Conference Proceedings

18th Annual Hyman P. Minsky Conference on the State of the U.S. and World Economies

Meeting the Challenges of Financial Crisis

April 16–17, 2009, New York City

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

FORD FOUNDATION

Contents

The proceedings consist of submitted papers by the speakers and transcripts of the speakers' remarks, and summaries of session participants' presentations.

Foreword

I am delighted to welcome you to the 18th annual Hyman P. Minsky conference on "Meeting the Challenges of Financial Crisis," organized by The Levy Economics Institute of Bard College with support from the Ford Foundation.

This year's conference focuses on current conditions and forecasts; macro policy proposals by the Obama administration and others; the rehabilitation of mortgage financing and the banks; financial market reregulation; proposals to limit foreclosures and modify servicing agreements; regulation of alternative financial products (derivatives and credit default swaps); the institutional shape of the future financial system; and international responses to the crisis. The presenters are top policymakers, economists, and analysts. They will offer their insights and policy guidelines on the challenges currently facing the U.S. and global economies. I trust you will enjoy their presentations and the discussions that follow. As always, your comments and suggestions are welcome.

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

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

Program

Thursday, April 16

9:00-9:30 a.m.

WELCOME AND INTRODUCTION

Maya Harris, *Peace and Social Justice Program, Ford Foundation*

Dimitri B. Papadimitriou, *The Levy Economics Institute*

9:30-10:30 a.m.

SPEAKER

Bruce Kasman, *JPMorgan Chase & Co.*

"Unpleasant Arithmetic"

10:30 a.m.–12:15 p.m.

SESSION 1

Assessment of Fed/Treasury Response to Crisis

Moderator: Greg Hannsgen, *The Levy Economics Institute*

William Kurt Black, *University of Missouri–Kansas City*

Marshall Auerback, *RAB Capital PLC*

"Return of the State"

Jane D'Arista, *Political Economy Research Institute, University of Massachusetts Amherst*

"Setting the Agenda for Financial Reform"

Thomas Ferguson, *University of Massachusetts Boston*

"Fatal Reversal: From Single Payer to Free Markets and Back Again"

12:15-2:30 p.m.

SPEAKER

Dennis P. Lockhart, *Federal Reserve Bank of Atlanta*

2:30-3:15 p.m.

SPEAKER

James Grant, *Grant's Interest Rate Observer*

"Always the Same, Always Different"

3:15-5:00 p.m.

SESSION 2

Proposals On Alternative Financial Regulation

Moderator: Jane D'Arista, *Political Economy Research Institute, University of Massachusetts Amherst*

Alan S. Blinder, *Princeton University*

"It's a Long Regulatory Agenda"

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

"Thoughts about the Supervisory System Going Forward"

Michael Greenberger, *The University of Maryland School of Law*

"Will We Have Meaningful Reform or Simply the Appearance of Reform?"

Martin Mayer, *The Brookings Institution*

"Narrow Banking *v.* Toxic Instruments"

5:15-6:30 p.m. **SESSION 3**

Levy Institute–Ford Project Proposals on Reregulation of the Financial System

Moderator: Greg Hannsgen, *The Levy Economics Institute*

Jan Kregel, *The Levy Economics Institute*
"Minsky and the Regulation of the Financial System"

C. P. Chandrasekhar, *Jawaharlal Nehru University*
"Structural Contagion: Some Implications of the International Transmission of Financial Fragility"

Mario Tonveronachi, *University of Siena*
"Reregulating the Financial System"

Éric Tymoigne, *The Levy Economics Institute*
"Financial Regulation and the Financial Instability Hypothesis: A Ponzi-finance Approach to Financial Reform"

6:30-7:30 p.m. **RECEPTION**

7:30 p.m. **SPEAKER**

Janet L. Yellen, *Federal Reserve Bank of San Francisco*
"A Minsky Meltdown: Lessons for Central Bankers?"

Friday, April 17

9:00-9:45 a.m. **SPEAKER**

Robert J. Barbera, *ITG*
"Minsky, U.S. Policy, and the Global Economy"

9:45–10:30 a.m. **SPEAKER**

Norbert Walter, *Deutsche Bank*
"Financial Crisis — A Threat to European Economies"

10:45 a.m.-12:00 p.m. **SESSION 4**

The Institutional Shape of the Future Financial System

Moderator: Jan Kregel, *The Levy Economics Institute*

Richard Bookstaber, *Author and financial economist*
"Four Tasks for the Market Stability Regulator"

Alex J. Pollock, *American Enterprise Institute*
"Does Changing Boxes on the Regulatory Organization Chart Alter Minsky's Fragility?"

Walker F. Todd, *American Institute for Economic Research*
"Stress Testing the Banks and Stabilizing Household Budgets"

12:00-1:15 p.m.

SESSION 5

Current Conditions And Forecasts

Moderator: Ajit Zacharias, *The Levy Economics Institute*

Dean Maki, *Barclays Capital*
"U.S. Economic Outlook"

James W. Paulsen, *Wells Capital Management*
"Economic and Financial Market Outlook"

Lakshman Achuthan, *Economic Cycle Research Institute*
"What Happens at Growth Rate Cycle Upturns?"

1:15-3:15 p.m.

SPEAKER

Henry Kaufman, *Henry Kaufman & Company, Inc.*
"Who Is Primarily Responsible for the Credit Crisis?"

3:15-4:00 p.m.

SPEAKER

Joseph E. Stiglitz, *Columbia University*

4:00–6:00 p.m.

SESSION 6

Alternative Stimulus and Bailout Proposals

Moderator: Dimitri B. Papadimitriou, *The Levy Economics Institute*

James K. Galbraith, *The Levy Economics Institute*
"No Return to Normal"

Warren Mosler, *Valance Company, Inc.*
"Alternative Proposals for a U.S. Nonconvertible Currency Regime"

Robert W. Parenteau, *The Levy Economics Institute*
"Riding the Debt Deflation Guardrails"

L. Randall Wray, *The Levy Economics Institute*
"The Return of Big Government: A Minskyan New Deal"

Welcome and Introduction

MAYA HARRIS
Vice President, Peace and Social Justice, Ford Foundation

DIMITRI B. PAPADIMITRIOU
President, The Levy Economics Institute

MAYA HARRIS: Good morning. It is my great pleasure to be able to welcome you here today. Our foundation president, Luis Ubiñas, wanted to be here to welcome you himself, but he is currently in California on a site visit with some of our trustees. I'm actually very glad that I could be here, because this is an enormously impressive and timely gathering, and it's one that we at the Ford Foundation are very proud to be able to support.

It has always been a very important part of the Ford Foundation's mission to bring new thinking and innovative approaches to bear on tackling some of our most pressing challenges, issues, and concerns. I think we all can agree that there are few issues more urgent than those presented by our current financial crisis. We are deeply interested in those issues here at Ford—in global financial governance, in stability and, particularly, how it impacts poverty reduction and social justice in the United States and around the world. It's a very important part of our work under the terrific leadership of our program officer, Leonardo Burlamaqui, whom I think many of you know. So, for us, participation in this conference is a wonderful opportunity to learn from all of you, from the thought leaders and experts and academics and decision makers who are here. It's also quite an opportunity for all of us, because a crisis of this magnitude presents that rare chance to truly redefine the debate and the agenda on global financial governance. A convening of this caliber promises us the exact kind of bold thinking that we need to have as part of that debate—on policy, on regulation, and on reform. So we at Ford are very eager to hear your discussions over the course of the conference. We hope that, for you, those discussions are fruitful and productive, and that you enjoy your time here with us.

With that, I would like to invite the president of The Levy Economics Institute, Dimitri Papadimitriou, to the podium to begin the conference. Thank you.

DIMITRI B. PAPADIMITRIOU: Thank you very, very much. I want to welcome you all to the 18th Annual Hyman P. Minsky Conference, which has been organized by The Levy Economics Institute. I want to express our sincere thanks to the Ford Foundation, not only for its financial support, but also for being the host of the conference. We have an excellent roster of speakers, representing the academy as well as the banking sector, the financial sector, and, above all, the Federal Reserve. I hope you will enjoy the conference….

The instability of the financial system was at the core of Hy Minsky's work. Minsky argued that a capitalist system's dynamics have an inherent tendency to foster fragility. Stability encourages risky behavior. Risky behavior ultimately develops into a crisis. As he very precisely put it: stability is destabilizing.

In a prescient article written in 1987, Minsky predicted the explosion of home mortgage securitization that eventually led to the subprime meltdown in 2007. He was one of the few economists who understood the power of securitization. Two decades later, his predictions were validated: the "Minsky moment" had arrived. Minsky's solution to sharp downturns in financial crises was for a "big government" to maintain income and profit flow and a "big bank," with its lender-of-last-resort operations, to inject liquidity into the financial system.

The March Federal Reserve flow-of-funds data show that federal government liabilities rose sharply in 2008, to over $6.3 trillion. The Federal Reserve's liabilities also rose, to just under $1.9 trillion. Large as these numbers may be, when expressed as percentages of GDP, they are still lower than the corresponding levels of the 1950s. Big Government and Big Banks were even bigger in earlier times. To those who have warned about the danger of a surge in inflation, given yesterday's CPI, we should be worrying more about the current *dis*inflation, which may turn out to be deflation. We are at least assured that, according to Fed Chairman Ben Bernanke, the Fed has the full panoply of tools at its disposal to mop up excess reserves when it needs to.

On the other hand, personal sector financial net worth fell by nearly $8 trillion over the previous year—this, again, as of December 31, 2008. The financial assets and liabilities of the personal sector were $37 trillion and $20 trillion, respectively, for a net of $17 trillion. The Federal Reserve and federal government's liabilities are necessarily assets of either the U.S. private sector or other countries. As Minsky wrote, in a period of serious financial turmoil, the balance-sheet effects of government deficits prevent "IT"—the Great Depression—from happening again.

The Fed data also show the effects of these deficits on the balance sheets of various investors in the United States and around the world, including the Chinese central bank. Last month, Chinese Premier Wen Jiabao expressed concern about the safety of these assets. China and Japan's holdings of U.S. securities as of December 31, 2008, were over $727 billion and $627 billion, respectively. The readiness of the world to finance the United States helps its government to enact a huge fiscal recovery effort. I will return to the issue of foreign holdings and, more generally, global imbalances later.

Other U.S. sectors also invested heavily in Treasuries—among the safest securities because they are backed by the full faith and credit of the United States and considered impervious to default. Another important group of investors was money market mutual funds, which bought $310 billion in T-bills as of December 31. And who bought the money market mutual funds? The principal buyers were households, nonfinancial businesses, and funding corporations. The last category includes entities set up by the federal government—the Resolution Fund Corporation comes to mind—to clean up risky assets at Bear Stearns and AIG. These sectors increased their money fund balances by $167 billion, $50 billion, and $172 billion, respectively, in 2008.

About three years ago, The Levy Economics Institute reported on the coming recession and the increase in unemployment on the assumption that the financial market implosion would bring household borrowing to a virtual halt, strongly affecting aggregate demand and output. These projections have come to pass, and we're presently witnessing what is now the worst global economic crisis since the Great Depression. Other advanced countries are in recession, while the emerging economies have seen their economic growth significantly decline. The International Monetary Fund projects world economic growth to fall to 0.5 percent in 2009. The World Bank's projections put it at -1.7 percent. These figures are quite different if one compares them with the 2008 growth rate of 3.4 percent. This year's international trade flows of both advanced and emerging economies are estimated to grow at a much slower pace than in 2008 and 2007, when trade grew by 15 and 22 percent, respectively. The prospects, then, for world trade—the engine of economic growth for many countries for almost a decade—are discouraging. Since December 2007, trade has declined, trade financed for importers has become difficult to secure, and world consumer confidence has dropped to unprecedented levels. In February 2009, U.S. exports (an increase of $2 billion over January notwithstanding) contracted sharply, by 16.9 percent on a year-on-year basis, while imports declined by 28.8 percent year-on-year. As reported by Goldman Sachs, in December 2008, exports of the major U.S. trading partners—including China, Japan, South Korea, Brazil, Germany, and India—were down significantly. These conditions indicate a global decrease in aggregate demand and a high probability of falling exports and declining growth.

Furthermore, history is full of instances where countries adopted protectionist policies intended to improve their own trade position—with detrimental effects to others. With this as a background, I will argue that the United States and the rest of the world's economies will not be able to achieve balanced growth and full employment unless they can agree upon and implement an entirely new system for running the global economy. I will outline the nature and magnitude of an emerging crisis—the worsening of an already unbalanced economy—and some of the things that need to happen in order to prevent it.

Before doing so, some recent history is in order. The process by which U.S. output was sustained through a long period of growing imbalances could not have occurred if China and other Asian countries had not run huge current account surpluses, with an accompanying "saving glut" and a growing accumulation of foreign exchange reserves that prevented their exchange rates from falling enough, flooding U.S. financial markets with dollars and thereby helping to finance the lending boon. . . . This was an interdependent process in which all parties played an active role: the United States could not have maintained growth unless it had been happy to encourage (or at least permit) the private sector, particularly the personal sector, to borrow on such an unprecedented scale.

For those unfamiliar with the Levy Institute's work, we run simulations for the intermediate term—three to four years—using a stock-flow macroeconometric model that we have developed. The operational framer of our model is the accounting identity that links the internal and external imbalances, the internal imbalances consisting of the private (personal and corporate) sector and the public sector, and the foreign sector comprising the external imbalances—which, as a matter of logic, sum to zero.

For 2007, these balances look roughly like this: -2.2 percent for the private sector, a 3 percent deficit for the government, and a 5.2 percent deficit for trade. In 2008, you see a dramatic turnaround in the private sector balance, which reached +1.1 percent.

Changes in the three financial balances—government, foreign, and private—illustrate the major forces driving the U.S. economy. . . The first two output recessions of 1980 and 1990 were driven by falls in private expenditure relative to income. Then, between 1993 and 2000, there was moderately stable growth, due to a persistent upward trend in private expenditure relative to income. The brief dot-com recession of 2001–03 was partly offset by a fiscal stimulus, sending the government budget into deficit. Between 2004 and the first half of 2007, there was a renewed expansion of private expenditure and a fall in private net saving. . . .

