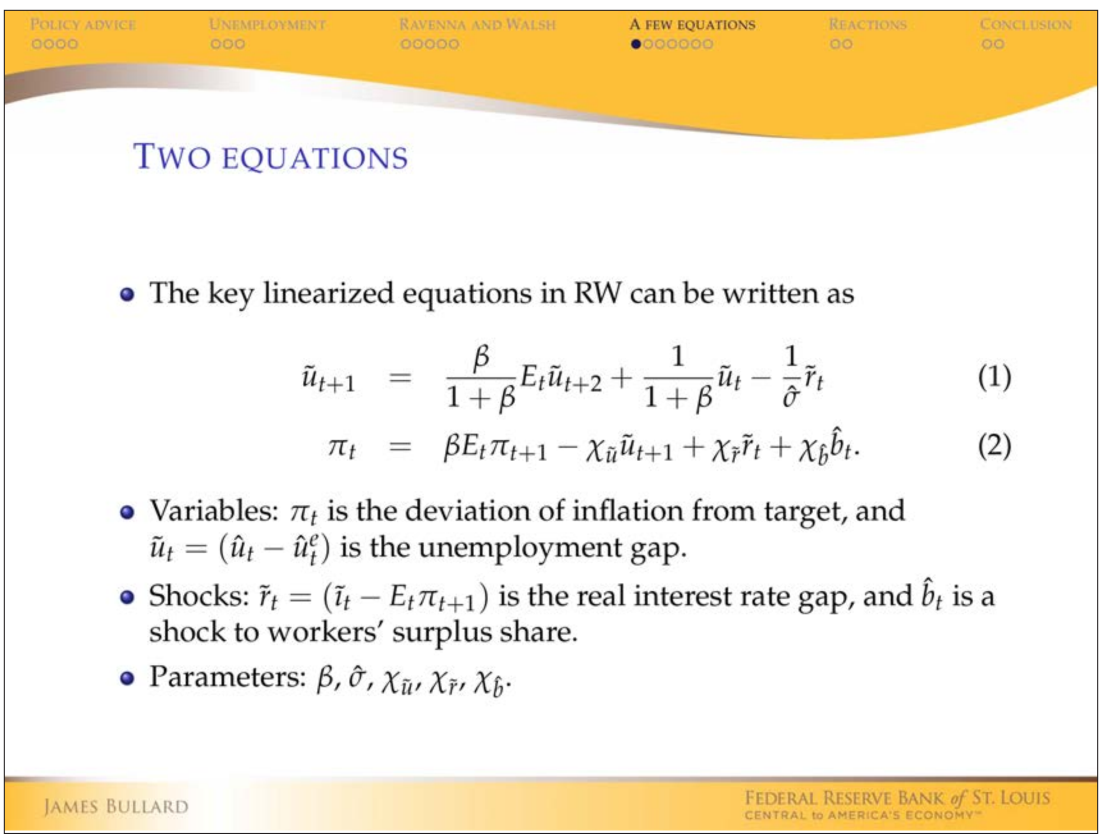
Will this advice change when these labor search frictions are included in the model? What [you'd think] they'd found was . . . , okay, now we have this sticky-price problem, we've got the labor search frictions in the model, and surely the policymaker is going to trade off these two things. And you want to try to partly mitigate the sticky-price problem and partly mitigate the labor search problem—that would surely be the intuition that you would have.

But that isn't what happened. The optimal policy is actually still very close to price stability, even with the unemployment explicitly in the model. So the policymaker in the model still does better by following the maxim: just keep inflation pretty close to target, and that'll be close to the optimal policy that you can get. If you try to put more weight on unemployment inside the model, the way people might have in mind, you can get very negative outcomes for this economy. And they talk a lot about that. If you take some, say, monetary policy rules from somewhere else and you impose them on this model, you're going to do very badly.

So what I want to do is take the policy advice coming from Ravenna and Walsh seriously, at least as a benchmark, for how we should think about dealing with unemployment through monetary policy. Now, be careful here: there are policies that can fix the unemployment inefficiencies that are in this world; they just aren't monetary policy. They're other policies. They're labor market policies, and that's where I'm going to end up. So it's not that you can't do something about it; it's just maybe you shouldn't lean on the monetary policymaker to do a lot about it, because, as we're going to see, what monetary policy can do is too blunt of an instrument to fix all these problems in this particular economy; that's the intuition.

So I want to take this as an important baseline for contemporary US monetary policy and even global monetary policy. I'm going to discuss just a few key aspects of this analysis, and then address some possible reactions that you might have to this work.

Now I'm going to show you a few equations [Figure 3], so if you want to get your coffee or check your iPad, this would be a good time to do it *[laughter]*. I just want to put up two equations, and we're not going to go through in any detail; but I just want to get a flavor, if you're not used to this kind of thing, of the kinds of things that are always going to happen if you try to think about these things seriously.



So here [are] the equations, . . . and the variables are *pi*—*pi* is always inflation in this world—and *u*, which is unemployment. *Pi* isn't just the level of inflation, but everything's in terms of the deviations of inflation from your target. So first of all, you have to set a target, and the FOMC has done that. Then the question is, how far away are you on inflation from that target. And then look at the unemployment. It's not just the level of unemployment, but this unemployment gap: you have this *ue* here in this equation—*ue* is the normal amount of unemployment that you would get anyway. This is an economy that has unemployment in it. So what's happening is, matches are breaking up every day, and those guys cannot just instantaneously get a job. They've got to go search around to find a job and see if they can get a new match. So you have unemployment all the time.

In addition to that, you have additional inefficiencies coming in how intensively are they going to search, and for the firms, how many workers are out there looking for jobs—how intensively are the firms going to advertise for jobs? You've got other margins that are going on here above and beyond the fact that you just have unemployment even in normal times.

Then there are shocks in this economy—those are the *r* terms and the *b* terms—and there're a bunch of parameters which are Greek letters.

All I want you to get out of the quick glance at those two equations is just a couple of things. First of all, everything's forward-looking. Today's values or variables depend on my expectations of tomorrow. And if there're some engineering types in here, you know what my expectations of tomorrow are that I keep substituting in the equation—I'm going to get the whole infinite future; so what's happening today depends on the outlook for the entire future. This is a critical factor in all of modern macroeconomics, and it's no exception here, and it doesn't change when you go to models of unemployment.

Inflation is expressed as a deviation from a target level. Unemployment is expressed as a deviation from the level that would prevail in a model with less frictions—if you got rid of the sticky-price problem. Their remark is that neither the level of unemployment nor simply the level of the unemployment gap correctly measures the appropriate objective of monetary policy; so you have to be careful on that dimension.

Now, what you want to do here is pursue a policy—not one that you would make up or one that I would make up—[but] you want to ask the guys in the model, "What do you want us to do?" How can the monetary policymaker help given that the guys in the model are facing the sticky-price problem and the fact that their job matches dissolve on them and they've got to go search for a new job?

Well, a big part of the paper is that Ravenna and Walsh show that the households want the policymaker to minimize the loss function, which depends on inflation variability, it depends on consumption variability—those are kind of normal things that you would get out of the sticky-price literature—but also on a term involving labor market tightness; that's the vacancies per number of unemployed worker. So that's exactly what is new in this paper and exactly what you would expect. If I go in this direction, then labor market tightness is going to be a huge factor; the condition of the labor market is going to be a huge factor. That's exactly what you would expect. So they did get that. So so far, so good. Looks like now the policymaker will trade off between all three of these.

So what should the policymaker now do given that the policymaker can only do one thing—and this is going to be critical—you can only do one thing: adjust the short-term nominal interest rate.

Well, the main finding is that price stability advice survives and does pretty well in this framework. So the policymaker should still keep inflation as close to target as is practicable, and if you want to express it as a Taylor-type policy rule, for those of you that use Taylor-type policy rules, they have an . . . inflation gap term, and maybe an unemployment gap term. If you wanted to express it that way, you'd put most of the weight on the inflation gap term and not very much weight on the unemployment gap term.

So if you try to deviate from this policy—you say, "I'm going to put more weight on unemployment"—they spend a lot of time showing that that, at least in this model now, is going to create poor outcomes for the households in the model. The households would revolt on you. You'd have a revolution. They wouldn't like that policy.

So the idea that the Fed should put more weight on unemployment does not fare very well in this analysis. In fact, such an approach might be highly counterproductive. Of course, research begets research. So why is this the case?

We're going to look [for] just a second at another paper by Ravenna and Walsh about trying to get at the intuition in this finding. This paper was in *The Journal of Monetary Economics* this past year ["Monetary Policy and Labor Market Frictions: A Tax Interpretation"]. Why is price stability close to optimal even when the labor market distortions are present? And these are significant labor market distortions in this model. Well, it's not a simple matter, but the basic idea is that policymakers have only one thing they're doing: They're moving the nominal interest rate around. This is a model that has lots of things wrong. The prices are sticky; they're not representing supply and demand in the right way. And the guys have to search for their jobs. The employers have to decide how many vacancies to post based on their expectation of what the workers are doing. The workers have to decide how intensively to search. So there're a lot of distortions in this economy, but the monetary policymakers have only got one thing that they can do: they can move the nominal interest rate up and down.

Well, it turns out that trying to address labor market inefficiency solely through monetary policy does not work very well. So basically what happens is, okay, I'm going to try to fix this. I'm going to move the nominal interest rate up. That makes one labor market inefficiency better but makes another labor market inefficiency worse, and so you don't gain very much on the labor side by doing that policy. So what comes out of the analysis is, well, just focus on price stability and use some other policies to address these labor market inefficiencies. I think that's the basic intuition behind this.

What this points to is, don't lean so heavily on the monetary guys to try to fix this problem. You've got to come in with other policy tools, and that suggests more direct labor market policies that will get at the types of inefficiencies that are in this model. In this paper, Ravenna and Walsh . . . actually equipped the policymaker with a zillion policy tools, and then you can fix everything. You can have one policy to fix this, one policy to fix that. The right kinds of taxes and subsidies in the right places fix everything, and you get the fully optimal policy. But the monetary guy can't do that. The monetary guy just has the nominal interest rate. That, I think, is the guts of the intuition.

All right: reactions. I hope your reaction is going to be to throw tomatoes at me. One thing is, what about this "zero lower bound" thing? This is an economy that doesn't have any problems with the zero lower bound; you're not near the zero lower bound. Obviously, in today's economy we are at the zero lower bound. But if you think about their argument, they're saying that even if you weren't at the zero lower bound and you weren't constrained at all in your monetary policy, you'd still have trouble addressing these labor market inefficiencies. That, I think, is probably not an issue from the perspective of what's being said here. And you could say this is one crazy model, and there're a lot of papers out there. That's certainly true, but these guys are leaders in this literature; certainly not the last word on these issues—there will be more papers written going forward, and I look forward to reading them and seeing them—but this particular paper has a lot of advantages.

S o you've got this search-theoretic idea about unemployment that's the leading theory of unemployment. You've got that idea into the model, and it's not an easy matter. You've got clear comparisons to the standard policy advice that comes out of the standard New Keynesian literature, so that's very clean. You're talking about how happy the households are with the policy. You're not asking about someone else's policy or putting in ad hoc policies: you're asking the guys in the model what they would want you to do, and you're calibrating to US data, but you can mess around with other parameter settings. I don't think the parameter settings are really critical for the core ideas here, but they are matching up with US data as best they can. So for all these reasons I think these results should be considered as an important benchmark for US monetary policy.

Let me conclude and we'll get to the Q&A, so you can sharpen up your pencils and ask me about this or anything else, I guess. Again, just to review what I'm saying here: if you look at the standard New Keynesian literature flowing from Mike Woodford's exceptional work in this area, the advice that comes out of that is that you should pursue price stability—really, price-level targeting. And practically speaking, this means let's keep inflation pretty close to target all the time. The FOMC has actually done that more or less since 1995, so this has been very influential globally in the central banking circles. You can argue with it. I'm not arguing with it here, but you can argue with it. . . .

A lot of people look at high unemployment today and say, why doesn't the central bank put more weight on unemployment in its decision-making process? But, as I'm pointing out here, frontline research suggests that if you put more weight on unemployment, you might get counterproductive outcomes. Price stability remains the policy advice from this literature, even in the face of serious labor market inefficiencies. So I want that to be the benchmark thought for monetary policy in the US. And again, without getting into a lot of technicalities that might be beyond my pay grade, I think that the essential intuition is, the monetary guys can only do one thing: they can adjust the nominal interest rate. That isn't enough to be able to address the multiple inefficiencies that would occur in an economy like this. For that, you've got to bring in other policies. That seems like a sensible conclusion to me. It's not that you don't want to address unemployment; it's just that it's not a good way to address unemployment inefficiency.

I'm going to stop there, and let's go to some Q&A. Thank you.

Q&A

Q: I'm a locally based bank analyst. Thank you for coming to speak to us and participate. Two concerns I have are that—and I don't think monetary policy can alter these, but tell me what you think—the consumer price index, which I believe is a disingenuous and flawed, deficient calculating tool for determining inflation, I think policymakers and monetary economists rely on that kind of data, . . . because it excludes the inflation in food and fuel that the vast majority of Americans experience or encounter.

My next concern is in the multilateral agreements to which the US is signatory, like the G20 agreements. There was to be no net new job growth. I don't recall exactly when the US went into G20 acknowledgment or as a signatory such that our Congress, or whoever our policymakers are that connect as a signatory to G20, but no net new job growth has been since at least the mid-'90s, I think. And so the deindustrialization—i.e., the nice word for trade, i.e., importation—has been to eliminate tariffs on that. So free trade is part of the deindustrialization. You have the negative ripple effects, so that you don't have job creation under what we ordinarily enjoyed prior to G20 agreement, etc. So if you can discuss perhaps a better calculation to more accurately describe inflation, whereas many of us have felt the impact of the derivatives driving up the price of fuel, or the impact of these instruments, the financial engineering that has really altered even the quality of financial intermediation, so that you have all of these new instruments that have just had a lot of deleterious impact. . . . A flip side of [deindustrialization] is the greater exposure of our economy to real estate and the financial sector. So there're a lot of policies that, as you say, aren't necessarily in the formulas that you're talking about.

JB: Yes. Much is not in the model, that's certainly true. I don't know a lot about the G20 agreements because I'm not directly involved with that, but I know a lot about inflation and measures of inflation, so let me just riff on that. And I agree with you completely on the core-versus-headline-inflation issue, so let me talk about that for a minute.

If you're the man on the street, and you're experiencing price changes, the typical interaction is at the gas station and at the grocery store. So if you exclude food and energy prices, you're excluding the main interaction that a typical household has in a week with markets. So I think it really hurts Fed credibility to talk about so-called core inflation, which excludes food and energy prices, because it creates a disconnect between the households, or mainstream America, and what the Fed is saying about inflation. They see those prices every day, so you have to address those prices.

Now, headline inflation is more volatile than core inflation; core is smoother, but, I'm sorry, that's the policy problem that we have. Those prices are kind of volatile, and that's up to the Federal Reserve to try to keep them stable and keep the headline inflation number closer to the target.

There is also the issue of CPI inflation, or Consumer Price Index inflation, versus Personal Consumption Expenditures inflation. Those are two different calculations of the inflation index. The official line of the Federal Open Market Committee is that we target Personal Consumer Expenditures inflation. We think the weights there are done a little bit better than they are for the Consumer Price Index.

The concern that maybe there are certain types of prices that aren't properly accounted for in the universe of prices in these indexes—I don't really agree with that. I think that these are the best measures of inflation that we have, and that they do include—for instance, housing is calculated in through the owner's equivalent rent calculation, and so on. So these measures of inflation that we have are pretty broad, and we try to get the weights right. The weights are changing over time, but you try to get the weights as right as you can. Calculating a price index is actually a very difficult technical problem. If you've ever looked at it, it's very difficult.

Let me just finish on that by saying one thing about inflation: inflation is running very low by the PCE measure right now. Year over year, PCE inflation is about 1.3 percent measured on headline or core. But measuring on headline, which would be my preference, that's pretty low. I'm getting concerned about that, and I think that that gives the FOMC some room to maneuver with its easy monetary policy, because I'd like to see that come back up closer to target, and we're not there right now. I'm thinking that that will happen this year, but we'll see.

Q: Just to get to the point: do you think there would have been a financial crisis had the federal government not been the catalyst to try to achieve social programs through financial institutions or other business institutions and coercing them in order to get their goals achieved? Secondarily, do you perceive that there are any policies currently that are going to create employment coming out of this government?

JB: Did the government create the financial crisis? You're talking to *me*. I'm an equilibrium macroeconomist. The government's part of the equilibrium, absolutely. So you set a bunch of policies and then everyone optimizes in the economy given those policies. The policies are changing over time. This is the equilibrium in the economy. So you can't get away from that and say, oh, the government's going to step out of everything. Whatever policies you have are dictating what the equilibrium looks like, and what we got was a very bad outcome in 2008–09. Is the government part of that? Absolutely. . . . Are we going to create jobs? Well, . . . one of the things that has happened is, after the financial crisis, you got the Reinhart-Rogoff effect. And what is that? Potential growth is lower after a financial crisis—pretty substantial evidence from around the world over the last 800 years, according to Reinhart and Rogoff. So, what happened in the US? Potential growth fell, so we got about 2 percent growth in the last couple of years. That's a very persistent effect, and that's not very different from the history as we've seen it. So I think that they've got the right hypothesis for what happens after a financial crisis. You've done damage to the financial remediation process in the US economy, and it takes a while—quite a while, really—to unwind that damage and rebuild the trust that would have previously existed.

Q: Thank you for your talk. Two questions: one is, do you think, under the current conditions, forward guidance is sufficient to get to either price stability or the goals of the Fed? And secondly, if Ravenna and Walsh are correct, is forward guidance also sufficient to mitigate deflation risks? It does not appear to me that that's so.

JB: I like to think of current Fed policy in two parts. There's the forward guidance question, which is to promise to keep rates low for longer, coming out of the New Keynesian literature; and there's also the quantitative easing [QE] approach, which is to buy government bonds and push down yields along the yield curve. I think that of those two, the QE is better because it's a more direct intervention, and it's better understood, I think, by people in the marketplace. I think it has more direct effects on inflation and inflation expectations. You really especially saw that with QE2, which started in November, really, in the fall of 2010 and continued through the middle of 2011.

The forward guidance I'm partly sympathetic to, but the forward guidance has a negative aspect to it. The negative aspect is that, if the policymaker says that the short-term interest rate is at zero today and is going to remain at zero for some period into the future, the private sector can take that two ways. They could take that as a sign that policy is very easy and therefore there should be a boom today. But they could also take it as a sign that the central bank is pessimistic about the future outcomes in the economy, and that could reduce investment and employment today. So there's a double-edged sword, I think.

I've been very concerned about the pessimistic signal that can come from too much forward guidance. I think the FOMC has improved on this dimension because we changed our forward guidance from a date-based forward guidance—we were previously saying we would keep rates low through mid-2015. My interpretation is that markets took that as possibly a negative signal that we thought that the economy wasn't going to improve even in 2013, 2014, or 2015, and that can have negative impact today. As we saw in these equations, everything's forward looking in the economy, so that could have a negative effect. But we've improved that. Just last December we switched to a threshold-based policy, so we didn't give a date. We don't give dates anymore. We say we're going to keep rates low because we're looking for stronger economic growth and we're looking for inflation to stay close to target or not get too far above target. So we put in the thresholds instead. That's a state-contingent way to say that we want to keep rates low until the economy recovers more strongly than it has so far. I think that's an improvement, but I'm a little wary of former guidance as compared to QE. That's why I've been an advocate of QE.

Q: Thank you. . . . First of all I want to praise you and thank the St. Louis Fed for the development of the FRED database. I can't tell you how important FRED is—

JB: I planted this question *[laughter]*.

Q: I can't tell you how important it has been in my ability to teach economics and finance. And the continued improvements you've made to it, it's just so important, and I'm very grateful for all the work—

JB: Well, just let me stop you there. Thanks on FRED, and I know, I get a lot of comments about our economic database. Hopefully, we're providing a good public service here, and we welcome comments. We're trying to improve all the time. We've got mobile aps and other things that hopefully are keeping up with technology. So thank you very much.

Q: I have two questions or comments. First of all, in your speech you mentioned over and over again that the Fed has one tool: controlling short-term interest rates. My observation recently is, it seems to be more than one tool. You have short-term interest rates and you have long-term interest rates now that have dramatically altered the maturity structure of the asset side of the Fed's balance sheet, holding more long-term Treasury bonds and long-term mortgage-backed securities—so, really two interest rates using open market operations, and one instrument to regulate both the short-term and the long-term end of the market. I'd like you to comment on the challenge of that and the implications of that.

And secondly, there's an enormous amount of excess reserves in the system right now because the balance sheet has been extended by over a trillion-and-a-half dollars of excess reserves. A lot of people are wondering what will happen when the banks decide that it's more profitable to start lending those excess reserves out than just keeping them at the Fed and earning 25 basis points. . . .

JB: On the reserves I think one thing to keep in mind is that the Fed does now have the power to pay interest on reserves, which we did not have before 2008. So if you look at US monetary policy over the postwar era, that was all an era where the Fed could not pay interest on reserves. But we can now pay interest on reserves; so the basic plan is that if the economy picks up and money supply starts increasing at a substantial pace, then we'll be able to raise the interest rate on excess reserves and keep some of that liquidity at bay. I think there are some controversial aspects of that because the payments will actually go to the very largest banks in the US. So if you think that's not a good outcome, tell me now, because the plan is to do exactly that if we get faster growth and inflation starts picking up. So you do have this interest on reserves tool, which I think is important.

Now, the first part of the question was, in the model that I put up, the Fed only had one tool—move the short-term nominal interest rate in reaction to economic events. But it seems like we've got more than one tool now because we're also acting on the longer-term part of the maturity structure of the US Treasury securities, and also purchasing MBS securities.

I'm a research guy, so from a research perspective, what you could do is, you could say, well, suppose I come in and give the policymaker another tool. And then if I give them this other tool, would that allow the policymaker to mitigate some of the labor market inefficiency that's in this model? I'm skeptical that you could get that to work in the model, but that's certainly an open question for future research.

There are other types of tools that are sometimes talked about for the Federal Reserve. If you read a money and banking textbook ,they'll talk about reserve requirements or other types of things, so you could think about other types of policy tools. But the caricature of modern central banks is that they do one thing: they control the short-term nominal interest rate, and that's the spirit of the model and the spirit of the analysis here. . . . If you want to think of a policymaker that has multiple tools, you'd have to go back to the drawing board and put that in and see how that would help.

The essence, though, is that there are these labor market inefficiencies that are just not well addressed by the types of things that central banks do. You want to get more direct aid to the guys that are unemployed—the firms that are hiring workers, how are their incentives working?—and you want to get right to the point, and not be over here in the financial sector somewhere. That's a very indirect method of addressing these problems.

Q: As I understand the search-theoretic aspect of Ravenna and Walsh—and I'll get back to what you were actually talking about instead of positing a question— . . . one part about it is the severability of the employer-employee relationship in downturn. And clearly, that is the Anglo-American model: you fire people. In other cultures—Japan, Germany, other places—you have reduced hours, you have reduced wages, even in the case of Japan. So the question is, does that hold up through all economies and all cultures? And the second part about that is, looking at the dramatic uptake in temporary and part-time employment, especially part-time for economic reasons in the current climate, does that somehow change? Obviously, all research is backward-looking—you're looking at old data. We've seen this enormous uptake in part-time employment for economic reasons. We've seen this enormous uptake in the model of employment today. Does that somehow break down the Ravenna and Walsh conclusion?

JB: I don't think that Ravenna and Walsh or this literature generally is going to be able to address very directly issues about changes in the nature of the labor market where you've got a lot more part-time workers, a lot more temp workers. People are working on that, but probably not in the context of monetary policy. So it would take some doing to get that kind of thing to come into the model. It is the changing nature of the workplace—that's part of what's going on. What you might worry about is that policy is driving that changing nature of the workplace; that employers feel like this is a better way to get the hours that they need out of their labor force, and so therefore they don't want to get into long-term matches with workers, and what implications does that have for the nation going forward.

I'm sorry, what was the first part of your question?

Q: I was just pointing out that in different cultures there is a—

JB: Oh yes, that's a really great point. I want to elaborate on this a little bit. So the point was that the US employment model maybe isn't quite the same. It's considered more freewheeling than, say, the European employment model. And I would say, in the context of what I'm saying today, look at Germany, because Germany's been very impressive on the labor market dimension through this crisis and through the current European recession—very impressive. And what did Germany do? They undertook structural labor market reform about a decade ago—it took a long time to put in place, but it's a lot of specific ideas. Again, they're not waiting on the monetary policymaker; that's the European Central Bank—that's different. They're thinking about, if you're concerned about outcomes and labor markets, get to work and think about how you can solve problems in labor markets. And what they got was, with those structural labor market reforms, unemployment came down to a low level—it came down below US levels. Europe goes into recession; they're still at pretty low levels. Financial crisis comes along, and they didn't really have an increase in unemployment. So if you look at some of the things that they did, I think those could be copied. If you're concerned about these issues, you could copy their policy. So I think that that's a very reasonable thought on how the US could approach labor market issues rather than leaning so heavily on monetary policy guys who are going to have only blunt instruments to address these questions. . . .

Let me just say one thing about comparing Germany to the US. Let's look at youth unemployment. Let's divide the labor force into two groups—15–25 years old and 25 and older, both in Germany and the US. If you take the US unemployment rate for 25 and older versus the German unemployment rate for 25 and older, Germany's lower, but they're only lower by maybe a point or a point and a half, something like that, and these are lower numbers than what you're used to. And if you look at the 15–25 group, youth employment in Germany, it's about 8 percent; [the US rate] is about 17.

When you're looking at the overall unemployment rate, a lot of it's skewed toward the very young guys. So . . . you have to be thinking about, how am I getting new entrants into the labor market? How am I getting them integrated into jobs where they're happy and they're going to stick in the job? So I guess we're not doing a very good job compared to the Germans. And I think what they've done is think very carefully about training programs. They put things right in the high schools, and things like that, where they can move people right into jobs. They've also done other things, like, instead of firing workers, reducing hours and things like that. So I think that's where, if you want to focus, it's not the focus of monetary policy; this is the focus of the Labor Department, it seems to me, and the Congress to think about what we can do in these areas to get better outcomes. But a lot of it is focused on youth unemployment, and Germany has done a better job there. . . .

There's a dual mandate in the US for the Federal Reserve and that the ECB only has a single mandate, so that the two central banks are different in this dimension. The ECB has a price stability mandate alone, and the US has a [mandate to] maintain stable prices and maximum employment. If you read the Federal Reserve Act, there's actually a triple mandate: moderate interest rates is the third part. So we're killing that one. I always like to take credit for that one. So we're killing one of them. Maximum employment? Not looking so great right now. And price stability.

But the point of this literature is not to say that you don't care about labor markets; you do care about labor markets. But the way to get the best outcome from the monetary policy perspective on the dual mandate is to provide the price stability. Then you get the best outcomes for the whole economy that you can get. That was Greenspan's take on the dual mandate, and I think it's still the right one, and it's the one that continues to come from the literature. You need other kinds of policies if you're going to address these inefficiencies in labor markets.

ERIC ROSENGREN

President and Chief Executive Officer, Federal Reserve Bank of Boston

Risk of Financial Runs—Implications for Financial Stability

I am grateful to the Levy Institute for the invitation to take part in a conference that focuses on such a vital goal—building a financial infrastructure that supports a more stable and equitable economy.

Before I begin, I want to take a moment to acknowledge that I join you from a community in Boston that on Monday endured a terrible and profoundly cruel tragedy, at the Marathon. My thoughts are with the many people who were wounded, with those—including Boston Fed staff—who were uninjured but at the scene, and, most of all, with the families and friends of those whose lives were lost.

So with heavy hearts we turn to the matter at hand, perhaps finding a small bit of encouragement in doing work that intends to make things better for all participants in our economy.

Today I would like to discuss the risk of financial runs—and the implications for the stability of the financial system, which underlies a well-functioning economy. Of course, I would like to note that the policy views I express today are my own, not necessarily those of my colleagues on the Board of Governors or the Federal Open Market Committee (the FOMC).

The financial crisis of 2008 and its aftermath have significantly increased the attention policymakers devote to financial stability issues. The Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act) and a variety of new bank regulatory initiatives, including the Basel III capital accord, are intended to reduce the risk of similar problems in the future. For commercial banks, the policy changes stemming from the crisis have been increases in bank capital, stress tests to ensure capital is sufficient to weather serious problems, increased attention to liquidity, and new measures intended to improve the resolution of large systemically important commercial banks.

While these measures are clear steps toward improved financial stability, I believe the actions taken around other, less traditional financial institutions have not moved nearly as markedly or at the same pace as the corrective actions taken for commercial banks. This is despite the fact that less traditional financial institutions were at the epicenter of the crisis. My comments today will focus on one area that has received less attention in the United States than elsewhere—the need to ensure that large broker-dealers will not need to rely on a government safety net in the future.

The financial runs that beset highly leveraged institutions, structures, and products were significant and unfortunate features of the financial crisis. While deposit insurance reduces the risk that depositors will flee en masse from commercial banks, the financial crisis highlighted that other types of financial institutions and structures were also highly susceptible to runs. For example, money market mutual funds, which are not required to hold capital, experienced credit losses and significant investor flight (i.e., runs) during the crisis. Policymakers put in place temporary backstops—insurance funded by the US Treasury and a liquidity facility facilitated by the Federal Reserve—to avoid further collateral damage. Since then, there has been much public discussion of regulatory actions that could significantly reduce the financial stability concerns around money market mutual funds—which are regulated by the SEC—but industry opposition has been vocal, and no significant actions have as yet been taken.[1] Former SEC Chair Schapiro was right to pursue money market fund reform, and now that her successor is confirmed, I am hopeful that the SEC will revisit this issue.

Structured investment vehicles (SIVs), which financed long-term, risky financial assets with short-term commercial paper, also encountered trouble during the crisis. Investors who were concerned about the valuation of the SIVs' long-term assets "ran" from the short-term commercial paper the SIVs issued to finance their assets, causing many SIVs to fail or be wound down.

Additionally, broker-dealer firms—which were assumed by most observers to present less risk of a run because their borrowing is often fully collateralized—proved vulnerable and also played a prominent role during the crisis. However, widespread questions about the appropriate valuation of collateral during the crisis made it apparent that collateral in and of itself was not sufficient to avoid runs.

Brokers act as agents for others and are defined by the Securities and Exchange Act to include those that "engage in the business of effecting transactions in securities for the account of others."[2] Dealers are "engaged in the business of buying and selling securities for their own account." Both are regulated by the Securities and Exchange Commission (SEC) and are subject to a variety of regulations, including net capital requirements, restrictions on the use of customer accounts, and various accounting and reporting requirements.

Broker-dealers are a critical component of our financial infrastructure. They act as "market-makers" in securities, ensuring that markets remain highly liquid and that financial transactions can be conducted efficiently and effectively. Still, notwithstanding their market making strengths and capabilities, these organizations were not immune from the widespread seizing up of markets—and indeed found themselves at the center of events in the financial crisis.

Two prominent broker-dealers failed at critical junctures during the crisis. The first major broker-dealer failure involved Bear Stearns. Arguably, the most disruptive failure was Lehman Brothers. Emergency loans were provided to Bear Stearns, and in the wake of its assisted merger a variety of emergency credit facilities to backstop the industry were set up. Additional actions were taken, to forestall more widespread runs after the failure of Lehman Brothers.

Despite the central role that broker-dealers played in exacerbating the crisis, too little has changed to avoid a repeat of the problem, I am sorry to say. In short, I firmly believe that a reexamination of the solvency risks of large broker-dealers is warranted.[3]

Hence, my remarks today will highlight the need for more regulatory focus on broker-dealers. I will begin by discussing the role of broker-dealers and their experience during the financial crisis. I would then like to detail some of the policy actions taken during the crisis—actions that backstopped broker-dealers and prevented further collateral damage. Then I will examine why being housed within a bank holding company should not obviate the need for the broker-dealer subsidiary to hold more capital. Then I will provide some concluding observations.

Broker-Dealers and the Financial Crisis

Some of the largest broker-dealers serve as a counterparty to the Federal Reserve when the Fed buys and sells securities—performs so-called "open market operations"—in the conduct of monetary policy. Traditionally, most of the Fed's open market operations involve the buying and selling of Treasury securities, so broker-dealers that are the largest players in this critical market play a significant role in maintaining liquidity and market functioning. Most of these firms are also very active in making markets in a variety of other financial instruments, and as such they help to facilitate well-functioning credit markets more generally.

Figure 1 describes 10 large broker-dealers in 2006, with the fourth column noting their crisis-era changes. Rather striking changes have occurred among the largest broker-dealers as a result of the financial crisis. Two of the largest became bank holding companies (Goldman Sachs and Morgan Stanley). Lehman Brothers and Bear Stearns—formerly ranking among the 10 largest—both failed. Merrill Lynch, which fell just short of the top 10 in 2006, was acquired while it was experiencing financial difficulties. And one of the largest foreign broker-dealers in 2006 (UBS) needed to be supported by its home government. These outcomes occurred despite two substantial emergency lending programs that provided backstop support to the large broker-dealers during the crisis.

Dramatic changes in organization and ownership occurred among these critical entities. That, and the extent of their problems during the financial crisis, make it clear that they did not hold sufficient capital to weather the magnitude of problems they would face during the crisis.