In terms of the trend in private sector debt, there was upward movement throughout the period, but between 2000 and 2007 there was a marked acceleration, the proportion rising from 130 percent to 174 percent of GDP. Then, in the first quarter of 2008, growth suddenly ceased and began to fall. Between the third quarter of 2007 and the third quarter of 2008, borrowing declined by 13 percent as the credit crunch took hold—a dramatic drop that is by far the steepest fall over such a short time in the history of the series. There is no natural floor to the flow of borrowing as it reaches zero. Indeed, it is expected that gross borrowing will go on falling below repayments, causing negative borrowing for a considerable period of time.

According to our projections, over the next five years the level of private debt relative to GDP will fall back to its pre-bubble level of about 130 percent of GDP. Furthermore, borrowing will continue negatively for a long time after that. The unprecedented cut in interest rates by the Federal Reserve may be the correct policy, but it will not do the trick in terms of reactivating standard lending practices, unless business confidence in future profits and income growth is recovered. Low interest rates will keep mortgage payments low, sustaining disposable income, and may help the economy to recover. But with borrowing out of the picture, private net saving (the difference between income and expenditure) is likely to remain positive for years, as households pay down debt—willingly or not.

Our simulations for the period 2009–12 trace a baseline projection for the public sector financial balance assuming neutral assumptions; that is, no fiscal stimulus is applied. Borrowing and debt follow the projections indicated above and there is a corresponding decrease in spending, leading to the projected large rise in the private balance and a corresponding fall in GDP over the next few years. The balance of trade is determined by the accounting identity, which shows that it improves quite a lot, mainly as a result of the collapse of aggregate demand in GDP.

Furthermore, the implication of all these assumptions when taken together is that GDP … will fall roughly 12 percent below trend between now and 2010, while unemployment will rise to about 10 percent. The collapse of private spending will require the federal government to apply fiscal and monetary stimuli large enough to bring (falling) output and (rising) unemployment to more tolerable levels.

Two alternative projections for the financial balances, as well as for output and unemployment, are based on the assumption that fiscal stimuli are applied that are primarily an increase in government outlays of approximately $380 billion, or 2.6 percent of GDP, and $780 billion, representing 5.3 percent of GDP. . . . The message of these projections—which are not forecasts but rather denote orders of magnitude—is that even with the application of a very large fiscal stimulus, output will not increase sufficiently to prevent unemployment from continuing to rise through 2010. Given the political climate in Washington, it seems unlikely that budget deficits on the order of 8 to 10 percent over the next two years would be tolerated. The current economic and financial crisis notwithstanding, there is still a strong and widespread belief that the U.S. budget should be cut and eventually moved into balance. The conclusion to be drawn, therefore, is that nothing like the configuration of projected balances and other variables will be possible, since this will result in a debt-to-GDP ratio of approximately 80 percent, while GDP will remain below the 3 percent trend line, and with an unemployment rate of more than 6 percent.

Therefore, fiscal policy alone cannot resolve the current crisis. A large enough stimulus will help counter the drop in private expenditure, reducing unemployment, but will bring back a large and growing external imbalance, which will keep world growth at an unsustainable level. On the other hand, if confidence in financial markets is restored and lending returns to normal, pre-bubble levels, private expenditure will increase, helping the economy to recover. In this case, the private sector balance will slowly be restored to its pre-bubble level, with a slower reduction in the debt-to-income ratio, and the government deficit will shrink due to increased tax revenues. But the balance of payments would begin to deteriorate again, unless countermeasures were taken.

At the moment, the recovery plans under consideration by the United States and many other countries seem to be concentrated on the possibility of using expansionary fiscal and monetary policies. But, however well coordinated, these policies will not be sufficient. What must come to pass is a worldwide recovery of output, combined with sustainable balances in international trade. A solution that ensures sustained growth with full employment would require both fiscal expansion and a rapid acceleration in net export demand. Part of the needed fiscal stimulus has already occurred, but much more is needed. If the United States attempts to restore full employment by fiscal and monetary means alone, the balance-of-payments deficit will explode, most likely reaching 6 percent of GDP (as in 2006 and 2007)—which clearly is unsustainable. . . .

A resolution of the strategic problems now facing the U.S. and world economies can likely be achieved only by an international agreement that alters the global pattern of aggregate demand, combined with a change in relative prices. It is inconceivable that such a large rebalancing could occur without dramatic changes in the institutions responsible for running the global economy. Reliance on a market solution would be akin to chasing a mirage.

Speakers

BRUCE KASMAN
JPMorgan Chase & Co.
Unpleasant Arithmetic

I want to address how the financial crisis is playing out on the macro scene, perhaps with a little more of a global take than much of what you're going to be hearing during the sessions that follow, and perhaps be a little more concrete while obviously providing my own views on how I see things playing out.

I want to set the stage by making two broad points about what's going on in macro space. First of all, we all have absorbed the message from Minsky that stability is destabilizing. But what does instability produce? . . . Instability produces a very powerful business cycle. Perhaps that's the most important point I can leave you with in terms of thinking about the global economy in 2008 and 2009.

I think we can all see the first chapter of this story—that what's been playing out here is a synchronized and severe economic downturn across the world. It's one that continues fairly intensely right now, and we think that in the first half of this year the global economy will contract at about a 3 percent pace. At JPMorgan we aggregate without using purchasing power parities, so these are market-based measures of aggregating global growth.

What's more controversial and less easy to see is that we're setting the stage for global growth recovery in the second half of the year. It's being driven by some very powerful policy actions being taken by governments to contain—not resolve, but contain—the crisis in financial markets. . . . A dynamic that's playing out in the world that is producing traction in terms of costs through the downturn is likely to stabilize confidence as we go through the middle part of the year and is also likely to gather steam in a somewhat synchronized fashion on the upside, just as it did on the downside. We don't project much growth in the summer and fall, but we do think the most likely outcome is that we set the stage for above-trend growth as we go into 2010. So there's a business cycle playing out here, one that is powerful on the downside and will be at least as powerful relative to what expectations are right now playing out on the upside as we go out over the next 12 to 18 months.

Unfortunately, I'm going to complement Dimitri in making a point, which is that what's happening here is a break in macroeconomic performance, and any optimism I'm trying to express about the cycle shouldn't overshadow what I'll call the very unpleasant arithmetic we have looking ahead. The way I'd like to characterize that is by saying that I think we're making a break in macro performance from three decades of tightening labor markets and falling unemployment rates globally, to one where we're going to be living with very high unemployment rates for a long period to come. I don't mean one year or two years; I mean four or five years. That is a fundamental and profound shift from the macroeconomic point of view. Dimitri also mentioned the issue of disinflation and deflation, which I think is an immediate concern.

The more profound issue is . . . how the world adjusts from an environment of relatively good performance in labor markets to one that is generating sustained disappointing performance. It's a global story. It's obviously a U.S. story at its core, but it's not just a U.S. story. If you ask how we think it's going to resolve itself in a U.S. context, I would describe it as balancing into malaise—which is to say, we will get a cyclical recovery that will surprise people but, behind the scenes, one of the ways we're going to resolve some of the tensions here is with an economy whose potential growth rate is going to slow materially, down to something like 2 percent, and whose natural rate of unemployment is going to move up to somewhere between 6 and 7 percent. We'll find ourselves in a world in which medium-term performance will in some ways disappoint, creating a sense of chronic adjustments that are playing out against a world that, again, has some fairly powerful cyclical dynamics at play in the more near term. . . .

As I think everybody's aware, we're in the midst of a deep downturn, which I would venture to guess, even though we don't have the data going back, should be described as the deepest economic downturn since the 1940s. What's interesting relative to people's thinking on this six or 12 months ago is how synchronized things are across the globe . . . in both emerging and developed markets. In the developed world, our estimates are that things are continuing to contract at roughly a 6–7 percent pace (as in the fourth quarter of last year and the first quarter of 2009). In the emerging markets the numbers are not all that different, somewhere in the range of 5 percent.

Why is that? Why is this such a synchronized and global event? I think we have to step back and recognize that what's taken place here is not simply imbalances or problems in U.S. housing finance impacting the world economy. The point I would make to you is that we've been experiencing a set of global systemic shocks. . . . One is the credit cycle, which obviously has been the main event here. Global growth this decade was not driven by the U.S. consumer; it was not driven by U.S. housing. It was driven by easy credit, and everybody benefited. Everybody benefited from a world of cheap and easy access to credit through this decade, and now everybody is getting hurt by the turn in the cycle. And though it's not necessarily turning in a synchronous way, it did turn in a synchronous way in the latter part of 2008. A big part of why the downturn became so severe was that we had a synchronized tightening in credit conditions across the world, coming off a base where every economy—emerging markets, the United States, Europe, the rest of Asia—was very dependent on low and easy credit for its growth.

The second point we should recognize is that last year we were hit with a very powerful inflation shock; the good news on this one is that it was temporary. . . . Inflation basically doubled over the course of 2008—much of that was a result of rising food and energy prices—and it had a very big effect on purchasing power. The combination of that purchasing power squeeze (higher gasoline prices in particular) and the credit event was very damaging for the global auto industry.

That basically was the story in terms of what happened to the global economy. We were dependent on credit, and credit turned extraordinarily tight very quickly, then we had a very major inflation shock that hit purchasing power. Yet . . . the most surprising development in terms of how the global economy performed was that the United States didn't underperform. . . . It did not do well by any means, but it did not underperform.

Why is it that the United States, which certainly was at the center of the shocks even if they were global, didn't do more poorly than the rest of the world on average? Our 5 percent current account deficit is a starting point. The fact that we had a large current account deficit meant that as our demand weakened, a lot of our pain got shifted to other suppliers across the world. But that's certainly not the only thing going on here. Two other points I would mention are, first, policy. By August–September of last year, the Federal Reserve had already eased policy rates materially—300 basis points roughly—while over the course of 2008 through the summer, policy rates outside the United States were actually rising. The decision to respond more to inflation concerns outside the United States while the Fed was responding to the credit crisis early and aggressively is an important part of what has equalized the playing field. Fiscal policy is part of that as well.

Partly reflecting what the Fed was doing, U.S. corporates have actually been looking at the world ever since the housing market began to go down and expecting bad news. Their adjustments have been much more closely aligned with the weakness in performance that we've seen. It doesn't mean that they've been expecting everything that's happened, but they've kept fairly good control over costs. . . . I've plotted each recession since 1973, starting four quarters before the recession hit, and it's clear how well U.S. companies have maintained their inventory positions. It doesn't mean they're in a position where they're comfortable with where they are or that we're at an end to the inventory adjustment. However, the data that goes through the end of last year does make the point that they didn't get as far behind as they did in past dynamics as growth weakened. That point is very important in thinking about what's going on globally, in part because when I look at what's going on in Europe and Japan and a number of other countries and emerging markets, the more traditional pattern of being surprised in the corporate sector and having to make cost adjustments later in the game is something that I think does distinguish why the United States has held up in some ways relatively well in the last couple of quarters.

I want to turn from looking at the past to looking at where we are right now, and make three observations about what will be driving the global economy from spring into summer. . . . First, we're in the midst of a very powerful adjustment in terms of businesses cutting back on spending and employment, and trying to get their inventories and their costs down. This is really what's become the most important driver of the global recession as we've turned into 2009. The numbers are quite dramatic, and I think we should pay careful attention not just to the aggregate numbers but also to what's going on relatively across all sectors of the global economy.

The second point I want to make is that Europe and Japan are in the back of the pack here, and they're going to stay there for at least another six months or so. There are a lot of reasons behind that: high inventory ratios in Japan; labor market inflexibility and slow job growth in Europe. Cost adjustments are intensifying. Policy responses, particularly in Europe, have been slower. Currencies, particularly in Japan, have been an issue. There's a whole set of issues … that tell us that in the first half of the year and probably through the summer, the Japanese and Western European economies are going to be the ones that will be weakest and probably the most prone to disappointing on the downside in terms of the economic news.

The third point I want to make about what's happening now concerns pricing. . . . We're in a period where we're going to see a wedge play out in the global pricing space; which is to say, I think finished-goods pricing is coming down and will be under significant downward pressure, in large measure because of the degree of slack we're creating in the global system. But commodity prices are actually firming and will continue to firm as we make our way through the rest of 2009. Part of that has to do with the idea that growth is picking up. Commodity markets are not sitting with low levels of utilization rates like finished-goods sectors, and they will likely respond to growth. Part of it has to do with the way commodity prices respond … to forward-looking information and, particularly, have powerful leverage when monetary policy and liquidity conditions improve. . . . But keep in mind, I think there are some interesting dynamics and relative prices here that are probably going to be quite powerful. I can easily see oil prices getting above $60 a barrel in the next three months, metal prices firming, and goods pricing in core CPI (excluding food and energy) staying negative in a very significant way. Again, this is a global story, not just a U.S. story.

This is pretty much just table setting. The bigger question is, Where do we go from here? What do the next six months look like? What do the next three or four years look like?

I want to argue that we're on a path to seeing some growth, probably as early as the third quarter of this year. This path is characterized by the three Cs: containment of the financial crisis, cushions that prevent feedback loops from remaining negative, and confidence. . . . Three months ago, I would have said the containment of the funding crisis was much more fragile and uncertain, but I think it's pretty clear now that this isn't a normal financial market, and we're not going to have a normal financial market environment for a long time to come. Maybe if we use "normal" in the sense of 2007 conditions, we won't have a normal one in our lifetimes. We have a financial market where it's no longer the case that corporates have to wake up in the morning and worry about where their funding is going to come from for the next two or three months, and that there is some sense of stability that's beginning to return in a credit market that is clearly differentiating credits very significantly—which is what normally happens in a recession.

The second part of this is the feedback loop, and this is what I want to talk about in some detail, particularly in regard to the consumer. As we make our way through the spring and summer, we're going to get a little bit of a lift, because confidence begins to support activity in an environment in which the level of output and business behavior turns very lean relative to the level of demand, especially in the durable sectors of the global economy. I won't go through this in gory detail, but just a couple of observations on each of these points. I'm going to focus on the United States, partly because we think the States, along with a few Asian economies, will lead the story here. Keep in mind that this is at bottom a global story, but right now I'm going to turn more specifically to the United States with the idea that the credit markets, as I noted, have turned materially better. They are not normal in a world in which a corporate bond market is now functioning, in a world in which the Fed's actions have helped the commercial paper market, in a world in which banks are pulling back. But given what's going on in terms of GDP and bank balance sheets, it would be hard if we drew charts and looked at bank lending to actually observe a materially weak performance that reflects the effects of a credit crisis. That's not to say there aren't significant issues in the availability of credit, but I do think we are in a world in which conditions are stabilizing in terms of the key sources of stress that threatened the system systemically as we went through the second half of 2008.