Figure 1
Assets of Large Broker-Dealers

As of December 31, 2006

Broker-Dealer Name	Home Country	Assets Millions of Dollars	Crisis Context
Morgan Stanley & Co. Incorporated	United States	583,405 *	Converted to Bank Holding Company
UBS Securities LLC	Switzerland	575,359	Parent Received Support
Goldman, Sachs & Co. and Subsidiaires	United States	509,251 *	Converted to Bank Holding Company
Lehman Brothers Inc. and Subsidiaries	United States	404,854 *	Filed for Bankruptcy
Citigroup Global Markets Inc. and Subsidiaries	United States	377,951	Parent Received Support
Deutsche Bank Securities Inc.	Germany	317,871	
Credit Suisse Securities (USA) LLC and Subsidiaries	Switzerland	269,834	
Banc of America Securities LLC	United States	251,442	Parent Received Support
Bear, Stearns & Co. Inc. and Subsidiaries	United States	236,191 *	Assisted Merger
Barclays Capital Inc. and Subsidiaries	United Kingdom	236,023	
Total		3,762,181	

*as of November 2006

Source: SEC Focus Report Form X-17A-5 Part III

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Liquidity Facilities during the Crisis

In 2008, the Federal Reserve established the Primary Dealer Credit Facility (PDCF) to help stem the financial crisis by providing overnight loans to primary dealers. The assets that were put up as collateral for the loans were subject to significant "haircuts"—that is, the dealers could only borrow against a fraction of assessed market value—to protect the Fed and minimize the risk that could stem from a borrower's default. As with the Fed's so-called "discount window" lending to commercial banks, lending was at the Fed's primary credit rate and the dealer was fully responsible for the repayment of the loan, beyond the collateral pledged (in other words, the loans were made with recourse).

The program began in March 2008, in the wake of the Bear Stearns failure, and ended in February 2010.[4] The PDCF was, in effect, tantamount to the Fed providing a "discount window" type lending facility to primary dealers—in order to ensure adequate functioning in securities markets that are a key part of the triparty repo market.[5] These markets are widely used in short-term financing, and, importantly, are used by the central bank to conduct the trades in short-term government securities that allow it to maintain the federal funds rate at the level dictated by the FOMC. It is important to point out that when all was said and done, all the loans made through the Primary Dealer Credit Facility were paid off in full, and the sizable returns to the Fed generated by the program were remitted to the US Treasury.

As Figure 2 highlights, primary dealers used the program extensively during the crisis. Lending peaked at $156 billion.[6] And, while foreign-owned primary dealers did participate in the program, it was much more extensively utilized by domestic primary dealers.

The Fed established a second emergency program, the Term Securities Lending Facility (TSLF), which allowed primary dealers to lend less-liquid securities to the Federal Reserve for one month, for a fee, in exchange for highly liquid Treasury securities. This program provided needed liquidity to the market at a time when trading in a wide variety of securities had become impaired. The TSLF was also announced in March 2008 and ended in February 2010. As with the PDCF, there were no losses on the program, and the revenue the Federal Reserve generated in operating the facility was returned to the Treasury.

Figure 2 also shows that the peak balance of the term securities lending program was $246 billion.[7] This program had roughly equal participation by domestic and foreign primary dealers.

Figure 3 shows the loans outstanding over time with the PDCF. The outstanding loans peaked in the fall of 2008 as primary dealers found it particularly difficult to fund their positions.

Figure 4 provides the outstanding securities lent through the TSLF. Again, the peak occurs in the fall of 2008, when liquidity for securities trading became particularly problematic.

In sum, broker-dealers experienced dramatic difficulties during the 2008 crisis, and the Federal Reserve needed to temporarily backstop broker-dealers with substantial lending. Given that recent history, the assumption that collateralized lenders like broker- dealers are not susceptible to runs has been proven wrong.

At the same time, broker-dealer capital regulation by the SEC remains largely unchanged, despite the lessons of the financial crisis. Consequently, broker-dealers remain vulnerable to losing the confidence of funders and counterparties should the world economy again experience a significant financial crisis. As I have mentioned in other speeches,[8] during stress periods, bank holding companies with a low concentration in broker-dealer activities had less stock price response to the stress periods than institutions with greater concentration in broker-dealer activities. We have also examined the data on credit default swap spreads—a market gauge of the cost to insure against a party's default—and the data show materially

Figure 2
Primary Dealer Credit Facility and Term Securities Lending Facility Summary Statistics

Peak Outstanding Balances (in Millions)						
Facility	Peak	Peak Outstanding Balance	Outstanding Balance of Domestic Borrowers on Peak Date	Share	Outstanding Balance of Foreign Borrowers on Peak Date	Share
Primary Dealer Credit Facility	September 29, 2008	$155,768	$136,325	87.5%	$19,443	12.5%
Term Securities Lending Facility	September 26, 2008	$245,567	$123,507	50.3%	$122,060	49.7%
Totals		$401,335	$259,832	64.7%	$141,503	35.3%

Originations (in Millions)					
Facility	Total Originations	Originations by Domestic Borrowers	Share	Originations by Foreign Borrowers	Share
Primary Dealer Credit Facility	$8,950,992	$8,393,935	93.8%	$557,057	6.2%
Term Securities Lending Facility	$2,005,697	$984,152	49.1%	$1,021,545	50.9%
Totals	$10,956,689	$9,378,087	85.6%	$1,578,602	14.4%

Source: Federal Reserve Board

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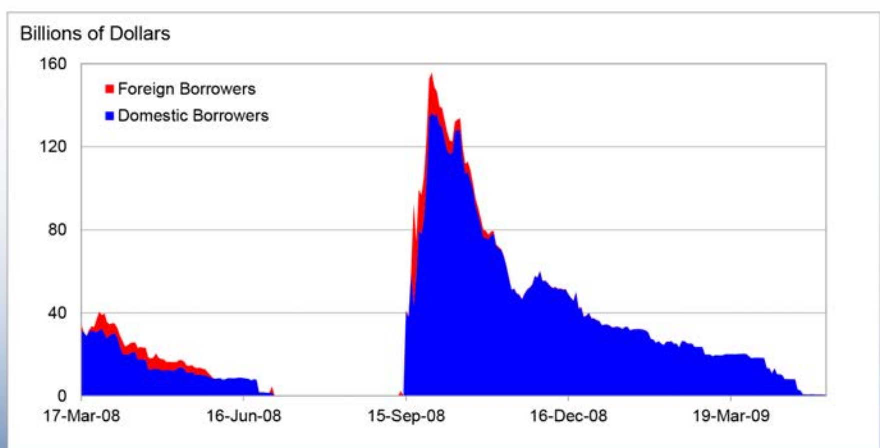
Figure 3
Primary Dealer Credit Facility Loans Outstanding

Daily, March 17, 2008 - May 12, 2009



Source: Federal Reserve Board

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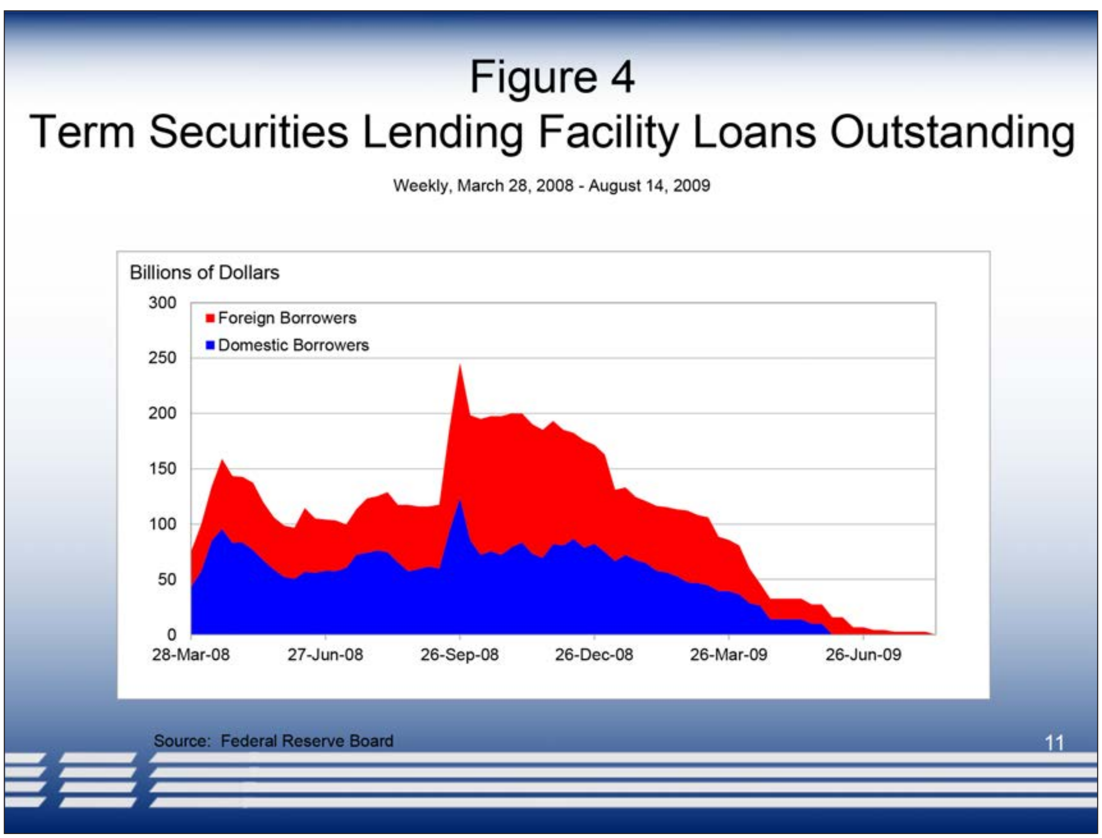
higher spreads during times of financial turmoil for major banks with higher concentrations of broker-dealer activity.

Moreover, the current broker-dealer situation vis-à-vis capital poses the potential for significant moral hazard. Were a crisis to once again cause serious problems in liquidity and in securities-market functioning, it is quite possible that programs such as the PDCF and TSLF would need to be considered again (notwithstanding likely public opposition to what could be perceived as "bailouts"). If broker-dealers assume that they will once again have access to such government support should markets be disrupted, they will have little incentive to take the steps necessary to shield themselves from financing problems during a crisis and thus minimize their need for a government backstop.

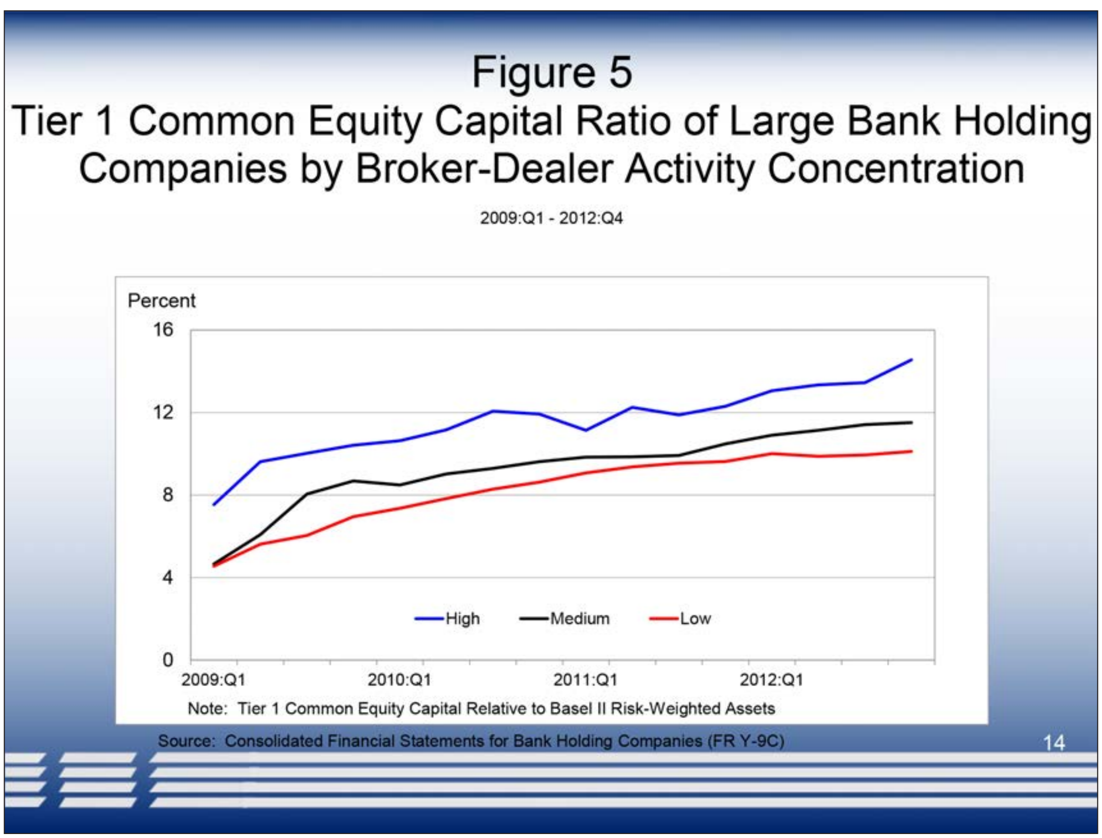
Broker-Dealers and Bank Holding Companies

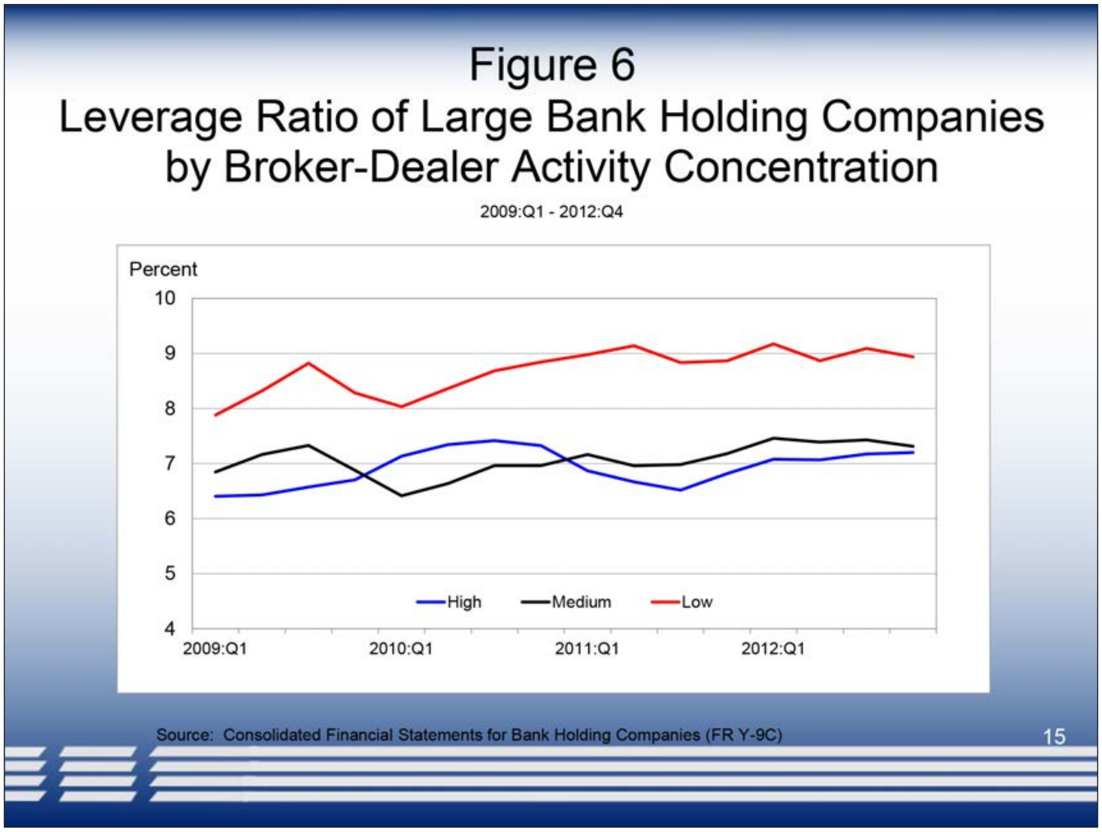
One of the fallouts of the financial crisis is that many of the large broker-dealer operations are now part of bank holding company structures. Goldman Sachs and Morgan Stanley became bank holding companies during the crisis. Bear Stearns was acquired by JPMorgan Chase, and Merrill Lynch was acquired by Bank of America. While these large broker-dealer operations are in bank holding companies, there are significant regulatory requirements and restrictions that apply, including capital thresholds and limitations on transactions between the FDIC-insured depository subsidiaries and the affiliated broker-dealer subsidiaries. Despite these restrictions, however, broker-dealers can still pose a risk to the broader organization by leaning on the parent bank holding company for support and, accordingly, reducing the availability of funds at the parent company to support any FDIC-insured depositary.



Bank holding company capital requirements are applied to the consolidated holding company. Arguably, the appropriate level of consolidated capital should depend on the risks inherent in the holding company's liability structure, as well as in its assets. For example, to avoid solvency risk for a firm dependent on wholesale funding may require significantly more capital than a firm with all insured deposits, because of the possibility for runs and "fire sale" disposal of assets. Those bank holding companies that are primarily funded by insured deposits are unlikely (or less likely) to suffer a substantial run. However, a bank holding company may find that liabilities of the broker-dealer may be more susceptible to runs. In addition, current regulations restrict bank subsidiaries from supporting nondepository subsidiaries with funds from the insured depository. This suggests to me that bank holding companies with large broker-dealer affiliates should hold more capital to reflect the reduced stability of their liabilities during times of stress.

Figure 5 shows the Tier 1 common equity capital ratio over time, and Figure 6 shows the leverage ratio over time. While bank holding companies with large broker-dealer operations generally have more Tier 1 common equity than bank holding companies with little or no broker-dealer activity, this result primarily reflects that broker-dealers hold securities, which have low risk weights compared to loans. In contrast, bank holding companies with large broker-dealer operations tend to have much lower leverage ratios than bank holding companies with limited broker-dealer activity. However, given the very different risks of runs posed by broker-dealers and their less stable liability structure, an argument can be made for higher capital requirements for broker-dealers as well as organizations, such as bank holding companies, with significant broker-dealer operations.





Concluding Observations

In summary and conclusion, I would just reiterate that broker-dealers did not perform well during the financial crisis. Many of the largest broker-dealers failed or were converted to or subsumed into bank holding companies. Despite these structural changes, significant government intervention was required to maintain market functioning and liquidity, in markets key to the stability of the US financial system and the economy that relies on it.

Unfortunately, despite this history of failure and substantial government support, little has changed in the solvency requirements of broker-dealers. The status quo represents an ongoing and significant financial stability risk. In my view, then, consideration should be given to whether broker-dealers should be required to hold significantly more capital than depository institutions, which have deposit insurance and preordained access to the central bank's discount window.

Thank you.

Notes

1. Recently, the presidents of the 12 Federal Reserve Banks submitted a joint comment letter responding to the Financial Stability Oversight Council's proposal on money market mutual fund (MMF) reform, available at http://www.bostonfed.org/news/press/2013/pr021213-letter.pdf. "Money market mutual funds have no explicit capacity to absorb losses in the event of a decrease in the value of assets held within the fund's portfolio," said the Reserve Bank presidents in their joint letter. "This structure gives rise to a risk of destabilizing money market mutual fund runs by creating a first mover advantage."

2. The Securities Exchange Act of 1934 governs the way in which the nation's securities markets and its brokers and dealers operate. The Act generally defines a "broker" broadly as any person engaged in the business of effecting transactions in securities for the account of others. Unlike a broker, who acts as agent, a dealer acts as principal. The Act generally defines a "dealer" as any person engaged in the business of buying and selling securities for his own account, through a broker or otherwise. Source: the SEC's guide to broker-dealer registration, http://www.sec.gov/divisions/marketreg/bdguide.htm#II.
3. I would note that Federal Reserve Governor Daniel Tarullo and New York Fed President William Dudley have raised concerns about broker-dealers and wholesale funding markets. See http://www.federalreserve.gov/newsevents/speech/tarullo20121204a.htm and http://www.newyorkfed.org/newsevents/speeches/2013/dud130201.html. In the former, Governor Tarullo discusses "three proposals currently being debated in policy circles: (1) breaking up large financial institutions by reinstating Glass-Steagall restrictions or by imposing other prohibitions on affiliations of commercial banks with certain business lines; (2) placing a cap on the nondeposit liabilities of financial institutions; and (3) requiring financial institutions above a specified size to hold minimum amounts of long-term debt available for conversion to equity to avoid or facilitate an orderly resolution of a troubled firm."
4. The final auctions for the PDCF and TSLF were in May and July of 2009, respectively. My graphs end in May and August 2009, not February 2010, because while the program still existed in those latter months, there were no loans outstanding.
5. My colleague William Dudley, president of the New York Fed, discussed access to the discount window in a speech titled "Fixing Wholesale Funding to Build a More Stable Financial System," available at http://www.newyorkfed.org/newsevents/speeches/2013/dud130201.html. In it, he said, "The other path would be to expand the range of financial intermediation activity that is directly backstopped by the central bank's lender of last resort function. . . . We have banking activity—maturity transformation—taking place today outside commercial banks. If we believe these activities provide essential credit intermediation services to the real economy that could not be easily replaced by other forms of intermediation, then the same logic that leads us to backstop commercial banking with a lender of last resort might lead us to backstop the banking activity taking place in the markets in a similar way. However, any expansion of access to a lender of last resort would require legislation and it would be essential to have the right quid pro quo—the commensurate expansion in the scope of prudential oversight. . . . Extension of discount window-type access to a set of nonbank institutions would therefore have to go hand-in-hand with prudential regulation of these institutions. Many thorny issues would have to be resolved."
6. Our PDCF peak ($156 billion) is calculated using daily data and differs from the peak that is calculated and often reported using weekly data ($146.6 billion). Similarly, our TSLF data is weekly, as of Fridays, whereas it is often published as of Wednesdays.
7. Figures for the Term Securities Lending Facility reflect expected maturities and may not reflect early returns of loans outstanding.
8. See http://www.bostonfed.org/news/speeches/rosengren/2012/062912/index.htm, particularly the discussion of broker-dealer financing beginning on page 11, and especially figure 11.

THOMAS M. HOENIG

Vice Chairman, Federal Deposit Insurance Corporation

Choosing a Banking Model for the US Economy

The discussion of financial firms being too big to fail has taken on renewed prominence in the United States, putting us on a course that will do much to shape the economic landscape for decades ahead.

Driving this interest is the perception among many Americans that they remain financially vulnerable to the largest, most complex firms. The reported lapses in controls and failed risk-management systems disturb them. Each new scandal adds to their doubts about the ability of any one person to manage these conglomerates and any bank supervisor to understand and regulate them.

There is concern that the financial system has become ever more concentrated, with the largest firms holding increasing sway over the allocation of economic resources. The 10 largest US banking companies, for example, held assets the equivalent of 25 percent of GDP in 1997, 58 percent in 2006 and, since the crisis, it has increased to over 71 percent.

The public remains uneasy that the current structure of the largest firms puts the entire economy in jeopardy should they falter. History and current events suggest that, unless the companies are reconfigured, the government's impulse will be to protect creditors with public funds rather than risk a market breakdown.

As we renew discussions about the structure of our financial system, the debate should be vigorous, for much is at stake.

The Consequences of Maintaining the Status Quo

I share the view that the current configuration of the financial system remains a risk to the public and an impediment to the competitive vitality and strength of our economy. Coming out of the crisis, our financial system is more concentrated, and under current policies this trend almost certainly will continue. These conglomerates will become yet more complex, and their financial position will define financial stability for the broader economy.

The incentives toward risk taking remain essentially unchanged from precrisis times. The safety net of central bank loans, deposit insurance, and, ultimately, sovereign support has been expanded beyond where it is needed, covering more types of businesses and activities; the funding advantage for the largest most complex firms appears as great as before the crisis; and the incentives that encourage excessive leverage and risk remain compelling.

As this trend continues, ever-more complex regulations will follow in an attempt to control these banks' actions and the risk to the safety net that protects them. Over time I suspect the industry will be treated like, and eventually become, public utilities.

This is a discouraging trend. However, there are choices.

Structure Matters

One alternative to continuing our current policies is to rethink the safety net and the structure of the industry for which it would be available. The objective would be to confine the safety net to a limited set of financial services and activities directly tied to the payments system and longer-term lending, and place other activities outside the net in order to encourage a more competitive, market-oriented, and pro-growth financial system.

In considering this choice, it is helpful to first briefly consider the role of the safety net in helping to create the too-big-to-fail situation. As you are aware, following the Great Depression, the safety net was expanded to include FDIC insurance, which was in addition to the Federal Reserve's discount window. In doing this, lawmakers understood it would deepen a moral hazard problem because depositors and other creditors would be less attentive to the banks' condition, relying instead on government oversight and possible bailouts. To confine the moral hazard, FDIC insurance was made available only to commercial banks and their retail customers. For the same reason, higher-risk investment banking and broker-dealer activities were forced out of commercial banks and away from the safety net. These restrictions were codified into the Glass-Steagall Act in 1933.

For several decades, this structure coincided with relative stability within the financial system. However, with this stability, market players, academics, and others began to argue that the separation between commercial and investment banking was unnecessary and that the market would be more competitive and consumers better served if investment and commercial banks were allowed to compete directly. This view eventually became law as part of the Gramm-Leach-Bliley Act of 1999.

While competition might have increased temporarily, the unintended consequence was to extend the safety net to an ever-greater number and range of activities and financial firms. This extended a rich subsidy that encouraged leverage and facilitated management's reach for ever-higher return on equity—something that would have been far more difficult and unsustainable without the safety net's subsidy. The result is to reward those managers who gamble and win the day. And, of course, it is left to the public too often to pay the bills when banks lose. Also, it has become an imperative that to compete successfully requires getting access to the safety net. All this has had the additional perverse effect of leading to ever greater concentration within the industry. Diversification may have been the intent, but a more concentrated and vulnerable market has been the result. It didn't take a decade for the industry to leverage up, increase in size, and engage in activities that eventually contributed to the crisis of 2008.

Also, given the complexity of the market structure that evolved with the help of the safety net, in extreme circumstances, governments feel increasingly compelled to provide some form of extended financial safety net to a greater share of the financial market.

One lesson we should take from the recent crisis is that the market's structure should be simplified and the safety net should be narrowed to what it was originally intended to cover. If we fail to accomplish this objective, we are on our way to making these firms ever more concentrated and eventually public utilities.

Restructuring to Reinvigorate the Economy

At a minimum, the Volcker rule needs to be implemented as a step toward this objective. However, we would do well to go further than the Volcker rule and move the broker-dealer and trading activities out of the banks and into separate corporate entities.

With this action, you redefine the coverage of the safety net and provide opportunity for greater market discipline and, in time, greater financial stability to a broad range of financial activities.

In its simplest terms, this broader proposal would narrow the public safety net to the purpose for which it was intended. This would involve commercial banking narrowly defined: the payments system that transfers money around the country and the world, and its related intermediation process of transferring funds from depositor to borrower. Commercial banks, with the protection of the safety net, would again be restricted from engaging in higher risk and return activities such as trading, creating derivatives, or other broker-dealer activities that do not need government protection to function effectively. However, banks would continue to do trust and wealth management, and underwrite new issues of stocks and bonds, as those activities are similar to the intermediation process by bringing new capital to commercial firms.

These reforms cannot be effective unless the shadow banking system is also removed from the safety net. The proposal thus would rein in the shadow banking system by requiring that money funds represent themselves for what they are: uninsured investments, the value of which changes daily. It would discipline the repo market by subjecting repo lenders that accept mortgage-related collateral to the same bankruptcy laws as other secured creditors.

The Role of Shadow Banks and the Need for Reform

It is sometimes argued that the recent crisis was related more to shadow banks outside the safety net than to commercial banks under the net. Lehman Brothers is cited as just such a case. However, Lehman was a commercial bank in the most important sense. Around the same time as the passage of the Gramm-Leach-Bliley Act in 1999, Lehman and similar shadow banks began to issue short-term liabilities—such as repos—to fund longer-term assets, just as banks use demand deposits. Many repos were overnight instruments and were not subject to the same rules as other liabilities should the firm fail. Furthermore, major investors in the repos were money market mutual funds, which were not marked to market on a daily basis, and most consumers considered them to be demand deposits.

These deposit-like instruments were promoted to be perfectly safe and, over time, shadow banks like Lehman leveraged themselves and built complexity and size around these instruments. In time, given the extent of their presence in the market, a view formed that the government would protect creditors, and the moral hazard problem thus worsened. Moreover, when the government attempted to step back from this guarantee with Lehman, the market collapsed and no other large financial firm was allowed to fail. The government confirmed the market's perception that these shadow banks and commercial banks were no different.

Also, I would note that when TARP funds were released to nine of the country's largest financial firms on October 28, 2008, they were distributed according to size and complexity and included both commercial and investment banks. Too-big-to-fail became institutionalized, and included commercial banks and an ever-larger group of firms thought to affect the stability of the economy.

Effect on Competition

Finally, there is concern that limiting the safety net to commercial banking and simplifying the structure of the largest banks to exclude trading and related broker-dealer activities will adversely affect the competitive position of US institutions in the global market. There is also concern that such steps would adversely affect regional and smaller banks as they would have to compete more directly with the narrowly focused mega banks.

Before we conclude that simplifying the system would undermine our international competitive position, we should consider the history of banking in the US. We have a long tradition of financial institutions competing on a global basis and doing so successfully under the model similar to that proposed here. The largest commercial banks under the umbrella of the safety net would remain megabanks and hold scale capable of offering payments services and loans of any size to firms that operate globally. US broker-dealers and investment banks have long offered specialized capital market services that are competitive and second to none in the world.

Only recently have we changed the model and made the safety net a requirement for any broker-dealer to compete against the largest banks that operate within its protections. The too-big-to-fail subsidy has provided an enormous competitive advantage to these largest, most complex firms. They hold far less tangible capital than regional or community banks. This gives them an advantage over smaller banks in pricing loans. They dominate any loan market they choose to enter as they have broader, deeper, and better priced access to capital and credit.

Similarly, some believe that the largest banks minus their trading and other broker-dealer activities would compete more directly with regional and smaller banks, thus driving them out of the market. I find it difficult to accept this as a reason to leave the largest banking companies as subsidized conglomerates.

This argument would have you believe that, although these largest banks can take market share from whomever they please, for some reason they have chosen not to compete with regional and smaller banks. It would seem that only if they were forced to do so, would they compete with these smaller banks. This is untrue. Witnessing the consolidation of the industry over the past two decades makes the argument seem almost nonsensical. I speak to regional and community bankers regularly who express enormous frustration that the largest banks are pricing them out of their own market, not because of scale but because of subsidy.

Robust competition and innovation have been the hallmark of US financial firms' success. Making the safety net a requirement for success hardly enhances the competitive outcome. If these largest firms are required to compete with comparable capital requirements, if they are not too big to fail, if their holding companies can be taken into bankruptcy and their banks resolved as other banks are, then the regional and smaller banks can compete on a level playing field and will be less subject to the whims of the largest firms. Neither the largest nor the smallest financial firms should be afraid of direct competition within a set of fair, transparent, and uniformly enforced regulations.

Conclusion

We need to rethink how we can best move our financial and economic systems forward in a competitive and productive direction. To do this, we must eliminate too-big-to-fail and reduce the associated taxpayer subsidy by narrowing the explicit and implied government guarantees.

This requires reforming the financial structure. A safety net only for commercial banking activities provides stability to critical financial infrastructure. Separating broker-dealers from commercial banking and the safety net will make them more responsive to the discipline of the market. This simpler financial structure will also strengthen the supervisors' ability to place bank holding companies and trading houses into bankruptcy and banks into resolution should they fail, and thus make them more accountable for their actions.

Reconfiguring the financial system would accomplish many goals. It would level the competitive playing field. It would invigorate the capital markets by removing the disparity between investment firms inside the safety net and their competitors that are outside. It would strengthen the economy—not by preventing crises, but by stabilizing the system so that when crises do arise, faltering firms and not the public are held accountable. In turn, the stability would provide a true foundation for the industry and the economy to thrive through innovation and competition instead of through protections and subsidies.

Can this done? As I have noted elsewhere, the actions of two presidents stand out as our country determines how to define the structure and role of the financial system going forward. President Teddy Roosevelt, the trust buster, changed the competitive landscape of America for the good. President Franklin Roosevelt enacted the Glass-Steagall Act, from which coincided with decades of relative economic stability and financial growth.

For our future economic stability and financial growth, we should make the choice to reform the system. Big is not bad. Big and subsidized is bad.

The views expressed are those of the author and not necessarily those of the FDIC.

LUIS A. UBIÑAS

President, Ford Foundation

Good morning. I'm Luis Ubiñas, president of the Ford Foundation. It gives me great pleasure to welcome you here today.

This is the fifth year we've had the privilege of hosting the Minsky Conference and hosting all of you. When you step back and you think about those five years, those five years since you first joined us here, it's been a remarkable time. We were in the depths, when we first started, of the worst economic downturn since the Great Depression. "Were" is the tentative word in that sentence, because lots of us think we still are.

Around that time, we were just talking about the Ford Endowment. Equity markets hit their nadir, and people like us who manage large endowments, we had to make decisions about how far the economy would fall and how deep the losses would be. Meetings with my investment team at the time were meetings about the future of the foundation, and they ended up being very important meetings. Many institutions, including some of the universities that you all likely work for, suffered irreparable damage—irreparable damage in some cases to reputation, but irreparable damage sometimes to their endowments, to their economic ability to do their jobs. Many organizations made mistakes that permanently changed them. And there were places where there were even harder trade-offs, where even more difficult decisions were being made. Jobs were being lost at an unprecedented rate, and there seemed to be no floor on housing prices in some markets.

It's important to think back to that February, March, and April, that late winter and early spring in 2009, because there was fear, there was concern. Even in this room, people were asking questions about what we didn't know. We saw not just the bursting of bubbles, but in some ways the bursting of our trust in larger systems.

Now much of that is in the past tense, but the reality is that this crisis continues. Fiscal and monetary policy have reached levels rarely seen and even then demand is lagging. I was just at the OECD on a conference on this topic, and it is a challenging situation when you go to maximum levels of fiscal and monetary policy and aren't seeing demand. We've watched as European economies have fallen one after the other, Iceland to Ireland, Greece to Cyprus, and the list goes on, mired in financial crisis with crippling—*crippling*—unemployment and political and social upheaval. Remember, behind the data are people's lives.