Importantly, you no longer have a housing market to kick, in the sense that there's no longer a subprime or an all-day market to take out; it's the conforming space that really drives housing activity. And, I think we're on the cusp of a stabilization in home sales. We may already be there, helped in large measure by the ability of the Fed to bring mortgage rates down. We shouldn't underestimate the importance of what that means in terms of the activity side of the equation in housing. . . . We're in a situation now where, if new home sales do begin to show signs of stabilizing, the level of inventories—the level of housing starts relative to sales—is going to put builders into a position where a sense of confidence that home sales are *not* going down is probably going to complete the process of adjusting starts down. If that happens by itself, it probably will add something close to 1 percent to GDP growth. . .

This is not a story about home prices or inventories in the existing market. . . . I want to emphasize that we went into the housing market downturn with activity going down and the financial side lagging it by a long way, and we're going to come out of the housing market downturn with the activity side stabilizing and the financial side (i.e., prices, defaults, and delinquencies) lagging it in a significant way. But I think that we're in the midst of an adjustment here—that we're within a few months of starting to feel as if the activity side of the housing market has reached a bottom. From a macroeconomic, cyclical point of view, that's a big event. . . .

Now let's talk about the consumer, which . . . I think is the place where we should have the biggest debate.

The first point I want to make to you is, we need to recognize how big an adjustment the U.S. consumer has made already. We're at the end of a four-quarter period in which consumer spending has contracted at the most severe pace we've seen in the post–World War II era. When you look at discretionary spending, the adjustments made by the household sector are remarkable. Durable spending as a share of income is now well below any level we've seen in the postwar era. So don't underestimate what the U.S. consumer has done in terms of making a very significant adjustment to its spending behavior over the course of the last four quarters.

Of course, that doesn't mean the consumer is done, and I think behaviorally this is the big call for 2009. . . . Relative to the standard macro model estimates, which projected a rise in savings rates of substantial size over the last year, the consumer has moved much more aggressively to pull back. I tend to look at consumer spending in the context of the past 20–30 years of data. My nickname for the U.S. consumer is "the Big Smoothie." What the consumer does generally is take volatile income and wealth dynamics and smooth them out. What the consumer has done over the last year is, in fact, to magnify shocks, moving adjusted savings rates up roughly 5 percentage points over the last 12 months (given the macro data), in an environment in which that adjustment, in terms of the weakness of consumption, has been a major driver of the economic downturn.

What we're arguing is that the consumer is at an inflection point right now. Leaving aside the lumpiness in some of the near-term income dynamics, which does matter for our forecast, we believe the consumer has in some sense front-loaded weakness into his behavior. To some degree, you can see that in the confidence readings. Surveys from the Michigan Survey of Consumer Confidence show that uncertainty about the future has been a driving dynamic in terms of what has been key to consumer behavior. We believe that in some sense what happened is, consumers magnified financial shocks in part because credit conditions tightened. Obviously, they responded in part because macro fundamentals deteriorated, but they responded aggressively to a large degree because they became much more concerned about the future. Unless the consumer is disappointed or surprised in a negative way by what's going to happen in six to nine months—and I would argue that there's a lot of bad news priced into consumer confidence—what you're likely to see is consumer spending behavior aligned much more closely with traditional macro fundamentals.

From our point of view, that doesn't indicate a boom in consumer spending *or* a continued contraction in consumer spending at the 4 percent pace we saw in the second half of last year. We have slight positives in our forecast on the consumer side. What's interesting—and I'm going to go back to being global now—is to understand what that means in a business cycle sense. In a world in which global industrial production in the last three or four months has been falling at a 30–35 percent annualized pace, a flat consumer in this environment is a recipe for the business sector's getting enormous traction in terms of its adjustments. Our proxy for global final sales on a monthly basis—we're basically using capital goods shipments and retail sales data on a global basis—shows a gap opening up between production and sales. If we're right and that gap remains in place for another three to six months, it suggests that the adjustments on the part of the business sector are going to come to at least some significant moderation as we hit midyear. We're beginning to see signs that that may, in fact, be what's evolving. Looking at the orders-to-inventories ratio—which has been a pretty good high-frequency indicator of where the global industrial cycle is heading—we're starting to see V-shaped behavior play out there, with numbers climbing rapidly out of negative territory, and I think orders and inventories will become aligned if there's no further and significant deterioration in final demand as we go into the latter part of the year.

There's one other point about the business cycle dynamic that we need to keep in mind, and that is, there's a lot of stimulus coming through the system, and most of that stimulus we haven't seen yet. It's not the stimulus that hit us in the first quarter of this year. Much of the stimulus is actually beginning to be felt in the second quarter. . . . On a global basis, it will equal an increase in GDP growth of about 2 percent over the four quarters that begin in the second quarter of the year. I like to define the axis of policy vigor on the fiscal side as including the United States, Japan, and China. Japan has really picked up steam recently. Three or four months ago, the Japanese numbers would have been less than half of what they are today; but … the last couple of announcements from Japan suggest they're going to get an addition to GDP of roughly 3 percent beginning in the middle of the year. . . .

I would describe U.S. fiscal policy as somewhat less than shock and awe and somewhat more than chopped liver. Which is to say, we're getting a contribution of roughly 2.5–3 percent to GDP growth in the second half of the year—a little more than 2 percent on the four quarters. That's meaningful, but from an economy that averaged something like a 5.5 percent decline in GDP in the fourth quarter of '08 and the first quarter of '09, it's not enough to bring us out of an economic downturn. We need to have our story about the consumer, our story about business adjustments working through the system—that, combined with the fiscal stimulus, is what's needed. So fiscal policy alone is not enough to bring the United States out of recession, but if we're right about what's happening more generally, it will be a factor. In terms of the way I'm looking at the world right now, I feel pretty comfortable about the balance of risks around this profile—which is to say, the risks as we go forward may actually be a little bit to the upside of what we're forecasting. . . . From our forecasts, the second half of 2008 and the first half of 2009 have similar declines in GDP and industrial production. But what's crucial here is the shift between what's happening in terms of final demand (particularly consumer spending) and how businesses are making adjustments (particularly on the inventory side). That, combined with the idea that the fiscal environment is adding and the financial sector drags are fading, is what's setting us up for some growth that begins to add up to something material going into 2010.

I want to shift gears now and reiterate the point I made up front, which is, if we were to hold another conference five years from now, I don't think anybody would be focusing on when we began to see an economic recovery take hold in the United States. This is a big story if you're thinking about the world from the standpoint of high-frequency dynamics or debating whether the United States is going to follow the path of the 1930s. But once we get beyond those kinds of considerations, when we look back on this period I think everything I've talked about up till now will be seen to be of relatively little significance in terms of the bigger picture.

We are, I think, in the midst of breaking what has been a very powerful and important underlying trend in the global economy, and that is three decades in which, through the ups and downs of the business cycle, we've seen improving labor market conditions on a global basis. In the developed world, I think the improvement in labor market conditions on a trend basis has been important in causing (and has probably been caused by) a lot of the good things that have happened in macroeconomic space, including globalization, disinflation, and the increased prominence of market-oriented systems worldwide. I think we're breaking this trend in a very dramatic and powerful way, and one that's quite troublesome in terms of its implications.

Obviously, one implication is that over this three-decade period of declining unemployment rates, fiscal positions did not consolidate in any clear-cut way across the world; and it's pretty clear that the developed world's present deficit and debt levels are outcomes that we haven't seen since the 1940s. We're moving into a world where we're basically shocking the system from low to high unemployment, and we're blowing our fiscal picture in a very significant and dramatic way. I want to reinforce this point—and I think Dimitri made the point as well—that it's going to be very hard to get back to something that we are used to in terms of normal labor markets. Choose a peak unemployment rate and ask yourself the question, How much growth do I need to get back to a normal labor market? Using 6 percent as our normal unemployment rate (and, given the unemployment rate we've lived with in the last 20 years, 6 percent is actually on the high side) and 9.5 percent as our peak unemployment rate (that's our forecast for the peak, and I would be comfortable saying things are more likely if I take the risks to be higher than lower on that front), . . . what kind of GDP growth are we going to need to get back to our "normal" rate in, say, a three-year period? The number I come up with is over 5 percent GDP on average over that period.

Now, I can tell you that I'm confident we're going to have a bounce at some point—we're going to get a few quarters of good GDP growth, probably over 4 percent. But I'm not going to sit here and tell you in any way, shape, or form that the U.S. economy can sustain over 5 percent GDP growth for three years running. That, to me, seems in the land of miracles.

So what I want to say to you is, we're not going to be sitting here with high unemployment rates for one year or two years or three years. We're going to be sitting here with high unemployment rates for a long time to come, and with elevated budget deficits for a long time to come, and that's a big and profound macroeconomic shift. It dwarfs everything that I've told you about the business cycle, except for the fact that I think the current business cycle dynamic is telling you we're not going to experience the Great Depression and have a 20 or 25 percent unemployment rate. But once we get past that debate, this is really the big story.

How does the political economy respond to this in a more medium-term sense? The first battle is preventing disinflation from turning into deflation. We can debate inflation performance here—and there are lots of macroeconomic issues around how you forecast inflation—but I have very little doubt that what's reflected in that high unemployment rate is an unusually large amount of slack in the world economy that means pricing pressure is going to be extremely challenging in the finished goods sector. And that's going to have a very significant effect on core inflation in the United States. Our models tell us core inflation's going negative in 2010. Our forecast is for it to go flat. We have core PCE data in the United States that goes back to the 1950s. Over that time, core PCE never broke below 1 percent. Breakdown below 1 percent, let alone going flat, is a big macro event, and I think what we expect to see over the next 12 months is a Federal Reserve that is shifting gear from an acute financial crisis response to making sure that very low inflation, potentially even negative core inflation, does not seep into market psychology—a significant challenge. I think the Fed understands this and has the tools necessary to the fight. But I don't want to minimize the battle that lies ahead, or the fact that the Fed is going to have to maintain very accommodative policies and will, I think, ultimately continue to keep its balance sheet very far expanded (although perhaps not in the same composition as what we have today). I'm a believer that we can win, but I want to emphasize that this battle is going to be the dominant force over the next two years; it's not going to be the Fed balance sheet causing inflation.

Unfortunately, the other battle, one that we're not going to win, is malaise. I don't know of a country … that has seen a major shock to its labor market in the way we're describing—a major shock to its public sector finances—and hasn't seen that show up in a deterioration in trend performance. There are a lot of things we can talk about in terms of trend performance in the United States, including capital formation, the way the government is going to have to work toward trying to fill its fiscal holes, and what I think is a major skill mismatch unfolding in the labor markets. The Beveridge curve data is already suggesting that the skill mismatch is of significant size, and … that the NAIRU is moving up in a significant way.

The bottom line is that it's very hard to see the U.S. economy not coming out of this with a relatively positive cyclical balance over the next year or two but slipping into an environment in which underlying productivity growth slides and the labor supply continues to be soft for a number of reasons, some of which are not related to the cyclical dynamic. To some degree, we resolve these problems in a way that we wouldn't necessarily deem very favorable, which is, we find ourselves with a 2 percent potential growth rate and a NAIRU that moves up toward 7 percent over the next two or three years. Essentially, the United States doesn't look like Depression-era America. It doesn't look like Japan in the 1990s. But it may look like Europe in the 1980s. Which is to say that, coming out of a major disruptive shock, we find ourselves stuck in low growth and high unemployment, and with a government sector that increasingly has to deal with that—and in some ways does so in manners that reinforce the problems.

Maybe we get the good elements of that and we have a long August vacation and create a café culture in Des Moines and Minneapolis (hopefully not with the same degree of cigarette consumption as we see in Paris). But without trying to go into this in more detail—I want to have some time for questions—I'll leave you with that point: that I think we are in the midst of a very powerful business cycle whose downside is not over and whose upside will surprise people, but beneath the surface, there is malaise. Two percent potential growth, sustained high unemployment, high fiscal deficits, and government responses to that are in some ways the price we're going to pay as we shift from an acute financial crisis to a chronic adjustment phase.

Q&A

. . . If I've learned anything in the last 18 to 24 months, it's the limit of my ability to understand and forecast the linkages between the financial side and the real side, but I do think … we've already made some very significant adjustments on the macro side that have moved us from a world of high dependency on credit to relatively low dependency on credit. We are in a situation where one of the key issues going forward relates to whether we're going to see some modest resumption in nonbank credit activity in the United States—in the commercial paper market, the corporate bond market, the conforming mortgage market, and the agency balance sheets—and recognizing that in the early stages of an economic recovery, even in a normal recession environment, banks tend to take a backseat in their behavior, whether improvement on that front can take place against the backdrop of relatively modest demand for credit and a world in which the banks, while not returning to normal, are not aggressively pulling back in terms of their activities. That scenario does make sense to me in a world in which there probably will be some net additional injection of capital into the banking system. There will be banks that will be taken into receivership or actively managed by the government, and there will be a relatively slow workout phase on that. That's the basic call I'm making in an environment in which, from the point at which we're starting this business cycle, I'm effectively building in a relatively hindered recovery on the back of financial conditions that continue to pose a drag. You can track this on a real-time basis by just looking at the financial space and seeing whether that dynamic is playing out. As we've gone through the first three or four months of the year, I'm feeling comfortable, but certainly not confident, with the view that I just expressed. . . .

I'm slightly confused about your prediction of a consumer revival. If consumers are not going to have jobs, they're not going to have credit cards either—or else they're going to have far more expensive credit cards. So exactly how does consumer spending revive?

We've had a period over the last two quarters where U.S. consumption contracted at a 4 percent pace. I'm suggesting that over the next two or three quarters consumer spending is going to be roughly flat, . . . in a world in which real disposable income in the first half of the year is growing at an estimated 4.5 percent pace. It's not growing on what labor income is doing; it's growing on the back of lower inflation and a number of different injections of income from the government sector. . . And I think that cushion on the income side comes together with an environment in which the fear factor that has driven the consumer toward excessive adjustments relative to the macro fundamentals . . . begins to be tempered by some sense that the news on the economy is not worse than they expect. So this is a story that is continuing to have an underlying trend rise in savings rates, it's continuing to have the macro fundamentals weighing on the consumer; but it's shifting away from the behavioral convulsion that consumers went through in the second half of last year, and it does have some cushions affecting the picture. That's a forecast; it's not a reality right now. But I'm happy to tell you that in the first three or four months of this year I don't see anything that makes me any less confident that that kind of story is the more likely one to play out here. . . .

This sounds a little bit like the conversations that were being had around 1937.… Back then, of course, there was the premise of a kind of long-term, low-level stagnation, and then you had the greatest economic stimulus in history, which was World War II. So I think in some sense the long-term forecast leaves out the politics and the possibility of a fundamentally different path. Secondly, your short-term forecast strikes me as too optimistic. The OECD says we're going to have unemployment in excess of 10 percent into 2011 and 2012. Where are the jobs going to come from, and why are we not going to continue to see monthly job losses of 500,000 or 600,000?

I think we are going to continue to see significant job losses for the next couple of months, but what you have here is an environment in which the business sector has moved very aggressively to cut—cut inventories, cut jobs, cut capital spending plans. They are making adjustments based on a picture of demand that is extremely bleak. I think what will happen in the next few months—and it's already starting to happen in the data flow—is that they will begin to see the world as not turning out to be quite as bad as they expected, and by having made those aggressive adjustments, those adjustments begin to fade as we make our way through … into the early summer.

In our forecast, that does not include any job growth until roughly the end of the first quarter of 2010. It's not uncommon—in fact it is very common—to see consumers in a much more muted fashion than what we're seeing right now have their worst period in an economic downturn as you're going into the downturn, and actually begin to recover well before the labor market adjusts. So I don't see there's any inconsistency with the forecast that we have that we continue to have job cuts through the end of this year—the business adjustments will continue to linger—but that consumers actually stop pulling back. I don't see consumer spending booming here. Again, every quarter I've got this year does not have a consumption number above 1 percent; but it doesn't have numbers going back into that zone of -3 or -4 percent.

I would just emphasize this: that an important part of the consumption weakness we're seeing right now reflects consumers that have jobs, consumers that have access to credit, consumers that have lots of liquid assets. The U.S. household sector has something between 65 and 70 percent of one year's income sitting in cash right now, and if the consumer felt even modestly better about the future relative to where they've been—and by the way, consumer confidence readings in terms of expectations of the future are just about at record lows over the last 30–40 years—it's very reasonable to think that we will see stabilization in spending against the backdrop of weaker labor markets going forward. I think that's a more reasonable macro forecast than continuing to have consumer behavior convulse the way it has over the last three or four quarters. This is what forecasting is about—it's about taking views. I'm happy to test it in the light of the day. I'm suggesting to you that in the first three or four months of this year we've already begun to see the consumer move away from that convulsive path. The test is not over on that, but I'm feeling pretty comfortable with this view relative to an alternative one that says the consumer is going to keep pulling back in the way that we saw through the second half of 2008. . . .

Regarding the longer-term outlook, I think it's actually plausible that, if there is such an enormous output gap now, that the economy could grow at above trend for several years—well above 5 percent—without running into inflationary bottlenecks, so it may not be so implausible that we'd be getting back toward full employment in the next three years or so. But then the question is, What is that level of full employment? You had sort of a negative thought that the natural rate is 6 or 7 percent, maybe even more, based on the low growth of the capital stock and a supply mismatch. Are these long-term-equilibrium effects or just business cycle effects?

Let me start by making a disclaimer: any time an economist talks to you about something that goes beyond the next six months, you have to use a pretty high discount factor, because our ability to articulate and see the medium-term forces at work should always be made with an awful lot of humility.

With regard to your first observation, I agree with you: in an economy that has an enormous amount of slack, an economy that has policymakers who are committed to growth, an economy that is part of a global economy that has been synchronized on the downturn, there are a lot of reasons that, once things begin to show signs of improvement, they *can* improve—and I think they will improve in that cyclical context. But when we talk about strong, sustained growth, I don't see the ability of the financial markets to normalize in a way that helps lever that growth. Right now, at least, … I have fiscal policy ending its ability to support growth sometime by the middle of next year. From 2010 into 2011, fiscal policy turns tight in our forecast. Given that there will be ongoing adjustments on the financial side and ongoing behavioral adjustments—which I don't want to minimize, despite the view that I expressed about the consumer in the near term—I think talking about seeing those kinds of numbers on a sustained basis is heroic. . . .

As far as what's going on on the supply side of the economy, . . . the indicators are telling us that there is a supply mismatch that's starting to take hold in the labor market—that the relationship of the vacancy and unemployment rates is changing. It makes perfect sense to us that, coming out of this very disruptive downturn where there are big sectoral adjustments taking place, the economy will have more frictional unemployment and go through a period of fairly weak capital formation. Those things will weigh on trend performance, along with the broader issue of how the political economy . . . deals with a shock of this type. Both of those get me to a view that suggests that the supply side of the economy is biased toward deteriorating. . . .

I would like to go back for a minute to a question that was raised earlier regarding the unemployment crisis and how that is linked to consumer demand and its ability to take us out of this present situation. Part of the Obama stimulus package is devoted to direct job creation by the government. This is actually an idea that was raised by Hyman Minsky—he used the phrase "employment of last resort." Given the positive experience of Argentina and of India, and the fact that we have many experts here—including Randy Wray, Jan Kregel, Pavlina Tcherneva, and Dimitri Papadimitriou—I would like to initiate a discussion about active labor market policies, and if you think there is a place for them right now.

Let's distinguish two things here. One is the general thrust of fiscal policy, which has got a number of different things associated with it. But in terms of our forecast, we're making assumptions on multipliers, turning that into GDP growth, and then generating that GDP growth through a set of relationships that determine job formation. That's basically what I'm doing. I'm not sitting here trying to qualitatively look at labor intensivity or specific incentives that are in the Obama plan . . . in order to discern a specific effect on employment relative to what's happening to GDP more generally.

I'm going to punt on your question to some degree, so I'll apologize first. From my point of view, the case for doing fiscal policy right now is recognizing that you're going to pay a price for it later on down the road—that you've got to finance it in some way. . . . In that sense, what we need now is shock and awe. We need something right now to get the economy off of a negative dynamic—which, while I'm comfortable it is starting to abate, it is not necessarily certain that it will. If you can do that, the case for employment-oriented policies—as opposed to more environmentally-oriented policies, as opposed to investments in other things—becomes a cost-benefit one, which I think needs to be taken much more on a micro basis than on a macro basis. That's where I'm going to punt on it, because I don't have a particularly strong point of view on that specific topic. I think if we can get growth, we'll get jobs. If we don't have growth, we're not going to get jobs. And a lot that's going to get done on the government side with respect to unemployment is going to be secondary to that very basic issue—how much growth can we generate?

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First, let me thank Dimitri Papadimitriou of the Levy Institute for inviting me here to New York to speak to such a distinguished group. Your conference theme, "Meeting the Challenges of the Financial Crisis," as we saw this morning, provides wide latitude for a speaker to look back, look forward, and treat any number of topics. This afternoon, I plan to look ahead and consider certain challenges of the post–financial crisis period.

Indeed, I believe it's a good time to start thinking about life on the other side of the financial crisis. . . . Today, the economy is still very weak, but there are some encouraging signs that support optimism. My outlook is very similar to that presented this morning by Bruce Kasman. It calls for the beginning of a recovery in the second half of 2009. I do not expect a strong recovery, but I do expect the economic contraction we're now experiencing to give way to slow and tentative growth as early as the third quarter.

Certainly, risks remain to this cautiously optimistic outlook. I have a watch list. I am concerned about the commercial real estate sector and how its performance could affect the banking system. . . . I am concerned that continuing job losses will reverse the slight indications of improving consumer confidence. And I continue to watch house prices with concern. Residential real estate prices continue to fall, as indicated by the Case-Shiller index. Along with these domestic risks, global risks are also considered in my outlook, given downward revisions in forecasts for GDP growth in most major economies.

Nonetheless, I think it is an appropriate juncture to give more detailed and practical thought to the world we want to construct after this most difficult period. In my remarks today, I plan to share my personal views, even what you might call preliminary musings, on a basic question about the post-crisis environment: what regulatory environment will both align with the reality of financial markets and adequately address recent failings?

I trust this topic is appropriate for a conference in honor of Hyman Minsky. As you know, he devoted much of his academic life to the forces that give rise to financial instability and the important role that institutional arrangements play in both the promotion of, and the remedy for, financial instability.

Financial markets and securitization

There has been much discussion about restoring a commercial bank–dominant financial system, downsizing large, systemically critical financial institutions to eliminate the "too big to fail" problem, and limiting the role of securitization as part of a shrinking of the shadow banking system. These are examples of opinions, which range from predictions to prescriptions, on what the financial system should look like.

The financial system has already undergone what some would call radical change. I'm referring to the reduction of the number of stand-alone investment banks, the conversion of some investment banks to bank holding companies, and the forced consolidation of the commercial banking sector. I'm cautious about predicting such substantial change going forward. I expect the financial system to continue to involve a mix of capital markets and institutions, but with a wider array of institutions falling under regulatory supervision. Furthermore, I take it as a given that there will continue to be large international institutions with operations in many countries; that is to say, many regulatory jurisdictions around the globe.

Looking ahead, I see an ongoing role for securitization and the originate-to-distribute model. Securitization markets have shrunk dramatically over the last year and a half, and in some cases have shut down altogether. I expect these markets to return, perhaps in simpler form and with more accountability.

I expect securitization to continue because this form of financial intermediation or banking developed in response to needs and realities that have not disappeared. I was a commercial banker in the 1980s, and I remember well the onset of the practice of balance sheet allocation according to return on assets and, ultimately, return on equity. Commercial banks were, and remain, caught in a dilemma of wanting to serve their clients by providing loans but not always being able to justify booking very competitively priced loans on their balance sheets.

This tension gave rise to various securitization, distribution, and asset liquidity strategies, including off-balance-sheet vehicles such as the now notorious structured investment vehicles. The excesses that arose need to be addressed of course, but the underlying economics of 12-to-one leverage banking continue to dictate that assets retained on balance sheet meet net interest margin and return requirements. Banks, after all, must compete against all businesses for capital and seek competitive returns and earnings-per-share growth. In this respect, they do not compete only against other banks.

Securitization has brought benefits to consumers that cannot easily be matched by a bank that originates a loan to hold. In particular, mortgage securitization, which began in the 1980s, has led to lower mortgage rates, advancing the social goal of homeownership by improving affordability. In more recent years, however, mortgage-backed securities have been engineered and resecuritized into increasingly complex structures referred to as collateralized debt obligations, or CDOs, and even CDOs-squared. Investors in these securities relied on credit rating agencies to assess risk, and banks took advantage of regulatory arbitrage to conduct this business off balance sheet. The resulting lack of transparency regarding the value of the securities and the financial condition of the banks holding them was a central factor in the financial turmoil of the last 18 months.

Going forward, markets and investors will show a new awareness of the potential for complexity, opacity, and risk in securitized instruments. This awareness in and of itself has provided, and will continue to provide, incentives for the creation of simpler and more transparent securitization structures. For these and other reasons, I expect our securitization system to be reformed, but not replaced.

Agile oversight required

The regulatory environment we construct in the coming months must be suited to a financial system that remains a mix of capital markets and institutions—formal and so-called "shadow" banking—with an array of institutional operating models.

Against this reality, a system that responds to the perceived faults of the pre-crisis financial world by imposing a set of rules about what behaviors are prohibited is almost certain to amount to "fighting the last war." I do not believe we can easily anticipate where the next source of stress in financial markets will arise.

In my view, the post-crisis environment will require agile oversight. This regulatory approach should stress actively managing risk as it evolves, with the associated potential for an institutional failing, versus an approach that focuses on avoiding failure. Following this logic, the regulatory environment we construct should be a well-balanced mix of rules and principles guiding flexible response, and should also give a meaningful role to market discipline. In an ideal world, effective market discipline necessarily allows for failure in a system in which no institution is too big—or too interconnected or complex or operationally critical—to fail. Obviously, it will take some time to achieve this ideal situation.

Several policy actions over the last 18 months have been about avoiding failure of a large, systemically critical institution. It's important to emphasize that some of these actions took place in the absence of resolution authority; that is, the authority of a regulator to manage the failure of an insolvent institution in a purposeful and orderly manner.

In simple terms, resolution involves these steps: (1) seizing control of the entity, (2) finding an acquirer or acquirers, (3) selling off assets, (4) stabilizing funding arrangements, including insured depositors and counterparty exposures, (5) working out unsold assets, (6) allocating losses to shareholders, bond holders, wholesale depositors, and other claimants, and, finally, (7) managing final liquidation and shutdown, if required.

Though this list sounds relatively straightforward, aspects of it are extraordinarily complex. At the core of the systemic risk issue is the fact that banks and other highly leveraged financial institutions are involved in a complex network of two-way, short-term funding arrangements. The failure of a large, interconnected financial institution threatens the funding of its counterparties, which then threatens their counterparties, and so on.

The metaphor that seems apt is a chain of falling dominoes. Any robust resolution process must come to grips with the potential for these sorts of network spillovers and include mechanisms for short-circuiting the potential cascade of counterparty failures when a lead domino falls.

It seems to me that this type of resolution of a large, globally integrated and diversified financial institution is new territory for regulators and involves some challenges that haven't yet been faced. Ideally, the process would be substantially accomplished in a short period of time, with as little expense to the taxpayer as possible. Some commentators have suggested that "a short period of time" be defined as something along the lines of "over a weekend." Given the required scope and degree of integration with multiple national economies, that description of speed may be unrealistic.

The challenge with this kind of institution, or the problem of its resolution, can be summarized as follows: The entity is not just a domestic financial institution but a collection of *many* domestic institutions, all with cross-border connections. These multiple entities in aggregate involve hundreds (or more) of legal vehicles operating across a range of business lines that are not necessarily easily separable, in as many sovereign legal and regulatory structures, each interested in orderly resolution in its jurisdiction. Further, there may be, and in fact is likely to be, no single buyer that is qualified and acceptable to all. A resolution exercise of this magnitude has not been performed before.

Yet, without a believable resolution capability, the too-big-to-fail problem isn't reduced. The problem becomes "too big—or too interconnected or complex or operationally critical—to resolve."