We've seen youth taking to the streets. I had my son in Barcelona last summer, and there were riots nearly every afternoon, youth holding us to account, reminding us that they need a better deal, reminding us that we can't sacrifice both their present and their future for the problems of the past, the problems we leave to them.

Now, at this conference for five years we've spent enormous amounts of time asking a simple question: why? Why? And remember this complication: many of us hold that this crisis didn't start in 2007, that this crisis is a continuation of the crisis we faced in 2000, when a first implosion of an overvalued asset class led to a first wave of wholesale wealth destruction, of vast reduction in demand, and massive job losses. And just remember, the names were different. It wasn't Lehman Brothers, it wasn't Bear Stearns; it was World Com, Nortel, Lucent, in some ways, [companies] even more central to our economy. While the names were different, individuals lost their jobs, their wealth, their futures. Remember as well that it was only in 1995 that we recovered the jobs lost in that first phase of this crisis, and that it was scarcely 36 months later when the job losses began in this crisis.

Financial markets understand that. They understand that that 15-year reality is one seamless crisis in the failure to regulate. Markets are flat since '99, even before you account for inflation. They are telling us that there's been no reason to add value to the equity holdings, the equity value of our economy, for a decade and a half. Now, there have been ups and downs, but at the end of the day—and if you manage an endowment you know this—there's been no real return. There's been no return for 15 years.

So if you hold that we have been in an economic crisis for nearly a decade and a half, and that this crisis in fact continues, let's come back to this conference and the discussions that have occurred on this stage. The most basic theme across this last half decade here at Minsky has been a simple one: regulation exists for a reason. Just as traffic signals, curbs, and crosswalks keep the streets of New York from devolving to chaos, so does financial regulation keep the basic marketplace functioning. Everyone understands that. You can explain that to a high schooler and you can explain that to a secretary of the Treasury.

I just traced the financial crisis back to 2000. But everyone in this room—*everyone* in this room, regardless of persuasion—understands that we can take steps further back; that the marketplace chaos we are living with today and will continue to live with unless things change dates back to the vast deregulation that occurred in financial centers in the early 1980s. We understand that. We took away the curbs and we took away the crosswalks and we took away the streetlights, and what happened is what always happens: chaos came. And no one really benefited from that.

At Ford we've worked hard to try to surface these realities and the resulting questions in order to press for solutions, in order to try to work to improve the system of global financial governance, to create a system that is transparent and accountable, and to ensure that financial markets are once again what they were—drivers of sustainable development and employment opportunities worldwide. The idea that the financial system is somehow bad, inherently corrupt—all the dialogue we hear in the uncontrolled streets is in some ways misguided. At the end of the day, those financial markets are more important than ever. We need them to function better than ever. But they will not function—*they will not function*—without guardrails, without stripes down the middle of the road, without curbs. They will not function.

Many of you have been partners in this work. But I have to say, we can feel a slowing in the momentum, a loss of interest in this topic. The heat and the fire in leadership circles that we experienced in '09 and '10, even into '11, is dissipating, while there's still obviously a long road ahead to restore transparency and accountability, standard controls, and standard rules. Leaders are so enmeshed in the crises of the moment, in deciding whether or not to have depositors lose 40 percent or 80 percent if they're over $100,000 or over $125,000 in Cyprus, that they can't keep focus on the need to strike at the root cause, on the need to restore rules of the road, on a need to rethink the kinds of regulations that not only help people who own homes and need jobs, but also help people who are running financial institutions run those in stable environments.

I urge you—and I say this in various locales, in various geographies—I urge you to stay focused on this challenge, because what begins as conversation in rooms like this one, what begins as a set of ideas in sessions like the sessions you have here and in other places, those things have the potential to impact real lives around the world. There's nothing abstract about the impact of this conversation. It is felt in people's lives every day, people who struggle for 20 or 30 years to be able to put a down payment on a house, people who struggle to save for 15 or 20 years to send a child to college. Failure to regulate, failure to understand the importance of curbs—those failures [go hand in hand with] our failure in our humanitarian responsibility and our failure to deliver the kind of sustained environment for growth that we desperately need.

So, I want to close simply by thanking all of you for your contribution to this work and thanking all of you for the dialogues you'll have and [for taking the lead] in guiding us back to some reasonable regime for regulation. Thank you.

NARAYANA KOCHERLAKOTA

President and CEO, Federal Reserve Bank of Minneapolis

Low Real Interest Rates

Thanks for the invitation to speak at the 22nd Annual Minsky Conference. Professor Minsky devoted his career to emphasizing the connections between the financial sector and the real economy. It is safe to say that the events of the past decade have provided strong evidence in support of Professor Minsky's basic belief in the importance of those connections. Indeed, as the economy continues to improve, we are beginning to hear new concerns being voiced about potential financial instability and associated risks to the macroeconomy. In my talk today, I will provide some perspectives on those issues.

I start by arguing that, over the past six years, we have seen dramatic changes in the demand for and supply of safe assets. Given those changes, the Federal Open Market Committee (FOMC) is only able to achieve its congressionally mandated objectives of maximum employment and price stability by keeping the real—that is, net of inflation—interest rate well below its 2007 level. I suggest that these changes in asset demand and asset supply are likely to persist over a considerable period of time—possibly the next five to 10 years. It follows that the FOMC will only be able to meet its objectives over that time frame by taking policy actions that ensure that the real interest rate remains unusually low.

I then point out that low real interest rates can be expected to be associated with financial market phenomena that are seen as signifying instability. It follows that, for many years to come, the FOMC will only be able to achieve its congressionally mandated objectives by following policies that result in signs of financial market instability.

Finally, I discuss how the FOMC should take those signs of instability into account when formulating monetary policy.

Before proceeding I need to stress that my remarks today reflect only my views and not necessarily those of any other FOMC participant.

Low Real Interest Rates

Economists generally distinguish between nominal and real interest rates. The nominal interest rate is the interest rate reported on a typical savings account or mortgage. It tells you how many dollars a saver or a lender will get in the future for giving up a dollar today. The real interest rate adjusts those future dollars for the anticipated rate of price increases—that is, for the anticipated rate of inflation. This means that the real interest rate tells you how much purchasing power a saver or lender will get in the future for giving up a dollar of purchasing power today. Economists generally believe that household and businesses make savings and investment decisions based on *real* interest rates over the next five to 10 years.

When I was a student, back in the '70s and '80s, the real interest rate was a somewhat mysterious unobservable object. That's no longer true. Treasury inflation-protected securities—bonds that are colloquially called TIPS—make coupon payments that are indexed to the inflation rate. This indexation means that TIPS coupon payments provide a fixed amount of purchasing power to the bondholder, not a fixed amount of dollars. As a result, TIPS yields provide a useful measure of the real interest rate.

When we look at TIPS yields, we see that real interest rates have fallen dramatically over the past six years. In the first half of 2007, five-year TIPS bonds had a real yield of about 2.5 percent and 10-year TIPS bonds also had a real yield of about 2.5 percent. Now jump forward to 2013. The five-year real TIPS yield is around *negative* 1.3 percent. Just to be clear: this means that the buyer of a five-year TIPS bond is giving up $100 of purchasing power today in exchange for around $94—six dollars less!—of purchasing power in five years. The 10-year real TIPS yield is also negative—around negative 0.7 percent.

Why have real interest rates fallen so much? At one level, the answer is obvious: monetary policy. The FOMC has announced its intention to keep the fed funds rate near zero at least until the unemployment rate falls below 6.5 percent. At the same time, the FOMC has bought over $3 trillion of longer-term assets issued or backed by the government. With inflationary expectations well anchored, these actions are designed to push downward on real interest rates and have been successful in doing so.

But I think that the obvious monetary policy answer is actually deeply misleading. Consider the following, very Minnesota, analogy. Some days during the year when I go outside, I wear a parka. Other days, I wear a light jacket. And—this will seem hard to believe—on some other days, I don't need a coat at all.

Every morning, I have complete control over what kind of coat I wear—even more control than the FOMC has over real interest rates. But, of course, in making my choice of outerwear, I'm merely responding to the Minnesota weather, which is a force that is—sadly—well beyond my control. *The FOMC is in exactly the same position of having to respond to strong forces well beyond its control when making its decisions about the real interest rate.* Thus, when I decide what coat to wear, my goal is to keep myself at a temperature that I view as appropriate, given prevailing conditions that I cannot influence. Similarly, when the FOMC decides on a level of the real interest rate, its goal is to keep the macroeconomy at an appropriate "temperature," given prevailing conditions that it cannot influence.[1]

More concretely, the Committee is taking actions to adjust real interest rates so as to fulfill its congressional dual mandate of promoting price stability and maximum employment. Thus, suppose the economy is running too cold, in the sense that inflation is below the Committee's 2 percent target and unemployment is elevated. Then, the FOMC can, metaphorically, put on a heavier coat—that is, lower the real interest rate to stimulate spending and economic activity.

In 2007, the FOMC had on about the right kind of coat, in the sense that the macroeconomic outlook was broadly consistent with the Committee's objectives. The fall in TIPS yields over the past six years suggests that the FOMC has, in the language of my metaphor, put on a warmer coat by pushing down on real interest rates. Indeed, some observers have expressed the concern that the FOMC has put on too heavy a parka.

But the truth is that the FOMC's choice of winter garb is actually insufficient to keep the US economy appropriately warm. After all, the outlook for both employment and prices is too low relative to the FOMC's goals. Unemployment is currently 7.6 percent and is expected to fall only slowly. At the same time, inflation pressures are muted: both private sector forecasters and the FOMC expect that PCE inflation will be at or below 2 percent through 2013 and 2014. The Committee needs to put on some more serious winter gear if it is to get the economy back to the right temperature. More prosaically, the FOMC can only achieve its dual mandate objectives by lowering the real interest rate even further below its 2007 level.

What Happened?

I've argued that the path of real interest rates that is consistent with the FOMC's dual mandate objectives—what one might call the mandate-consistent path of real interest rates[2]—has fallen greatly since 2007. I now turn to a discussion of *why* this has happened. I see the decline in mandate-consistent real interest rates as grounded in an increase in the demand for, and a fall in the supply of, safe financial investment vehicles. Importantly, I see these changes as likely to be highly persistent.

There are many factors underlying the increased demand for safe assets. I'll discuss three that strike me as particularly important: tighter credit access, heightened perceptions of macroeconomic risk, and increased uncertainty about federal fiscal policy. In terms of credit access: I don't think that it's controversial to say that credit access is more limited than in 2007. What is less generally realized, I think, is that restrictions on households' and businesses' ability to *borrow* typically lead them to spend less and *save* more.

I can best illustrate this point through an example. Consider a household that wants to purchase a new home. In 2007, that household could have received a mortgage with a down payment of 10 percent of the purchase price, or even lower. In 2013, that same household is considerably more likely to need a down payment of 20 percent. These tighter mortgage standards mean that, to buy a similarly priced house, the household needs to first acquire more assets.

Thus, the demand for safe assets has risen because of tighter limits on credit access. It has also risen because of households' and businesses' assessments of macroeconomic risk. As of 2007, the United States had just gone through nearly 25 years of macroeconomic tranquility. As a consequence, relatively few workers or businesses (or macroeconomists!) in the United States saw a severe macroeconomic shock as possible.

However, in the wake of the Great Recession and the Not-So-Great Recovery, the story is different. Now more workers see themselves as being exposed to the risk of persistent deterioration in labor incomes. More businesses see themselves as being exposed to the risk of a radical and persistent downshift in the demand for their products. These workers and businesses have an incentive to accumulate more safe assets as a way to self-insure against this enhanced macroeconomic risk.

The federal fiscal situation is another key source of elevated uncertainty. The federal government faces a long-run disconnect between its overt commitments and the baseline path of federal tax collections. This disconnect can only be resolved by raising taxes and/or cutting the long-run arc of spending.

Of course, this tension between revenues and expenditures predated the 2007 downturn. However, it is at least arguable that the fiscal debates of the past few years have made more Americans aware of the uncertainties associated with resolving this long-run disconnect. And these uncertainties affect the demand for safe assets. The prospect of higher future corporate profits taxes gives businesses an incentive to demand safe short-term financial assets as opposed to engaging in long-term investments. The prospect of reductions in Medicare, Medicaid, or Social Security gives some households an incentive to demand more safe assets as a way of replacing those lost potential benefits.

I've argued that, due in part to tighter credit access and higher uncertainty, the demand for safe financial assets has risen since 2007. At the same time, the global *supply* of assets perceived as safe has also fallen. Americans—and many others around the world—thought in 2007 that it was highly unlikely that American residential land, and assets backed by land, could ever fall in value by 30 percent. Not anymore. Similarly, investors around the world viewed all forms of European sovereign debt as a safe investment. Not anymore.

Thus, the FOMC is confronted with a greater demand for safe assets and tighter supply of safe assets than in 2007. These changes in asset markets mean that, at any given level of real interest rates, households and businesses spend less. Their decline in spending pushes down on both prices and employment. As a result, the FOMC has to lower the real interest rate to achieve its objectives.[3]

I often hear that the FOMC has created a low interest rate environment that is harmful for savers and others. But, to return to my winterwear analogy, that seems about as compelling as blaming me for creating winter in Minnesota by putting on my long johns. The FOMC has been confronted with wintry changes in asset demand and supply. It has lowered the real interest rate to keep the economy "warmer" in light of these changes. Indeed, as I argued earlier, the weak macroeconomic outlook suggests that the FOMC has in fact not put on a warm enough coat—that is, it has not lowered the real interest rate sufficiently.

What about the future? The passage of time will ameliorate these changes in the demand for and supply of safe assets—but only partially. Any long-run forecast has enormous attendant uncertainties. But I expect that for a considerable period of time—possibly the next five to 10 years—credit market access will remain limited relative to what borrowers had available in 2007. I expect that many workers and businesses will remain more concerned than in 2007 about the risk of a large adverse recessionary shock. And I also expect that businesses will continue to feel a heightened degree of uncertainty about taxes and households will continue to feel a heightened degree of uncertainty about the level of federal government benefits. These considerations suggest that, for many years to come, the FOMC will have to maintain low real interest rates to achieve its congressionally mandated goals.

Financial Market Outcomes Associated with Low Real Interest Rates

I have argued that, for some time to come, the FOMC will only be able to achieve its dual mandate outcomes if the time path of real interest rates is lower than in 2007. Indeed, remember that in 2013, the mandate-consistent real interest rate over the next 10 years is at least three full percentage points lower than it was in 2007. It seems likely that the mandate-consistent time path of real interest rates could be unusually low for a considerable period of time. Moreover, these unusually low real interest rates will likely be associated with other unusual financial market outcomes. I'll discuss three of these outcomes in some detail: inflated asset prices, unusually volatile asset returns, and high merger activity.

The first consequence of low real interest rates that I mentioned—higher asset prices—is the most obvious. Long-lived assets are somewhat substitutable for each other. Hence, investors generally respond to low real TIPS yields by bidding up the price of other long-lived assets—including gold, land, stocks, or machines. It follows that when real interest rates are unusually low by historical norms, asset prices will typically be unusually high relative to historical norms.

The second consequence of low real interest rates is that asset returns should be expected to be highly volatile. When the real interest rate is very high, only the near term matters to investors. Hence, variations in an asset's price only reflect changes in investors' information about the asset's near-term dividends or risk premiums. But when the real interest rate is unusually low, then an asset's price will become correspondingly sensitive to information about dividends or risk premiums in what might seem like the distant future. This new source of relevant information should be expected to induce more variability into asset prices and returns.[4]

Finally, I believe that when real interest rates are low, we should expect to see more mergers. Mergers typically involve enduring current costs in exchange for a flow of future benefits. For example, to initiate the merger, the acquiring firm has to search for an appropriate target, and that search can be costly. As well, after the merger, it may be necessary to undertake a one-time costly reorganization of people and matériel to achieve the anticipated gains in revenue. Businesses will be more willing to pay the upfront costs of a merger in exchange for the anticipated flow of future benefits associated with the merger if the real interest rate is low.[5]

In this way, unusually low real interest rates should be expected to be linked with inflated asset prices, high asset return volatility, and heightened merger activity. All of these financial market outcomes are often interpreted as signifying financial market instability. And this observation brings me to a key conclusion. I've suggested that it is likely that, for a number of years to come, the FOMC will only achieve its dual mandate of maximum employment and price stability if it keeps real interest rates unusually low. I've also argued that when real interest rates are low, we are likely to see financial market outcomes that signify instability. It follows that, for a considerable period of time, the FOMC may only be to achieve its macroeconomic objectives in association with signs of instability in financial markets.

Financial Stability and Monetary Policy

These financial market phenomena could pose macroeconomic risks. In my view, these potentialities are best addressed through effective supervision and regulation of the financial sector. It is possible, though, that these tools may only partially mitigate the relevant macroeconomic risks. How, if at all, should the FOMC adapt monetary policy in response to any residual risk?

To answer this question, the Committee will need to confront an ongoing probabilistic cost-benefit calculation. On the one hand, raising the real interest rate will definitely lead to lower employment and prices. On the other hand, raising the real interest rate *may* reduce the risk of a financial crisis—a crisis which *could* give rise to a much larger fall in employment and prices. Thus, the Committee has to weigh the *certainty* of a costly deviation from its dual mandate objectives against the benefit of reducing the *probability* of an even larger deviation from those objectives.

This probabilistic cost-benefit calculation is conceptually challenging today and will remain so for some time to come. However, it is important to stress that the Committee is in a better position to address this challenge in 2013 than it was in 2007. The Federal Reserve System now dedicates a significant amount of our best staff resources to financial system surveillance. The Federal Reserve Bank of Minneapolis contributes to these efforts in a number of ways, including our ongoing monitoring of the risk-neutral probability distributions of future asset values.[6] As a result of these efforts, the FOMC has a lot more information, on an ongoing basis, about the extent of financial system risks.

Nonetheless, as always, there is more to be learned. We need to understand better, in light of the current state of supervision and regulation, which residual financial system risks have the potential to translate into macroeconomic risks. And we need to understand better to what extent monetary policy tightening can in fact temper those residual financial system risks.

Conclusions

Let me wrap up.

Over the past six years, there have been big changes in the demand and supply of safe assets. These changes seem likely to be persistent ones, and they mean that the FOMC may keep real interest rates unusually low for years to achieve its objectives of maximum employment and price stability.

It follows that, to attain maximum employment and price stability over the same long period of time, Americans will likely face the consequences of low real interest rates. I've emphasized consequences related to financial market instability, like inflated asset prices, volatile asset returns, and heightened merger activity. Even in the presence of effective supervision and regulation, these phenomena could pose residual macroeconomic risks. The FOMC's decision about whether to respond to those residual risks using the rather blunt tool of monetary policy will necessarily depend on a delicate probabilistic cost-benefit calculation.

Thanks for listening. I look forward to taking your questions.

Notes

* *I thank Ron Feldman, David Fettig, Terry Fitzgerald, and Kei-Mu Yi for many valuable comments.*

1. The analogy is imperfect in at least one key sense. Nobody can influence the weather. In contrast, other economic actors (like Congress or the president) may be able to influence economic conditions that are not under the control of the FOMC.
2. What I'm terming the "mandate-consistent real interest rate" is the same as the "natural real rate of interest" in simple New Keynesian models.
3. Kocherlakota (2012) provides a formal model of this mechanism.
4. Mathematically, I'm talking about the implications of having a higher average price-dividend ratio in the Campbell–Shiller (1988) formula. See also Cochrane (1992).
5. Many academic models of mergers are based on this kind of cost-benefit structure. See Moran (2013) for a recent example.
6. See the Minneapolis Fed's asset prices page (http://www.minneapolisfed.org/banking/assetvalues/index.cfm?).

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BENJAMIN M. LAWSKY

Superintendent of Financial Services, New York State Department of Financial Services

Regulating in an Evolving Financial Landscape

I am deeply honored to have the opportunity to address you today. This year's conference has brought together an impressive list of speakers and panelists and I'm sure the discussions and speeches during this three-day conference will provide valuable insights on improving the state of our global economy.

I very much appreciate Dimitri Papadimitriou's introductory remarks and the opportunity to address the members of this conference.

Also, it is important to recognize the Levy Institute at Bard College and the Ford Foundation for hosting this conference.

The theme of what I want to talk with you about today, "Regulating in an Evolving Financial Landscape," speaks to a unique set of challenges that we now face together as financial regulators and as a country.

In the wake of a devastating financial crisis, lawmakers, regulators, the financial industry, consumer advocates, and a wide range of other stakeholders are building the new architecture of a reformed Wall Street.

That's a dynamic, ongoing process.

As you well know, it didn't end the day—three years ago, on July 21, 2010—when the president signed Dodd-Frank into law.

Through Dodd-Frank, the president and Congress provided regulators in Washington with a robust framework for reform. But they left the specific contours of those new rules of the road up to a set of federal agencies writing regulations on matters as diverse as the Volcker rule, living wills, orderly liquidation authority, risk retention, qualified residential mortgages, and a whole long list of other terms and acronyms that were foreign to us only a few short years ago.

While regulators in Washington have made important progress implementing those critical reforms, the rules of the road are still not yet fully written.

And, of course, even when the ink is dry on every last regulation, there will remain—as there always is—a constant push and pull between regulators and the financial industry as market participants adjust to the new rules of the road.

Regulators need to remain vigilant. Because there is a constant danger that putting a thumb in the dyke in one part of the financial system will cause a leak to spring somewhere else, a danger that well-intentioned reforms could push risk to ever-darker corners of the financial system, to financial products not yet envisioned by even the most farsighted of regulators.

The lure of potential profits is too great, and the dynamism of the global economy is too strong, for the financial system to stand frozen in time.

This is not to say—as some suggest—that the art of financial regulation is a futile endeavor; that we should resign ourselves to a financial system that forever careens from crisis to crisis.

Far from it.

It just means that we should approach the constantly evolving landscape of the financial sector with a deep sense of humility about the capacity of any one set of reforms or safeguards to permanently preserve the stability of our kinetic, frenetic global financial system.

And this deep sense of humility shouldn't fade with the passage of time—when the 2008–09 financial crisis becomes a page in the history books rather than a fresh wound.

To be sure, Dodd-Frank represents the most far-reaching set of reforms to our financial system since the Great Depression.

But we can't become complacent.

And one critical part of avoiding that fate—avoiding complacency—is what I will call "healthy competition in financial regulation."

A dose of healthy competition among regulators is helpful and necessary to safeguarding the stability of our nation's financial system—not just today, but for the long term.

Healthy Competition in Financial Regulation

So what do I mean by healthy competition in financial regulation?

It's not so dissimilar to what economists talk about when they discuss healthy competition in the broader economy, or what Supreme Court Justice Louis Brandeis meant when he called the states "laboratories" of democracy during the Progressive Era.

The New York State Department of Financial Services—or DFS, as we like to call it—was recently created through the merger of two existing state agencies with long histories: the New York State Banking Department (which was founded in 1851) and the New York State Insurance Department (which was established in 1859).

However, DFS—in its current, unified structure—is only about 18 months old. So, in many ways, we're the new regulator on the block.

The Federal Reserve has been around for about a century. The FDIC has been protecting depositors since the Great Depression. And the US Treasury Department has served a vital role in managing our nation's finances since the founding of our republic.

At DFS, we're fortunate to work with federal partners who have a deep well of institutional knowledge and expertise—which complements our own. We've collaborated with our federal partners closely and cooperatively on a number of issues of common interest. Moreover, at DFS, like our other regulatory partners, we have a commitment to thorough, thoughtful, diligent work.

But we also have another key attribute at DFS.

We're nimble. And we're agile. And we're able to take a fresh look at issues across the financial industry—both new and old.

Sometimes financial regulators find that moving in a new direction is akin to turning a battleship in a bathtub. Institutional inertia can stymie even the most well-intentioned of watchdogs.

But as a newly created regulator, DFS isn't necessarily wedded to existing ways of doing business.

Indeed, similar to the example of the broader economy, when there's a new entrant into the marketplace, it often spurs others to reexamine existing processes and practices. To innovate.

At DFS, we can shine a spotlight wherever we think it needs shining.

When banks are engaging in practices that threaten our country's financial stability and national security, we can take swift action.

When consumers are being abused, we can move rapidly to right those wrongs.

Sometimes, that means DFS may be out in the lead on a particular issue.

But I think that's healthy. Not only for the financial regulatory community, but also for the long-term strength of the financial industry and our nation's economy.

Problems with Unhealthy Competition

Indeed, it may also be helpful to define healthy competition in opposition to the type of *unhealthy* competition that we saw during the lead up to the financial crisis; when the system turned on its head and the debate turned to who could *water down standards the most*, to who could provide the "lightest touch" regulation at the firms they oversaw.

In many ways, this created a race to the bottom in which both regulators and Wall Street firms were willing participants.

At DFS, we hope our activism at the state level will at least sometimes do the reverse and spur a race to the top.

Now, some people claim that being a strong and independent regulator is at odds with the goals of promoting economic growth and job creation; that you have to be a laid back or passive regulator to be pro-growth and pro-business.

We fundamentally disagree.

When Governor Cuomo—who himself played a vital role as a financial watchdog when he was attorney general—proposed creating DFS, he gave us a clear mission.

He wanted the industries DFS regulates—banking and insurance—to thrive. He wanted to keep New York the financial capital of the world.

And he also wanted to protect consumers and investors better than ever before by using all the tools in our tool belt.

Those two goals can fit together. They are not mutually exclusive.

When consumers, entrepreneurs, and investors have confidence in the integrity—the safety and the soundness—of their banks and insurers, when they know they're getting a fair deal, they'll do more business here.

That's better for the long-term health of the financial industry and our economy. And it is certainly better for the long-term health of our system to prevent future crises through smart and active regulation.

And it's certainly not pro-business to regulate so lightly that we run the risk of another meltdown.

With that in mind, I want to discuss a couple recent examples of DFS actions that we hope will play an important, constructive role in strengthening the long-term health of the financial system: first, a corner of the insurance industry called "force-placed insurance"; and second, anti–money laundering enforcement.

Additionally, I want to highlight a few other areas in financial regulation that DFS is taking a hard look at right now—where healthy competition may play a vital role going forward. Those include: (1) conflicts of interest in the consulting industry; and (2) the troubling role private equity firms are playing in insurance markets.

Force-placed Insurance

Let's start with force-placed insurance.

In October 2011, the New York State Department of Financial Services launched an investigation into the force-placed insurance industry.

Force-placed insurance is insurance taken out by a bank, on behalf of the homeowner, when a homeowner does not maintain the insurance required by the terms of a mortgage. This occurs most frequently when a homeowner allows their policy to lapse—usually due to financial hardship. So these are folks who are already teetering on the edge of financial disaster. And, as the name implies, the insurance is forced upon them.

Now, in certain circumstances, this makes sense because the mortgage holder has a right to protect their collateral (in this case, the house).

But when we conducted our investigation, we found that there was very little competition, and very high rates, in the force-placed insurance industry.

Sometimes when a homeowner who was already in financial trouble got "force-placed" into an insurance policy, their rate jumped two to 10 times higher—despite the fact that force-placed insurance provides far less protection for homeowners than voluntary insurance.

Our investigation looked at why this was happening.

Normally, you'd expect that the bank would do what any of us would do when they shop for something: that they'd look for the best product at the lowest price.

What we found was that the banks and the insurers had set up what is essentially a form of reverse competition. Banks were looking for high prices and high premiums. And they were happy to pay them. Why? Because a good portion of the premiums were being funneled back to the banks in the form of commissions—all of this, mind you, at the expense of homeowners and investors, who ultimately got stuck with the bill.

In May, we held public hearings where we brought the industry and homeowners to testify. And that hearing—along with our broader investigation—really tore the cover off this issue.

DFS's investigation has already produced a recent, major settlement with the country's largest force-placed insurer: Assurant. Assurant controls 70 percent of the market in New York. That settlement includes restitution for homeowners who were harmed, a $14 million penalty paid to the State of New York, and industry-leading reforms that will save homeowners, taxpayers, and investors millions of dollars going forward through lower rates.

Indeed, through those reforms, we're banning the type of practices that drove premiums sky-high. We're kicking the kickbacks out of this industry.

Today, we announced an additional settlement with the nation's second-largest force-placed insurer, QBE, that includes a $10 million penalty, restitution for homeowners, and New York's industry-leading reforms. Now companies representing more than 90 percent of this market in New York have signed onto our reforms.

When DFS began its investigation, force-placed insurance wasn't an area to which many regulators were paying close attention. It was essentially a dirty little secret in the insurance industry. But that's started to change—at least in part—because DFS has pushed very hard on this issue.

Soon after DFS announced its settlement with Assurant, the Federal Housing Finance Agency, which regulates mortgage giants Fannie Mae and Freddie Mac, followed our actions by filing a notice to ban the lucrative fees and commissions paid by insurers to banks on force-placed insurance.

To spur further action, DFS also recently urged other state regulators to use our settlement with Assurant as a national model. Every regulator should be asking, “If you can clean up things in New York, why can’t you clean it up nationwide?”

We’ve received a good response from a number of states so far. But the proof will be in the pudding. If other states follow through, it will help end the kickback culture that has pervaded this industry and hurt far too many homeowners and investors.

Anti–Money Laundering Enforcement

Another area where I think DFS has begun to play an important and constructive role is anti–money laundering, which is so vital to our country’s national security.

This was an area where we felt that, at times, the industry and our regulatory structures had gotten used to a certain playing field; a certain silently acknowledged level of consequences tied to a certain quantum of illegal and immoral behavior.

We felt that this was serious, serious conduct justifying more potent action. And we wanted the banking industry to take it a lot more seriously given the threat it posed not only to our financial system, but also to our national security.

Banks were sometimes effectively serving as financial conduits for terrorists, other enemies of our country, and perpetrators of some of the most vile human rights abuses anywhere on earth.

DFS took action against a particular bank last summer. We felt like it was the right thing to do, and we did it based on the facts and the law.

Our investigation uncovered that the bank had hidden from US and other regulators roughly 60,000 secret transactions involving at least $250 billion—reaping the company hundreds of millions of dollars in fees. This conduct had left the US financial system vulnerable and deprived law enforcement investigators of crucial information used to track all manner of criminal activity, including terrorism.

New York ended up securing a $340 million settlement and a set of reforms to help put a stop to this behavior.

Initially, there was what we believed to be a misplaced focus on the fact that DFS had acted more quickly, more robustly, and more independently than some people were used to from a state banking regulator.

That focus was misplaced, because it distracted everyone from the very real issues at stake when it comes to international money laundering on a massive scale for nations like Iran. Ultimately, though, we certainly stimulated a debate nationally and internationally on this issue. And, more important, I think we started an alteration—or, better yet, a recalibration—of the regulatory playing field going forward in this area.

Now you’re seeing more robust action being taken—at both the state and the federal level—to root out this type of illegal money laundering. That’s good for our national security. It’s good for the integrity—and the safety and soundness—of the broader financial industry. And it was driven in part by the sort of healthy competition I mentioned earlier.

Consulting

Now let me turn to a new set of issues on which DFS is very focused right now. And where we hope, again, to play an essential role in the weeks and months ahead.

The independence and integrity of monitors and independent consultants is another area of vital concern to DFS.

These consultants are installed at banks and other companies usually after an institution has committed serious regulatory violations or broken the law. The intent is that monitors assist companies in improving controls and ensuring that violations do not reoccur.

All too often, however, the outcome of a monitorship is disappointing, as we recently saw in the context of the national mortgage reviews. This can be blamed on a number of factors, but it is worth considering that our current system significantly undermines the independence of the monitors—the monitors are hired by the banks, they're embedded physically at the banks, they are paid by the banks, and they depend on the banks for future business.

If the monitors or consultants are simply puppets of the big banks that pay their fees—rather than independent voices—then their work product can hardly be deemed reliable.

There is also insufficient communication between monitors and regulators. Frequently, monitors never hear from regulators once they are put in place at a bank. This is a problem we can and must fix.

It's largely about "managing the monitors," and that is up to regulators. There need to be regular meetings between regulators and monitors. Expectations must be set. Weekly updates on progress should be happening.

A good monitor can truly improve a troubled company when there is a problem, but an ineffective monitor can make the situation much worse by creating a false sense of security in the regulator and the public.

At DFS, we have already instituted a more robust process in the selection of monitors, and we will be pushing more broadly for change in the dynamics between regulators, monitors, and institutions.

You will likely be seeing some innovative initiatives from DFS in this area in the coming weeks and months. And we expect that those actions will help propel reform at both the state and federal levels.

One very important question we all need to be asking is: when monitors or consultants perform poorly or, worse, when they intentionally obscure problems at banks, what should the consequences be? Because if we allow intentional conduct aimed at quietly sweeping problems at banks under the rug, we are truly undermining our whole system of prudential regulation. At some point, we must take action that has real consequences or the problems in our system will continue to be perpetuated rather than deterred.

Private Equity Buying Annuity Companies

I'd now like to turn to an emerging trend in the insurance industry that DFS has become concerned about.

Private equity firms are becoming active in the acquisition of insurance companies. In the last few years, private equity firms have been targeting fixed and indexed annuity writers.

For those who are unfamiliar with annuity companies, they sell insurance products that essentially promise a certain payment every year or month (whatever the terms of the policy may be) over a particular period of time.

If you look at the deals completed or announced to date, private equity-controlled insurers now account for nearly 30 percent of the indexed annuity market (up from 7 percent a year ago) and 15 percent of the total fixed annuity market (up from 4 percent a year ago).

These are large numbers, and they indicate a very rapid growth in market share. As you may expect, that's driving DFS to take a close look at these transactions and these firms—to ensure that the safety and soundness of these companies and consumers both remain protected.

Now, as you probably know, annuities are very popular products that a significant number of Americans rely on to help finance their retirements.

The risk that we're concerned about at DFS is whether these private equity firms are more short-term focused, when this is a business that's all about the long haul—that their focus is on maximizing their immediate financial returns rather than ensuring that promised retirement benefits are there at the end of the day for policyholders.