This challenge suggests resolution planning should be a continuous effort on the part of regulators. Practices might include what-if consultations with national authorities where the biggest offshore operations are located, resolution simulations to identify potential problems in advance, and working with institutions and host governments to achieve cleaner and simpler legal structures that are resolution-ready. By "resolution-ready," I'm envisioning legal vehicle structures that wrap assets and business units of organic businesses into entities that can be easily evaluated and transferred in the event of a necessary disposal.

These are just top-of-mind ideas. My point is that I'm urging careful thought on the implementation and execution capabilities required to limit systemic risk. In assessing the proliferating opinions about regulatory reform and focus, we should ask, How would you operationalize your recommendation?

The financial crisis in this country has resulted in financial industry consolidation. The effect of industry consolidation is greater concentration without, as yet, much reduction of systemic risk. The preferable direction is the opposite—toward less concentration.

Ideas have been floated, but there is not yet much consensus on how to accomplish deconcentration. Forced downsizing and breakup is an option. I have concerns about such an approach. It strikes me as a drastic measure that could unfairly penalize relatively healthy and successful institutions.

An alternative could be a scheme of escalating supervisory attention as a financial institution approaches and exceeds thresholds of systemic risk. This approach might provide a check on institutions and be a disincentive to becoming a potential systemic problem.

No return to simpler times

My remarks today have tried to contribute, based on some experience as a banker and recently as a policymaker, constructive, earthbound thoughts for the architects of the post-crisis financial and regulatory world. Next month, the Atlanta Fed hosts a conference at Jekyll Island, Georgia. The conference will take place where, about a century ago, many of the ideas leading to the Federal Reserve System were deliberated. Those meetings were held in 1910 in the aftermath of a financial crisis that bears strong resemblance to our current experience.

Coming off the turbulence of 2007–09, I can appreciate the yearning for a simpler era. But the future financial architecture and regulatory approach that lines up with it must be constructed, in my view, to be durable, to evolve with inevitable change, and to be equal to the reality of the financial sector that will survive this period. I expect the financial system to retain its diverse elements, including securitization markets, large, globally integrated institutions, and vigorous and ongoing innovation.

Thank you very much, and I would be happy to hear comments and respond to questions.

Q&A

In light of global banking institutions, wouldn't it be logical to have global financial regulating institutions? Likewise, if you're going to have a state regulator, maybe the bank should be limited to the size of the regulator, with the idea being to keep the system simple. A second question would be, what is the rationale for keeping shadow banking entities off the books—why would you not regulate any financial institution?

Let me respond in reverse order. I think off-the-books holding vehicles, or booking vehicles, are substantially a thing of the past, so in the future the logic that prevailed before will simply have to be dealt with in other ways. . . . In the '80s, as I remember it, in the commercial banking system we simply got to a point where we wanted to serve clients of various kinds but the competitively priced loan didn't meet return requirements. Out of that came various strategies to try to deal with that, among which was trying to figure out how you could put some of these loans in vehicles and sell them to investors. That was the basic idea of structured investment vehicles. I think that approach is substantially a thing of the past, so we will not be dealing with it as a problem going forward.

Regarding the first question: I certainly understand the intellectual appeal of some kind of a global system that lines up with the reality of globally operating institutions, but I am not expecting it to occur. In all likelihood, the system will continue to be a national system that deals with the international dimensions of some of its constituent firms, and that's what I'm really preparing for. There certainly may be innovations in that construct—for example, the macro prudential regulator, or systemic risk regulator, would be one aspect of that—but my expectation is that the regulatory system will continue to be conducted by sovereign states and will not have an overlay of some international institution to any great extent.

Doesn't Basel, and global accounting by a major accounting firm, represent an inchoate form of global regulation?

In many respects it does, but I would call it coordination. Obviously, if you end up with the same set of rules in various countries—and it is, I think, desirable to end up with some consistency across the system—then one could interpret that as at least a passive form of global regulation. But I'm speaking of regulation in the active form, where you have a regulator sitting across the table from a regulated institution and discussing the actions of that management team. That's still delegated, even under Basel II and other arrangements at the national level.

You didn't mention changes in incentives, especially for managers, in the financial sector. I think that has been one of the great problems in this crisis. Don't you think something should be done about it?

Yes, indeed. I think the incentive structures in general have been too short term and conceivably have given rise to some excesses. However, I do believe that the market will continue to play the dominant role in shaping what those incentive structures will be. It will be, I hope, a better informed market that is responding to the learnings of this very difficult period, one that requires of management a different set of incentives and working through market mechanisms for the most part. There may be some regulatory involvement in overseeing those incentives, but, in the end, I would still rely on the market to determine what those incentives should be.

You mention that you're going to rely on the markets. But the markets haven't adequately provided incentives in the past, so why should you expect that they would in the future?

I don't think we're going to come through this period without learning something. And I think there will be a combination of formal structural change in regulatory approaches, government involvement in markets and so forth, combined with market-generated, or self-generated, improvement in methods—for example, as alluded to this morning, addressing the real failure, in many respects, of the credit rating agencies to properly rate securities that in the aftermath were valued by the market far below their assigned ratings. I have to believe that the rating agencies are well along the way to reforming themselves in order to be effective in the world of the future. So my point is really a kind of philosophical one and made at a general level: that there will be regulatory oversight but in combination with markets' reforming the practices based on the learnings of this recent period.

You mentioned that the banks were leveraged roughly 12 to one. We know that hedge funds have gotten a lot of grief because their leverage may be three to one. My understanding is Lehman, Bear Stearns, and some of the other banks were leveraged 25 to one or even 30 to one. How could the government let this happen?

There are different leverage ratios in different countries, which, over time, should fall into a consistent practice as Basel is implemented. Your reference to hedge funds—first, from my position, we don't have a lot of visibility into hedge fund leverage. Certainly, it's understood generally by the treatment they get in the press that some of them are very highly leveraged and some of them are not so highly leveraged; there are different strategies at work. But those are private investment partnerships. They're not unimportant in our financial system—the Long-Term Capital Management case of several years ago was deemed a systemic risk situation, so I don't think they can be ignored—but we do need to approach the question of regulating their leverage very carefully and to treat them proportionate to their real worth. Generally speaking, hedge funds as institutions have not been a big part of the recent problems in my view…. Furthermore, notwithstanding the scale of some hedge funds today—which is really quite sizable—the difference in scale, size, and complexity of some of these institutions … is dramatic. Some of the world's largest hedge funds operate with a few hundred employees; some of the world's largest banks have a few hundred thousand employees. Hedge funds may operate from multiple trading rooms or multiple operations in a few financial centers, but we have large financial institutions that operate in over 100 countries. So there is a significant difference in scale, and maybe that has something to do with the recent problems having been more to do with the banks and financial institutions than necessarily with the hedge funds.

Early financial markets were regulated and then deregulated. Now they're going to be regulated again. What kind of a mechanism can guarantee that we don't backslide again, and that we'll be in the same spot in 20 years?

…I would guarantee nothing. Twenty years of prosperity has a way of taking people's eyes off the ball. . . . I'm looking out a few years—you might say the years during which I feel I'm going to be somewhat responsible for this—and I think we have been through such a traumatic period here, with so many lessons learned, and it's been so embedded in our psyche, that it's hard for me to believe that you're going to see substantial, let's call it imprudent, deregulation develop spontaneously in our system in the near term or even in the medium term, but I would guarantee nothing over the long term.

Recently, in hearings on his confirmation as Treasury Secretary, Timothy Geithner said he's not a regulator. Are you *a regulator, and if so, what could you have done differently to prevent this crisis from happening?*

I don't remember the comment by Mr. Geithner, … so I don't know quite what he meant by that. I may, a bit loosely, use the terms "supervisor" and "regulator" synonymously, but there are nuances in how these roles are actually executed. We play a role as supervisor, and that has some different connotations than regulator—regulator perhaps being more about the enforcement of particular rules as opposed to what you might call the monitoring end, or the prudential oversight of institutions. Maybe that's what he was referring to. At the Federal Reserve in Atlanta I have about 300 colleagues who are in the bank examiner role. I consider us as doing both supervising and regulating.

First, sir, let me say it's a pleasure to be speaking with the president of one of the largest Federal Reserve banks. We're all very happy to have this interaction, so we appreciate this very much …

You'll have Janet Yellen speaking tonight.

… even though our questions are hostile.

The really hard questions I would ask you to defer to the evening *[laughter]*.

You mentioned the originate-and-distribute model. That was a model that applied in the syndicated euro-loan market that started in the 1970s in the United States and grew very rapidly, and that led to … the 1982 debt crisis. In that period, we had three dozen sovereign defaults related directly to syndicated euro-loan market lending. The model was a front-end fee model, and it is still a front-end fee model today. Banks get front-end fees for participating, managing, et cetera. Front-end fees, as far as I can see, are very dangerous. I wonder what your comments would be about front-end fees in general, and to what extent in the ongoing consideration of changing the regulation of bank practices front-end fees might be addressed. They certainly were very important in precipitating the mortgage lending debacle we're in now, and they were a critical factor in the euro-loan market in the 1980s.

I appreciate the question. I want to take a digression first to talk a little bit about the macro forces that . . . cause syndication markets to occur.

In the late 1970s and '80s, the recycling problem of petro-state dollar earnings based on the growth in the oil price … turned out to be the rough equivalent of today's (or this decade's) problem of recycling excess savings from surplus countries. They're fairly close analogs. In both cases, they gave rise to the financial sector's coming up with solutions to investable funds, and those solutions tended to be very large-scale loans or securities that were big enough for the investors to care about and deal with, and they inevitably involved arrangement fees and other forms of up-front payment.

I do think that dealing with that problem of intermediation between surplus countries and places where those savings can be employed and used requires something akin to a syndication—either a loan syndication or a securities syndication—process. After all, we don't want any single institution to be overloaded with one concentrated risk, whether that risk in the '80s was Brazil, Mexico, or Argentina—or, as it turned out in this most recent cycle, subprime mortgage–backed securities. Both of those episodes had sad endings, partly because of the concentration that built up in banks. So I think there are legitimate reasons for a syndication style of banking to deal with those recycling problems of surplus countries.

I am sympathetic to your view that up-front fees, in some respects, are part of the problem. The market will ultimately dictate what works, because this is an arrangement between sophisticated financial institutions. But I have sympathy with the view that fees should be earned over the lifespan of the credit, whether that be an incentive at the individual level of the banker earning the bonus associated with that deal over the lifespan of the credit, or at the institutional level…. Whether that will become a regulatory issue is another matter. I don't really have good insight at this stage. As my earlier remarks suggested, I think we're at an early stage of sifting through all the ideas, and … we need to ask, How would you operationalize it? How would it work in a real banking situation? So I don't have a clear opinion on whether we're going to see that or not.

It seems inevitable that there will be more financial regulation going forward. But it also appears that this current crisis has as much to do with the failures of past regulation as it has to do with the activities on Wall Street. So my question is twofold: How do we improve our financial regulators so that they understand systemic risk better? And how do we build a new regulatory system that can anticipate, as Minsky would have said, how the competitive forces within the financial markets will lead to people evading the existing regulations? How can we be sure that our new regulations won't become a Maginot Line staffed by people who, regardless, are looking in the wrong direction?

My gut emotional response is that regulatory institutions are human institutions, too, and they have all of the challenges that any human institution has—retaining talent, recruiting talent, training talent, deploying talent against a particular problem, keeping up with the speed of change, retraining people, getting good leadership. All of that exists in our most revered regulatory institutions. And it is a big challenge. The stakes have been raised through this period, because now, whether it turns out to be the Federal Reserve or some other institution, we're talking about a systemic risk regulator.

I spent much of my career working internationally, . . . and I think I have a good feel for the large, globally integrated financial institutions that I described—I understand that animal reasonably well. Yet the complexity of it is a tremendous challenge to grasp. We tend to think in national paradigms, opposite an institutional reality that is really very much multinational with a headquarters. I think that, going forward, we have a challenge to develop the capabilities necessary to take on that role, whether it's the Fed or whomever. There will be, in all likelihood, a systemic risk regulator of some kind. Whoever that party is, they're going to have to learn some new capabilities and develop some new skills. . . .

Right now we've got a lot of distrust and anger on Main Street (to use some of the current jargon), and it's really pointed at Wall Street. As was described this morning, in the minds of some people, Wall Street is a fairly insular world—if not insular, at least the people there work in a confined environment for very long hours, and that tends to make any of us somewhat insular. What are the prospects for that distrust and anger dissipating over time? Again, not an easy problem, partly because we're dealing with qualitative issues that are based on some abstraction of what's going on out there in the world. I can bring it down to earth in the following sense. I speak a lot in the Southeast because that's my district, and I go around and talk to various groups. Typical groups include Rotary clubs, Kiwanis clubs, other kinds of civic organizations, regional college meetings or conferences—that kind of thing. And I hear a great deal about this animosity toward Wall Street. My only response is to make the somewhat idealistic speech that not only are we so highly networked in this country as to be dependent on one another and therefore have our destinies affected by whatever you want to call it, Wall Street or Main Street—those sectors are so intertwined as to be really much the same thing—but that's increasingly true globally as well.

I'll point to an example that helps to diffuse the issue in a way, because it takes it out of the internal class rivalry that might be developing in this country, and that is the uncoupling issue. Two or three years ago, the prevailing view was that the world had become substantially uncoupled, and therefore emerging markets could proceed along merrily regardless of what happened in the U.S. economy—that there wasn't that interdependence and that correlation in terms of results from one economy to the next. Clearly, that theory has been undermined by the synchronization that Bruce Kasman showed us this morning. So I try to make that point in my speaking engagements. But I can tell you that in the Southeast, very, very far from Wall Street, there are some strong feelings about this, and they are felt, almost inevitably, throughout the political system—and that may have been the reason for some of the vote tallies we saw early on in the '08 elections.

How would you evaluate reintroducing legislation that would be on the order of Glass-Steagall?

My own view on Glass-Steagall is, the genie is out of the bottle and cannot be stuffed back inside. To be effective, our large national and regional institutions—and many of those national institutions are truly global institutions—are going to require both a capital markets securities license and a lending license, and they will in effect decide what is the best solution for any given financial problem using that array of tools. I do not favor, nor do I expect, a return of Glass-Steagall.

I have a question regarding the recently criticized concept of value at risk. To my limited understanding, it's a regulatory capital requirement that banks report their value at risk, but in running samples through as part of my senior project … I found that different methods of calculating value at risk produce quite different results. From the articles I've read, it's quite an unreliable way of measuring your risk. How would you, as a regulator, rely on this information, and … how do you see its role in the future?