And—because of their potential short-term focus—there is a risk that these companies may not be delivering the level of compliance and customer service that we'd expect of them given the importance of this product to so many seniors on fixed incomes.

There can be exceptions, but generally, private equity firms follow a model of aggressive risk-taking and high leverage, typically making high-risk investments. If just a few of these investments work out, then the firm can be very successful—and the failed ventures are just viewed as a cost of doing business. This type of business model isn't necessarily a natural fit for the insurance business, where a failure can put policyholders at significant risk.

Private equity firms typically manage their investments with a much shorter time horizon—for example, three to five years—than is typically required for prudent insurance company management. They may not be long-term players in the insurance industry, and their short-term focus may result in an incentive to increase investment risk and leverage in order to boost short-term returns.

Now, at DFS, we regulate both banks and insurance companies. And the differences between these two industries are quite striking when it comes to private equity investments.

Private equity firms rarely acquire control of banks, not because they are prohibited from doing so, but because the regulatory requirements associated with such acquisitions are more stringent than a private equity firm may like. These regulatory requirements in the banking industry are designed, in part, to encourage a long-term outlook, and to ensure that the person controlling the company has real skin in the game.

The long-term nature of the life insurance business raises similar issues, yet under current regulations it is less burdensome for a private equity firm to acquire an insurer than a bank.

We need to ask ourselves whether we need to modernize our regulations to deal with this emerging trend to protect retirees and to protect the financial system.

This is an area that not too many regulators are looking at, but it's one where DFS is moving to ramp up its activity. And we hope that other regulators will soon follow suit.

Shadow Insurance

Another area that we're hard at work on relates to the use of what are called "captive" insurance companies, used to quietly off-load risk and increase leverage at some of the world's largest financial firms.

In July 2012, the New York State Department of Financial Services initiated a serious investigation into this somewhat obscure area that—we believe—could put insurance policyholders and taxpayers at greater risk.

Insurance companies use these captives to shift blocks of insurance policy claims to special entities—often in states outside where the companies are based, or else offshore (e.g., the Cayman Islands)—in order to take advantage of looser reserve and oversight requirements. (Reserves are funds that insurers set aside to pay policyholder claims.)

In a typical transaction, an insurance company creates a "captive" insurance subsidiary, which is essentially a shell company owned by the insurer's parent. The company then "reinsures" a block of existing policy claims through the shell company and diverts the reserves that it had previously set aside to pay policyholders to other purposes, since the reserve requirements for the captive shell company are typically lower. (Sometimes the parent company even effectively pays a commission to itself from the shell company when the transaction is complete.)

However, this financial alchemy—let's call it "shadow insurance"—does not actually transfer the risk for those insurance policies off the parent company's books, because in many instances the parent company is ultimately still on the hook for paying claims if the shell company's weaker reserves are exhausted (a "parental guarantee").

That means that when the time finally comes for a policyholder to collect their promised benefits after years of paying premiums—such as when there is a death in their family—there is a smaller reserve buffer available at the insurance company to ensure that the policyholders receive the benefits to which they are legally entitled.

We believe that shadow insurance also puts the stability of the broader financial system at greater risk. Indeed, in a number of ways, shadow insurance is reminiscent of certain practices used in the run-up to the financial crisis, such as issuing subprime mortgage-backed securities (MBSs) through structured investment vehicles (SIVs) and writing credit default swaps on higher-risk MBSs. Those practices were used to water down capital buffers as well as temporarily boost quarterly profits and stock prices at numerous financial institutions. And, ultimately, those practices left those very same companies on the hook for hundreds of billions of dollars in losses from risks hidden in the shadows, and led to a multitrillion-dollar taxpayer bailout.

Similarly, shadow insurance could leave insurance companies less able to deal with losses. The events at AIG's Financial Products unit in the lead-up to the financial crisis demonstrate that regulators must remain vigilant about potential threats lurking in unexpected business lines and at more weakly capitalized subsidiaries within a holding company system.

We are hard at work on our continuing investigation into shadow insurance and we hope to shed light on, and further stimulate a national debate on, this important issue to our financial system.

Conclusion

Now, I've highlighted a number of areas where DFS has taken a leadership role and sought to push reform. But the role of state regulators can and should vary based on the particular context.

It really comes down to a question of federalism—the relationship between the states and the federal government.

What I will call collaborative or cooperative federalism is usually the best kind of federalism, when we work closely and together and symbiotically with our federal partners. A great example of this is what DFS has been doing to partner with the Consumer Financial Protection Bureau (CFPB) in the areas of debt collectors and payday lending.

In other areas, where there has been less focus on a particular issue at the federal level, a form of persuasive federalism sometimes emerges—where the state tries to lead by example and stimulate national reform. DFS's work in the force-placed insurance industry is a great example.

On the far end of the spectrum is what I'll call, for lack of a better term, coercive federalism.

Coercive federalism should be rare. But sometimes it's necessary. Sometimes a state must act alone to change the rules of the game. DFS's work on anti–money laundering enforcement is a good example here.

Now, I listed three types of federalism. But if I had to give them an overarching label, I would call DFS's overall approach going forward catalytic federalism.

We will continue to evaluate the appropriate role of the state regulator on an issue by issue basis, depending on the context.

As I noted at the beginning of the speech, we inhabit a constantly evolving financial ecosystem. And we will remain nimble and agile as we attempt to effect change wherever our ever-changing markets need that stimulus.

Change is good. And a robust marketplace of ideas among financial regulators is a key strength of our system.

Indeed, our federal regulators are leading on a number of important issues.

Today, the Federal Reserve and Treasury, for example, are leading the charge on two areas of vital concern to long-term financial stability: money market reform and addressing potential sources of risk in the triparty repo market.

The SEC, together with its law enforcement partners, has fought hard to crack down on insider trading. And the SEC is also working to modernize investor disclosures in an era of Twitter, Facebook, and other social media products that didn't even exist a decade ago.

The Commodity Futures Trading Commission has taken a leadership role in cracking down on past abuses in LIBOR and proposing future reforms so that they don't happen again.

The CFPB—led by Richard Cordray, who is just one of the bright, shining stars of the Obama Administration—has staked out new ground in the fight to arm families with the clear, concise information they need to make the financial choices that are best for them.

In recent years, the FDIC has really been ahead of the curve on the issues of providing relief to struggling homeowners and ensuring banks have the capital they need to withstand unexpected financial shocks and losses.

The critical point is that through healthy competition—in this marketplace of ideas—the best ideas will hopefully rise to the top; that the ideas that withstand the informed scrutiny of fellow regulators, the media, the public, and other stakeholders will one day win out (even if it's not today); and that those ideas come out better for being battle tested.

I think our financial system, our economy, and our country will ultimately be better for it—when regulators speak their mind, say their piece, and engage in a vigorous debate through healthy competition.

Thank you, and I look forward to taking your questions.

Q&A

Q: Paul Peterman, NYU. I'm a New Yorker. I applaud your work thus far. What troubles me is that settlements are all well and good, but why don't we see jail time for the individuals responsible?

BL: Fair question. So, not mentioned in my introduction was that I spent five-and-a-half great, great years as a federal prosecutor in the Southern District of New York here in Manhattan, and about two years of it in the Commodities and Securities Fraud Taskforce—that's the white-collar unit there. And, look, I've given that question quite a bit of thought. My wife is a law professor, and I keep telling her, you should write about this question, because it's perplexing.

I think part of the answer is that the same factors that led to our financial crisis also lead to great difficulties in building these very complex criminal cases. What do I mean by that? The firms are enormous and incredibly diffuse, and they make it very hard . . . to pinpoint someone at the top who was involved in decisions directly that caused a fraud. That's first.

So they're very diffuse. They were involved with financial products that are incredibly complex. I think a lot of us in this room frankly would have trouble understanding all the ins and outs of these financial products, let alone a jury of New Yorkers. . . . And then third, frankly, a lot of regulators were well aware of and involved with a lot of what went on in the lead-up to the financial crisis. When you have regulators involved and a very diffuse, enormous firm involved with very, very complex products—remember, for a criminal prosecution you've got to show intentional fraud by an individual—it makes it incredibly incredibly hard.

Does that excuse the fact that really no big cases have been brought? Absolutely not. But I think that's a factor in why we haven't seen more.

Could we have devoted thousands of FBI agents and hundreds of prosecutors to building these cases? And if we had done that, would we have seen more cases built? I think that's a very fair suggestion. After Enron, if you look at the amount of resources that were put toward the Enron taskforce—and that was aimed at just that firm—nothing near that level was aimed at resolving what happened post financial crisis and bringing those who committed intentional criminal fraud to justice. So I think it's a very valid point to make. I think there are these factors that make it incredibly difficult. It would have required enormous resources, and a decision was made somewhere that a certain level of resources was going to be devoted to that. But I think also . . . a lot of the governmental resources got focused on not allowing our economy to crater any further than it did. So I think those are parts of the answer, but I'm waiting for my wife's law review article to really explain it to me.

Q: I'm Marcus Stanley from Americans for Financial Reform. We're a public interest organization in Washington, D.C., that works on financial reform issues.

As you know, the Dodd-Frank Act gave the federal government the power to designate nonbank systemically significant institutions, including insurance companies; and it's likely that some of the very large insurance companies are going to be designated in the first batch. There's a very strong lobbying effort going on in Washington, D.C., right now from the insurers, who are basically saying that it's inappropriate for the federal government and federal prudential regulators to set capital standards for any area of an insurance company, given that guys like you are on the beat at the state level. . . . I'm just wondering, given that insurance companies continue to sell financial guarantee products that are very deeply embedded in the financial system, what do you think is the proper division of labor between federal prudential regulators and the state regulators in oversight of insurance companies?

BL: How many hours do I have to answer that question? Look, it's a great question. I think, unlike banking—and this goes back to the federalism question—DFS is this fascinating amalgamation of banking and insurance regulation. Banking: very strong federal regulation; historically passive, weaker state regulation. Insurance side: no federal regulation historically and very, very active state regulation. So you're seeing that collision in this process of whether certain insurance companies are going to be designated G-SIFIs [global systemically important financial institutions], or what have you.

I think some of the companies—and we regulate a bunch of them—are so large and involved in so many of the kind of products you mentioned, that they present the kind of potential risks that our largest banks do as well. So I don't think that the federal regulators are wrong to be considering some of those institutions and whether they should be designated systemically risky.

I think the danger, though, is that that's fine, but they should be treated like insurance companies. Insurance companies can be very risky, and, as I mentioned, both with the private equity developments and with the captive insurance developments; but they're not banks, and regulators, to get it right, they can often be too weak, but they can also sometimes be overbroad. I think we just need to treat insurance companies as insurance companies. You don't typically have a run on an insurance company. Everything starts going south, people don't run to their insurance company and say, "Pay me my life insurance." It doesn't work that way. And the industry is sort of less tied together, and I think there are fair reasons to distinguish insurance from banking, obviously. So I think it's fine to be very careful and to think hard about those designations, and it's fair to consider some of these largest institutions as potentially systemic; but I do think we need to be really careful, and they should be considered for what they are. A dog is not a cat.

An additional problem is, a lot of the institutions that are doing these reviews are very used to dealing with banks, and they're very used to dealing with bank rules, and things are a little different with insurance companies. Hopefully, that will get sorted out in a smart, intelligent, careful, not overbroad way.

Q: Back when Governor Patterson was in office I recall there was a big brouhaha for a time when he read a paper on credit default swaps and said, "That looks a lot like insurance to me." The attorney general and the insurance commissioner at the time were supportive, a big hearing was held, and initially the governor, I think, had it right. He said that if any financial institution in this state wants to underwrite credit default swaps, they need to trek on up to Albany and register with the insurance department for that activity. Now today, by the way, all the big banks have brought their derivative activities inside the insured bank, which sort of squares and cubes the problem. But where is the initiative to do anything about this problem? It's a self-evident problem; it's a self-evident ticking time bomb. So, (a) what's happening in New York, which is where I think it has to begin if there's a solution; and (b) what's going on in Washington, which I think, after Dodd-Frank, sort of marches in the other direction.

BL: Great question. As I recall it, I was in the attorney general's office at the time. This was an initiative by an old friend of mine, Eric Dinallo, who was the superintendent of insurance at the time. I think the proposal, if I remember it right, was around naked credit default swaps, and that those were a form of insurance, and that they were putting forth a proposed rule that those had to be treated like insurance products.

I'm almost positive—and I haven't gone back and looked—that within several months that proposal got scrapped. And I think with Dodd-Frank, most of that rulemaking has been moved over to the CFTC, and that Gary Gensler at the CFTC has worked very, very hard to try and put in rules of the road for derivatives. I don't want to speak for him, but my guess is, they feel like there's still a lot more to be done. And it does make sense, in my opinion, for it to be happening at the federal level just because of this market and the way it works. But one thing I've always waited for and wanted to see was a real exchange, where these swaps could take place with some real transparency and with pricing we could all understand. I think that's something that has yet to happen, and I think it's surprising that the debate has really shifted away from that. It almost feels like no one's expecting it anymore.

Q: How can we get the public to recognize that we have $640 trillion in derivatives floating over our head against a world gross domestic product of $65 or $70 trillion?

BL: I don't have the answer to that. I think it's public awareness. Look, I think this is something at the CFTC. I think it goes back to what I said about why there aren't that many prosecutions. I think part of it is, it's incredibly complicated. Most people, you say the word "derivatives," and their eyes glaze over. . . . I spend a lot of time thinking about and translating very complex ideas, thoughts, products, into regular English that regular people can understand. To get those issues into the ether for regular readers, not of *The New York Times* or *The Wall Street Journal,* but of other newspapers and other media outlets, and to make it a topic of conversation on the nightly news, I think that's very, very hard to do. But it can be done. It just needs to be translated. . . . Part of it is, until there's a new urgency, it's easy to sort of just say that's too complicated, that's too much; we'll focus on this over here.

Thank you all.

SARAH BLOOM RASKIN

Member, Federal Reserve Board of Governors

Reflections on Inequality and the Recent Business Cycle

Thank you for asking me to join you today at this conference and to be a part of your continuing inquiry into how the ideas and legacy of Hyman Minsky can inform and shape our understanding of financial markets and the economy.

This speech expands on remarks I made in March to the National Community Reinvestment Coalition, in which I explored the roles that monetary and bank regulatory policy play in reducing the unemployment, economic marginalization, and financial vulnerability of millions of moderate- and low-income working Americans. Today, I am interested in continuing this exploration by examining an issue of growing saliency that macroeconomic models used at central banks and by academics have not traditionally emphasized—specifically, how such economic marginalization and financial vulnerability, associated with stagnant wages and rising inequality, contributed to the run-up to the financial crisis and how such marginalization and vulnerability could be relevant in the current recovery.

To isolate my proper subject here, I want to be clear that I am not engaging this afternoon with the concern that many Americans have that excessive inequality undermines American ideals and values. Nor will I be investigating the social costs associated with wide distributions of income and wealth. Rather, I want to zero in on the question of whether inequality itself is undermining our country's economic strength according to available macroeconomic indicators.

Economists have documented that widening income and wealth inequality has been one of the most notable structural changes to the US economy since the late 1970s. This change represents a dramatic departure from the three decades prior to that time, when Americans enjoyed broadly rising incomes and shared prosperity. Indeed, many of you in the room have shed important light on the recent trends in inequality and on the potential role of fiscal policy in addressing them. You have also explored how these trends are relevant to issues of financial stability. I won't attempt to repeat this strong line of research and analysis. Instead, my remarks today are specifically focused on adding to the conversation about how such disparities in income and wealth could be relevant for a macro understanding of the financial crisis and the recovery and the appropriate course of monetary policy today.

I will argue that at the start of this recession, an unusually large number of low- and middle-income households were vulnerable to exactly the types of shocks that sparked the financial crisis. These households, which had endured 30 years of very sluggish real-wage growth, held an unusually large share of their wealth in housing, much of it financed with debt. As a result, over time, their exposure to house prices had increased dramatically. Thus, as in past recessions, suffering in the Great Recession—though widespread—was most painful and most perilous for low- and middle-income households, which were also more likely to be affected by job loss and had little wealth to fall back on.

Moreover, I am persuaded that because of how hard these lower- and middle-income households were hit, the recession was worse and the recovery has been weaker. The recovery has also been hampered by a continuation of longer-term trends that have reduced employment prospects for those at the lower end of the income distribution and produced weak wage growth.

Of course, it is not part of the Federal Reserve's mandate to address inequality directly, but I want to explore these issues today because the answers may have implications for the Federal Reserve's efforts to understand the recession and conduct policy in a way that contributes to a stronger pace of recovery. Traditionally, the distribution of wealth and income has not been a primary consideration in the way most macroeconomists think about business cycles. But if inequality played a role in the financial crisis, if it contributed to the severity of the recession, and if its effects create a lingering economic headwind today, then perhaps our thinking, and our macroeconomic models, should be adjusted.

Despite the tentative nature of these conclusions, I do think it is vital to explore these issues, and, in the spirit of Minsky, I hope my remarks spur more inquiry and discussion. I should also note that the views I express are my own and not necessarily those of my colleagues on the Board of Governors or the Federal Open Market Committee (FOMC).

Trends in Income, Wealth, and Debt

In order to "level set" our understanding, let me begin by reviewing some of the changes to the structure of income, wealth, and debt in the years leading up to the Great Recession—changes that have had significant implications for the well-being of most American households. Long before the recession—decades before, in fact—income data show only sluggish increases in real incomes for low- and middle-income American households, and more-rapid increases for high-income households, resulting in a much greater concentration of income among those at the very top of the income distribution.

As just one example of the broader trend, according to the Congressional Budget Office, between 1979 and 2007, inflation-adjusted, pretax income for a household in the top 1 percent more than doubled, while, in contrast, income for a household in the middle of the income distribution increased less than 20 percent.[1] Over these years, the share of pretax income accruing to the top 1 percent of households also doubled, from 10 percent to 20 percent, while the share accruing to the bottom 40 percent fell from 13 percent to 10 percent. These growing disparities of total income are largely due to the increasing concentration of labor income, which, on average, accounted for more than 70 percent of all income over this period. In addition, the distribution of other sources of total income—such as profits from small businesses, capital gains and dividend income, rental income, and the like—also became more concentrated over this period.

Many have argued that these disparities in income are hindering economic growth through their effects on consumption. Intuitively, one might assume that the growing concentration of income at the top could lead to less consumer spending and aggregate demand, as wealthier households tend to save more of their additional income than others. However, there is no definitive research indicating that these income disparities show mixed results on the question of whether there are stable differences in the marginal propensity to consume across households with different incomes.[2] More generally, the evidence is equivocal as to whether there is an empirical relationship between higher income inequality and reduced aggregate demand. In my view, understanding the links between greater concentrations of income, variation in spending patterns throughout the income distribution, and the effect of that variation on aggregate consumption—and, ultimately, growth—requires more exploration.[3]

But since household behavior is surely driven by more than the size of the paycheck coming in the proverbial front door, the distribution of wealth—as distinct from the distribution of income—could have clearer implications for the macroeconomy. Indeed, wealth inequality is greater than income inequality in the United States, although it has widened little in recent decades. For example, according to the Survey of Consumer Finances (SCF), a survey conducted every three years by the Federal Reserve Board, the top one-fifth of families ranked by income owned 72 percent of the total wealth in the economy in 2010, whereas families in the bottom one-fifth of the income distribution together owned only 3 percent of total wealth in 2010.[4]

Hence, families with more modest incomes have much less wealth to cushion themselves against income shocks, such as unemployment. For example, in 2010, the median value of financial assets was less than $1,000 for families in the lowest income quintile. Moreover, what wealth low- and middle-income families do have is typically concentrated in housing. For families in the top quintile of income, the value of residential properties accounted for about 15 percent of total wealth in 2010. For families in the middle and lower half of the income distribution, the ratio of their home values to total net worth was near 70 percent. In contrast, stock market wealth (and the value of other securities) constitutes a very small share of wealth for low- and middle-income families.

Because the wealth of people at the lower end of the distribution is concentrated in housing, these households are disproportionately exposed to swings in house prices. This compositional effect was intensified during the housing boom, as the share of wealth accounted for by housing grew even faster for low- and middle-income families than for high-income families. That said, the increases in homeownership and house values during the boom were largely financed by rising mortgage debt. Thus, the direct positive effect of *rising* house prices on most households' net worth was largely offset by the negative effect of increased debt that households took on. On net, mortgage debt and home values moved up together. But when house prices began *falling*, the mortgage debt and repayment obligations remained. To be sure, the increase in mortgage debt prior to the recession occurred across all types of households. But it was families with modest incomes and wealth largely in their homes that were the most vulnerable to subsequent drops in home values.

The question then arises as to why households with poor income prospects sought out levels of mortgage debt that would ultimately prove so problematic. Putting aside the practice, in the run-up to the crisis, of lenders steering households to mortgage debt products that were more costly than what such households may have otherwise qualified for, one reason may have been that many households in the middle and lower end of the income distribution, whose wage earnings were stagnant, did not recognize the long-run and persistent trends underlying their lack of income growth.[5] If households thought they were merely going through a rough patch, it would have been quite reasonable for them to borrow money to smooth through it—to make home improvements, for example, or to send a child to college.[6] At the same time, many people believed that the sharp increases in their home values had made them permanently richer and that house prices would never turn down, a belief that appears to have been shared by many households in the upper part of the income distribution as well. In fact, purchasing a house using debt was a profitable investment in the early 2000s. While it is hard to know with any certainty what these individual households believed at the time, it seems quite plausible to me, as others have argued, that stagnant wages and rising inequality, in combination with the relaxation of underwriting standards, led to an increase in the use of credit unsupported by greater income.[7]

Inequality and the Great Recession

Given these developments, when house prices fell, household finances were struck a devastating blow. The resulting fallout magnified this initial shock, ushering in the Great Recession. Let me lay out this argument in more detail.

As I mentioned earlier, low- to middle-income families held a disproportionate share of their assets in housing prior to the financial crisis and hence were very exposed to what was a historic decline in house prices. And so, while total household net worth fell 15 percent in real terms between 2007 and 2010, median net worth fell almost 40 percent. This difference reflects the amplified effect that housing had on wealth changes in the middle of the wealth distribution.

The unexpected drop in house prices on its own reduced both households' wealth and their access to credit, likely leading them to pull back their spending. In particular, underwater borrowers and heavily indebted households were left with little collateral, which limited their access to additional credit and their ability to refinance at lower interest rates. Indeed, some studies have shown that spending has declined more for indebted households.[8]

Compounding the effect of falling house prices on household wealth and credit was the fact that these low- to middle-income households are also composed of some of the groups that have historically borne the brunt of downturns in the labor market. During recessions, the young, the less educated, and minorities are more likely to experience flat or declining wages, reduced hours, and unemployment.[9] While this disparity is not a new phenomenon, dealing with a loss in labor income during the most recent recession was a heightened challenge to households that had mortgage obligations and no other forms of wealth to cushion the blow. The adverse developments in the labor market added to the difficulty most households were having in repaying their existing debts and in accessing credit in the recession.

These low- to middle-income households that bore the strains in both housing and labor markets, and had little wealth cushion, had more difficulty making payments on their mortgages and other consumer credit debt. For example, among the mortgages originated from 2004 to 2008, almost 25 percent of those in low-income neighborhoods were foreclosed on or in serious delinquency as of 2011, more than twice the rate of mortgages originated in higher-income neighborhoods. Higher-income households had also taken on debt and were affected by declines in asset prices. But these households entered the recession with a larger wealth buffer and higher incomes, so they generally were still able to service their debts. The sharp rise in defaults and delinquencies put extraordinary stress on most households' finances, intensified the financial crisis, and exacerbated the effect of the initial economic shocks. Indeed, a rapid downward spiral of tighter credit, declines in asset prices, rising unemployment, and falling demand caused severe distress and a pullback in spending that was ultimately widespread across households.

Inequality and the Recovery

I have argued that rising inequality and stagnating wages may have led households to borrow more and to pin their hopes for economic advancement on rising home values, developments that exacerbated the severity of the financial crisis and recession. Now we are nearly four years into the recovery, which has been weak. In my view, this same confluence of factors has also contributed to the tepid recovery.

If my theory about why households overextended themselves before the financial crisis is correct, then it is likely also true that households have had a rude awakening in the years since. Not only did they receive an unwelcome shock to their net current wealth, but they also undoubtedly have come to realize that house prices will not rise indefinitely and that their labor income prospects are less rosy than they had believed. As a result, they are curtailing their spending in an effort to rebuild their nest eggs and may also be trimming their budgets in order to bring their debt levels into alignment with their new economic realities. In this case, the effects of the plunge in net wealth and the jump in unemployment on subsequent spending have been long lasting and lingering.

Overall debt levels remain higher than before the house price boom, and many families continue to struggle to keep up with their monthly payments. Although many households have significantly reduced their debt levels, many others probably have far to go.[10] It is hard to know just what the optimal debt-to-income ratio is, but, in my view, households will likely aim for something lower than before the financial crisis: households are probably working toward lower, more manageable debt service obligations; the heightened uncertainty in the recession may have raised the desired level of financial buffers; and, to the extent that households saw the negative shocks to house prices and income as permanent, they are reducing their spending and thus their demand for new borrowing. While the process of household deleveraging has affected the spending and borrowing of many households, there is no doubt that the process has been more acute for those that have experienced unemployment, underemployment, or slower wage gains.

To make matters worse, there is also some evidence to suggest that the factors that contributed to the rise in inequality and the stagnation of wages in the bottom half of the income distribution, such as technological change that favors those with a college education and globalization, are still at play in the recovery—and perhaps may have accelerated.[11] About two-thirds of all job losses in the recession were in middle-wage occupations—such as manufacturing, skilled construction, and office administration jobs—but these occupations have accounted for less than one-fourth of subsequent job growth.[12] In contrast, the decline in lower-wage occupations—such as retail sales, food service, and other lower-paying service jobs—accounted for only one-fifth of job loss and more than one-half of total job gains in the recovery.[13]

It is not only the occupational and industrial distribution of the new jobs that poses challenges for workers and their families struggling to make ends meet, but also the fact that many of the jobs that have returned are part time or make use of temporary arrangements popularly known as contingent work. The flexibility of these jobs may be beneficial for workers who want or need time to address their family needs. However, workers in these jobs often receive less pay and fewer benefits than traditional full-time or "permanent" workers, are much less likely to benefit from the protections of labor and employment laws, and often have no real pathway to upward mobility in the workplace.[14]

Wage gains have remained more muted than is typical during a recovery. While this phenomenon likely partly reflects the trends in job creation that I have already discussed, weak wage growth also reflects the severe nature of the crisis: typically, those who are laid off during recessions struggle to find reemployment that is of comparable quality to their previous job, and research has shown that, on average, a person's income remains depressed for decades following job loss, and that income losses over one's working life are especially severe when the job loss occurs during a recession.[15]

Indeed, while average wages have continued to increase (albeit slowly) on an annual basis for persons who have remained employed, the average wage for new hires has declined since 2010.[16] Although it is too early to state with certainty what the long-term effect of this recession will be on the earnings potential of those who lost their jobs, given the severity of the job loss and sluggishness of the recovery—with nearly 9 million jobs lost and still almost 2.5 million jobs below prerecession employment levels—it is very likely that, for many households, future labor earnings will be well below what they had anticipated in the years before the recession.

Implications for Our Thinking about the Macroeconomy

I have focused most of my remarks on the experiences of households at the lower ends of the income and wealth distributions, those households whose incomes improved the least in the years prior to the financial crisis and that suffered disproportionately as a result of the crisis and ensuing recession.

To be clear, my approach of starting with inequality and differences across households is not a feature of most analyses of the macroeconomy, and the channels I have emphasized generally do not play key roles in most macro models. The typical macroeconomic analysis focuses on the general equilibrium behavior of "representative" households and firms, thereby abstracting from the consequences of inequality and other heterogeneity across households and instead focusing on the aggregate measures of spending determinants, including current income, wealth, interest rates, credit supply, and confidence or pessimism. In certain circumstances, this abstraction might be a reasonable simplification. For example, if the changes in the distribution of income or wealth, and the implications of those changes for the overall economy, are regular features of business cycles, then even an aggregate model without an explicit focus on distributional issues would capture those historical regularities.

However, the narrative I have emphasized places economic inequality and the differential experiences of American families, particularly the highly adverse experiences of those least well positioned to absorb their "realized shocks," closer to the front and center of the macroeconomic adjustment process. The effects of increasing income and wealth disparities—specifically, the stagnating wages and sharp increase in household debt in the years leading up to the crisis, combined with the rapid decline in house prices and contraction in credit that followed—may have resulted in dynamics that differ from historical experience and which are therefore not well captured by aggregate models. How these factors have interacted and the implications for the aggregate economy are subject to debate, but I have laid out some possible channels through which there could be effects and that I believe represent some particularly fruitful areas for continued research.

Implications for Monetary Policy

The arguments that I have laid out suggest that paying attention to the experiences of different types of households may be important for the way we understand and interpret the macroeconomic events of the past several years. As a consequence, these differential experiences may also have implications for the conduct of monetary policy. Arguably, the FOMC's conduct of monetary policy in recent years has in part been designed to address this particular landscape. In response to continuing low levels of resource utilization, the FOMC has kept monetary policy highly accommodative by keeping its primary policy instrument, the federal funds rate, at an exceptionally low level; by supplementing this move with forward guidance about the funds rate; and by initiating unconventional policy actions such as large-scale asset purchases. One channel through which these policies operate is by putting downward pressure on longer-term interest rates, thereby encouraging firms to invest in plants and equipment and helping to enable households to purchase cars and other durable goods and also to refinance their mortgages. Lower interest rates also support the prices of homes and other assets, which can lead to additional spending. The resulting boost to demand leads firms to hire and invest further, strengthening the economy as a whole. To be sure, every household is different, and the particular mix of assets, skills, and opportunities that each has will determine how much it is able to share in the recovery. But accommodative monetary policy that lifts economic activity more generally is expected to increase the odds of good outcomes for American families.

Of course, it is also relevant to consider whether the unusual circumstances—the outsize role of housing wealth in the portfolios of low- and middle-income households, the increased use of debt during the boom, and the subsequent unprecedented shocks to the housing market—may have attenuated the effectiveness of monetary policy during the depths of the recession. Households that have been through foreclosure or have underwater mortgages or are otherwise credit constrained are less able than other households to take advantage of the lower interest rates, either for home buying or other purposes. In my view, these effects likely clogged some of the channels through which monetary policy traditionally works. As the housing market recovers, though, I think it is possible that accommodative monetary policy could be increasingly potent. As house prices rise, more and more households have enough home equity to gain renewed access to mortgage credit and the ability to refinance their homes at lower rates. The staff at the Federal Reserve Board has estimated that house price increases of 10 percent or less from current levels would be sufficient for about 40 percent of underwater homeowners to regain positive equity. It is my view that understanding the long-run trends in income and wealth across different households is important in understanding the dynamics of the macroeconomy and thus also may be relevant for setting monetary policy to best reach our goals of maximum employment and price stability. I believe that the accommodative policies of the FOMC and the concerted effort we have made to ease conditions in the mortgage markets will help the economy continue to gain traction. And the resulting expansion in employment will likely improve income levels at the bottom of the distribution. However, given the long-standing trends toward greater income and wealth inequalities, it is unlikely that cyclical improvements in the labor markets will do much to reverse these trends.

Conclusion

It strikes me that macroeconomists are far from a comprehensive understanding of how wealth and income inequality may affect business cycle dynamics. My remarks today are given only in the spirit of describing how that relationship might be further explored. I have said nothing about the social costs associated with such trends, nor have I provided much detail on what is occurring at the top end of the income and wealth distribution and the effects of those trends on the recovery. Nonetheless, I believe that, given the wide income and wealth disparities in the United States, this area is ripe for more research. In recent years, the Board has increased its efforts to measure and understand differences in the economic situations faced by different types of families. A particularly strong source of data to improve our understanding of the role for inequality and heterogeneity is the SCF. The triennial SCF marks its 30th anniversary this year, as the fieldwork for the 2013 survey begins this month. The data we collect on US families are a fundamental input for many different types of research projects being undertaken by Board economists, in other government agencies and research centers, and in academia. In addition, the Board, in partnership with other members of the Federal Reserve System, is engaged in a wide range of analysis and research using rich and timely data on households' use of consumer credit. And the Board continues to support direct efforts to understand differences in spending and saving behavior across households, such as studies of stimulus policies in the Thomson Reuters / University of Michigan Surveys of Consumers.

There is much work to be done on understanding the ways in which income and wealth inequality and other forms of household heterogeneity affect aggregate behavior, and the implications for monetary policy. The times demand that we continue to analyze such dynamics and their implications, in partnership with academics, our Federal Reserve System colleagues, and policy analysts representing many different types of government and private sector institutions.

Thank you for your attention and the creative thought you bring to today's economic challenges.