One thing you seem to be touching on is the inconsistency in evaluating risk from institution to institution and, by suggestion, that the regulatory system has accepted that inconsistency. There may be some truth to that. I think that, going forward, we will simply be driving for far more consistency across institutions. Keep in mind that in this country we have a somewhat fragmented regulatory system that involves a number of different players, and, as I mentioned (or bemoaned) earlier, human institutions have certain tendencies to do things in their own way. So there are some inconsistencies among regulatory or supervisory institutions. . . . Clearly, the need for greater consistency will be one of the themes put into force in response to the problems of the last couple of years. . . .

Of course, there's no regulatory system that is going to constrain poor decisions at the micro level. We probably shouldn't *have* a system that protects an individual banker from himself at the individual loan level. I made a lot of loans when I was a commercial banker, and I incurred some losses. There is no greater education than seeing your name as the senior person on a loan that went bad. I can tell you the details of those loans to this day, because bankers don't forget that. Having said that, banks are businesses that are eager to lend, and they have to balance that eagerness with the prudence of good credit judgment and the judgment of the borrowers. Sometimes, circumstances arise in which those judgments are out of kilter. . . In the aggregate, at a very large portfolio level, obviously we have to have a regulatory system that tries to identify those growing, let's say, *weak* practices and the growing risk to a portfolio, one that works with the management of the banks—or, in some cases, with the new management of the banks or financial institutions—to avoid the worst outcome. I don't know where the next financial stress is going to come from, but I'm quite certain it *will* come at some stage, and it will be the result of competitive situations that go beyond prudence in some respect. . . .

Given the perverse incentives rating agencies have, how do you think they may respond to regulation of their somewhat more perspicacious behavior?

I think the incentive structures related to the rating agencies do have aspects that are problematic and likely to be altered in some form. I'm not aware of … a concrete proposal that seems to satisfy the various parties, so this seems to be one of those matters that is still being discussed and debated, and that may roll out in the coming months. The rating agencies were relied upon pretty much as an article of faith. Clearly, this experience is going to bring more scrutiny to the agencies and their practices, and conceivably lead to some form of oversight. The rating agencies are very much part of this overall system that we want to protect against systemic risk, so I would speculate (my opinion only) that an institutional macro prudential supervisor or systemic risk supervisor would concern itself with the conduct of the rating agencies and how they're performing their business—that would include oversight of their revenue flows and what sources they come from. That, at this stage, is as much as I am prepared to say.

JAMES GRANT
Grant's Interest Rate Observer

Always the Same, Always Different

Every crisis features human actors, and they always seem to step on the same rakes. They overlend and they overborrow; they get bullish at the top, and then, wouldn't you know it, they get bearish at the bottom. The longer I live, the more I see that human beings have no business dealing with money. They are genetically unequipped for it, and it's a wonder that anybody's solvent.

Then again, no two crises are exactly the same. Except for the differences, after all, the historians would have all the money, and as it is, they have so little of it. This afternoon I intend to explore this particular crisis, our Great Recession: how is it the same, and how is it different?

First, the similarities, which I mean to illustrate by telling a story. The story is about a debt-financed real estate bubble from yesteryear. The time was the mid-1880s, and the place was the American Great Plains. To anyone who has been keeping up with current events, the outline of the plot will sound uncannily familiar. Low interest rates induced a flight of dollars into high-yielding, speculative-grade mortgages (property caught a bid); the price of houses and farms and commercial structures went up and up and up, and then, finance proving itself not for the last time fragile, they went down and down and down. Thus, presumptively good debts became emphatically bad debts.

As I say, a plot of no more originality than boy-meets-girl, boy-gets-girl, boy-loses-girl. What's instructive is the institutional setting in which this drama played out. Way back in the first administration of Grover Cleveland, there was no Federal Reserve, no federal deposit insurance, and no federally manipulated money market interest rates. Needless to say, there was no federal macro prudential supervisor either. Back then, the gold standard was in place. Anyone could push $20.67 through a Treasury Department cashier's window and demand an ounce of gold in exchange. Did such an arrangement not anchor the rate of credit creation and inculcate the Ten Commandments? No. Whatever it did, Kansas, Nebraska, and the Dakota Territory played host to their debt-financed property bubble.

So, then, what did happen in the absence of these familiar scapegoats of our own cycle? Around the time of the Civil War, the government turned over vast tracts of public lands to the railroads, sometimes 20 miles on either side of the railway. Historians recognize that these transportation companies were, in fact, real estate companies. The railroads needed settlers and the settlers needed credit, and the railroads furnished the credit.

The Burlington Railroad was a pioneer in residential real estate credit in that era. It offered not one kind of mortgage but a menu of choices, including a long credit, a 10-year lien priced at 6 percent. For the first two years, the borrower—would you believe it—paid interest only. The Union Pacific lent up to

90 percent value at 7 percent over an 11-year term, with interest only due for the first three years. So fertile was the land, so propitious was the climate, and so high were prevailing grain prices—as the promoters proclaimed—that a farmer could earn the cost of his farm with a single crop. The bulls did not entirely fabricate this claim in the early 1880s: it was true, briefly.

The weather was a pleasant surprise. Some 18 to 20 inches of rain was necessary to make a good crop, and this quota was annually met. Old-timers scratched their heads. The Kansas, Nebraska, and Dakota Territory they knew was dry, especially in their western reaches. What could explain this anomalous succession of wet seasons? Human activity. Yes! Human activity was brought forward as the reason! By breaking sod, irrigating crops, and planting trees, the settlers themselves affected a kind of benign climate change. A professor at the University of Nebraska lent his authority to this pleasing hypothesis.

It was indeed a new era, and not only in climate. With the advent of the railroads, the crops and the cattle of the Plains States could reach Eastern markets, and thanks to the march of migration, Western land prices persistently rose. In the decade of the 1870s, the population of Kansas tripled to one million, and it was as plain as the nose on your face that it would keep on tripling decade after decade, world without end, amen.

Yield-starved Eastern savers certainly seemed to believe it. Interest rates had climbed from the inflation of the early wartime 1860s, but rates had been falling since 1866, and by the early 1880s, New Englanders were earning just 4 percent at the bank and slightly less on high-grade railroad bonds. Inasmuch as the cost of living was actually falling, a modern-day economist would probably judge that real rates of interest were, in fact, generous. But Western mortgages yielding 6 and 8 percent and up seemed even more generous, and so-called channel mortgages—that is, loans secured by livestock, rolling stock, farming implements, and so on—fetched 10 percent and up.

If the yield pigs of yesteryear were anything like their millennial descendants, no economic pretext was required to induce them to reach for hundreds of basis points of extra yield. The savers' hands graft almost involuntarily. But if they needed a story, one was readily at hand. The age of free Western land was over or ending, the bulls declared. Waves of pioneers would have to pay increasingly higher prices for what had formerly been theirs for the taking.

Here is John D. Hicks, the great historian of the Populist movement. Moreover, said Hicks, crop yields in the West over a period of years had averaged high, prices were good, and collections were easily made. The mortgage notes themselves, gorgeous with gold and green ink, looked the part of stability, and the idea spread throughout the East that savings placed in this class of investment were as safe as they were remunerative—and this without the imprimatur of Moody's Investors Service, Fitch, or Standard & Poor's. Small wonder that money descended like a flood upon those who made it their business to place loans in the West.

So there was a nationwide surge in real estate mortgages in the 1880s, a big boom of lending and borrowing. One-point-four billion dollars were outstanding in 1889, up from $540 million in 1880, whereas the population rose by only 25 percent in that period, and wealth, as defined, rose by 50 percent. Real estate mortgages actually climbed by 156 percent. For perspective on that $1.4 billion outstanding, the banking capital in Chicago around 1880 totaled $10 million; deposits were $30 million. Now, Chicago had burned down in 1871, but still—frontier due diligence in the 1880s proved no more acute than the big-city kind 120 years later. Securities that could not have been sold in ordinary times found a ready market, according to a historian of the era. Bonds of Capitola Township, Spink County, Dakota, were sold in this period and changed hands many times in Eastern markets before it was discovered that no such township existed. Of course, that was before the invention of the Bloomberg terminal.

No close and continuous time series of real estate prices is known to exist, but scholars have pieced together snapshots from newspaper advertisements, and on this sketchy basis Kansas farmland appreciated by a factor of four- to sixfold in the years 1881–87. Some of it fetched $200 an acre—this when an ounce of gold was $20. Wichita was the Las Vegas or Orange County of the Great Plains, and the city derived a good income from license fees charged to real estate brokers. And then it ended. It ended in drought and, despite the drought, falling grain prices. Mortgage money dried up, and with the moisture, . . . Eastern investors refused to place more money in the West, and much of the money already invested was withdrawn as the lenders became frightened over the agitation of the debtors for relief in the shape of stay laws.

So the disappointed settlers, or many of them, packed their belongings into covered wagons pulled by fleshless or very skinny ponies and headed back East. On the side of at least one of these sad vehicles was emblazoned the motto "In God we trusted; in Kansas we busted."

Many were the institutional bulwarks erected against a repeat of this sorry bust, and of its many successors, not least the depressions of 1920–21 and, of course, 1929 and '33. Consider the improvements: a Federal Reserve to ensure an elastic currency; an SEC to enforce the canon of federal securities laws; a troika of federally sanctioned agencies to appraise the creditworthiness of public securities; a fiscally uninhibited, let us call it, Congress. And yet today, we are digging out from under the debris of "the worst failure of ratings and risk management ever," to quote the bankers at UBS—who ought to know.

On the one hand, we shouldn't feign surprise. Busts will always be with us. To create a really big, gaudy, and—let's be frank—fun-filled asset price bubble, all you really need is a quorum of human beings. No Fed, no Moody's, no S&P, no Fitch—none of that is necessary. Just people.

On the other hand, I did not take the subway uptown from Wall Street to leave our meddling central bank unscourged. Without the Fed and its big ideas and its big policies, the world would be a very different place. I'm going to contend it would be a better place, though not better for me or for my publication. For these dramatic times of ours I have our central bank to thank. So thanks, Alan, and thanks, Ben, for this, the era of good copy.

What chiefly distinguishes this era of financial crisis from its distant predecessors is government policy. The people are the same. I can assure you, we're no better investors than they were. We may be better informed, but our judgment is no more improved. There was a panic in 1873 that was followed by a depression, and this depression, according to the timekeepers of the National Bureau of Economic Research, didn't bottom until 1879—five-and-a-half years later. In 1878, Congress formed a committee to conduct an investigation into what, if anything, it should do about it—four-and-a-half years after the panic began. Professor William Graham Sumner of Yale University was one of the star witnesses. Asked what could be done to ameliorate the distress of the working classes who had been displaced by mechanization or globalization or both, Sumner replied, "There is no way on Earth to help. The only way is to meet it bravely. Go ahead, make the best of circumstances, and if you cannot go on in the way you were going, try another way, and still another, until you work yourself out as an individual."

Let us say that Sumner got a respectful hearing before the Democratically-controlled Congress of 1878—a more respectful one than he would get testifying before Nancy Pelosi today. I can assure you, having read a great many transcripts of these proceedings, the committee members were neither callous nor illiterate. They were, on the contrary, well spoken, highly intelligent, and, whatever their quotient of sympathy, answerable to the voters.

What, then, was their theory of booms and busts? The most perceptive of them saw that theirs was a time of radical and disruptive innovation. The telegraph and the steam engine, annihilating space and time, had created one worldwide commodity market out of a myriad of regional ones. The mechanical reaper, the sewing machine, the Bessemer process, the steel rail, the electric light, and the telephone had brought unimagined blessings. In so doing, however, they had brought great distress: they had pushed the global supply curve out and down and to the right. Let me interrupt myself and you to commend Edward Chancellor, here on this scene today, for this thought about the global supply curve. We'll get around to the modern application of his idea in a moment, but in that day, there was no question that in this great gust of innovation and productivity the global supply curve shifted downward and to the right.

The sum total of the world's steam engines, someone added up in 1887, represented the labor of one billion men, or three times the working population of Planet Earth. Nowadays, productivity data are presented with mathematical precision. No such pretended rigor informed the reporting of 125 years ago, but there is no mistaking the direction of things: it was onward and upward in a hurry. Here is the U.S. Commissioner of Labor writing in 1886: "In the manufacture of agricultural implements, specific evidence is submitted showing that 600 men now do the work that 15 or 20 years ago would have taken 2,145 men, a displacement of 1,545."

Maybe the best test of the rate of material progress was the rapidity with which, as someone put it, that which is old and has been considered wealth is destroyed by the results of new invention and discoveries. The Suez Canal was especially disruptive and especially frightening to anyone who had capital sunk in the previous technology. It opened in 1869. Before then, it took six months or so to get a ship to and from India for trading. Because of the uncertainty of the voyage and the length and unpredictability of everything, a great structure of warehousing and of capital finance inventory had been built up, and many in England made a very good living from this structure of production.

Then comes disruption. Now it's 30 days from London to Calcutta, one-way. It was bliss for the traveler and utter ruin for the owners of the not inconsiderable capital that had been tied up in the vast system of warehousing and distribution in England, and of British banking and exchange. Sailing ships, sailmakers, sailors—all entered bear markets. The canal, rued the *Economist,* "so altered and so twisted many of the existing modes and channels of business as to create mischief and confusion." They wished it had never been dug.

David Wells, before his name became associated with a somewhat erratic New York Yankees pitcher, was a very close student of economics in the 19th century, and he is the author of something called *Recent Economic Changes*, a book first published in 1889 that is just as wonderful today as it must have been then. Wells had this insight: "When production increases in excess of current market demand, even to the extent of an inconsiderable fraction, or is cheapened through any agency, prices will decline." And so prices fell. According to Friedman and Schwartz's *Monetary History of the United States* (1971), between 1875 and 1896, prices in this country declined by 1.7 percent each year.

Mixed were the blessings of these everyday low and lower prices. Many of Wells's contemporaries anticipated Joseph Schumpeter in identifying, if not naming, that thing we now know as creative destruction. There was kind of a cri de coeur from a contemporary of Wells that … seems to encompass, both in its spirit and in its words, some of the feelings that our masters in Washington must sense when they confront the supply curve that shifts downward and to the right: "In the last analysis it will appear that there is no such thing as fixed capital. There is nothing useful that is very old except the precious metals, and all life consists of the conversion of forces. The only capital which is of permanent value is immaterial, the experience of generations, and the development of science."