Notes

1. See Congressional Budget Office (2011), *Trends in the Distribution of Household Income between 1979 and 2007* (Washington: CBO, October).
2. The survey article by Attanasio and Weber (2010) describes several conditions that raise a household's propensity to consume additional income, such as temporary income shocks, borrowing constraints, and low liquidity. However, existing studies do not provide clear evidence that people with permanently low income have a high marginal propensity to consume. See Orazio P. Attanasio and Guglielmo Weber (2010), "Consumption and Saving: Models of Intertemporal Allocation and Their Implications for Public Policy," *Journal of Economic Literature* 48 (September): 693–751.
3. One concern with rising inequality and stagnating wages is that low- and middle-income households will turn to credit and wealth extraction to maintain their consumption growth. One sign of this behavior would be consumption inequality rising much less than income inequality. Researchers—including Krueger and Perri (2006); Aguiar and Bils (2011); and Attanasio, Hurst, and Pistaferri (2012)—have produced mixed findings on this basic question, although, taken together, there is growing evidence that consumption inequality has also risen substantially over the past several decades. See Dirk Krueger and Fabrizio Perri (2006), "Does Income Inequality Lead to Consumption Inequality? Evidence and Theory," *Review of Economic Studies* 73 (January): 163–93; Mark A. Aguiar and Mark Bils (2011), "Has Consumption Inequality Mirrored Income Inequality?" NBER Working Paper Series 16807 (Cambridge, Mass.: National Bureau of Economic Research, February); and Orazio Attanasio, Erik Hurst, and Luigi Pistaferri (2012), "The Evolution of Income, Consumption, and Leisure Inequality in the US, 1980-2010," NBER Working Paper Series 17982 (Cambridge, Mass.: National Bureau of Economic Research, April).
4. The specific measure used to group families for these wealth calculations is the stable component of income, referred to in the SCF as "normal" or "usual" income. In the SCF, after families have reported their actual incomes for the year, they are asked whether this was a normal year. If the answer is no, they are asked what their income usually would be in a normal year. Using normal income as a classifier removes the systematic bias in average wealth that arises when, for example, normally high-income families are temporarily in the lowest income group because they had a particularly bad year.
5. In a separate line of inquiry on the social dynamics of spending, Bertrand and Morse (2013) find that moderate-income households spend more if they live in states with rapid spending growth among high-income households, which suggests another channel for inequality to increase debt. See Marianne Bertrand and Adair Morse (2013), "Trickle-Down Consumption," NBER Working Paper Series 18883 (Cambridge, Mass.: National Bureau of Economic Research, March).
6. In fact, recent research shows that these trends in annual inequality are mostly due to rising disparities in the component of a household's income that is stable over time, rather than rising disparities in the component that varies from year to year. See Jason DeBacker, Bradley Heim, Vasia Panousi, and Ivan Vidangos (2011), "Rising Inequality: Transitory or Permanent? New Evidence from a US Panel of Household Income 1987–2006," Finance and Economics Discussion Series 2011-60 (Washington, D.C.: Board of Governors of the Federal Reserve System, December).

7. For example, Rajan (2010) has argued that rising inequality resulted in the relaxation of credit standards, which led to the financial crisis, and Kumhof and Ranciere (2011) present a model with such features. However, Bordo and Meissner (2012) look at data from 14 advanced countries and do not find a general relationship between inequality and credit booms. Meanwhile, Bhutta (2011, 2012) finds that federal programs aimed at increasing homeownership only modestly increased the availability of mortgage credit to lower-income borrowers. See Raghuram Rajan (2010), *Fault Lines: How Hidden Fractures Still Threaten the World Economy* (Princeton, N.J.: Princeton University Press); Michael Kumhof and Romain Ranciere (2011), "Inequality, Leverage and Crises," CEPR Discussion Paper 8179 (London: Centre for Economic Policy Research, January); Michael D. Bordo and Christopher M. Meissner (2012), "Does Inequality Lead to a Financial Crisis?" NBER Working Paper Series 17896 (Cambridge, Mass.: National Bureau of Economic Research, March); Neil Bhutta (2011), "The Community Reinvestment Act and Mortgage Lending to Lower Income Borrowers and Neighborhoods," *Journal of Law and Economics* 54 (November): 953–83; and Neil Bhutta (2012), "GSE Activity and Mortgage Supply in Lower-Income and Minority Neighborhoods: The Effect of the Affordable Housing Goals," *Journal of Real Estate Finance and Economics* 45 (June): 238–61.
8. See Atif Mian, Kamalesh Rao, and Amir Sufi (2011), "Household Balance Sheets, Consumption, and the Economic Slump (PDF)," unpublished paper, University of Chicago, Booth School of Business, November; and Karen Dynan (2012), "Is a Household Debt Overhang Holding Back Consumption?" *Brookings Papers on Economic Activity* (Spring): 299–358.
9. An Organisation for Economic Co-operation and Development study by Ahrend, Arnold, and Moeser (2011) documents across a wider range of countries that individuals with low incomes tend to lose the most from adverse macroeconomic shocks. See Rudiger Ahrend, Jens Arnold, and Charlotte Moeser (2011), "The Sharing of Macroeconomic Risk: Who Loses (and Gains) from Macroeconomic Shocks," OECD Economics Department Working Papers 877 (Washington, D.C.: OECD Publishing, July).
10. In contrast to the decrease in overall debt, student loans have continued to rise at a solid pace. The outstanding level of student loan balances is nearly twice its level five years ago and now represents the largest component of consumer (nonmortgage) lending. The increase in student loans is likely related to broader developments in the recession and exposes the households holding these loans to new risks.
11. The poverty rate has risen sharply since the onset of the recession, after a decade of relative stability, and it now stands at 15 percent, significantly higher than the average over the past three decades. See Carmen DeNavas-Walt, Bernadette D. Proctor, and Jessica C. Smith (2012), *Income, Poverty, and Health Insurance Coverage in the United States: 2011*, US Census Bureau Current Population Reports P60-243 (Washington, D.C.: US Government Printing Office, September).
12. See National Employment Law Project (2012), "The Low-Wage Recovery and Growing Inequality," Data Brief (New York: NELP, August), http://nelp.3cdn.net/8ee4a46a37c86939c0_qjm6bkhe0.pdf.
13. These patterns were also observed during the recessions of the early 1990s and early 2000s—the so-called jobless recoveries—but not prior to then. See Nir Jaimovich and Henry E. Siu (2012), "The Trend Is the Cycle: Job Polarization and Jobless Recoveries," NBER Working Paper Series 18334 (Cambridge, Mass: National Bureau of Economic Research, August); and Christopher L. Foote and

Richard W. Ryan (2012), "Labor-Market Polarization over the Business Cycle," Public Policy Discussion Paper 12-8 (Boston: Federal Reserve Bank of Boston, December).

14. See US Department of Labor, Commission on the Future of Worker-Management Relations (1994), "Contingent Workers," in *Fact Finding Report*.
15. See Steven J. Davis and Till von Wachter (2011), "Recessions and the Costs of Job Loss," *Brookings Papers on Economic Activity* (Fall): 1–55.
16. See Jesse Rothstein (2012), "The Labor Market Four Years into the Crisis: Assessing Structural Explanations," *ILRReview* 65 (July): 486, figure 11.

MARY JOHN MILLER

Under Secretary for Domestic Finance, US Department of the Treasury

Progress towards a Stronger Financial System

Thank you for inviting me to join you tonight. It looks like you have heard from an impressive group of panelists and speakers during the past two days. I am honored to participate in this event.

I would like to focus this evening on a subject of considerable recent attention—financial institutions that some have called "too big to fail." This seems like a particularly fitting topic given the conference title of "Building a Financial Structure for a More Stable and Equitable Economy."

In fact, those two objectives—a stronger and fairer system—would be a good way to describe the overarching purpose of the reforms put in place in the wake of the financial crisis through the Dodd-Frank Wall Street Reform and Consumer Protection Act and through international efforts such as the Basel capital accords. And while these reforms reach far more broadly than just addressing risks posed to the system by the largest financial institutions, they provide extremely important tools to both reduce the risks presented to the financial system by these companies and level the playing field for their smaller competitors.

But before we go any further, I think it is important to be clear about what people mean when they talk about financial institutions that are too big to fail. The too-big-to-fail catchphrase appears to mean different things to different people. A common use of the too-big-to-fail shorthand is the notion that the government will bail a company out if it is in danger of collapse because its failure would otherwise have too great a negative impact on the financial system or the broader economy.

With respect to this understanding of too-big-to-fail, let me be very clear: it is wrong. I will discuss this issue in more detail later in my remarks, but as a result of the comprehensive reforms passed by Congress and signed into law by President Obama, no financial institution, regardless of its size, will be bailed out by taxpayers again. Shareholders of failed companies will be wiped out; creditors will absorb losses; culpable management will not be retained and may have their compensation clawed back; and any remaining costs associated with liquidating the company must be recovered from disposition of the company's assets and, if necessary, from assessments on the financial sector, not taxpayers.

Too-big-to-fail is also used as a way of discussing whether or not large financial institutions benefit from lower borrowing costs because of their size. If creditors believe that a company is so big or interconnected that the government will step in to keep it from failing and limit creditors' exposures to losses, they will not have sufficient incentives to demand appropriate compensation for lending the company money. As a result, any company that is perceived by lenders as being too big to fail might enjoy a funding advantage compared to other companies that do not benefit from such a perception.

While the Dodd-Frank Act makes it very clear that the government cannot bail out a failing financial company, the evidence is mixed whether market participants, specifically lenders to bank holding companies, nonetheless provide any funding advantage to the biggest financial companies based on some belief that the government would bail them out if necessary. In addition to the question of whether the market provides any such funding advantage, it is also important to ask why the market would continue to do so in light of the law's clarity that taxpayer support will not be forthcoming and thus whether any funding advantage might be attributable to other reasons.

Although some commentators have suggested that the largest bank holding companies do receive a funding advantage by virtue of their perceived too-big-to-fail status, some of the evidence they rely on predates the financial crisis and Dodd-Frank's reforms. We must therefore determine whether and to what extent such an advantage might persist. It is also quite hard to isolate exactly what factors could contribute to a lower cost of funding for a larger institution than for smaller competitors.

Financial institutions' borrowing costs are determined by a large number of factors, including their creditworthiness, the amount of debt they issue, their business mix, their exposure to different markets, and many other considerations. Larger companies that issue more debt benefit from features such as greater liquidity, a greater pool of potential investors, more research analyst coverage, and a more diversified funding base than their smaller competitors. Research shows that large nonfinancial corporations enjoy a similar funding advantage over their smaller and less diversified peers. In other words, funding advantages that larger companies enjoy may be a function of these factors rather than market perceptions of the probability that they would receive government support.

It is also important to note that some evidence actually suggests the opposite conclusion—that larger banks' funding costs are higher than those of their smaller peers. In the wake of the financial crisis, the largest banks' borrowing costs have not only increased more than those of some regional bank competitors, but have also increased to higher absolute levels. While some of this increase is likely due to considerations such as exposure to Europe and many other factors, it may also be a reflection of the reforms put in in place by the Dodd-Frank Act. Also, smaller banks often derive a higher percentage of their funding from lower-cost, insured deposits compared to larger banks that rely on a greater percentage of higher-cost debt to fund their activities.

One of the pieces of evidence that the largest bank holding companies benefit from their perceived too-big-to-fail status stems from the ratings uplift that credit rating agencies provide to these companies based on the expectation that they would receive government support in the event of financial distress. In the immediate aftermath of the crisis, the largest bank holding companies received as much as a seven-notch uplift to their credit rating compared to their underlying fundamental creditworthiness. This was based on the rating agencies' assumption that the government would provide emergency assistance if necessary.

Following enactment of the Dodd-Frank Act, the rating agencies indicated that they would monitor the impact of financial reform implementation on the largest financial companies and adjust their ratings as appropriate. Since then, the rating agencies have removed as much as six notches of uplift attributable to expectations of government support. One rating agency has also recently indicated it may further reduce or eliminate its remaining ratings uplift assumptions by the end of 2013. So to the extent the largest financial companies have been benefiting from a funding advantage based on their ratings, that uplift has been declining and appears to be continuing to go away as implementation of the Dodd-Frank Act progresses.

Other evidence also points to potential market recognition of progress on financial regulatory reform implementation. If investors still perceived large bank holding companies as too big to fail, we would expect to see low credit default swap spreads with little variation between the largest companies. However, compared to their precrisis baseline, the credit default swap spreads for the largest bank holding companies have not only increased on an absolute basis but investors have also increasingly distinguished between the largest bank holding companies as measured by the variance in their spreads.

Another interesting wrinkle to this data point is that the credit default swap spreads for these companies have recently been declining. While spreads remain higher and more varied between different firms than precrisis levels, the recent trend could be caused by multiple factors. It could reflect market recognition of the substantial progress to make these companies more resilient than they were before the crisis, reduced concerns about their exposure to Europe, renewed attention to the too-big-to-fail debate, or a combination of all of the above and other reasons.

The foregoing discussion demonstrates above all else that the evidence on both sides of the argument is mixed and complicated, making it hard to attribute the existence or absence of a funding cost advantage to any single factor, including a market perception of a too-big-to-fail subsidy. The bottom line is simply that it is important to acknowledge the difficulty of making these assessments and to be cautious about drawing conclusions in either direction. We will continue to carefully consider the developments and the work in this area, remaining mindful that our financial system is dynamic and that we need to remain vigilant to evolving risks.

In the meantime, we must continue to work hard to reduce the risks posed by large financial companies and keep putting in place the measures to wind such companies down with minimal impact on the rest of the economy if the need arises. To the extent the largest bank holding companies enjoy any funding cost advantage based on a perceived too-big-to-fail status, these efforts should help wring it the rest of the way out of the market. And most importantly, this work is making our financial system safer and a stronger, more reliable engine for providing credit to help our economy grow.

I think about financial regulatory reforms following the crisis in three categories. First, we are putting in place a comprehensive set of reforms to make firms stronger and safer, reducing the chance that they will fail. Second, a number of measures are designed to reduce risks and improve market transparency and investor protections, which also help make the financial system safer. Third, if a financial company does fail, provisions including the Dodd-Frank Act's living wills requirements and its orderly liquidation authority give regulators important tools they lacked before the crisis to resolve a failing company while limiting the fallout to the rest of the financial system and the economy.

The Dodd-Frank Act and the international Basel capital reforms contain a number of important provisions to make financial institutions stronger and less likely to fail during periods of stress. First and foremost, capital requirements have increased significantly in terms of both quality and quantity and provide a significant buffer to make banks more resilient. Other important reforms include the Volcker rule, which limits the ability of banks that have access to the federal safety net to make risky trading bets and invest in speculative funds, and limits on exposures to particular counterparties to reduce interconnectedness in the financial system.

The new capital requirements include surcharges that increase based on institutions' size and complexity, which should not only reduce the chance that they fail but also have the ancillary effect of helping offset the benefit, if any, that the largest, most complex institutions receive in the funding markets.

The 18 largest bank holding companies that are subject to the Federal Reserve's Comprehensive Capital Analysis and Review stress-testing process roughly doubled the amount of their Tier 1 common equity capital over the last four years from approximately $400 billion to almost $800 billion at the end of 2012. This substantial amount of additional capital gives these companies a much stronger ability to withstand a future downturn. As Federal Reserve Chairman Bernanke noted in a speech earlier this month, after being subjected to a severely adverse stress scenario, the highest quality capital at these 18 companies was more than two percentage points higher than at the end of 2008.

The financial crisis also taught us that companies' liquidity and funding models matter a great deal as well. The Basel Committee on Banking Supervision's Liquidity Coverage Ratio and Net Stable Funding Ratio requirements constitute key parts of the Basel III reforms. When these provisions are implemented in the United States, they will contribute significantly to improving the stability of the financial system and making it less vulnerable to the destabilizing runs that we experienced during the crisis. While much work remains to be done in these areas, liquidity in the US banking system is much better than it was before the crisis. Banks' holdings of cash and highly-liquid securities now exceed $2.5 trillion, more than double the amount at the end of 2007.

We are also working to reduce the risks to the financial system posed by the largest nonbank financial companies. The Financial Stability Oversight Council is in the final stages of evaluating an initial set of nonbank financial companies to determine which companies will be supervised by the Federal Reserve Board and subject to prudential standards including capital and liquidity requirements. For the first set of companies, the Council is nearing the end of the process.

The Dodd-Frank Act also contains a number of provisions that are designed to reduce risks in the system, increase transparency, and strengthen investor protections. Collectively, these measures help make financial institutions and the financial system as a whole safer and stronger.

Comprehensive reform of the over-the-counter derivatives market, which was largely unregulated prior to the crisis, provides examples of important reforms in each of these areas. Last month, mandatory central clearing of certain swap transactions began. More categories of swaps and an expanded universe of financial institutions will be subject to central clearing requirements as the year progresses, reducing risks to the financial system and to the financial institutions engaging in these transactions.

As a result of the Dodd-Frank Act's trade-reporting requirements, the price and volume of certain swap transactions are now available to regulators and the public at no charge, and required reporting for additional asset classes will continue to roll out. Swap dealers also now have to register with the Commodity Futures Trading Commission and adhere to new standards for business conduct and record-keeping.

The reforms I have just discussed, along with many other provisions of the Dodd-Frank Act, go a long way towards making financial companies safer and stronger and reducing the likelihood that they will fail. But in the event that a financial company does fail, the Dodd-Frank Act provides important new tools to facilitate its resolution while limiting the negative impact on the rest of the financial system and the economy. Two provisions of the Dodd-Frank Act are particularly important in this respect: its living wills requirement and the orderly liquidation authority.

It is helpful to think of the living wills requirement and the US Bankruptcy Code as providing a first-line defense to deal with a failing financial company. The largest bank holding companies and any designated nonbank financial companies are required to submit comprehensive plans for their rapid and orderly resolution to the Federal Reserve and the Federal Deposit Insurance Corporation (FDIC). These plans, or living wills, can be used by regulators as a road map for an orderly resolution of the company under the Bankruptcy Code, if the need arises.

If the Federal Reserve and FDIC determine that the plans are not credible or adequate to facilitate the orderly resolution of the company in bankruptcy, they can take the following steps. First, they can require a company to submit a revised living will that fixes any shortcomings identified by the regulators. These resubmissions can include proposed changes in the company's business operations and corporate structure to facilitate an orderly resolution in bankruptcy. If the Federal Reserve and FDIC determine that the revised plan is still insufficient, they can impose other remedies, including stricter capital, leverage, and liquidity requirements and restrictions on the company's growth, activities, and operations.

The living wills clearly provide an important tool for regulators, but it is worth noting that they also provide an important tool for the companies that have to prepare them. Companies are forced to closely examine their structure and activities, determine what risks they might present, and how they could be resolved in an orderly manner should the need arise. If companies use the living wills process to simplify their legal structures and improve the management of their businesses, it will not only help facilitate their orderly resolution but also help prevent that need from ever arising.

If living wills and the bankruptcy process are the first-line defense to protect against the failure of a financial institution, then the Dodd-Frank Act's orderly liquidation authority can be thought of as the second-line defense. While the Bankruptcy Code should be the first resort to resolve a failing company, the orderly liquidation authority provides a new and important backstop for the FDIC to liquidate a failing financial company that cannot otherwise be resolved without serious adverse effects on US financial stability.

There are a number of requirements that must be satisfied in order to use the orderly liquidation authority and that govern its use, but I want to reiterate that it must be used to wind down a failing company, not bail it out. The statute is clear that any company put into receivership pursuant to this authority must be liquidated. As I mentioned before, creditors and shareholders must bear the losses of the company. Any funds spent to liquidate the company must be recovered from the disposition of the company's assets and, if necessary, from assessments on the broader financial sector.

Some have expressed concern that we cannot know how effective the orderly liquidation authority will be until we actually put it to use. While it is true that we may not be able to fully test this framework until an actual failure, the regulatory community and the private sector have engaged in a substantial amount of important work to prepare for the potential use of this authority. Treasury, the Federal Reserve Board, the FDIC, and other financial regulatory agencies have made extensive preparations and conducted planning exercises to be fully prepared to wind down a company whose failure could threaten the stability of our financial system. The private sector has been conducting similar planning exercises.

We have also been actively engaged with our international regulatory counterparts to strengthen our collective ability to resolve large cross-border firms both through forums like the Financial Stability Board and on a bilateral basis where appropriate. The close collaboration between the FDIC and the Bank of England to develop coordinated approaches to resolution is particularly important, given the significant percentage of US financial institutions' overseas operations that are located in the United Kingdom. The FDIC has also recently launched a joint working group with the European Commission to coordinate on resolution planning. Continuation of these efforts will be essential to making the Dodd-Frank Act's orderly liquidation authority as effective a tool as possible to mitigate threats to US financial stability.

We will not know the full impact of these reforms until they are fully implemented and tested in practice. In some cases, such as capital and liquidity requirements, reforms will not be fully in place for several more years. But given the headway that we have already made and the additional work that remains to be done, we need to finish the course that we set in 2010 and focus on getting existing reforms fully implemented. It is important to consider the totality of what the Dodd-Frank Act and Basel reforms do and give existing reforms time to take both shape and effect.

Having said that, we must never lose sight of the need to remain vigilant. We have a dynamic financial system. Constant evolution in the financial system and in the behavior and activities of financial institutions will require regulators to be flexible, to be willing to consider new threats to the financial system, and to stand ready to pursue new solutions to address emerging threats.

The question of what the role of government should be in maintaining financial stability is not new. In preparing for this talk, I visited the Treasury library to look at some of Hyman Minsky's work. It was fascinating to read Minsky's original typewritten manuscript from 40 years ago on the topic of financial instability and economic disasters. He started his paper with the following observation: "A striking characteristic of economic experience in the United States is the repeated occurrence of financial crises—crises that usher in deep depressions and periods of low-level economic stagnation." We saw all too vividly in the most recent crisis the economic harm that financial crises can inflict as measured by the trillions of dollars of lost wealth and millions of lost homes and jobs.

Minsky also commented on the rapid evolution of the financial sector in his paper, in terms of both financial institutions and practices. While the scale of financial institutions was not a focus at the time Minsky wrote that paper, the fundamental questions faced by policymakers and regulators today are not so different. How do we strike the proper balance of safety and risk in the financial system? How can we provide a level playing field that does not confer advantages on different participants in the financial markets? How can we preserve investors' confidence in the financial system so that it can provide the services and credit that the economy needs to prosper and grow? There are no easy answers to these questions, and the menu of solutions must be much broader than merely thinking about size and scope. What we do know is that we need to keep working hard to implement rules of the road that are appropriate not just for the financial system that we have today but also for the system we will have in the future. I hope my remarks tonight have provided a fuller understanding of our approach and the significant progress we have made.

Sessions

SESSION 1

Five Years After: Is There Progress in Financial Regulation?

José Antonio Ocampo, Frank Veneroso, Robert J. Barbera, Floyd Norris

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How should one proceed, **BARBERA** asked, if one accepts Hyman Minsky's diagnosis but not his proposed remedy; which is to say, if one accepts Minsky's theory of financial instability but not his call for the "socialization of investment"? Referencing Joseph Schumpeter and Nicholas Kaldor, Barbera argued that giving the government greater control over investment in order to smooth out the boom-and-bust cycle would diminish the "recklessness and enthusiasm" of the private sector, which generates a higher growth trajectory over the long term. In that light, he asked, how do we strike the proper balance with respect to regulation and monetary policy?

The standard approach is that monetary policy should be in charge solely of price stability, while regulation takes care of financial instability. Unfortunately, said Barbera, that division of tasks is inadequate. The problem is that, as we discovered in both 1999 and 2008, there can be finance-driven instability without there being elevated wage and price levels. Monetary policy needs to play a key role in attending to the potentially destabilizing dynamics of the financial system.

Elaborating on how we should (and should not) think about regulation and monetary policy, Barbera mentioned two names: Jamie Dimon, head of JPMorgan Chase, and Jean-Claude Trichet, former president of the European Central Bank (ECB). Barbera noted Dimon's complaints to the effect that the onerous costs of the 2010 Dodd-Frank Act were making it difficult to deliver the kind of returns expected by shareholders. The appropriate response, said Barbera, is to acknowledge that deadweight loss is unavoidable with a set of regulatory changes as large and unwieldy as Dodd-Frank's. He suggested that regulatory micromanaging is a "backdoor" means of having the government influence investment decisions. By contrast, a 20 percent Tier 1 capital requirement, while it too would diminish return on equity, allows for less such micromanaging.

Moving to monetary policy, Barbera noted Trichet's boasts about the ECB maintaining low rates of inflation. The best way to understand this, said Barbera, is with a medical analogy: this is like a kidney doctor unconcerned that his or her patient is dying, as long as the kidneys look fine. Despite the fact that the eurozone patient was dying, wage and price inflation looked good.

Although central banks like the Bank of England and the US Federal Reserve, by contrast with the ECB, were initially formed in order to handle panics in the banking system, the focus has since shifted to controlling wage and price inflation. Although inflation was the primary destabilizing dynamic in the 1960s and 1970s, and thus the evolving focus, since the mid-1980s this has no longer been the case. Since then, Barbera explained, inflation has been low and the real source of instability has been in the asset market; central bank policy should reflect that, rather than remaining narrowly focused on the "kidney" while the overall health of the patient suffers.

Barbera ended with some counterfactuals about how monetary policy would have looked if one had attended solely to inflation in the US context. He noted that following the Taylor rule in the last business cycle, if we were using a measure of headline inflation, would have required monetary policy to tighten in 2002 and 2003, which could easily have produced a double-dip recession. By contrast, paying attention to asset markets would have provided a better indication that the financial system was full of excesses in 2004. And although tightening at that point would not have prevented the housing bubble, Barbera admitted, raising the Fed funds rate much faster could have burst the bubble one year earlier, which would have meant eliminating the exponentially spectacular excesses of the last year of the bubble. Focusing on asset markets right now, Barbera said, also leads one to be enthusiastic about the Fed's quantitative easing (QE) policy and forward guidance, and to the view that the ECB is well behind in its policy response.

OCAMPO focused his discussion on the regulation of cross-border capital flows. This is a topic, he said, that is not only central to emerging economies but also has relevance for countries on the eurozone periphery. The latter are affected by unregulated cross-border capital flows in ways that are similar to what we have seen in emerging economies: a cross-border boom in financial flows generates asset bubbles and large, unsustainable current account deficits.

Ocampo pointed to discussions within the International Monetary Fund (IMF) that have taken place since the global financial crisis on this issue of cross-border finance. A position has emerged from these discussions that, while not a consensus view within the IMF, represents significant conceptual progress in Ocampo's estimation: that capital flows carry risk and as such they should be regulated under certain conditions. What the IMF calls "capital flow management techniques" should be a normal part of countries' regulatory tool kits and not something abnormal.

Unfortunately, said Ocampo, the IMF tends to regard these capital account regulations as "last-resort interventions." He characterized the IMF position as follows: once all other measures have been exhausted—such as using countercyclical monetary and fiscal policies, letting the exchange rate appreciate if there is a capital boom, and accumulating reserves—then and only then should capital account regulation be attempted.

The problem with this position, according to Ocampo, is that the ability to adopt countercyclical monetary policy is limited by the volatility, or the procyclicality, of capital flows. For instance, adopting countercyclical monetary policy in the face of a boom would require raising interest rates. However, raising interest rates will itself attract capital, essentially resulting in a procyclical policy. Likewise, letting the exchange rate absorb the shock has a procyclical effect: for an economy that has net liabilities in a foreign currency, appreciation generates a capital gain. It also generates a current account deficit, said Ocampo; a potential source of crisis generation. All of these responses, along with the accumulation of reserves, are constrained in the absence of the regulation of capital inflows.

Ocampo praised an element of the IMF's position that called for taking capital account regulation into consideration in trade and investment agreements. He noted, for instance, that free trade agreements with the United States, as well as some OECD investment agreements, forbid the use of capital account regulations.

Ocampo also stressed that source countries should be aware of the externalities generated by capital flows. Reflecting on the state of current global imbalances, Ocampo pointed to a reduction in the US deficit; Europe turning to a slight surplus position in the current accounts, which reflects the absence of expansionary monetary or fiscal policy in the eurozone; and oil-exporting countries running large surpluses.

On the other side of these moves toward surplus, China is reducing its surplus and non-oil-exporting emerging economies are being forced to accumulate deficits. What, Ocampo asked, should we do about this? Some argue that the United States, Europe, and Japan should not be running expansionary monetary policy; Ocampo disagreed. These expansionary policies are needed by the world economy, he said, and the question is how to prevent them from generating risks in the global economy, reinforcing the necessity of global regulation of capital flows.

The use of capital account regulations by both receiving countries and "sending" countries (countries generating outflows) is important, he emphasized, because more than 80 percent of global financial assets are in industrial countries. This means that even a minor disturbance in the industrial economies can produce outsize effects in emerging economies. This issue of cross-border flows, Ocampo concluded, is still being underestimated by regulators.

VENEROSO focused on the question of what government agencies will do to help prevent new financial bubbles. Beginning with the state of regulation, he referenced Elizabeth Warren's observation that no matter what crime is committed in the financial sector, there is a settlement, a comparatively small fee is charged, and the wrongdoers get to go home and sleep in their beds. Citing statements from former Treasury Secretary Timothy Geithner and Attorney General Eric Holder, Veneroso commented that the absence of indictments is commonly excused by pointing to the possibility that legal action would rattle the markets. Meanwhile, Veneroso continued, the head of the Commodity Futures Trading Commission tells us that he lacks adequate funding for taking care of bad actors.

Turning to the question of when the next credit bubble will emerge, Veneroso pointed out that we are not very far below the credit-to-GDP peaks of the past and that corporate debt is above US historical trends. The odds of a stock market bubble developing are high, and we may already be there, he warned. The market-capitalization-to-GDP ratio is already at 125 percent. This is, said Veneroso, 50 percent above the highest level we ever reached in the 100 years before 1995, when the bubble era began.

Veneroso then moved to John Maynard Keynes's critique of the idea of rational expectations. In Keynes's view, agents cannot see the uncertain future, so they extrapolate from the present and the past—expectations are adaptive. Moreover, these adaptive expectations are weakly anchored. Therefore, the "name of the game" in the stock market, Veneroso said, is to game other people's loosely anchored expectations. Although Hyman Minsky also believed that uncertainty blinds us to the future and that expectations are adaptive, he had a different take on this, according to Veneroso. Minsky said that if investors forget about bad periods, they will become complacent. When stability reigns, precautionary demands will fall, meaning asset prices will rise. The more stability that is created, the more this will tend to inflate asset prices. Although Veneroso qualified that Minsky was talking here about real assets financed by debt rather than stocks, he suggested we could adapt this view to the stock market. Veneroso added that Minsky believed government interventions to prevent debt deflations reduced people's sense of fear, making them more inclined to take on risk. In other words, Veneroso argued, these interventions can make people more inclined to speculate in stocks at high prices.

One of the problems with the Federal Reserve's asset purchases is that, if there is not a good output response in the real economy, the central bank will be concerned about letting asset prices go down, due to the fragility of demand. In effect, Veneroso argued, this means that the point at which the central bank would intervene to provide more quantitative easing rises with stock prices. This is, he said, a "bubble machine," whether or not the Fed wants to admit it.

Veneroso drew attention to some discrepancies between operating and reported earnings data. Recently, operating earnings have been much higher than reported earnings. If you go back 15 years, he pointed out, the differences are much smaller, and if you go back 25 years, the differences basically disappear. Veneroso suggested that reported earnings are being inflated. Profit-to-GDP ratios and profit margins are higher than ever before and no one knows why, he said. Comparing flow-of-funds data to the National Income and Product Accounts (NIPA), he suggested that NIPA might be overstating corporate profits.

Veneroso also highlighted what he described as another "weird" result, when looked at from a financial balances perspective: although we have brought the fiscal deficit down from 10 percent to 5 percent of GDP, we have not brought down the profit-to-GDP ratio (the corporate profit share of GDP would normally tend to come down along with the government deficit, Veneroso explained). In Minsky's and Michal Kalecki's work, profits and investment tend to be correlated, he noted, but we currently have very low net business investment, alongside record-breaking corporate profits.

In the bubble era, as stock prices rise, net equity issuance becomes more negative—the opposite, Veneroso commented, of what the "rational" agent would do. This is because "corporate managers have joined Keynes in the casino," as he put it. Managers' expectations are adaptive: when equity prices rise, they expect them to continue to rise, thus leading them to speculate and buy in their own shares. This creates incentives to inflate operating earnings, "shower" management with stock options, and pursue short-term capital gains. Concluding with a policy recommendation, Veneroso suggested that we need to keep Wall Street honest with better enforcement of financial reporting practices.

SESSION 2

Measures and Implications of Inequity in Income and Wealth

Dimitri B. Papadimitriou, Branko Milanovic, Edward N. Wolff, Thomas Masterson

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MILANOVIC examined and compared how national and global inequalities changed in the age of globalization, between 1988 and 2008. He began by observing that national inequalities increased, for the most part, over this period. In other words, there were more countries with an increase in Gini coefficients than countries with a decrease. Importantly, it is the larger countries, in terms of population, that experienced the more dramatic increases in inequality.

Milanovic highlighted a few issues raised by these observed increases in national inequality. First, there is the question of whether inequality played a causal role in the global financial crisis (Milanovic pointed to an op-ed he wrote in 2009 that made the case for such a causal link). The second issue is that inequality might be even greater than the data suggest. This is due to the fact that household surveys tend to undermeasure the very rich, either because the latter tend not to participate in such surveys or they underestimate their incomes when they do participate. Finally, he mentioned that perceptions of inequality can outstrip actual inequality, particularly in the presence of political or crony capitalism, and that such changing perceptions may have played a role in the Arab Spring.

Moving to patterns of global inequality—inequality between world citizens—over the 1988–2008 period, Milanovic observed that inequality in this sense has been on the decline since 2000. The way to reconcile these opposite movements in national and global inequality is by looking at the very high growth rates of two poor countries: China and India. Despite the rising inequality *within* each of these countries, the fact that they are growing at such rapid rates lifts the incomes of their populations to the point that it reduces global inequality. This is likely the first time since the Industrial Revolution that we have seen a decline in global inequality, Milanovic surmised.

In relative terms, the largest percentage gains in income were made by people around the median of the global income distribution and those in the global top 1 percent. Percentage income gains were the least among the global poor and the global upper middle class (around the 70th–80th percentile), which corresponds to poor people in rich countries and the middle classes in Latin America and Eastern Europe. Switching from relative to absolute gains in income, however, changes the picture. Between 1988 and 2008, the top 5 percent gained more than half of the total increase in global income.