He was throwing up his hands: Nothing is permanent. There is no such thing as long-term adjustment. Everything is up in the air.

So what was the public policy response to this crisis—this deflation, as we would now call it?

Well, there wasn't really a public policy response to it. Washington called it progress. Now, not everyone did. (Everything supporting that observation is the emergence of the Populist revolt.) But on balance (the Populists were defeated), people regarded this as progress. I contend that the singular distinction between this crisis of ours and that crisis of theirs is the confusion in the minds of policymakers between progress and deflation.

In 2002 and 2003, Fed Chairman Ben S. Bernanke got on his high horse about deflation and gave a succession of speeches. He said he wouldn't put up with it, that he would not suffer a rate of debasement in the currency of less than 2 percent. And he said this: "By increasing the number of dollars in circulation, or even by credibly threatening to do so, the U.S. government can also reduce the value of the dollar in terms of goods and services, which is equivalent to raising the prices in dollars of those goods and services. We conclude that under a paper money system, a determined government can always generate higher spending and hence positive inflation."

I daresay he's less certain about the path to higher inflation these days, but he's no less determined to affect it.

That was in 2002. Pressing interest rates to the floor, the Fed—wouldn't you know it—without intending to, ignited this great burst of lending and borrowing, much of it unprecedentedly reckless.

Which brings us up to the present policy response and to its perhaps not intended consequences down the road. We at *Grant's* have gone through the postwar recessions and assigned index numbers to the sum total of fiscal and monetary stimuli to affect recovery. We did it in kind of a rough-and-ready way, and I suspect it will satisfy no one in its thoroughness. What we did was take the cumulative change over the course of the recession in the fiscal balance—that is to say, the deficit as a percentage of GDP—and then over the same cumulative period, peak to trough, we took the change in the Fed's balance sheet. Those are both percentage numbers. Then we totaled them and we got this rough-and-ready, as I say, index number that, although inadequate, is at least simple. The results I find startling, and I think that perhaps they've not really sunk in yet on Wall Street.

I guess this is the 11th postwar slump, and the average slump was, what, 10 months long, and the average decline in real GDP was, I think, 1.8 percent. So ours is middlingly miserable. The last measured decline in GDP was 1.8 percent; it will certainly be worse. The average federal response—defined as fiscal balance (or imbalance) plus expansion in the Fed's balance sheet—was 2.9 percent. So we have a middlingly miserable slump and, again, for perspective, 2.9 percent was the federal response.

As things are, the projected decline in the fiscal balance and the actions the Fed has already taken get you to 19 percent of GDP. The authorized increase in the size of the Fed's balance sheet over the next year or so would get you to 29 percent of GDP—exactly 10 times the magnitude of the average postwar governmental response to a recession.

I hold in my hand a kind of archaeological relic. It's a copy of a *Washington Post* editorial from 1949 taking Harry Truman to task for the profligacy with which he had met the first postwar recession. It scored Truman for advocacy of deficit financing as a method of overcoming the downturn in economic activity. “The needful thing,” said the editors of the *Post,* “is a revival of business and banker enterprise. A government spending program that will add to the size of an already huge federal debt and tend to shake confidence in the credit standing of the government is not the way to provide investment initiative. On the contrary, it is the way to retard it.”

That was then, and in that recession the fiscal balance in fact swung an impressive 5.5 percent, but the Fed actually tightened. In fact, in four of the 11 recessions, the Fed’s response was either no response or slight tightening. This time around, . . . well, the Fed’s balance sheet in December of 2007 floated to $874 billion. At last report, on a downtick, it was $2.1 trillion.

The question before the house, certainly the great question before investors, is, What is it about this economy of ours—to borrow from Dr. Minsky, this fragile “set of financial relations”—that has led us, almost without discussion, into a tenfold increase in the average federal response to a slump? Are things so desperate, and if they are, why are they so desperate?

I’ve got a couple of ideas. I think that certainly an obvious candidate for a cause of our troubles is simply the degree of leverage in the system. When Ronald Reagan took the oath of office, debt-to-GDP was running about 169 percent; today, it’s 370 percent. But these gross numbers really don’t tell much in the way of a story. The way leverage is laid on, layer upon layer, the lack of due diligence, accountability, and risk control is what’s so startling about this cycle. Every cycle features, certainly in retrospect, failures of risk and risk management. This time was special.

Way back in the day, there was a bank called the Chemical Bank. In the 19th century—not so much in the 20th—the Chemical Bank had a reputation for fussiness and conservatism, remarkable even in that day before the socialization of credit risk. It was run by a fellow named George Gilbert Williams, and it was called Old Bouillon for the reliability with which it paid out gold coin even during such panics as that of 1857. Near the end of Williams’s career, a reporter asked him the reason for his success, and Williams said, “The fear of God.” Ladies and gentlemen, I leave you with that message, and I would welcome a question or two if you have one.

Q&A

I appreciate your point, but have you not just disproved it in your own talk, in the following sense: you had to go back to 1873 to find a period that was as filled with turmoil as the one we’re in now. So isn’t the reason for an active role for government the 70 years preceding the current crisis and the lack of depressions between 1929 and 2009?

Part of my thesis does in fact do rather a jujitsu flip here. To a degree, these tribulations of ours seem to be hardwired into the species—and I’m just taking American experience and relatively modern experience into consideration. Go back to John Law—wherever there is a dollar of borrowed money, somebody’s going to get into trouble. That goes without saying. It is a truism.

I think what is so remarkable about the present moment is not even so much the sins of our bankers, which have been considerable; not even so much the fact that Citibank—the national Citibank, incorporated in 1812, that survived the panics of 1837, ’57, ’73, ’92, et cetera—is a ward of the state. Its lamentable end in the private sector is remarkable, as is the magnitude of the federal response to a garden-variety recession overlaid on a truly spectacular financial failure. ... I think that one of the things we’ve forgotten from yesteryear is the idea of bankers being personally at risk for their decisions. If I were in charge, what I would do is not, after all, institute a macro prudential supervisor. I would somehow convene the country's best legal minds, and ... invite them to put back into the laws the spirit of the partnership, and somehow meld the best of that into limited-liability corporations. There are two banks in this city that were founded in the second decade of the 19th century, only one of which is going to be around to blow out the candles on its 200th birthday cake as a private actor, and that is Brown Brothers, which is a partnership. I think there's a lot to be said for the partnership form of organization. I gave this little speech in the presence of a noted alumnus of Goldman Sachs, and he said, "You could hardly run a modern financial institution as a partnership." What I didn't say but felt like saying was, "Much more modernity, and it's all over." As my friend Martin Mayer actually said at a *Grant's* conference the other day, until the Banking Act of 1935 wiped this off the statute books the shareholders in a nationally chartered bank were at risk for their pro rata share of the paid-in capital of the bank should there be a failure. So they would come looking for *you*, about the time you didn't have the money to cough up. It was not really very effective, but the spirit of the law was that the officers of a bank owed more to the institution than their salary and their profit sharing.

So, by comparing our difficulties to those of the 1870s I don't mean to be so much nostalgic as to compare the institutional arrangements then—which still weren't enough to forestall depression. *But*, the era in which the Depression occurred was also an era of remarkable progress. We, mistaking progress for deflation, have created a mountain of debt and a mountain of moral hazard. . . .

In the Depression, nearly all the Brown Brothers partners were busted. They were carried by their one solvent partner, Averell Harriman. . . .

May I say something about the Depression? You can't open the paper without seeing comparisons of our troubles with those—"not since the Great Depression," and so on. In the Great Depression, GDP was down 47 percent top to bottom in nominal terms. To me, it's not remarkable that there was one Brown Brothers partner who wasn't broke; it's remarkable that *anybody* was solvent. Nominal GDP in this country is down, what, 2 percent? Three percent? Well, no. Say it's 5 percent. And we have a financial crisis that in some respects is in fact comparable to what happened in the Depression, with an economy that has suffered the merest perturbation by contrast. That is a profound indictment of our finance, and our financiers. . . .

Isn't the answer to your question of why they're throwing so much stimulus at what is so far a middling recession that it's a first-rate financial collapse and they're doing their damnedest not to have it turn into a middling depression? That doesn't seem contradictory at all. One can take issue, as you do and I do, with the ways in which they're doing it. But I think what you've left out of your story is political power, that between the '30s and the '70s political power was in the hands of people who felt that the financial economy ought to be constrained for the benefit of the real economy. Then there was a tremendous power shift that was facilitated by technical innovations and ideological changes, and the people who represented the New Deal line of thinking were overwhelmed by the bipartisan Goldmanites, who have continued to rule the roost. There has been zero political difference in the way the Bush administration, which in every other respect is the polar opposite of the Obama administration, and its successor have handled this diabolical blend of very cheap money, very little regulation, and "Do whatever it takes to double down on the bubble" attitude.

Yes, and I would like to add to that the observation that what both the Bush people and the Obama people seem to lack is any confidence that there is something like a self-regenerating force in markets. To me, the beau ideal of a depression is the 1920–21 affair. It lasted about 18 months—a depression so vicious that Harry Truman, who lost his haberdashery, never forgot, and recalling that formative experience, pushed through the Employment Act of 1946. The 1920–21 depression was not everyone's idea of a beau ideal, but it had this going for it: it was short; it was sharp; it ended. It ended, oddly enough, with the fiscal balance tightening and with the Fed tightening as well. Interest rates were higher at the trough than they were at the peak—the first and last time that ever happened in the Fed's history. Why did the 1920–21 depression ever end? If we have to have a stimulus equal to, say, 29 percent of GDP in order to get out of this mess, how were they able to do it then? Here is Allan Meltzer talking about it in his *History of the Federal Reserve* (2004): "Falling prices raised real balances and attracted gold from abroad. The public used its increase in money balances to purchase goods and assets. Judging from stock market prices, after July 1921 asset prices rose absolutely and relative to prices of new production. . . . The change in relative prices and real wealth more than offset the negative effect of high real interest rates on spending." People felt richer because prices were down.

Now, every fiber of the administrations of Barack Obama and George Bush was straining to prevent markets from clearing. House prices shouldn't fall, there should be no deflation—what happened in earlier cycles was, I think, instructive. Low prices, as they say in Chicago commodities exchanges, are a cure for low prices. At low prices, people produce less and consume more. At high prices, they produce more and consume less. Markets, to a degree, are self-regulating. What I see lacking in our public policy consensus is any conception that low prices might be better affected sooner rather than later.

Surely the wave of innovation that began in the '70s with securitization was not subjected to any kind of self-correction—it only got more and more baroque and more and more dangerous. If ever there was proof of the premise that markets are not always self-correcting, it was the failure of markets to discipline financial excess in the past 30 years. . . . I think the difference between a business cycle perturbation that usually corrects itself and a debt deflation is a difference in kind. Most of the business cycle recessions of the postwar and the prewar period would have been more or less self-correcting without heroic intervention, but I'm not sure even Amity Shlaes thinks the Great Depression would have been totally self-correcting.

I'll say only this about your claim that there was no correction of excesses from the '70s. There were plenty of bear markets and there were plenty of interventions by the Federal Reserve, such that people came to believe there would always be another one. The Fed became not simply the manipulator of interest rates, as the New York City rent control apparatus is the manipulator of rents; it also became the financial first responder to the scene of accidents. I submit to you that the moral hazard entailed in that set of expectations and policies was a powerful force in perpetuating excess. . . .

Thank you.

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A Minsky Meltdown: Lessons for Central Bankers?[1]

It's a great pleasure to speak to this distinguished group at a conference that's named for Hyman Minsky. My last talk at the Levy Institute was 13 years ago, when I served on the Fed's Board of Governors, and my topic then was "The New Science of Credit Risk Management at Financial Institutions." I described innovations that I expected to improve the measurement and management of risk. My talk today is titled "A Minsky Meltdown: Lessons for Central Bankers?" and I won't dwell on the irony of that. Suffice it to say that with the financial world in turmoil, Minsky's work has become required reading. It is getting the recognition it richly deserves. The dramatic events of the past year and a half are a classic case of the kind of systemic breakdown that he—and relatively few others—envisioned.

Central to Minsky's view of how financial meltdowns occur, of course, are "asset price bubbles." This evening I will revisit the ongoing debate over whether central banks should act to counter such bubbles, and discuss "lessons learned." This issue seems especially compelling now that it's evident that episodes of exuberance, like the ones that led to our bond and house price bubbles, can be time bombs that cause catastrophic damage to the economy when they explode. Indeed, in view of the financial mess we're living through, I found it fascinating to read Minsky again and reexamine my own views about central bank responses to speculative financial booms. My thoughts on this have changed somewhat, as I will explain.[2]

Minsky and the current crisis

One of the critical features of Minsky's world view is that borrowers, lenders, and regulators are lulled into complacency as asset prices rise.[3] It was not so long ago—though it seems like a lifetime—that many of us were trying to figure out why investors were demanding so little compensation for risk. For example, long-term interest rates were well below what appeared consistent with the expected future path of short-term rates. This phenomenon, which ended abruptly in mid-2007, was famously characterized by then Chairman Greenspan as a "conundrum."[4] Credit spreads, too, were razor thin. But for Minsky, this behavior of interest rates and loan pricing might not have been so puzzling. He might have pointed out that such a sense of safety on the part of investors is characteristic of financial booms. The incaution that reigned by the middle of this decade had been fed by roughly 20 years of the so-called "great moderation," when most industrialized countries experienced steady growth and low and stable inflation. Moreover, the world economy had shaken off the effects of the bursting of an earlier asset price bubble—the technology stock boom—with comparatively little damage.

Chairman Bernanke has argued that other factors besides complacency were responsible for low interest rates in this period.[5] A glut of foreign saving mainly generated in developing countries such as China and India fueled demand for dollar-denominated assets. This ample supply of foreign savings combined with a low U.S. personal saving rate, large U.S. government deficits, and high productivity gains to produce a huge current account deficit. As a result, vast quantities of funds began "sloshing around" in our economy seeking investment projects.

Fed monetary policy may also have contributed to the U.S. credit boom and the associated house price bubble by maintaining a highly accommodative stance from 2002 to 2004.[6] This accommodative stance was motivated by what Greenspan called "risk management policy," in which, to reduce the possibility of deflation, the funds rate was held below the level that would otherwise have been chosen to promote a return to full employment.[7] In effect, the Fed took a calculated risk. It took out some insurance to lower the chances of a potentially devastating deflationary episode. The cost of that insurance was an increased possibility of overheating the economy. These policy actions arguably played some role in our house price bubble. But they clearly were not the only factor, since such bubbles appeared in many countries that did not have highly accommodative monetary policies.