While for many countries the pattern of change in national inequality looks similar to that in the United States, in which the higher percentiles in the income distribution enjoyed the largest percentage gains in real income, the pattern of change in global inequality resembles a "reclined or supine *S*," as Milanovic described it. This latter pattern, in which the global middle class and top 1 percent enjoy the largest gains while those in the global "upper middle class" see the least, has important political implications. In particular, there is the question of what the relationship is between the growth of the middle class in China and other emerging market economies and the absence of such growth in the incomes of the poor and middle classes in the rich world. The growth of the global middle classes is a positive development, from a global perspective, but the question is whether this growth is causally linked to the dip in the global 70th–80th percentile. How these changes in national and global inequality can be reconciled is one of the fundamental issues of this century, Milanovic concluded.

WOLFF looked at changes in household wealth inequality in the United States over the period 2007–10, using data from the Survey of Consumer Finances—which, he noted, contains a high income supplement that provides good data on the very wealthy. Prior to the Great Recession, median wealth was growing fairly well: it was up 24 percent from 1983 to 2001 and 19 percent from 2001 to 2007. This differs from the trends in income growth, he said: median income grew much less during the first period and stagnated in the 2001–07 period.

The Great Recession produced what Wolff described as a "stunning" result: median wealth dropped by 47 percent. By comparison, incomes fell by 5 or 6 percent in real terms between 2007 and 2010. This introduces a puzzle: why, Wolff asked, was median wealth growing so much more than income until 2007, and why did it fall so much more between 2007 and 2010? The other puzzle is that the fall in median net worth was almost twice as great as the fall in the price of houses (47 percent and 24 percent, respectively), even though houses are the main asset of the middle class.

Except for a small upward "blip" from 1983 to 1989, wealth inequality was more or less flat until 2007. From 2007 to 2010, however, it spiked upward. Wolff noted that this large increase in wealth inequality is a very unusual result in the context of a recession. Income inequality, in terms of the Gini coefficient, actually declined over the Great Recession. By contrast with what happened to wealth inequality, he said, this decline in income inequality is the typical dynamic associated with recessions.

According to Wolff, leverage helps explain this unusual change in wealth inequality. The middle class saw rising debt from 1983 to 2007, and particularly during the 1990s and 2000s. Comparing ratios of debt to net worth in 2010, the wealthy top 1 percent had a ratio of 3.5 percent, while the middle class had a debt-to-net-worth ratio of 72 percent.

As he illustrated with an arithmetic example, leverage is beneficial during periods of rising asset prices, in terms of increasing the rate of return on one's net worth; but when asset prices go down, losses are magnified. The higher leverage of the middle class thus led to a much steeper decline in net worth, as compared to the top 1 percent (whose net worth declined by 15 percent, compared to 47 percent for the median). This also helps explain, said Wolff, why net worth for the middle class fell by so much more than the percentage drop in housing prices: leverage intensifies the loss from an asset price decline.

Leverage also helps explain racial changes in wealth inequality from 2007 to 2010. Up to 2007, disparities in wealth between blacks and whites and Hispanics and whites were being eroded due to increasing homeownership rates among blacks and Hispanics; this was largely due to the banking system pushing subprime mortgages among those populations, Wolff maintained. However, higher leverage ratios among blacks and Hispanics caused the racial inequality of wealth to expand during the 2007–10 period. Wolff provided similar results broken down by age, with leverage again playing the key role. In 2007, people under 35 had debt-to-net-worth ratios of 93 percent; for those over 75, the ratios were 2 percent.

Moving to policy lessons, Wolff argued that we have to regulate the mortgage market and securitization more heavily. The increase in leverage among the relevant groups was not just permitted but encouraged by the banking system. Financial institutions were willing to issue questionable loans because they could be quickly packaged and sold off, with no need to hold any of the risk.

MASTERSON presented the Levy Institute Measure of Economic Well-Being (LIMEW). The LIMEW attempts to measure households' command over economic output, broadly speaking. Household income is typically used as a measure of economic well-being and inequality, but there are problems with this approach that the LIMEW is meant to correct, Masterson explained. The LIMEW measures the household's command over and access to commodities (goods and services produced for exchange) and noncommodities (which are either nonmarketable or not marketed). It is generated by using base money income, adding income from wealth (by annuitizing net worth and debt), and subtracting taxes. This last is something not found in the standard household income measures—the LIMEW is an aftertax measure. To these elements are added cash and noncash transfers from government, noncash transfers from labor, and the value of public consumption and household production, many of which are also left out of the traditional household income measure.

Masterson went through the LIMEW estimates for the United States over the period 1959–2007, as well as comparisons with estimates for Canada, Great Britain, and France. For the United States over this period, growth in both LIMEW and real household income was tepid, Masterson pointed out, with average annual growth rates of 0.69 and 0.67 percent, respectively, compared to the 2.3 percent rate of growth in real, per capita GDP. However, these growth rates varied considerably over different periods in that 1959–2007 span. He also noted that in the 1960s and '70s, LIMEW grew more slowly (or shrunk more quickly) than the household income measure, while the reverse was true in the 1980s and '90s.

Masterson highlighted the fact that for the middle quintile, government transfers were the single largest contributor to growth in LIMEW over the entire 48-year period; transfers contributed far more to the growth in economic well-being than base income (which is mostly wages). This is particularly true in the 2000–07 period, he emphasized, in which transfers accounted for almost all of the growth in economic well-being for households in the middle quintile.

Looking at each LIMEW quintile's share of aggregate well-being, Masterson observed that almost 50 percent of the total went to the top LIMEW quintile (in 2007). The top 20 percent's share has been growing since 1959, with every other quintile decreasing slightly, except for the bottom quintile, which ended up more or less the same in 2007. After 1989, growth in the top 5 percent's share of aggregate LIMEW accelerated, accounting for most of the growth in the top quintile's share.

Comparing the Gini coefficients for LIMEW and household income, Masterson said that inequality of household income is greater than inequality of LIMEW. He accounted for this difference by noting that (1) the LIMEW subtracts taxes, and taxes are still somewhat progressive in the United States; and (2) the measure includes household production, which is more equally divided than income and wealth. The change in LIMEW inequality from 1959 to 2007, Masterson remarked, is not due to base money income but to income from wealth; particularly, income from nonhome wealth.

Moving to international comparisons, Masterson noted that the United States has a higher median equivalent LIMEW than Britain, Canada, and France. The gap is larger in terms of per capita GDP, but there has been striking convergence between Britain and the United States in the LIMEW measure, with the gap almost disappearing. The story here, Masterson explained, is that by the mid-2000s, the US-Britain gaps for all deciles (in terms of LIMEW) had shrunk—and the bottom three deciles in Britain actually surpassed the lower deciles in the United States. From the mid-1990s to the mid-2000s, Britain experienced inequality-reducing growth, with the lower deciles growing faster than the higher deciles.

Looking in particular at median economic well-being, Masterson said the gap with the United States converged the most in Britain; this was largely due to Britain catching up to the United States in terms of the contribution of income from wealth and increasing its lead in terms of the contribution of government transfers and public consumption. In Canada, there was a smaller amount of convergence, due to the fact that base income for the middle class fell in the United States from the early to the mid-2000s but actually rose in Canada. In France, there has been barely any convergence at all. Finally, inequality of LIMEW is higher in the United States than it is in all three comparison countries. That inequality gap has increased for Britain and France but decreased for Canada. In terms of policy lessons, Masterson reemphasized the importance of government transfers and public consumption in contributing to economic well-being; not just for the poor, but well into the ranks of the middle class.

SESSION 3

Minsky on Ending Poverty: Jobs, Not Welfare

Justin Lahart, Dimitri B. Papadimitriou, Jan Kregel, L. Randall Wray

MODERATOR:
JUSTIN LAHART
The Wall Street Journal

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

DIMITRI B. PAPADIMITRIOU
Levy Institute

JAN KREGEL
Levy Institute and Tallinn Institute of Technology

WRAY discussed Hyman Minsky's early writings on poverty and unemployment, which have been collected in a new book, *Ending Poverty: Jobs, Not Welfare* (2013), published by the Levy Economics Institute. He outlined three main points that Minsky made in connection with these themes. First, a real "war on poverty" has to include a commitment to full employment. Second, since private markets will not supply it on their own, responsibility for full employment falls to the government. Third, as the issuer of a sovereign currency, the government has the financial capacity to deliver on that goal.

Minsky's full-employment-focused alternative was never actually adopted. Instead, Wray observed, we got the Kennedy–Johnson War on Poverty. The War on Poverty got its start under President Kennedy and was shaped by his Council of Economic Advisers (CEA). Wray outlined the CEA's position as follows: (1) poverty is not inextricably linked to unemployment; (2) unemployment can be reduced to adequate levels through aggregate-demand-focused fiscal policies; (3) however, a certain level of unemployment is necessary to act as a "buffer stock" to keep inflation under control. Wray remarked that these views still hold sway among economists, on both the left and the right.

Minsky rejected these views, Wray explained. From Minsky's perspective, what was missing from this approach to poverty was a government commitment to full employment. Minsky thought that providing training without ensuring access to a job had it backward. And although he did not deny the need for welfare programs, Minsky believed they discouraged labor force attachment. Welfare alone cannot solve the poverty problem, which stems from joblessness, insufficient hours, and low pay. More generally, Wray outlined Minsky's problems with trying to fight poverty through a strategy focused on growth and redistribution. First, depending on investment to stimulate demand leads to financial instability. Second, this sort of investment-led growth favors high-wage workers. Finally, the amount of redistribution that would be necessary would be politically infeasible.

Tax cuts and loopholes intended to create a more favorable business environment were also part of the Kennedy administration's plan, and Minsky was equally skeptical of this approach, Wray said. These tax cuts shift income to capital, and contracts granted to high-tech industries generate demand for high-skilled, high-paid labor, all of which exacerbates inequality. A private sector–led expansion also increases business confidence and debt financing; margins of safety decline and financial fragility increases. Minsky held that an expansion led by the public sector, by contrast, enhances stability by providing safe assets and generating income flows.

The government could improve the distribution of income by generating full employment through the funding of a job guarantee or employer-of-last-resort (ELR) program, offering a job to anyone willing and able to work. As Wray stressed, the point is that the government funds the job guarantee, not that it necessarily operates the program. This approach directly eliminates poverty that is due to joblessness, as opposed to the investment-led strategy in which rising demand for specialized labor somehow "trickles down" to those who need it. Tight full employment generated through an ELR program raises the incomes of low-wage workers faster than high-wage workers. The ELR wage effectively becomes the minimum wage and the program operates as an automatic stabilizer: during a slowdown, workers move into the ELR pool; as the economy picks up, they are drawn into the private sector and government spending declines. This is superior to maintaining a "buffer stock" or "reserve army of the unemployed," Wray said, because it allows those who would otherwise be unemployed to continue enhancing their skills and maintaining their employability.

Wray explained that Minsky anticipated a number of objections his proposal might draw. Minsky maintained that "irrational prejudices" against government spending and deficits needed to be ignored, and that an ELR program would be less inflationary than the alternative—an alternative in which unemployment decreases the supply of potential output while welfare increases demand. Maintaining full employment with an ELR program need not be inflationary by itself. For any inflationary pressures that emerge on the way to full employment, Minsky advocated placing constraints on the growth of wages at the high end. He was not, Wray pointed out, opposed to wage and price controls. Wray noted that inflation is less of a concern with today's economy than it was when Minsky was writing in the 1960s. Finally, one of the institutional barriers Minsky wrote about in the 1960s, the exchange rate regime, no longer applies to the United States and its floating currency.

In 1994, **PAPADIMITRIOU** and Minsky wrote a paper on full employment ("Why Not Give Full Employment a Chance?," Paper 173, Hyman P. Minsky Archive). At the time, they were concerned about bringing down the unemployment rate, which stood at 6.6 percent. Fast forward to today, Papadimitriou said, and the unemployment picture is much worse. In the 1994 paper, he explained, they tried to show the complementarity between full employment and financial stability and identified two barriers to prosperity: a weak financial system and a limit to publicly financed demand. A system of private financial institutions capable of sustaining prosperity in an advanced, complex, financial economy was necessary, along with a system of regulations that would supervise and backstop these institutions. As is still true today, Papadimitriou added, in 1994 there was a need for a new international financial architecture. Today's financial system, he said, is not capable of financing private demand sufficient to generate full employment. Reliance on government deficits or government-assisted private financing is therefore necessary.

So far, Papadimitriou argued, quantitative easing has not translated into an increase in financed spending. Moreover, he stressed, banks now play a much less important role in financing prosperity than they did in the past. If full employment is to be achieved, publicly financed demand will have to make up for the deficiency in privately financed demand.

Unfortunately, government spending has not been effectively supporting private productivity or the well-being of most citizens, as Papadimitriou pointed out. Instead, we have seen the US government pursue austerity of the sort imposed in Europe. Government spending, he said, needs to be shifted to research and development, education, infrastructure, and other productive activities.

Papadimitriou reflected that in 1994, he and Minsky proposed a 4 percent unemployment rate as a reasonable policy objective. We have been at that rate before, he noted, and we can get there again. However, he cautioned that the link between GDP growth and employment has been breaking down over the last three decades. Papadimitriou cited a recent Levy Institute study ("Is the Link between Output and Jobs Broken?," Strategic Analysis, March 2013) indicating that today, each 1 percent increase in GDP will improve the unemployment rate by only one-third as much as it would have in the 1970s. As a result, far faster growth or a sustained recovery is necessary in order to measurably improve the employment picture.

The ratio of employment to the working age population has been declining since the 2007 crisis. Comparing the precrisis employment peak to current employment levels, Papadimitriou remarked that three million jobs are missing. Taking population growth into account, the economy would need to create 12 million jobs just to get back to the precrisis employment-to-population ratio.

To accelerate job growth and permanently bring the economy in close approximation to full employment, said Papadimitriou, the government needs to create a modern-day equivalent of the trio of work-based programs featured in the New Deal: the Civilian Conservation Corps, the Works Progress Administration (WPA), and the National Youth Administration. Two central principles motivate this work-based approach: an abhorrence of "the dole" and the importance of paid work in sustaining human dignity. Papadimitriou explained that a modern-day WPA would not only move people from welfare to work but also provide goods and services to poor communities, including supplementary labor for various public projects, the construction of public buildings, and the provision of care services for children and the elderly.

Papadimitriou calculated how much such a program would cost today. Assuming a minimum wage income of $20,000 per year and adding 50 percent for the cost of materials and administration, the total cost to support one million jobs would be $30 billion. Creating one million jobs through youth programs, which can pay subminimum wages, would cost $20 billion. Combining these two programs to employ five million people would cost $130 billion, which Papadimitriou pointed out is less than 1 percent of GDP.

He then delved into a direct job creation program now being implemented in Greece. Announced in 2011, the program was designed to support 55,000 people, using funds from the European Union. At the time, over 800,000 people were unemployed in Greece, and the picture has only worsened since, he said. Although the program was intended to provide 55,000 jobs, roughly 270,000 applicants, largely women and female youth, qualified—and this, Papadimitriou stressed, was back when unemployment was at 16.2 percent, not the 30 percent now being projected. Although the program needs to be scaled up, appeals to do so have fallen on deaf ears in Berlin and Brussels, he said.

Looking at the social and economic impacts of unemployment, Papadimitriou reminded the audience that long-term unemployment eventually becomes structural, as workers' skills deteriorate and they become unemployable. Moreover, informal work expands and the expense of the formal economy and inequality increases, eroding social cohesion. All of this, he said, along with increases in poverty, homelessness, crime, poor health, and depression, is happening in Greece.

KREGEL discussed some of the international dimensions of Minsky's work. As with global inequality, measures of global poverty have declined recently, with the following caveat: the situation is not as good as it looks, due to the incredible success of India and China. These countries have succeeded in dramatically reducing poverty with policies to generate employment. The conclusion one ought to draw from this, Kregel reasoned, is that we should be looking to such employment policies as sources of poverty reduction, as opposed to relying on some of the less successful policies that have traditionally been promoted.

The United Nations has been a proponent of what Kregel described as "mistaken" policies with respect to addressing poverty. The traditional UN approach is based on the idea that there are constraints to development: domestic savings gaps, scarcity of domestic resources, and external resource requirements. The recommended response in the face of these constraints is to increase domestic savings, but since incomes are not high enough to do so in most developing countries, the recommended approach is to rely on foreign savings—the transfer of real resources through either official development assistance or private aid and investment flows. This is, said Kregel, the international equivalent of welfare, and it was part of the foundation of the UN's approach through the 1990s. The UN's first "Development Decade," formulated in the 1960s, was based on the idea that 1 percent of developed countries' GDP (0.7 percent of GDP in official development assistance) would be transferred to developing countries. There were four such Development Decades, up to the 1990s.

Kregel noted that if you examine the historical record, it is virtually impossible to find a period in which developed countries actually transferred net real resources to developing countries. He recounted an anecdote in which the Chilean finance minister, in a recorded conversation with President Nixon, declared the program a failure: Latin America was actually transferring resources to the United States. Eventually, the UN abandoned this policy. In place of a fifth Development Decade, we got the Millennium Development Goals (MDGs), which reduced the emphasis on resource transfers and focused instead on a directed-aid strategy designed to meet measurable social development goals. Kregel noted that the MDGs still require the transfer of external resources to developing countries—$100 billion per year up to 2015.

Part of the change in policy was motivated by the idea that the focus on transferring resources in order to reduce poverty needed to be changed. Kregel reflected on his role in preparing the "outcome document" of the UN's 2005 global summit, in which he managed to include a paragraph on full employment (paragraph 47). The question is, he asked, how can employment be made a part of the MDGs? The simplest way to do so, he suggested, is by having government take responsibility for providing employment to anyone willing and able to work at, or marginally below, the prevailing wage in the informal sector. Such an ELR program, he argued, would be more successful at reducing poverty than an approach based on welfare programs involving the net transfer of resources (including, he added, basic income guarantee programs).

If we look at existing direct job creation programs, the key contributions go beyond those we would normally think of: employment and income. In addition, there are substantial collateral benefits; Kregel highlighted education in particular. He used the example of an Argentinian employment program that exhibited similar trends to those highlighted by Papadimitriou; namely, large participation rates from women. This employment program included a primary education component. Most of the women in the program were illiterate or semiliterate, and the classrooms, Kregel recalled, were filled with middle-aged women learning to read and write. A suitably designed ELR program, he said, can contribute to meeting the MDGs: eradicating hunger and poverty; providing universal primary education; promoting gender equality and the empowerment of women; reducing child mortality; and improving maternal health. Women's active participation in the labor force, as well as in various activities that can be part of an ELR program—Kregel cited the Argentinean example in which women were involved in organizing and petitioning the government to create decent sanitary services in the slums—encourage women's social and political empowerment while also helping to advance toward many of these goals. A properly designed ELR, said Kregel, would enable governments to meet a substantial number of the MDGs at a much lower level of expenditure than would be required in terms of transfers.

SESSION 4

Systemic Sources of Inequity and Financial Instability

John Cassidy, Alan S. Blinder, Steven M. Fazzari

MODERATOR:
JOHN CASSIDY
The New Yorker

ALAN S. BLINDER
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STEVEN M. FAZZARI
Levy Institute and University of Missouri–Kansas City

BLINDER made three main "Minskyan" points. First, despite all of its substantial achievements, the financial system is a source of macroeconomic instability: every 75 years or so, he said, it causes a depression or near depression. Second, part of the value added in employment in the financial industry derives from fooling people rather than helping them. Blinder identified his third point as the most controversial: the financial industry is too big.

Beginning with instability, Blinder mentioned that years ago he coined "Blinder's Law of Speculative Markets," which says that markets almost always respond in the proper direction but they exaggerate the magnitude of the response. Minsky also taught us that markets forget, and it is clear, Blinder said, that in 2013 the financial markets are already forgetting the lessons of the last crisis. If you take most standard economic models and substitute "forgetting" for rational expectations, you will get a much more Minskyan view of the world—and a much more accurate view, he added. In good times, market participants tend to believe that the good times will never end, leading to overleveraging.

One of the reasons Blinder offered for the inherent instability of financial markets is that excessive risk taking is encouraged when playing with "OPM" (other people's money) as opposed to "MOM" (my own money). Along with this natural tendency to overleverage when playing with OPM, Blinder continued, many traders working at financial institutions have been given incentives, through their compensation packages, that lead to excessive risk taking: they reap huge rewards when a gamble pays off and get a mere slap on the wrist when it fails. As financial institutions continue to forget, whatever little reform of compensation practices there has been will disappear, he predicted.

Blinder confessed to being surprised that financial practices amounting to fraud or near fraud could have developed to the point of becoming a "macroeconomic event." This, he offered, is the justification for the Consumer Financial Protection Bureau (CFPB). Blinder emphasized the importance of making the CFPB a permanent body, in order to combat financial market forgetfulness.

Beyond fraud, one of the reasons the crisis was made possible, Blinder argued, was through excessive complexity. There were cases of deliberately created asymmetric information in which one counterparty knew a lot more than the other—or at least they thought they did (as we saw in the crisis, Blinder observed, this sometimes turned out not to be the case). By undermining competition, deliberately created asymmetric information leads to high profits: highly complex financial products make it very difficult to comparison shop, Blinder pointed out. When the crash comes, however, the losses are potentially socialized, as in the case of the Troubled Asset Relief Program.

This asymmetry in rewards and losses could be regarded as a kind of subsidy to the financial industry, leading to an industry that is too large, Blinder suggested. He also mentioned the work of Thomas Philippon, who argues that trading activities are part of the reason too many resources are being put to work in finance. Blinder noted that this comes back to moral hazard, and he distinguished here between ex ante and ex post moral hazard. In terms of ex post moral hazard, the question is whether the government should intervene in the wake of a financial crisis, since this will inevitably aid both innocent victims and culprits. As for ex ante moral hazard, the challenge is to design institutions and create incentives that minimize the problems in the financial sector.

Given the inherent instability of the financial sector, Blinder concluded, the larger that sector is, the greater the problems will be in the event of a crisis. This, he said, is the reason to think carefully about his third point, regarding the question of whether the financial system is too big.

FAZZARI presented a paper on connections between inequality and macroeconomics that he cowrote with Barry Cynamon. The main theme involved showing how trends in inequality contributed to the Great Recession and to the sluggishness of the current recovery.

In what Fazzari described as the "consumer age," households borrowed excessively for the 20-plus years leading up to 2007. The collapse of this "lend-and-spend" dynamic, he said, is what led to the Great Recession. This consumer age was also marked by rising inequality and the stagnation of middle-class incomes. According to Fazzari, this introduces a paradox: theory would tell us that a rising share of income going to the top of the income distribution would lead to lower household spending and create a drag on aggregate demand, but instead we saw a boom in consumption. The fact that the bottom 95 percent of the income distribution spent a higher share of their stagnating incomes helps resolve this paradox, he explained. The drag on demand was delayed by households taking on excessive debt, but we are now seeing that structurally depressed demand in our slow recovery.

Fazzari pointed to data showing that from the early 1950s to around 1980 a stable 20 percent of pretax income was going to the top 5 percent of the income distribution; after that, their share rose by a dramatic 12.5 percentage points in the span of a mere 25 years.

Prior to the consumer age, households' debt-to-disposable-income ratios were reasonably stable at just over 60 percent. This ratio began rising in the early to mid-1980s and grew even more rapidly in the late 1990s and 2000s, right up to the peak of the housing bubble, swiftly dropping thereafter. Fazzari asked how these trends in household indebtedness look if we disaggregate and examine how they differed across income groups.

He pointed out that from 1989 to 2007 the debt-to-income ratio of the top 5 percent was basically flat. Although the ratio ends up slightly higher at the end of the period, Fazzari stated that this is largely due to changes in the denominator (incomes). For the bottom 95 percent, by contrast, the rise in debt ratios is quite dramatic, he said, and this is where the rise in aggregate borrowing is concentrated.

Fazzari presented a "key chart" showing spending rates (spending divided by income) for the bottom 95 percent and top 5 percent from 1989 to 2010. Although the bottom 95 percent were receiving a smaller share of total income during this period, they were spending a larger and larger share of their own incomes up until the Great Recession. According to Fazzari, this resolves the "paradox" mentioned earlier. As for the top 5 percent, their spending rates were also rising until the 2000s. This is largely explained by wealth effects, he said, as these spending rates dropped off for the top 5 percent after the tech bubble burst and equity prices fell in 2000 and 2001.

Fazzari estimated that at the peak of the consumer age's trends of higher spending and borrowing rates, 7.5 percent of total demand in the economy could be attributed to these trends. He contended that this is a high magnitude of "unsustainable demand," and that when we lost this 7.5 percent, we had the Great Recession. The other way to look at this, he said, is that prior to the Great Recession, 0.4 to 0.7 percent of the annual growth rate was a result of these unsustainable trends exhibited in the bottom 95 percent.

Although Fazzari agreed with the proposition that economies recover slower after financial crises, he also stressed that inequality is playing a part. We are experiencing an unprecedented level of consumption stagnation, he argued. In every recession dating back to 1974–75, consumption rebounded more robustly than in the current recovery. Going forward, he asked, in the context of all this inequality, is it possible to have a strong recovery without blowing up another middle-class housing finance bubble?

SESSION 5

Legal Implications of Measures to Improve Financial Instability

Emilios Avgouleas, José Gabilondo, George S. Zavvos, Paula Dwyer

MODERATOR:
PAULA DWYER
Bloomberg View

EMILIOS AVGOULEAS
University of Edinburgh

JOSÉ GABILONDO
Florida International University

GEORGE S. ZAVVOS
European Commission

AVGOULEAS identified key gaps in financial reform and discussed what might be done to address them. The conference, Avgouleas reflected, is about building a robust financial structure for an equitable and stable economy, but current reforms are not delivering those conditions. The problem is that, in Avgouleas's estimation, we have not been thinking sufficiently "outside the box." He pointed to reforms currently in place that are meant to address two of the most important issues for financial stability: too-big-to-fail, and issues of interconnectedness and cross-border spillovers.

In terms of too-big-to-fail, Avgouleas said, we have attempted to restructure the way banks operate so as to make them less prone to speculation, including weak attempts to limit bank size, cap assets, and impose new charges on SIFIs and G-SIFIs (global systemically important financial institutions). The problem is that risk weighting opens the door to manipulation, and even if it did not, it's hard to see the benefits of all these measures unless we radically "rethink banking," as he put it.

Avgouleas cited Glass-Steagall as the best example of structural reform—of a structural separation between commercial and investment banking. The commercial banking sector was remarkably stable under Glass-Steagall and the investment banking sector became very focused and successful. In fact, he said, it is likely that *commercial* banks played the key role in lobbying for the repeal of Glass-Steagall, not investment banks or "Wall Street" per se. This is because under Glass-Steagall commercial banks had been cut off from equities underwriting, which was very profitable in the 1980s and '90s. Moreover, he argued, Glass-Steagall enabled American banks (investment and commercial) to become internationally competitive, edging out their more unfocused European competitors ("universal" banks) in terms of high-end banking activities.

As for objections to structural reform, Avgouleas reported that he could find no evidence of significant economies of scale and scope, in terms of bank size or diversification, respectively. Instead, he said, there is evidence to suggest that there are benefits from financial institutions that are more focused. On the other hand, he allowed that the diversification of income streams can make for better hedging, and a more stable banking institution. Nevertheless, there are also serious inefficiencies in large banking conglomerates.

The case for small banks, beyond their being more focused, is that they are better able to process "soft" information, according of Avgouleas. Most of the credit risk on the commercial banking side, he argued, came from lack of due diligence. We should return to a model of banking in which bankers know their clients and their credit risks. However, he stressed that we cannot go back to this model without destroying wholesale banking.

Avgouleas suggested that we need to rethink the social and economic purposes of banking, and to consider the possibility of dividing banking business into, not two, but *three* parts: retail banking, wholesale banking, and investment banking. The most difficult is wholesale banking, he said, which cannot exist without linkages to shadow banking. We need not worry about retail banking, he continued. We do need a better business model for investment banking (a return to a partnership structure); but most important of all, we need to figure out how we can prevent wholesale banking's links to shadow banking from destroying our economies.

Turning to the question of global banking and cross-border spillovers, Avgouleas noted that the United States and Europe are taking a unilateralist approach to bank supervision and resolution. This approach, he stated, will mean the end of global banking. The alternative requires addressing four key questions: Who supervises systemic risk on a global basis? Who conducts unified supervision of the systemically important banks? Who gives warnings and provides research on emerging risks? And, who is in charge of the resolution of cross-border institutions?

Avgouleas recommended a four-pillar structure that would oversee global banking: a macroprudential supervisor, a microprudential supervisor, a body providing research and knowledge, and one to take care of the resolution of G-SIFIs. He suggested putting the International Monetary Fund in charge of macroprudential supervision, turning the Financial Stability Board into a formal international body in charge of microprudential supervision, and using the Organisation for Economic Co-operation and Development as a think tank for financial standards. Money would have to be provided through fiscal burden-sharing arrangements.

GABILONDO focused his presentation around five main themes: (1) an examination of Minsky's early justification for the central bank acting as a market maker of last resort to achieve liquidity stabilization; (2) a "market-infused" reading of the Federal Reserve's authority to trade for its own account; (3) an argument that the Fed bailouts of financial institutions in 2007 and 2008 were consistent with its authority to trade for its own account; (4) Dodd-Frank's limitations of the Fed's discretion in dealing with liquidity stabilization; and (5) a response to the Levy Institute–Ford Foundation report on the Fed's lender-of-last-resort function.

Gabilondo explained what he meant by "market making" as follows: using proprietary capital to provide asset liquidity and smooth out price changes by buying in a bear market or selling in a bull market. The structure of the funding market has changed, he said, with more interbank exposures and links between asset markets and firm funding liquidity. If the central bank wants to stabilize liquidity, he suggested, it has to consider all the products, firms, and trading sectors that might impact liquidity—beyond its traditional liquidity clients.

Gabilondo quoted a passage from a 1967 paper by Hyman Minsky ("Financial Intermediation in the Money and Capital Markets") in which the latter wrote about this sort of market making. The problem Minsky identified in that paper is that the Fed has traditionally been risk averse and is bound by legislative mandate. This led Gabilondo into a discussion of the Fed's changing mandate and authority.

The growth of the Federal Reserve's authority, he said, has to be understood both exogenously and endogenously. The Fed is a "creature of statue," but those statutes have changed over time: he cited the example of section 13(3), created in 1932 and expanded in 1935, and which played such a central part in the 2008 rescues; and then ran through numerous other instances in which Congress has given the Fed more and more expansive trading authority.

On the "endogenous" side of things, Gabilondo pointed out that the Fed has expanded its authority of its own accord—through its own interpretations of what it can do. This is a good thing, he argued, because of the central bank's unique relationship to the market: the Fed regulates the market by trading in it, which means buying at a premium and selling at a discount. This involves what Gabilondo called a kind of "generative" authority, which he likened to the federal judiciary's power of judicial review. Among numerous examples, he highlighted the 1923 move toward using open market operations (instead of the discount window), which is now the main monetary policy instrument, and the 2008 decision to save the interbank funding market through the use of what he called "financial hospitals": using vehicles like Maiden Lane for taking care of "sick" assets.

Explaining why these special facilities (financial hospitals) worked, Gabilondo commented that the Fed was willing to buy troubled assets and hold them to maturity, creating what he called "synthetic hedged assets": though they started off as speculative or Ponzi assets, in Minskyan terms, they gained a "hedged" status through the Fed's actions. The Fed also added asset market liquidity, thereby saving firms due to the link between asset liquidity and firm funding liquidity, and provided price discovery. Finally, the Fed did not shift losses, he argued; instead, it essentially made them disappear.

Title 11 of Dodd-Frank, which attempts to restrict the Fed's 13(3) discretion, "ossifies" authority, according to Gabilondo: it ends the path of iterative learning the Fed has gone through, is inconsistent with the "market-infused" reading of the Fed's authority he laid out earlier in the presentation, and prevents the Fed from making quick decisions in critical circumstances.

Gabilondo ended with a discussion of some of his points of contention with a recent Levy Institute–Ford Foundation report ("The Lender of Last Resort: A Critical Analysis of the Federal Reserve's Unprecedented Intervention after 2007"). Responding to what he regarded as allegations that the Fed's rescue operations after 2007 exhibited deficits of accountability and democracy, Gabilondo argued that the Fed's *intended* antimajoritarian mandate justifies its activities. The Federal Reserve was "democratically charged to be antidemocratic"—to be free from short-term political preferences. This does not mean the

Fed lacks any accountability, he said: it is still a creature of legislation, and its leaders are named and confirmed by democratically elected officials. His greatest concern, Gabilondo explained, is that making the Fed more accountable to political or executive agencies could limit its ability to react in a crisis.

ZAVVOS took aim at the economic philosophy underpinning the creation of the eurozone. While Minsky's theory of financial instability calls for resilient supervision and crisis-management institutions, the "Maastricht Treaty hypothesis," in Zavvos's words, holds that the private sector behaves rationally, and that the key threat to the system is the overindebtedness of the public sector. Both the design of the euro area and the European crisis responses thus far suffer from a doctrine of "putting the house in order," in which it is understood that member-state fiscal discipline and getting the banking system in order are all that is needed for stability. This doctrine is unsustainable, said Zavvos, and a key question remains: what will be the crisis-management mechanism that will prevent the system from collapsing?

Zavvos indicated that the euro area faces a "trilemma" in the sense that only two of the following three goals can be achieved at one time: financial integration, financial stability, and national banking supervision. He referenced the example of Cyprus, in which capital controls were necessary in order to support financial stability and maintain national supervision.

The project to create a European Banking Union represents a dramatic departure from the assumptions behind the dominant mainstream policy and thinking in the euro area. For the first time, he said, there is an effort to create a federal, supranational structure for financial supervision. Zavvos outlined the four pillars of the planned European Banking Union: a single supervisory mechanism, a singular resolution mechanism, a common deposit guarantee system, and a fiscal backstop.

The single supervisory mechanism will be established as a two-tier system: the European Central Bank (ECB) will be the European banking supervisor and the national supervisory authorities will form the second tier. The ECB has been chosen for this role, Zavvos explained, because the Treaty on the Functioning of the European Union provides a legal basis for conferring these tasks on the ECB. He noted that the ECB will have both micro- and macroprudential supervisory powers. The Cypriot banking crisis would likely have been prevented, Zavvos surmised, if the single supervisory mechanism had already been in place. The ECB would have spotted the dysfunction and would have, for instance, curtailed Cypriot banks' large investments in Greek bonds and asked for additional capital buffers at an early stage.

The second pillar, the single resolution mechanism, will be composed of two bodies: the single resolution authority and the single resolution fund. This mechanism is necessary, Zavvos argued, in order to enable quick decision making regarding cross-border banking groups—only a supranational authority can provide this. Moreover, national resolution funds may be insufficient. Zavvos observed that, in light of the recent crisis in Cyprus, the ECB has become the de facto resolution authority, but this arrangement, he said, does not involve sufficient political accountability; hence the need to hasten the creation of the resolution mechanism. The challenge to moving in this direction is legal. The resolution mechanism, he cautioned, may be challenged in the German or European courts, and a treaty revision would be time consuming.

Additionally, he noted that both the crisis in Cyprus and the flow of bank deposits out of peripheral countries have highlighted the need for a deposit guarantee system.

One issue that remains outstanding relates to decisions about bank structure. Zavvos reflected that the crisis has brought second thoughts about the dominant model of the "universal" bank and the question of too-big-to-fail. However, he pointed out that in a single market, it is important that member-states' approaches to these structural questions be harmonized.

Zavvos identified a broad threat facing the eurozone's financial system: the crisis is pushing member-states to, for instance, ring-fence assets and impose capital requirements on foreign banks' branches, turning them into de facto subsidiaries—actions that threaten to fragment and "renationalize" the single market. This only highlights the need for a speedy completion of the eurozone's banking union, he said. Zavvos concluded with a number of steps that he thought needed to be taken beyond those currently planned for the banking union. For instance, while the ECB's supervisory powers only cover the banking sector, Zavvos argued that they ought to be extended to investment banks as well, and perhaps also to insurance. Finally, the banking union makes a fiscal union—and thereby a completion of the political union—even more necessary. Public money is needed to provide a fiscal backstop to the entire operation. Minksy's prescription for pulling out of a crisis required a "big bank," operating as a lender-of-last-resort, but also "big government"—a big fiscal capacity, Zavvos noted, that the eurozone still lacks.

SESSION 6

Regulation and Supervision of the New Financial Structure

Yalman Onaran, Jan Kregel, L. Randall Wray, Walker F. Todd

MODERATOR:
YALMAN ONARAN
Bloomberg News

JAN KREGEL
Levy Institute and Tallinn Institute of Technology

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

WALKER F. TODD
American Institute for Economic Research

KREGEL proposed what he called a "new Q": replacing quantitative with qualitative monetary policy. The Federal Reserve, he said, is using the "old Q," quantitative monetary policy, based on the quantity theory of money. For instance, Kregel cited an argument by Fed chairman Ben Bernanke to the effect that, as long as the central bank can infinitely increase the supply of money and the real sector cannot infinitely increase the supply of goods, prices must eventually rise. Kregel pointed out that Bernanke is making a jump here between pushing the monetary policy "button" and creating real demand for goods and services. In Bernanke's representation of the way the monetary system works, banks passively transmit changes in monetary policy—higher or lower reserves and/or interest rates—into changes in monetary creation. Kregel explained that this is what Minsky would describe as the "narrow" view: that banking affects the economy only through the money supply. The narrow view, Minsky said, leads policymakers to ignore the composition of bank portfolios.

Kregel observed that the kind of "Q" the Federal Reserve has been using lately (quantitative easing, etc.) can be traced back to Keynes's *Treatise on Money*. There, Keynes recommended that the central bank buy securities until long-term interest rates are brought down and use a form of forward guidance as a means of exiting a slump. However, Keynes was forced to admit that this proposed solution did not work. The rise in equity prices came about, Kregel noted, but it was not accompanied by a rise in investment, the whole point of the policy.

The reason the old Q does not work, said Kregel, is articulated in Keynes's idea of liquidity preference: that people might prefer to hold on to this money produced by quantitative easing—that there is a gap between increasing the money supply and boosting economic activity. Keynes came to the conclusion that alongside these monetary policy efforts there was a need to create an exogenous demand for credit to finance spending on production. Kregel noted that the upshot of Keynes's view is that there must be coordination between quantitative easing and fiscal stimulus.

With reference to the work of William Edward Dunkman ("Qualitative Credit Control"), Kregel argued that central bank credit (base money) cannot be accessed by the public for use in buying commodities. Central bank policy has to increase the volume of bank credit, but it can only get this credit into the hands of the public if someone actually borrows from the bank. Both Keynes and Dunkman pointed out that lending cannot increase unless some productive activity is initiated.

Quantitative easing (QE), said Kregel, is a good thing for the wrong reasons. It is necessary, but not in order to support lending. The right reasons, he explained, relate to a statement made by Richard Kahn: that the role of the banking system is to create as much money as the public needs and to hold the financial assets the public does not want to hold. In the recent crisis, Kregel elaborated, rather than letting the value of the assets that no one wanted to hold drop to zero, it was better that the Federal Reserve hold them. QE is not a good idea because it leads to economic recovery, but because it can prevent the economy from collapsing.

To formulate a new Q, he said, we need to focus on the idea that liabilities are established through the acquisition of assets, and reverse the concept of lending out depositors' funds. Banks do not intermediate between savers and investors. Banking is not money lending. Banks create credit. The cash flows from business activity provide the income to validate the loans: without the business activity, there is no validation. The new Q requires qualitative, rather than quantitative, credit control, Kregel explained. For Minsky, this meant recognizing the need to guide the evolution of financial usages and practices.

Kregel discussed a proposal to reform the Glass-Steagall financial structure that Minsky considered in 1995. Minsky proposed a bank holding company system in which subsidiaries would have separate functions and be independently capitalized. One such subsidiary would handle the payments function; it could be set up as a narrow bank, in theory obviating the need for deposit insurance and other safety nets. (The problem with the narrow banking proposal, Kregel commented, is that it does away with banks' liquidity-creation function and their role in financing innovative economic activity.) Minsky proposed a second subsidiary that would do short-term financing, supported by a government insurance fund. Other subsidiaries would handle investment banking, insurance, and so on. In Minsky's view, this holding company structure would not only mean smaller institutions but also make it easier to engage in qualitative credit control. For instance, it would allow us to require different equity ratios for different activities. Broadly speaking, Kregel argued, this structure would make financial practices and activities much easier to identify, thereby making the institutions much easier to supervise and regulate—easier, ultimately, to hold individuals to account for fraudulent activity.

WRAY presented the Levy Institute–Ford Foundation report "The Lender of Last Resort: A Critical Analysis of the Federal Reserve's Unprecedented Intervention after 2007." Last year's report examined the causes of the recent financial crisis and provided a detailed breakdown of the Fed's extraordinary interventions, showing cumulative loan originations worth more than $29 trillion. This year's report focused on lender-of-last-resort activities from the perspective of the "classical" interpretation of what a central bank ought to do.

Wray suggested that Minsky, while he would have called for the Federal Reserve to lend without limit, recommended lending at the discount window, rather than through secret deals. Minsky, said Wray, would not have supported creating special facilities or providing extremely low interest rates through complicated auctions.

Responding to José Gabilondo's claim (see Session 5) that the Fed "disappeared" the losses or made profits on its lending, Wray pointed out that there should be no surprise that a central bank can be profitable. The real problem, he said, is that the losses were, in effect, shifted to small banks that didn't get interest rate subsidies and had a hard time competing, and to workers, 12 million of whom lost their jobs. Every day the big banks remain in business, Wray contended, the losses compound. Central banks that act as lenders of last resort, lending freely even beyond commercial banks, are necessary, but they should not be used to bail out fraudulent enterprises, he insisted. The purpose of central banks is not to serve banks or financial markets, but to serve the public interest.

Wray characterized the financial collapse as more than just a liquidity crisis. It was, he stated, the failure of what Minsky called money manager capitalism. And unlike the 1929 crash, when financial capitalism was replaced with a new, more successful form of capitalism, this time around we are trying to resurrect money manager capitalism.

Wray highlighted the work in this year's Ford–Levy report detailing the subsidies received by big banks, in the form of the extremely low interest rates provided through the Federal Reserve's special facilities. Looking at 21,000 transactions, the report found that the top three borrowers received close to 40 percent of all funds at interest rates as low as 0.01 percent. Moreover, Wray stressed, these loans were not like the short-term support one might see in a bank run, but instead went on for as long as four-and-a-half years.

Wray explained that banks' solvency problems led to a refusal to roll over what was often overnight funding, and this is what led to a liquidity problem. He cited work by Thorvald Grung Moe that portrayed the Federal Reserve as moving from lender of last resort and market maker of last resort to quantitative easing. The problem, according to Moe, lies in the growth of complex, layered, interconnected shadow banks creating liquidity that can dry up very quickly (essentially creating the illusion of liquidity). The central bank, following Bagehot's rule, is supposed to lend without limit against good assets; but Wray noted Moe's observation that banks have posted their worst collateral with the Fed in order to solve the liquidity problem.

Wray included the following among the lessons we should learn from the Federal Reserve's crisis interventions: that central banks should not provide unlimited liquidity support to a financial system that has been growing too quickly. It does not make sense to support a financial system that has grown too big for the economy. Stronger regulations are needed, he said, to limit the growth of private liquidity. With regard to the problem of too-big-to-fail, the Fed should call big banks' "bluff," as Wray put it, by allowing them to fail. To this he added that legislation is needed to curb speculative finance and that public spending should be used to restore growth and profits. Wray echoed Minsky's view that growth led by the public sector is more stable than private sector–led growth—the former, rather than the latter, is where we should look for a recovery.

Wray concluded by outlining some of Minsky's views about how to reconstitute the financial structure. The basic idea is to reorient the system to promote the capital development of the economy, broadly understood (not only private capital, but public capital and human capital as well). The financial system should provide (1) a safe and sound payments system; (2) short-term loans to households and firms; (3) a safe and sound system of housing finance (which we had, Wray remarked, before 1974 in the form of the thrifts); (4) a range of financial services, including insurance and retirement savings; and (5) long-term funding of positions in expensive assets. Wray underscored that there is no reason why these functions need to be provided within a single institution or by the private sector.

Where are we, **TODD** asked, four-and-a-half years after the onset of the full-blown crisis? Thanks in part to the Federal Reserve's liquidity support, he said, the situation is not as bad as it could have been. However, he cautioned that with every other major central bank exceeding or threatening to exceed the Fed's money creation rate, it is unclear how much longer quantitative easing measures will be effective in global financial markets. Todd asked whether we have created a financial bubble, in the form of rising stock prices, without the consumer demand and sales that would support these stock valuations. He suggested that we may be closer to the next financial shock than we thought.

Todd went back to examine what the Federal Reserve had done with respect to the creation of base money in previous economic and financial crises of comparable magnitude. Over an eight-year period (1970–78), he observed, Fed Chairman Arthur Burns doubled the monetary base—whereas Chairman Bernanke doubled it in just a single quarter. At the end of this year, Todd said, if QE is completed, the Fed will have a balance sheet roughly five time as large as when Bernanke started. What the Federal Reserve has been doing is unprecedented in peacetime, but the closest analogy is Burns's doubling of the Fed's balance sheet in the 1970s.

Todd then discussed Walter Bagehot 's principle that the central bank, in the context of a panic, should lend against all securities normally (which is to say, in a noncrisis period) deemed good at a penalty rate of interest and for as long as is necessary to get to the end of the emergency. Todd argued that in that sense Alan Greenspan did the right thing, at the discount window and with open market operations in an emergency, when he was chairman of the Fed.

According to Bagehot, if the central bank provides enough liquidity, then those who need it most will bid a higher price (i.e., pay a higher interest rate) for it. Institutions will eventually go out of business if they do this for too long, as they will run out of good collateral. Those that are sound will be able to pay the high rates for longer and will eventually inherit the "wreckage," as Todd put it, of the institutions that fail.

Responding to José Gabilondo's critique (Session 5) of the Ford–Levy report, Todd argued that there was an accountability deficit at the Federal Reserve because of the secrecy and lack of democratic oversight under which its interventions were carried out. Beyond the detailed investigation of the Fed's rescue operations, how close are we, he asked, to getting a full audit of our central bank? A general audit bill was passed in the House, he noted, in honor of the retirement of Representative Ron Paul, but Senator Harry Reid killed the bill in the Senate, and we are unlikely to see it revived before the next crisis.

The Federal Reserve, Todd argued, departed from the classical understanding of the lender of last resort by violating every one of Bagehot's qualifications. However, Todd agreed with Gabilondo's assessment that the Fed still retains the discretion to conduct liquidity stabilization under section 13(3). Todd remarked that he had called for the repeal of 13(3), for the reason that, if emergency credit is really needed at the nonbank level, then it ought to be done through the congressional appropriations process. Let politicians pay the political price for providing public money to bail out a private institution, he said. Todd reflected that in the 1930s, in the face of the same situation, the Reconstruction Finance Corporation was created to bail out not just banks, but individual firms as well, from railroads to insurance companies.

In response to Gabilondo's contention that the Fed's antimajoritarian mandate justifies its accountability deficit, Todd responded that this amounts to an endorsement of corporatism. The Constitution was drafted by "a bunch of classical liberals," he said, and there has never been a vote to explicitly choose between classical liberalism, corporatism, socialism, and modern welfare liberalism. The Federal Reserve should not be above democratic accountability. If you want to keep the Federal Reserve Board more or less the way it is, he suggested, and not designate the Board a branch of the Treasury, then the one major change to consider would be to make the seven governors run for election (by Federal Reserve district). The Fed's existing checks and balances, Todd commented, are the most attenuated checks and balances imaginable.

SESSION 7

Financial Stability and Inequality: Compatible or Contradictory?

Robert Kuttner, Jeff Madrick, Alex J. Pollock, Stephan G. Richter

MODERATOR:

STEPHAN G. RICHTER

The Globalist and The Globalist Research Center

ROBERT KUTTNER

The American Prospect

ALEX J. POLLOCK

American Enterprise Institute

JEFF MADRICK

Roosevelt Institute, *Challenge*, The Cooper Union, and *Harper's Magazine*

KUTTNER focused his discussion on what he called the "double standards" of debt, the subject of his book *Debtor's Prison: The Politics of Austerity versus Possibility.* Debts are often waived or renegotiated, but he identified a double standard in terms of who gets debt relief. For instance, corporations declaring chapter 11 bankruptcy, after settling their old debts for cents on the dollar, can immediately start borrowing again, and the Troubled Asset Relief Program (TARP), along with quantitative easing, has provided large Wall Street banks with a great deal of debt relief. Homeowners and students, on the other hand, do not get comparable debt relief, Kuttner remarked. Similarly, when the European Central Bank and International Monetary Fund (IMF) advanced money to small countries like Greece, it was to roll over old debts and pay creditors, not to restore economic growth.

Kuttner shared his explorations into the historical origins of modern bankruptcy, tracing it back to Great Britain and debtors' prisons at the turn of the 18th century. The problem with debtors' prisons is that they ruin the economic potential of debtors, curtailing their ability to pay creditors and resume economic activity. In 1706, Queen Anne's ministers passed the first bankruptcy law in reaction to the fact that most members of the British entrepreneurial class were in jail due to the plague, wars with France, and a storm that destroyed half of Britain's merchant fleet. However, Kuttner pointed out that ordinary debtors did not qualify under the law; one had to be a merchant. In other words, the double standards of debt were present at the creation of modern bankruptcy.

These double standards, he said, have macroeconomic consequences. Burdening the next generation with student debt, allowing the housing market to struggle while refraining from using creative means to refinance mortgages, and continuing with the current approach to dealing with debt in the eurozone periphery all repeat the macroeconomic mistake of debtors' prisons.

The term "privatized Keynesianism," coined by Colin Crouch (*The Strange Non-death of Neoliberalism*), is a good description, Kuttner said, of what occurred in the 1980s, '90s, and the first decade of the 2000s, when economic stimulus depended on the household sector going deeper and deeper into debt—all enabled by deregulated finance. He argued that the problem with privatized Keynesianism is that it is procyclical: euphoric on the upswing and contractionary on the downswing.

Kuttner remarked that the exception to the "dismal" story of double standards with regard to debt and debt relief can be found in the period from the 1930s to the 1950s. After the Great Depression, finance was harnessed to the public interest, enabling all manner of debt relief. In the aftermath of World War II, with laissez-faire discredited in most of Europe, there was a consensus in favor of managed capitalism, or full-employment welfare states, with Bretton Woods as the international counterpart that was meant to control speculative private capital flows.

However, in the 1980s the European Union (EU) started gaining power at the expense of the member-states and their managed forms of capitalism, and it did so, according to Kuttner, as a fundamentally neoliberal institution focused primarily on the free movement of capital, services, people, and goods.

Kuttner described current European leaders as suffering from selective memory: the eurozone crisis was a Minskyan collapse created by exotic financial products originating, for the most part, in the United States and United Kingdom; but eurozone leaders have somehow accepted the premise that the crisis should be blamed on rigid labor markets and excessive public debt. He commented that the IMF's "old playbook," involving taking advantage of a crisis to force neoliberal reforms, has been taken up in the EU.

Finally, Kuttner talked about the political economy of debt and debt relief. In his view, the exceptional period from the 1930s to the 1950s, described earlier, can be explained by a constellation of political forces that has not since been reproduced. To explain how it is that two systems that are as different, historically and institutionally, as the United States and the EU have converged on such similar theories and policy stances (austerity, for example), Kuttner pinpointed the common influence of finance. Finance has regained its political power, and although the convergence of events in 2008 (the discrediting of laissez-faire, financial manipulation, and casino capitalism) looked like it might produce radical change similar to what we saw in the 1930s, nothing happened—prompting Kuttner to recall A. J. P. Taylor's line that history had reached a turning point and failed to turn.

POLLOCK recited Keynes's argument that inequality in the distribution of wealth made possible the accumulations of wealth and fixed capital that underlay the industrial age. Implicit in this argument, Pollock reflected, is that it is preferable to lift every person to a higher absolute level of well-being, even if the distribution of that well-being is unequal, than it is to have everyone equal but at a lower absolute level. Pollock expressed his agreement with this principle and remarked that talk about capitalists and proletarians has been rendered obsolete. Proletarians, he remarked, have essentially become capitalists through their pension funds. The accumulation of wealth Keynes was referring to can come to be very widely owned.

He added that the more fundamental source of wealth is not fixed capital, but rather entrepreneurial innovation and risk taking. Pollock cited an essay by Michael Pettis ("Why the World Needs Restless Bankers") in which the latter argued that long-term wealth creation is based on financial systems funding risk-taking entrepreneurs, and that as a result, no growing economy has maintained a stable financial system. Key to these entrepreneurial ventures, Pollock said, is a form of uncertainty, identified by Frank Knight, in which, beyond not knowing what is going to happen, we do not even know the probabilities or the range of possible outcomes.

This uncertainty confronts entrepreneurs and the banks that finance them, but also—especially, Pollock stressed—central banks. He branded the Federal Reserve as the biggest source of systemic risk in the world. Its actions require making guesses about outcomes that are unknowable and have a wide potential impact, for good or ill. For instance, Pollock pointed out that in the early 2000s, the Fed had a plausible-seeming theory in which encouraging a boom in housing would generate a wealth effect that would help offset the contractionary effects of the bursting of the tech-stock bubble.

Pollock recalled a conversation he had had with Hyman Minsky in which the latter spoke about a necessary dialectic between entrepreneurs and bankers. In Pollock's recounting, Minsky described entrepreneurs as optimistic, risk taking, and self-confident, while bankers were pessimistic, skeptical, risk averse, and preferred wide margins for error. According to Minsky, a proper balance is required between entrepreneurs and entrepreneurial spirit on the one hand, and bankers and bankerly prudence on the other. In Pollock's view, the characteristics he recalled Minsky associating with entrepreneurs are what allow those entrepreneurs to achieve great things against long odds, while ignoring naysayers and cautious risk advisers.

However, he added, while these commercial ambitions can lead to great economic improvements, they can also lead to going broke. Pollock stated that former head of Countrywide Financial Angelo Mozilo, who had over 30 years of extraordinary success in building his mortgage company before the crash, was "both the best mortgage banker in the country and the worst mortgage banker in the country, sequentially."

The entrepreneur therefore needs to be balanced out by Minsky's bankers. As Pollock observed, the problem occurs when bankers themselves are overtaken by the entrepreneurial spirit and become risk takers. This is particularly likely to happen in an extended boom—the recent housing boom, he pointed out, lasted seven years. While skeptics will be proven right in the long term, Pollock remarked, betting against an extended run of enthusiasm can be very expensive. Now, he said, we are living through a long-lasting bond bubble inflated by the Federal Reserve's manipulation of the bond and mortgage-backed securities markets. The key challenge, he concluded, is to maintain a proper balance between enterprise and prudence.

MADRICK spoke about the relationship between inequality and financial instability. He suggested that we do not have much empirical evidence about this relationship, but that there are two key reference points: inequality was very high in the 1920s, and it did not reach this level again until the 1990s and 2000s. Notably, both periods were followed by dramatic crashes, in 1929 and 2008, respectively. However, Madrick remarked that the United States has had both inequality and financial crises throughout its history.

As far as thinking about how inequality can induce financial crises and instability, Madrick described a "fork in the road" between a political and an economic view. He confessed that, although he is primed to think more in terms of economics, he has doubts about whether this is the more important interpretive framework. The political fork—characterized by the view that inequality gives power to the wealthy, who in turn use that power to effect change in the direction of deregulation, low taxes, and a high-dollar policy—may have had more to do with the crisis. Financial markets, he said, do not work the same way as more traditional markets for goods and services, and when there is too much power at the top, financial markets get carried away.

Madrick contrasted Keynes's uncertainty-driven economics with the school of thought, dominant in the last 25 to 30 years, that places the rationality of markets at the heart of its models. In his estimation, this school of thought began with a reasonably evidence-based idea but eventually turned to an extremism that supported the ideology of its time. It placed an undue faith in stock prices, he said, inspiring the idea of compensating CEOs with stock options, for example, which led to severe "short-termism." Madrick stated that the financial community, when left to its own devices, cannot handle the responsibility. Partly in response to Pollock's presentation, Madrick pushed back against the idea that taking this view requires stifling innovation. We need, he said, to end abusive leverage, low capital requirements, and a lack transparency in the financial system, and to start paying attention to the issue of monopoly profits.

The concept of inequality, he commented, is used incorrectly by progressives. It is often argued that inequality is the source of stagnating wages, but we need to bifurcate this argument. Stagnating wages are a problem, Madrick said, but what created the inequality was the ability to make large amounts of money on Wall Street, including for managers with stock options. He referenced research showing that those at the very the top of the income distribution (the top 1 percent) are financial executives and business managers with stock options. Madrick argued that GDP would not have been as large as it was without this financialization of the economy. In other words, he said, the idea that there would have been a big pool of income that could have been distributed more equally requires more circumspection.

The real issue is low wages, he insisted. Low wages affect financial instability in different ways throughout the world. In the United States, low wages did not lead to underconsumption but to overindebtedness. In addition to this, Madrick said, the United States had a high-dollar policy that was effectively "bought" by the wealthy. A high dollar, he pointed out, harms manufacturing and helps Wall Street by keeping interest rates down while a large trade deficit is created.

The other way of dealing with low wages is to follow an export-led growth policy to compensate for the reduced consumption; China and Germany, he said, followed this model. We have created a world of extreme external imbalances as a result, Madrick noted. The imbalances in Europe have played a large role in the eurozone crisis, and the imbalance between the United States and China (among others) has also been a source of instability.

Madrick called for promoting a high-wage economic growth model around the world. He pointed out that this is an idea contrary to neoclassical economics, in which high wages are inflationary and eat into corporate profits. In his view, high wages would reestablish external balance and thereby reduce instability.

Madrick concluded by asking why Keynesian policies were not wholeheartedly adopted in the United States or Europe. His answer for the United States was that Keynes was adopted in a "bastardized" form (in Joan Robinson's words) that focused on using fiscal deficits in the short term in order to get back on a neoclassical growth track, instead of as a long-term model or one that focuses on wage levels. Moreover, he remarked that austerity is attractive to many because it taps into deep, natural, seemingly "common sense" instincts regarding the value of sacrifice and belt-tightening.

SESSION 8

Inequality, Instability, Labor Markets, and the Fiscal Compact

Frank Veneroso, Nora Lustig, Peter Coy

MODERATOR:

PETER COY

Bloomberg Businessweek

NORA LUSTIG

Tulane University and Center for Global Development and the Inter-American Dialogue

FRANK VENEROSO

Veneroso Associates, LLC

LUSTIG presented her research on Latin American trends in inequality. Inequality is very high in Latin America (the highest in the world, she pointed out), but it has been declining since 2000. Moreover, this decline has been a contributing factor in the reduction of poverty and the expansion of the middle class in the region.

In terms of economic growth, the 1980s were a “lost decade” in which countries all over the region saw shrinking economies as a result of a debt crisis. There was a mild recovery in the 1990s, a relative stagnation in 1998–2002, and then a large acceleration of economic growth in the early 2000s. This last she attributed to the commodities boom. Poverty declined somewhat over the 1990s recovery, then stagnated, after which it showed systematic decline during the period of high growth. This is not surprising, Lustig observed, as growth and poverty tend to move in opposite directions (high growth associated with declining poverty), but inequality can go either way, with no particular law that links growth or contraction to inequality.

In Latin America, inequality grew alongside economic growth until 2000, then began to decline.

It declined for most countries in the region at the same time as it was rising in other parts of the world. This is quite remarkable, Lustig explained: it is unusual to see such a sustained (decade-long) decline in inequality that affects so many countries. The only comparable example is the immediate post–World War II period, in which inequality fell in many advanced economies. She pointed out that the decrease in inequality in the 2000s was larger than the increase in the 1990s, and that it coincided with an expansion of both the middle class and the income class of those considered "vulnerable" (with incomes just above poverty level), at the expense of the proportion of the population in poverty. She pointed out that redistribution accounts for half of the decline in poverty and a third of the increase in the middle class.

Among the factors responsible for the drop in inequality, Lustig included declining inequality in hourly labor income, an increase in the progressivity of government spending, and decreasing dependency ratios among poor families. Breaking it down, 40 percent of the fall in inequality in the region is explained by the changes in hourly labor income and 14 percent by changes in government transfers. Looking in more detail at the changes in labor earnings, Lustig suggested that the story could be more of a supply-side one—a result of educational upgrading (an increase in the amount of people with higher levels of education); or a demand-side story—an increase in the relative demand for low-skill labor. She also hypothesized that the changes could be due to so many governments in Latin America turning to the left, reversing the trends in the 1980s and 1990s toward clamping down on minimum wages and degrading the strength of unions. Finally, Lustig suggested another explanatory hypothesis, which she called the "degraded tertiary": that the expansion of tertiary education involves an increase in the proportion of lower-quality students and educational institutions. Lustig mentioned that it is hard to determine which factor is playing the most significant role, citing two different research papers on the case of Mexico that have produced contrasting results, with one paper supporting a supply-side explanation and the other telling a demand-based story. Lustig cautioned that the results are not very robust.

As for changes in government transfers, Lustig suggested that the increasing role of conditional cash transfers could be part of the explanation (however, she also noted that the evidence on this is indeterminate). It is also possible that the region's democratization process could have led to increases in political participation among groups normally excluded from the process, leading to demands for policy changes that benefit these groups. Citing research that indicates leftist governments tend to redistribute more than nonleftist governments, Lustig observed that the increase in the number of countries governed by the left could be playing a role.

Lustig concluded by noting the reasons she is skeptical that this dramatic decline in inequality is sustainable. If it is a supply-side story, she said, then the increases in education will face a pair of barriers. First, for those who are poor, it is still difficult to access tertiary education—and not just because schooling is expensive, but because the opportunity cost involved (i.e., working less) still makes it impossible for many poor people. Second, Lustig commented that the quality of education in Latin America is low, such that many people now graduating from secondary school are not adequately prepared for college, and so will not be able to continue on into tertiary education. For these reasons, the declines in inequality may come to an end.

VENEROSO addressed the topic of financial instability in emerging economies. He remarked that instability in the postwar period appeared earlier and was more severe, frequent, and varied in the emerging economies, and that we can learn a lot about these pathologies through appreciating the full range of Hyman Minsky's thinking.

Although it has been said that we are all Minskyites now, Veneroso contended that Minsky is often misunderstood or selectively read. The Minsky of Charles Kindleberger's *Manias, Panics, and Crashes*, in which Minsky's thought is associated with profit bonanzas, herding, leveraged speculation, and so on, is not the real Minsky, Veneroso said. Another interpretation portrays Minsky's thought as being all about speculation in traded asset markets using leverage, and this also misrepresents the real Minsky, according to Veneroso. He pointed out that Minsky was not primarily focused on stock markets and traded asset markets (though he allowed that this second interpretation is at least an extension of Minsky's thought about the corporate sector).

The real Minsky, Veneroso argued, should be associated with three things. First, there is the financial instability hypothesis, in which corporations and bankers forget the trauma of recessions in good times, leading to euphoric increases in investment driven by an unrealistic view of what cash flows will be like. As a result, investment outpaces profits, which requires borrowing more and more. Veneroso added that, in his opinion, this model is not sufficient to explain financial instabilities. Postwar, there is an additional explanation required of how borrowing can last long enough to raise debt-to-GDP levels by 50 or 100 percent of GDP.

In addition to the financial instability hypothesis, Veneroso picked out two additional key elements in Minsky's thought. Neither of these elements, he argued, is part of orthodox macroeconomics. The first is the moral hazard that is created in a world in which governments and central banks intervene to prevent debt deflations. This creates the perception among borrowers and lenders that they enjoy a kind of insurance, leading to increased risk taking, more financial fragility, and rising private debt–to-GDP ratios. In Europe, bank assets are equal to four-and-a-half times GDP; this can only happen, he said, in a world of serious moral hazard.

The second element is Minsky's technical notion of "Ponzi" finance. In "hedge" finance, the cash flows of borrowers are sufficient to meet obligations of both principal and interest. If these cash flows are able to meet debt service but not cover the principal, this is "speculative" finance. Ponzi finance occurs, Veneroso explained, when cash flows are insufficient for either interest or principal—requiring borrowing even to meet interest payments. This is a bold macroeconomic concept, said Veneroso, because it amounts to saying that the rate of interest can exceed the return to capital for a long period of time, which does not fit with standard macroeconomics. In his view, moral hazard and Ponzi finance are the missing ingredients that, when added to the financial instability hypothesis, can account for the dramatic rises in private indebtedness we have witnessed, and thereby the financial pathologies of our time.

Recalling his experience as a financial adviser to Latin American countries in the 1970s and '80s, Veneroso stated that bankers and borrowers were engaging in a drawn-out process of Ponzi finance, with very high real rates of interest and effectively no collateral. This was, he said, an extraordinary pathology, with no stock market or real estate bubbles; just a Ponzi process of compounding debt without collateral. He argued that this was caused by Latin American economies creating profound moral hazard through industrial policies and inflationary episodes that inflated away debt for those who had overborrowed.

In emerging Asian markets, while some have blamed foreign finance for financial instability, Veneroso said the real answer has to do with Minsky's moral hazard and Ponzi finance dynamics producing dramatic increases in credit-to-GDP ratios. China, he observed, has increased its debt-to-GDP ratio in the last four years by 80 percentage points—again, without collateral. Veneroso pointed out that there is no stock market to speak of in China, and while there is a real estate bubble, the bubble is not paired with a massive increase in mortgage debt. The problem lies with corporate and unincorporated businesses. Due to the euphoria created by 33 years of 10 percent growth and all manner of government supports, moral hazard is driving levels of indebtedness that have, he stated, never been seen in the history of the world.

Participants

EMILIOS AVGOULEAS holds the International Banking Law and Finance chair at the University of Edinburgh. He is an acknowledged expert on financial market regulation, banking law, and finance, and global economic governance. Avgouleas has published extensively in the wider field of international and European finance law and economics, and behavioral finance. He is the author of a number of scholarly articles and two monographs: *Governance of Global Financial Markets: The Law, the Economics, the Politics* (2012); *The Mechanics and Regulation of Market Abuse: A Legal and Economic Analysis* (2005), and co-author, with Sir Ross Cranston and others, of the forthcoming edition of *Principles of Banking Law* (2013). Avgouleas's work has been cited in financial market policy reports and impact studies published by the European Union Commission, the House of Lords – EU Committee, and the Irish Commission on Banking. He has frequently given evidence before parliamentary and government committees, both in the UK and abroad. Before joining the University of Edinburgh Avgouleas was University Professor of International Financial Markets and Financial Law at the University of Manchester. During his doctoral studies he received a law department teaching fellowship and held an associate research fellowship with the financial markets group at The London School of Economics (LSE).

Avgouleas has practiced extensively in the broader field of International financial law and structured finance. He worked as an associate in the derivatives and financial institutions group of Clifford Chance LLP, as a managing associate in the financial markets group of Linklaters, and as an equity partner in a prominent Athens law firm. Avgouleas has advised governments and central banks, including the Scottish government, on issues of financial stability, bank supervision, and monetary policy; a former Greek PM on issues of economic development and market integrity; and leading NGOs on issues of ethical finance and economic development. Moreover, during his time in practice Avgouleas worked on or led cutting-edge advisory and transactional projects in the fields of structured finance, sovereign debt, and financial regulation with a distinctly global focus. He has given lectures and chaired workshops at a number of leading UK and international universities, such as Oxford, Cambridge, LSE, Duke, Hong Kong University, and the University of Copenhagen, and has held a number of visiting posts. Longer-term visiting posts have included Global Capital Markets Center Fellow at Duke University's Law School and Fuqua School of Business, and Professor of Capital Markets Law at the China–Europe School of Law, China University of Political Science and Law, Beijing.

Avgouleas is a member of the editorial board of seven journals in the field of international economic and banking and finance law, and holds, inter alia, the following academic memberships: co-convenor of the International Financial and Monetary Law Network, member of the Royal Economic Society, and academic associate, Centre for International Business and Management, Judge Business School, University of Cambridge. He holds an LLM in banking and finance law and a Ph.D. in law and economics from the LSE, where he received a teaching scholarship.

ROBERT J. BARBERA is co-director of the Center for Financial Economics at Johns Hopkins University, where he has taught applied macroeconomics for the past eight years. Formerly chief economist at Mount Lucas Management LP, Barbera spent more than three decades as a Wall Street economist, earning a wide institutional following. He is a frequent guest on CNBC and is regularly quoted in *The New York Times* and *The Wall Street Journal*. In 2009, Barbera authored *The Cost of Capitalism: Market Mayhem and Stabilizing Our Economic Future*, which identifies the root causes of the Great Recession of 2008, points out key policy prescriptions for economic recovery, and offers commentary about the shape of capitalism in the decades to come. The *Times* labeled *The Cost of Capitalism* one of the top six books of 2009 on the issues of finance and crises; it also received favorable reviews in *The Economist* and the *Asia Times*. Early in his career, Barbera served as a staff economist for Senator Paul Tsongas and as an economist for the Congressional Budget Office. He also lectured at MIT. From 1982 through 1987, Barbera was chief economist at E. F. Hutton, and in 1988 was appointed chief economist and director of economic research at Lehman Brothers. He left that post in mid-1994, and through mid-1996 was co-chairman of Capital Investment International, a New York–based research boutique. Barbera earned both his BA and his Ph.D. from Johns Hopkins.

ALAN S. BLINDER has been on the faculty of Princeton University since 1971, taking time off from January 1993 through January 1996 for service in the US government—first as a member of President Clinton's original Council of Economic Advisers, and then as vice chairman of the Board of Governors of the Federal Reserve System. In addition to his academic writings and best-selling introductory textbook, he has written many newspaper and magazine columns and op-eds and, in recent years, has been a regular columnist for *The Wall Street Journal*. He also appears frequently on PBS, CNBC, CNN, and Bloomberg TV. Blinder is a distinguished fellow and past vice president of the American Economic Association, a past president of the Eastern Economic Association, and a member of the American Academy of Arts and Sciences, the American Philosophical Society, and the American Academy of Political and Social Science. His latest book, *After the Music Stopped: The Financial Crisis, the Response, and the Work Ahead* (2013), was, in Blinder's words, "written for people who really want to understand what happened to us since 2007. It's not a who-done-it, but rather a why-did-they-do-it. It's about how we got into this mess, what we did to get out of it, and what remains to be done."

JAMES BULLARD is president and chief executive officer of the Federal Reserve Bank of St. Louis, positions he has held since 2008. In these roles, he participates in the Federal Open Market Committee (FOMC) and directs the activities of the Federal Reserve's Eighth District head office in St. Louis and branches in Little Rock, Ark., Louisville, Ky., and Memphis, Tenn. An economist and monetary policy scholar, Bullard has been with the Bank since 1990. His research has appeared in numerous professional journals, including the *American Economic Review*, the *Journal of Monetary Economics*, *Macroeconomic Dynamics,* and the *Journal of Money, Credit and Banking*. He has been a peer reviewer for more than two dozen periodicals and institutions, and currently is co-editor of the *Journal of Economic Dynamics and Control*. In addition, Bullard has participated in more than 150 conferences, symposia, and lectures sponsored by foreign central banks, academic institutions and monetary policy groups around the world.

Bullard has called for the FOMC, the Fed's monetary policymaking body, to adopt state-contingent policy, which is policy that is adjusted based on the state of the economy, and to give greater consideration to headline inflation than core inflation when making monetary policy decisions. He discussed the reasons to deemphasize core inflation in his paper "Measuring Inflation: The Core Is Rotten," published in 2011 in the Federal Reserve Bank of St. Louis's *Review*. In the wake of the financial crisis, he supported quantitative easing and warned about the possibility of the United States falling into a Japanese-style deflationary trap. The latter was the subject of his paper "Seven Faces of 'The Peril,'" published in 2010 in the *Review*. Beyond the Fed, Bullard is an honorary professor of economics at Washington University in St. Louis, where he also sits on the advisory councils of the economics department and the Olin Business School's Center for Finance and Accounting Research. He is a member of the University of Missouri–St. Louis Chancellor's Council and serves on the boards of the St. Louis Regional Chamber and Growth Association and of the United Way of Greater St. Louis. A native of Forest Lake, Minn., Bullard received his doctorate in economics from Indiana University in Bloomington. He holds BS degrees in economics and in quantitative methods and information systems from St. Cloud State University.

LEONARDO BURLAMAQUI is a program officer at the Ford Foundation in New York City. The overall goal of his work is to strengthen global financial governance in order to achieve a fairer and more democratic version of globalization, through support for projects on financial governance reform and new regulatory and enforcement mechanisms designed to restructure the financial system toward a more transparent, accountable, and effective system of governance that helps to alleviate poverty and expand social justice worldwide. He previously held academic appointments as professor of economics and business and research director of the law and economics program at Candido Mendes University, and associate professor of political economy at the State University of Rio de Janeiro (on leave), as well as stints at the World Intellectual Property Organization, the World Institute for Development Economics Research (Helsinki), the Institute for Developing Economies (Tokyo), and the Centre for Development and the Environment, University of Oslo. He has served as a member of the board of the International J. A. Schumpeter Society (2002–06) and is currently on the board of The Other Canon Foundation and a contributing editor to the *Post Keynesian Economics Forum*. Burlamaqui has written and published on innovation and competition, development economics, intellectual property, institutions and economic change, and the political economy of knowledge and finance. He is co-author, with M. da Conceição Tavares and E. Torres, of *Organized Capitalism in Japan* (1995), and co-editor, with A. C. Castro and H.-J. Chang, of *Institutions and the Role of State* (2000). His publications include "Banking and the Financing of Development: A Schumpeterian and Minskyan Perspective" (with J. Kregel), in G. Dymski and S. de Paula, eds., *Re-imagining Growth: Toward a Renewal of the Idea of Development* (2005); "The Rise and Halt of Economic Development in Brazil, 1945–2004: Industrial Catching–up, Institutional Innovation, and Financial Fragility," in H.-J. Chang, ed., *Institutional Change and Economic Development* (2007); "Innovation, Competition Policies and Intellectual Property—An Evolutionary Perspective and its Policy

Implications," in N. Netanel, ed., *The Development Agenda: Global Intellectual Property and Developing Countries* (2009); and "Knowledge Governance: An Analytical Perspective," in L. Burlamaqui, A. C. Castro, and R. Kattel, eds., *Knowledge Governance—Reasserting the Public Interest* (2012). Forthcoming publications include "From Intellectual Property to Knowledge Governance" (with M. Cimoli), in J. Stiglitz et al., eds., *Intellectual Property Rights: Legal and Economic Challenges for Development* (2013). Burlamaqui holds a Ph.D. in economics from the Federal University at Rio de Janeiro.

JOHN CASSIDY has been a staff writer at *The New Yorker* since 1995. He has written many, many articles for the magazine, on topics ranging from Alan Greenspan and Ben Bernanke to the Iraqi oil industry and the economics of Hollywood. He also writes a blog on *The New Yorker*'s website, titled "Rational Irrationality." His latest book, *How Markets Fail: The Logic of Economic Calamities*, was published in November 2009. Cassidy is also a contributor to *The New York Review of Books* and a financial commentator for the BBC. He came to *The New Yorker* after working for newspapers on both sides of the Atlantic. He joined the *Sunday Times*, in London, in 1986, and served as the paper's Washington bureau chief for three years, and then as its business editor, from 1991 to 1993. From 1993 to 1995, he was at *The New York Post*, where he edited the Business section and then served as the deputy editor.

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 became technology editor in 1992 and associate economics editor in 1997, before being named economics editor in 2001. He came to *BusinessWeek* from The Associated Press (AP) in New York, where he had served as a business news writer since 1985. Before that, Coy was a correspondent in the AP Rochester bureau. He 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.

PAULA DWYER is a member of the *Bloomberg View* editorial board, focusing on economics, finance, regulation, and politics. For more than three decades, she has reported, written, and edited news stories—and now editorials—on the personalities, politics and policies driving decision makers in the US and overseas. She was named a Pulitzer Prize finalist for editorial writing in 2012. Dwyer spent 2004 to 2009 at *The New York Times*, where she was deputy business editor in New York and then economics editor in the Washington bureau. While at the *Times*, she was responsible for the Washington bureau's coverage of the financial crisis, regulatory reforms, and the 2009 health-care debate. Prior to joining *Times*, Dwyer worked for 20 years, from 1985 to 2004, at *BusinessWeek* magazine, where she was chief congressional correspondent, London bureau chief, Washington investigative correspondent, and deputy Washington bureau chief. She joined Bloomberg News's Washington bureau in late 2009 to edit enterprise stories. Soon after Bloomberg acquired *BusinessWeek*, she became an assistant managing editor of the magazine, overseeing policy and politics for the refocused weekly. She joined *Bloomberg View* in April 2011 as part of its startup team. Dwyer's Pulitzer Prize nomination was for editorials she wrote or edited on Europe's debt crisis. She is the co-author, with Arthur Levitt, the former Securities and Exchange Commission chairman, of "Take On the Street," a *New York Times* bestseller in 2002. She received an Overseas Press Club award in 1995 for coverage of globalization.

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JOSÉ GABILONDO is an associate professor at the Florida International University College of Law. He teaches corporate finance and tax, writes about debt markets, and served as associate dean for three years. Before joining academia, he worked in financial market regulation at the US Department of the Treasury, the US Securities and Exchange Commission, the Office of the Comptroller of the Currency, and the World Bank. A nationally recognized commentator in the Spanish-language media on financial matters, he is co-author of *Corporate Finance: Debt, Equity, and Derivative Markets and their Intermediaries* (2011) in the American Casebook Series. His recent articles have defended the Fed's transformation into a market maker of last resort, analyzed the leverage and liquidity dynamics of the new credit market, and, drawing on Minsky, emphasized the ongoing relevance of liability structure. His service activities include participating in law school accreditation and promoting exchange with the Cuban university system and bar association.

THOMAS M. HOENIG was confirmed by the Senate as Vice Chairman of the Federal Deposit Insurance Corporation (FDIC) on November 15, 2012. He joined the FDIC on April 16, 2012, as a member of the FDIC board of directors for a six-year term. He is a member of the executive board of the International Association of Deposit Insurers. Prior to serving on the FDIC board, Hoenig was the president of the Federal Reserve Bank of Kansas City and a member of the Federal Reserve System's Federal Open Market Committee from 1991 to 2011. He was with the Federal Reserve for 38 years, beginning as an economist and then as a senior officer in banking supervision during the US banking crisis of the 1980s. In 1986, he led the Kansas City Federal Reserve Bank's Division of Bank Supervision and Structure, directing the oversight of more than one thousand banks and bank holding companies with assets ranging from less than $100 million to $20 billion. He became president of the Kansas City Federal Reserve Bank on October 1, 1991. Hoenig is a native of Fort Madison, Iowa. He received a doctorate in economics from Iowa State University.

NARAYANA KOCHERLAKOTA took office as president and chief executive officer of the Federal Reserve Bank of Minneapolis on October 8, 2009. In that capacity, Kocherlakota serves on the Federal Open Market Committee, the policymaking arm of the Federal Reserve System. In addition to his responsibilities as a monetary policymaker, Kocherlakota oversees all operations of the Bank, including supervision and regulation, and payments services. Before his appointment as president, Kocherlakota served as a member of the Minneapolis Fed's Research staff, as well as a research consultant for the Bank. His prior experience also includes professorships at the University of Minnesota, where he was chair of the economics department, and at Stanford University. Kocherlakota has published more than 30 articles in academic journals on a variety of topics, including monetary and financial economics. His work includes theoretical and empirical contributions to monetary economics and financial economics. Kocherlakota was named one of the top 100 Global Thinkers by *Foreign Policy* magazine in 2012. Kocherlakota earned a Ph.D. in economics from the University of Chicago in 1987 and an AB in mathematics from Princeton in 1983.

ROBERT KUTTNER is co-founder and co-editor of *The American Prospect* magazine, a senior fellow at the think tank Demos, and professor of public policy at Brandeis University's Heller School. Kuttner was a longtime columnist for *BusinessWeek*, and continues to write columns for *Huffington Post*, *The Boston Globe*, and *The New York Times* international edition. He was a founder of the Economic Policy Institute and serves on its board. Kuttner is the author of 10 books, including the 2008 *New York Times* bestseller *Obama's Challenge: American's Economic Crisis and the Power of a Transformative Presidency*. His best-known earlier book is *Everything for Sale: the Virtues and Limits of Markets* (1997), which received a page-one review in the *New York Times Book Review*. His other books on economics and politics include *The Squandering of America* (2007), *The End of Laissez-Faire* (1991), *The Life of the Party* (1987), *The Economic Illusion* (1984), *Revolt of the Haves* (1980), and the forthcoming *Debtors' Prison* (May 2013). Kuttner's other writing has appeared in *The New York Times Magazine* and *Book Review*, *The Atlantic*, *The New Republic*, *The New Yorker*, *Dissent*, *Foreign Affairs*, *New Statesman*, *Columbia Journalism Review*, *Political Science Quarterly*, and *Harvard Business Review*. He has contributed major articles to *The New England Journal of Medicine* as a national policy correspondent. His other positions have included national staff writer and columnist on *The Washington Post*, chief investigator of the US Senate Banking Committee, executive director of President Carter's National Commission on Neighborhoods, and economics editor of *The New Republic*. He is the two-time winner of the Sidney Hillman Journalism Award, the John Hancock Award for Business and Financial Writing, the Jack London Award for Labor Writing, and the Paul Hoffman Award of the United Nations for his lifetime work on economic efficiency and social justice. He has been a Guggenheim Fellow, Woodrow Wilson Fellow, German Marshall Fund Fellow, and John F. Kennedy Fellow. Kuttner was educated at Oberlin College, The London School of Economics, and the University of California at Berkeley. He holds an honorary doctorate from Swarthmore College. He has taught at Brandeis, Boston University, the University of Oregon, University of Massachusetts, and Harvard's Institute of Politics. He lives in Boston.

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 in the Ragner Nurkse School of Innovation and Governance of 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. He is a life fellow of the Royal Economic Society (UK) and an elected member of the Società Italiana degli Economisti and Patron of the Associação Keynesiana Brasileira. He is editor of the *Post Keynesian Economics Forum*. In 2010, Kregel 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, with a particular emphasis on how different sectors interact with the macro economy. He was previously an economic reporter for the *Wall Street Journal* and wrote the "Ahead of the Tape" column. He has also penned columns for *CNNMoney* and TheStreet.com.

BENJAMIN M. LAWSKY is New York State's first Superintendent of Financial Services. As superintendent, Lawsky is the supervisor of all insurance companies in New York, all New York State–chartered depository institutions and the majority of United States–based branches and agencies of foreign banking institutions. He also regulates all of New York State's mortgage brokers, mortgage bankers, check cashers, money transmitters, budget planners, and similar providers of financial services. Entities supervised by the department number approximately 4,400, with assets of about $6.2 trillion. Lawsky led Governor Andrew Cuomo's initiative to make the Department of Financial Services, which includes the former New York State Banking and Insurance Departments, into a modern unified financial regulator. Lawsky's objectives for the new Department of Financial Services include three main goals: keeping New York on the cutting edge as the financial capital of the world, protecting consumers better than ever before, and serving as a model of efficient government.

Prior to his current position, Lawsky was Governor Cuomo's chief of staff. Previously, he served as deputy counselor and special assistant to then-Attorney General Cuomo. Prior to that, Lawsky had spent over five years as an Assistant United States Attorney in the Southern District of New York, where he prosecuted white-collar crime, organized crime, and terrorism cases. He began his career as chief counsel to Senator Charles Schumer on the Senate Judiciary Committee and as a trial attorney in the civil division of the Department of Justice.

Lawsky graduated from Columbia Law School and Columbia College.

NORA LUSTIG is Samuel Z. Stone Professor of Latin American Economics at Tulane University, where she holds a joint appointment in the department of economics and the Stone Center for Latin American Studies. She is also a nonresident fellow at the Center for Global Development and the Inter-American Dialogue, and an associate research fellow of Tulane's Center for Inter-American Policy and Research. Prior to joining Tulane she was Shapiro Visiting Professor of International Affairs at George Washington University; director of the Poverty Group at the United Nations Development Programme; senior adviser and chief of the poverty and inequality unit at the Inter-American Development Bank; senior fellow at the foreign policy studies program of The Brookings Institution; and professor at the Center of Economic Studies of the Colegio de México. She was a founding member and president of LACEA, the Latin American and Caribbean Economic Association; co-director of the *World Development Report 2000/2001: Attacking Poverty*; and chair of the Mexican Commission on Macroeconomics and Health. Lustig's research and teaching have focused on economic development, poverty, and inequality, social policies, and social protection, with particular emphasis on Latin America. She has published 16 books and more than 70 articles. Her classic *Mexico: The Remaking of an Economy* was selected by *Choice* magazine as an Outstanding Academic Book in 1994. A sample of her recent publications includes *Declining Inequality in Latin America. A Decade of Progress?, Thought for Food: the Challenges of Coping with Soaring Food Prices*, *The Microeconomics of Income Distribution Dynamics*, and *Shielding the Poor: Social Protection in the Developing World.*

Currently, Lustig is the director of the Commitment to Equity project (CEQ), a research initiative focused on assessing the impact of fiscal policy on inequality and poverty in Latin America. She is also the editor of the *Journal of Economic Inequality*'s Forum and a member of the board of directors of the Institute of Development Studies and the Global Development Network, as well as a member of the advisory boards of the Center for Global Development and Columbia University's Earth Institute. She is a member of the advisory committee for the United Nations Development Programme's *Human Development Report 2012–13*. Lustig was one of the authors of the World Committee on Food Security's report Social Protection for Food Security. She received her doctorate in economics from the University of California, Berkeley. She was born and raised in Buenos Aires, Argentina, and has lived in Mexico and the United States.

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), which was 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. Madrick writes a monthly column, "The Anti-economist," for *Harper's Magazine* online and regularly contributes to a variety of blogs, including NewDeal2.0, Huffington Post, Triple Crisis, and Age of Greed on the SCEPA website.

THOMAS MASTERSON is director of applied micromodeling and a research scholar working primarily on the Levy Institute Measure of Economic Well-Being (LIMEW) within the Distribution of Income and Wealth program. The LIMEW is an alternative, household-based measure that reflects the resources that the household can command for facilitating current consumption or acquiring physical or financial assets. With other Levy scholars, Masterson was also involved in developing the Levy Institute Measure of Time and Income Poverty and applying it to the study of poverty in Latin America. Masterson's specific research interests include the distribution of land, income, and wealth. He received a Ph.D. in economics from the University of Massachusetts, Amherst, and is the co-editor of *Solidarity Economy I: Building Alternatives for People and Planet—Papers and Reports from the 2009 US Forum on the Solidarity Economy* (2010).

BRANKO MILANOVIC is lead economist in World Bank Research Department in the unit dealing with poverty and income inequality; visiting professor at the School of Public Policy, University of Maryland. He was a long-term visiting professor at the School for Advanced International Studies in Washington (1997–2007) and senior associate at the Carnegie Endowment for International Peace (2003–05). He is the author of numerous articles on the methodology and empirics of global income distribution and the effects of globalization. His most recent book, *The Haves and the Have-nots: A Brief and Idiosyncratic History of Global Inequality* (2010), has been translated into seven languages.

MARY JOHN MILLER serves as the US Department of the Treasury's Under Secretary for Domestic Finance, with responsibility for developing and coordinating Treasury's policies and guidance in the areas of financial institutions, federal debt financing, financial regulation, and capital markets. Previously, Miller served as Assistant Secretary of the Treasury for Financial Markets, where she advised the Secretary on broad matters of domestic finance, financial markets, federal, state and local finance, and federal government lending policies. In this role, she has been responsible for Treasury's management of the public debt. Prior to joining Treasury, Miller spent 26 years working for T. Rowe Price Group, Inc., where she was the director of the fixed-income division and a member of the firm's management committee. Miller received a BA from Cornell University and an MCRP from the University of North Carolina at Chapel Hill. Miller also has earned her Chartered Financial Analyst designation.

FLOYD NORRIS has been with *The New York Times* for nearly 25 years, all but one of them as a financial columnist. He is the recipient of all three lifetime-achievement awards in business journalism—the Elliott V. Bell award from the New York Financial Writers' Association in 1998; the Gerald Loeb Lifetime Achievement Award, administered by the University of California, Los Angeles, in 2003; and the Distinguished Achievement Award from the Society of American Business Editors and Writers in 2008. Before joining the *Times* in 1988, Norris was the stock market columnist for *Barron's National Business and Financial Weekly*. He previously worked at both The Associated Press and United Press International, and as press secretary to then–Senator John A. Durkin, Democrat of New Hampshire. At the *Times*, he has been chief financial correspondent since 1999, when he finished a one-year stint as a member of the *Times*'s editorial board, writing editorials on economic issues. Norris holds an MBA from Columbia University, where he was a Walter Bagehot Fellow in Economics and Business Journalism.

JOSÉ ANTONIO OCAMPO is professor, director of the Economic and Political Development Concentration in the School of International and Public Affairs, fellow of the Committee on Global Thought, and co-president of the Initiative for Policy Dialogue at Columbia University. He has occupied numerous positions at the United Nations and in his native Colombia, including UN Under-Secretary-General for Economic and Social Affairs, Executive Secretary of the UN Economic Commission for Latin America and the Caribbean (ECLAC), and Minister of Finance of Colombia. He has received numerous academic distinctions, including the 2012 Jaume Vicens Vives award of the Spanish Association of Economic History for the best book on Spanish or Latin American economic history; the 2008 Leontief Prize for Advancing the Frontiers of Economic Thought; and the 1988 Alejandro Angel Escobar National Science Award of Colombia. He has published extensively on macroeconomic theory and policy, international financial issues, economic and social development, international trade, and Colombian and Latin American economic history. His most recent books include *The Economic Development of Latin America since Independence*, with L. Bértola (2012); *Development Cooperation in Times of Crisis,* edited with J. A. Alonso (2012); the *Oxford Handbook of Latin American Economics*, edited with Jaime Ros (2011); *Time for a Visible Hand: Lessons from the 2008 World Financial Crisis,* edited with S. Griffith-Jones and J. E. Stiglitz (2010); and *Growth and Policy in Developing Countries: A Structuralist Approach*, with L. Taylor and C. Rada (2009). He holds a BA in economics and sociology from the University of Notre Dame and a Ph.D. in economics from Yale University.

YALMAN ONARAN has been with Bloomberg News since 1998, opening the organization's first bureau in Turkey, among his many roles. Onaran was covering Lehman Brothers and Bear Stearns for Bloomberg when they became the first to fall in the financial crisis of 2008–09. As a senior writer, he now pens 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. His first book, *Zombie Banks*, about the unresolved troubles of the banks in both continents, was published in 2011. A native of Turkey, Onaran first came to the United States to attend college. He has degrees from the College of Wooster and the Columbia University School of Journalism and School of International and Public Affairs. Before joining Bloomberg, he worked as a war correspondent for The Associated Press in the Middle East.

DIMITRI B. PAPADIMITRIOU is president of the Levy Institute, executive vice president and Jerome Levy Professor of Economics at Bard College, and managing director of ECLA of Bard. 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 13 books published by Palgrave 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.

ALEX J. POLLOCK is a resident fellow at the American Enterprise Institute (AEI) in Washington, D.C. Before joining AEI, he was president and chief executive officer of the Federal Home Loan Bank of Chicago from 1991 to 2004. Pollock focuses on financial policy issues, including financial cycles, government-sponsored enterprises, housing finance, banking, retirement finance, corporate governance, the housing bubble, financial crises, and the ensuing political responses. He is the author of *Boom and Bust: Financial Cycles and Human Prosperity* (2010), as well as numerous articles and Congressional testimony. Pollock is the lead director of CME Group, a director of the Great Lakes Higher Education Corporation, a past president of the International Union for Housing Finance; and chairman of the board of the Great Books Foundation. He is a graduate of Williams College, the University of Chicago, and Princeton University.

SARAH BLOOM RASKIN took office at the Board of Governors of the Federal Reserve System on October 4, 2010. She has extensive and diverse experience in the financial industry that has provided her a range of perspectives spanning supervision and regulation, compliance, enforcement, and legislation. She is known as a thought leader and critical thinker in the interaction of banking and finance with the public good. Prior to her appointment to the Board, Raskin was the Commissioner of Financial Regulation for the State of Maryland. In this capacity, Raskin and her agency were responsible for regulating a vast array of interconnected financial institutions, including banks, credit unions, mortgage lenders, mortgage servicers, and trust companies, among others. Under her leadership, the Commissioner's Office led the State of Maryland through the depth of the financial crisis reforming through legislation, regulation, examination, and supervision, the foreclosure process, combating foreclosure rescue and loan modification scams, and elevating licensing, lending, and servicing standards.

Prior to serving as commissioner, Raskin was managing director at the Promontory Financial Group, where she assisted financial institution clients addressing various policy and risk management issues. She also served as the banking counsel for the US Senate Committee on Banking, Housing, and Urban Affairs where she proposed and negotiated financial legislation. Earlier in her career, Raskin worked at the Federal Reserve Bank of New York and the Joint Economic Committee of the Congress. During her time as a member of the Federal Reserve Board, Raskin has given speeches on a number of topics, including not just the economy but the critical role of community and regional banks within it. She has discussed the contours and value of "feet on the ground" bank supervision and examination, and operational and reputational risk management. Her speeches also relate to how various financial services business models may or may not reflect "high road" policies, practices, and procedures that serve the public and enhance safety and soundness.

Raskin currently chairs the Board of Neighborworks, a corporation with nationwide affiliates that promotes neighborhood reinvestment and homeowner counseling. Her views are believed to be refreshing for their candor and clarity. She believes in the value of prudent regulation and enforcement and in empowering supervisors to take the tough and unpopular positions that serve the interest and needs of our economy. Raskin received her BA in economics (magna cum laude) from Amherst College, and her JD from Harvard Law School.

STEPHAN G. RICHTER is publisher and editor-in-chief of *The Globalist*, the daily online magazine on the global economy, politics, and culture that he founded and launched in January 2000, and president of The Globalist Research Center. He is also the global quizmaster on public radio's *Marketplace Morning Report*, where he presents "The Globalist Quiz." From 2002 to 2008, Richter was a monthly columnist for *Les Echos*, the leading financial daily in France. In the late 1990s, he was an adviser to the International Monetary Fund and, in the early 1990s, he served as North American adviser to the German Economics Ministry and Vice Chancellor. In the fall of 1990, on behalf of US Senator Bill Bradley, he drafted a "Sense of the Senate" resolution that ultimately led to the forgiveness of Poland's Communist-era public debt in April 1991. His 1992 book *Clinton: What Europe and the United States Can Expect* correctly forecast the Clinton administration's emphasis on fiscal consolidation. Richter was a Rotary Foundation Award recipient in 1980–81 and a Congressional Fellow of the American Political Science Association in 1986–87. He received his JD from the University of Bonn in 1984.

ERIC ROSENGREN has been president and chief executive officer of the Federal Reserve Bank of Boston since July 2007 and is currently a voting member of the Federal Open Market Committee. Previously, he headed the Bank's supervision, regulation, and credit group, and was active in domestic and international regulatory policy. Rosengren joined the Bank in 1985 as an economist in the research department. He has written extensively on macroeconomics, international banking, bank supervision, and risk management, including articles in leading economics and finance journals. Much of his recent research has focused on how problems in the financial sector impact the real economy. Rosengren is a director of the United Way, a trustee of Colby College, and a member of advisory boards at Colby College and the University of Wisconsin. He holds a BA from Colby College and an MS and Ph.D. from the University of Wisconsin, Madison.

WALKER F. TODD, research fellow and director of the summer fellowships program for the American Institute for Economic Research (AIER), lives in Chagrin Falls, Ohio, near Cleveland, and has been affiliated with AIER in one capacity or another since 1995. In the AIER Summer Fellowship Program, he teaches a course on the history and origins of competing theories of property rights. He is an attorney admitted to practice in Ohio and New York, and an economic consultant with 20 years' experience at the Federal Reserve Banks of New York and Cleveland. Todd has been an instructor in the Special Studies program at the Chautauqua Institution since 1997. He was an adjunct faculty member of the Cleveland-Marshall College of Law, Cleveland State University, for 13 years, and a former director of and program organizer for the Committee for Monetary Research. He has published widely in the areas of banking, central banking, monetary policy, and property rights, including topics related to international debt, the International Monetary Fund, and the regulation of the banking system and financial markets. Todd holds a Ph.D. in French from Columbia University and a JD from Boston University School of Law.

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.

FRANK VENEROSO is the founder, in 1995, of Veneroso Associates, which provides global investment strategy to money managers. In the German market, he acts as a market strategist for the Global Policy Committee of RCM, a global equity management affiliate of the Allianz Group. Veneroso served from 1992 to 1994 as partner-in-charge of global investment policy formulation at Omega, one of the world's largest hedge funds. Prior to that, he provided investment strategy advice to long-only money managers, hedge funds, and the world's largest private equity firm. In 1988, he was commodities adviser to PHIBRO, then the leading global commodities trading firm. In those years, Veneroso also wore a public policy hat, working as a financial sector policy analyst and adviser to several of the major multinational agencies responsible for economic development and, either through these agencies or directly, to the governments of emerging economies. This work encompassed money and banking, financial instability and crisis, privatization, and the development and globalization of emerging securities markets. His clients included the World Bank, International Finance Corporation, US Department of State, and Organization of American States. During this time, he also advised the governments of Bahrain, Bolivia, Brazil, Chile, Columbia, Ecuador, Korea, Mexico, Peru, Portugal, Thailand, Venezuela, and the UAE. Veneroso has published numerous papers on finance and development and financial instability issues. He also published a lengthy book on the gold market in 1998, when gold, then trading at $282 an ounce, was perhaps the most discredited of all asset classes. Applying classic principles of microeconomics to the gold market, he forecasted that gold would reach $1,200 per ounce in 2010. That year, the price of gold reached $1,200 for the first time ever. Veneroso graduated cum laude from Harvard University.

Senior Scholar **EDWARD N. WOLFF** is professor of economics at New York University, where he has taught since 1974, and a research associate at the National Bureau of Economic Research. He served as managing editor of the *Review of Income and Wealth* from 1987 to 2004, a visiting scholar at the Russell Sage Foundation in New York (2003–04), president of the Eastern Economics Association (2002–03), and a council member of the International Input–Output Association (1995–2003) and the International Association for Research in Income and Wealth (1987–2012). His principal research areas are productivity growth and income and wealth distribution. He is the author (or co-author) of *Growth, Accumulation, and Unproductive Activity: An Analysis of the Post-War US Economy* (1987), *Productivity and American Leadership: The Long View* (1989), *The Information Economy: The Implications of Unbalanced Growth* (1989), *Competitiveness, Convergence, and International Specialization* (1993),*Top Heavy: A Study of Increasing Inequality of Wealth in America* (1995, 1996, 2002), *Economics of Poverty, Inequality, and Discrimination* (1997), *Retirement Insecurity: The Income Shortfalls Awaiting the Soon-to-Retire* (2002), *Downsizing in America: Reality, Causes, and Consequences* (2003), *Retirement Income: The Crucial Role of Social Security* (2005), *Does Education Really Help? Skill, Work, and Inequality* (2006), *Poverty and Income Distribution* (2nd ed., 2009), *The Transformation of the American Pension System: Was It Beneficial for Workers?* (2011), and *Productivity Growth: Industries, Spillovers and Economic Performance* (2012). Wolff received his Ph.D. from Yale University in 1974.

Senior Scholar **L. RANDALL WRAY** is a professor of economics at the University of Missouri–Kansas City. His current research focuses on providing a critique of orthodox monetary theory and policy, and the development of an alternative approach. He also publishes extensively in the areas of full employment policy and, more generally, fiscal policy. With President Dimitri B. Papadimitriou, he is working to publish, or republish, the work of the late financial economist Hyman P. Minsky, and is using Minsky's approach to analyze the current global financial crisis. Wray is the author of *Money and Credit in Capitalist Economies* (1990), *Understanding Modern Money: The Key to Full Employment and Price Stability* (1998), and *Modern Money Theory: A Primer on Macroeconomics for Sovereign Monetary Systems* (2012). He is also co-editor of, and a contributor to, *Money, Financial Instability, and Stabilization Policy* (2006) and *Keynes for the 21st Century: The Continuing Relevance of The General Theory* (2008). Wray taught for more than a decade at the University of Denver and has been a visiting professor at Bard College, the University of Bologna, and the University of Rome (La Sapienza). He received a BA from the University of the Pacific and an MA and a Ph.D. from Washington University, where he was a student of Minsky.

GEORGE S. ZAVVOS is a legal adviser at the legal service of the European Commission (EC) in Brussels. He has represented the EC in over 130 cases in the Court of Justice of the European Union (EU), equivalent to the US Supreme Court. In this capacity, he has also been involved in several financial services reforms, including the European financial supervisory architecture. From 1994 to 1997, Zavvos was the first European Commission Ambassador and Head of Delegation to the Slovak Republic, where he established with the European Bank for Reconstruction and Development the first postprivatization investment fund in Central and Eastern Europe. From 1990 to 1994, Zavvos was the leading Member of the European Parliament on financial services (Rapporteur for the Directive on Capital Adequacy for Banks and Investment Firms as well as the Directive on Supplementary Pension Funds and the Post-BCCI financial stability reforms), as well as a member of the Budgets Committee and Budgetary Control Committee. He was also member of the European Parliament – US Congress and European Parliament – Russia

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