As Minsky's financial instability hypothesis suggests, when optimism is high and ample funds are available for investment, investors tend to migrate from the safe hedge end of the Minsky spectrum to the risky speculative and Ponzi end. Indeed, in the current episode, investors tried to raise returns by increasing leverage and sacrificing liquidity through short-term, sometimes overnight, debt financing. Simultaneously, new and fancy methods of financial engineering allowed widespread and complex securitization of many types of assets—most famously, in subprime lending. In addition, exotic derivatives, such as credit default swaps, were thought to dilute risk by spreading it widely. These new financial products provided the basis for an illusion of low risk, a misconception that was amplified by the inaccurate analyses of the rating agencies. This created a new wrinkle that even Minsky may not have imagined. Some of the investors who put money into highly risky assets were blithely unaware of how far out on a limb they had gone. Many of those who thought they were in the hedge category were shocked to discover that, in fact, they were speculative or Ponzi units.

At the same time, securitization added distance between borrowers and lenders. As a result, underwriting standards were significantly relaxed. Much of this financing was done in the "shadow banking system," consisting of entities that acted a lot like banks—albeit very highly leveraged and illiquid banks—but were outside the bank regulatory net. Although these developments reached an extreme state in the U.S. subprime mortgage market, risky practices were employed broadly in the U.S. financial system. And this activity extended far beyond our borders as players throughout the global financial system eagerly participated. As banks and their large, nonbank competitors became involved in ever more complicated securitizations, they began to employ sophisticated "new tools" to measure and manage the credit risks flowing from these transactions. But those tools—which I described in my speech 13 years ago—proved insufficient for the task.

This cult of risky behavior was not limited to financial institutions. U.S. households enthusiastically leveraged themselves to the hilt. The personal saving rate, which had been falling for over a decade, hovered only slightly above zero from mid-2005 to mid-2007. A good deal of this leverage came in the form of mortgage debt. The vast use of exotic mortgages—such as subprime, interest-only, low-doc and no-doc, and option-ARMs—offers an example of Minsky's Ponzi finance, in which a loan can only be refinanced if the price of the underlying asset increases. In fact, many subprime loans were explicitly designed to be good for the borrower only if they could be refinanced at a lower rate, a benefit limited to those who established a pattern of regular payments and built reasonable equity in their homes.

In retrospect, it's not surprising that these developments led to unsustainable increases in bond prices and house prices. Once those prices started to go down, we were quickly in the midst of a Minsky meltdown. The financial engineering that was thought to hedge risks probably would have worked beautifully if individual investors had faced shocks that were uncorrelated with those of their counterparties. But declines in bond and house prices hit everyone in the same way, inflicting actual and expected credit losses broadly across the financial system. Moreover, the complexity of securitized credit instruments meant that it was difficult to identify who the actual loan holders might be. Meanwhile, asset write-downs reduced equity cushions of financial firms and increased their leverage just when growing risks made those firms seek less leverage, not more. When they tried to sell assets into illiquid markets, prices fell further, generating yet more selling pressure in a loss spiral that kept intensifying. We experienced a "perfect storm" in financial markets: runs on highly vulnerable and systemically important financial institutions; dysfunction in most securitized credit markets; a reduction in interbank lending; higher interest rates for all but the safest borrowers, matched by near-zero yields on Treasury bills; lower equity values; and a restricted supply of credit from financial institutions.

Once this massive credit crunch hit, it didn't take long before we were in a recession. The recession, in turn, deepened the credit crunch as demand and employment fell, and credit losses of financial institutions surged. Indeed, we have been in the grips of precisely this adverse feedback loop for more than a year. A process of balance sheet deleveraging has spread to nearly every corner of the economy. Consumers are pulling back on purchases, especially on durable goods, to build their savings. Businesses are cancelling planned investments and laying off workers to preserve cash. And, financial institutions are shrinking assets to bolster capital and improve their chances of weathering the current storm. Once again, Minsky understood this dynamic. He spoke of the paradox of deleveraging, in which precautions that may be smart for individuals and firms—and indeed essential to return the economy to a normal state—nevertheless magnify the distress of the economy as a whole.

The U.S. economy just entered the sixth quarter of recession. Economic activity and employment are contracting sharply, with weakness evident in every major sector aside from the federal government. Financial markets and institutions remain highly stressed, notwithstanding a few welcome signs of stability due mainly to Federal Reserve and federal government credit policies. The negative dynamics between the real and financial sides of the economy have created severe downside risks. While we've seen some tentative signs of improvement in the economic data very recently, it's still impossible to know how deep the contraction will ultimately be.

As I mentioned earlier, the Minsky meltdown is global in nature, reflecting the ever-increasing interconnectedness of financial markets and institutions around the world. The recession is the first during the postwar period to see simultaneous contractions in output in Europe, Japan, and North America. Economic growth in these areas has weakened sharply as the financial pain has spread and the U.S. recession has spilled over to our trading partners. Forecasts for growth in Europe and Japan in 2009 are now even weaker than for the United States. What's more, many developing nations face stark challenges as markets for their products have dried up and capital inflows have abruptly halted, making debt refinancing—if necessary—difficult, if not impossible. The global nature of the downturn raises the odds that the recession will be prolonged, since neither we nor our trade partners can look to a boost from foreign demand.

Bubbles and monetary policy

The severity of these financial and economic problems creates a very strong case for government and central bank action. I'm encouraged that we are seeing an almost unprecedented outpouring of innovative fiscal and monetary policies aimed at resolving the crisis. Of course, fiscal stimulus played a central role in Minsky's policy prescriptions for combating economic cycles. Minsky also emphasized the importance of lender-of-last-resort interventions by the Federal Reserve, and this is a tool we have relied on heavily. I believe that Minsky would also approve of the Fed's current "credit easing" policies. Since the intensification of the financial crisis last fall, the Fed has expanded its balance sheet from around $850 billion to just over $2 trillion and has announced programs that are likely to take it yet higher. In effect, the government is easing the financial fallout resulting from virulent deleveraging throughout the private sector by increasing its own leverage in a partial and temporary offset.[8]

However, as I said at the beginning of my talk, this evening I want to address another question that has been the subject of much debate for many years: Should central banks attempt to deflate asset price bubbles before they get big enough to cause big problems? Until recently, most central bankers would have said no. They would have argued that policy should focus solely on inflation, employment, and output goals—even in the midst of an apparent asset-price bubble.[9] That was the view that prevailed during the tech stock bubble and I myself have supported this approach in the past. However, now that we face the tangible and tragic consequences of the bursting of the house price bubble, I think it is time to take another look.

Let me briefly review the arguments for and against policies aimed at counteracting bubbles. The conventional wisdom generally followed by the Fed and central banks in most inflation-targeting countries is that monetary policy should respond to an asset price only to the extent that it will affect the future path of output and inflation, which are the proper concerns of monetary policy.[10] For example, a surging stock market can be expected to lead to stronger demand for goods and services by raising the wealth of households and reducing the cost of capital for businesses. As a result, higher stock prices mean that the stance of monetary policy needs to be tighter, but only enough to offset the macroeconomic consequences on aggregate demand created by a larger stock of wealth. In other words, policy would not respond to the stock market boom itself, but only to the consequences of the boom on the macroeconomy.

However, other observers argue that monetary authorities must consider responding directly to an asset price bubble when one is detected. This is because—as we are witnessing—bursting bubbles can seriously harm economic performance, and monetary policy is hard pressed to respond effectively after the fact. Therefore, central banks may prefer to try to eliminate, or at least reduce the size of, this threat directly. Under this approach, policymakers would push interest rates higher than would be indicated under conventional policy. The result, of course, would be that output and employment would be reduced in the near term, which is the price of mitigating the risk of serious financial and economic turmoil later on.

What are the issues that separate the antibubble monetary policy activists from the skeptics? First, some of those who oppose such policy question whether bubbles even exist. They maintain that asset prices reflect the collective information and wisdom of traders in organized markets. Trying to deflate an apparent bubble would go against precisely those "experts" who best understand the fundamental factors underlying asset prices. It seems to me though that this argument is particularly difficult to defend in light of the poor decisions and widespread dysfunction we have seen in many markets during the current turmoil.

Second, even if bubbles do occur, it's an open question whether policymakers can identify them in time to act effectively. Bubbles are not easy to detect because estimates of the underlying fundamentals are imprecise. For example, in the case of house prices, it is common to estimate fundamental values by looking at the ratio of house prices to rents, which can be thought of as equivalent to a dividend-price ratio for the stock market.[11] If this ratio rises significantly above its fundamental, or long-run, value, the possibility of a bubble should be considered. Indeed, from 2002 to early 2006, this ratio zoomed to about 90 percent above its long-run value, far outstripping any previous level. Nonetheless, even when house prices were soaring, some experts doubted that a bubble existed. That said, by 2005 I think most people understood that—at a minimum—there was a substantial risk that houses had become overvalued. Even at that point though, many thought the correction in house prices would be slow, not the rapid adjustment that did occur.[12]

Now, even if we accept that we can identify bubbles as they happen, another question arises: Is the threat so serious that a monetary response is imperative? It would make sense for monetary policymakers to intervene only if the fallout were likely to be quite severe and difficult to deal with after the fact. We know that the effects of booms and busts in asset prices sometimes show themselves with significant lags. In those cases, conventional policy approaches can be effective. For example, fluctuations in equity prices generally affect wealth and consumer demand quite gradually. A central bank may prefer to adjust short-term interest rates after the bubble bursts to counter the depressing effects on demand. The tech stock bubble seems to fit this mold. The price-dividend ratio for these stocks reached dizzying heights and many observers were convinced that a crash was inevitable. But monetary policymakers did not try to stop the relentless climb of tech stock prices, although they raised interest rates toward the end of the period to dampen emerging inflationary pressures. Instead, it was only after tech stocks collapsed that policy eased to offset the negative wealth effect and, as unemployment rose, to help return the economy to full employment. The recession at the beginning of the decade was fairly mild and did not involve pervasive financial market disruptions.

Still, just like infections, some bursting asset price bubbles are more virulent than others. The current recession is a case in point. As house prices have plunged, the turmoil has been transmitted to the economy much more quickly and violently than interest rate policy has been able to offset.

You'll recognize right away that the assets at risk in the tech stock bubble were equities, while the volatile assets in the current crisis involve debt instruments held widely by global financial institutions. It may be that credit booms, such as the one that spurred house price and bond price increases, hold more dangerous systemic risks than other asset bubbles. By their nature, credit booms are especially prone to generating powerful adverse feedback loops between financial markets and real economic activity. It follows then, that if all asset bubbles are not created equal, policymakers could decide to intervene only in those cases that seem especially dangerous.

That brings up a fourth point: even if a dangerous asset price bubble is detected and action to rein it in is warranted, conventional monetary policy may not be the best approach. It's true that moderate increases in the policy interest rate might constrain the bubble and reduce the risk of severe macroeconomic dislocation. In the current episode, higher short-term interest rates probably would have restrained the demand for housing by raising mortgage interest rates, and this might have slowed the pace of house price increases. In addition, as Hyun Song Shin and his coauthors have noted in important work related to Minsky's, tighter monetary policy may be associated with reduced leverage and slower credit growth, especially in securitized markets.[13] Thus, monetary policy that leans against bubble expansion may also enhance financial stability by slowing credit booms and lowering overall leverage.

Nonetheless, these linkages remain controversial and bubbles may not be predictably susceptible to interest rate policy actions. And there's a question of collateral damage. Even if higher interest rates take some air out of a bubble, such a strategy may have an unacceptably depressing effect on the economy as a whole. There is also the harm that can result from "type 2 errors," when policymakers respond to asset price developments that, with the benefit of hindsight, turn out not to have been bubbles at all. For both of these reasons, central bankers may be better off avoiding monetary strategies and instead relying on more targeted and lower-cost alternative approaches to manage bubbles, such as financial regulatory and supervisory tools. I will turn to that topic in just a minute.

In summary, when it comes to using monetary policy to deflate asset bubbles, we must acknowledge the difficulty of identifying bubbles, and uncertainties in the relationship between monetary policy and financial stability. At the same time though, policymakers often must act on the basis of incomplete knowledge. What has become patently obvious is that not dealing with certain kinds of bubbles before they get big can have grave consequences. This lends more weight to arguments in favor of attempting to mitigate bubbles, especially when a credit boom is the driving factor. I would not advocate making it a regular practice to use monetary policy to lean against asset price bubbles. However recent experience has made me more open to action. I can now imagine circumstances that would justify leaning against a bubble with tighter monetary policy. Clearly further research may help clarify these issues.[14]

Another important tool for financial stability

Regardless of one's views on using monetary policy to reduce bubbles, it seems plain that supervisory and regulatory policies could help prevent the kinds of problems we now face. Indeed, this was one of Minsky's major prescriptions for mitigating financial instability. I am heartened that there is now widespread agreement among policymakers and in Congress on the need to overhaul our supervisory and regulatory system, and broad agreement on the basic elements of reform.[15]

Many of the proposals under discussion are intended to strengthen micro-prudential supervision. Micro-prudential supervision aims to insure that individual financial institutions, including any firm with access to the safety net, but particularly those that are systemically important, are well managed and avoid excessive risk. The current system of supervision is characterized by uneven and fragmented supervision, and it's riddled with gaps that enhance the opportunity for regulatory arbitrage. Such arbitrage was a central component in the excessive risk taking that led to our current problems. It is now widely agreed that such gaps and overlaps must be eliminated, and systemically important institutions—whether banks, insurance firms, investment firms, or hedge funds—should be subject to consolidated supervision by a single agency. Systemic institutions would be defined by key characteristics, such as size, leverage, reliance on short-term funding, importance as sources of credit or liquidity, and interconnectedness in the financial system—not by the kinds of charters they have. Another critical shortcoming of the current system is that it lacks any legal process to enable supervisors of financial conglomerates and nonbanks to wind down the activities of failed firms in an orderly fashion. The need for a resolution framework that would permit such wind-downs of systemically important firms is also widely accepted.

The current crisis has afforded plentiful opportunities for supervisors to reflect on the effectiveness of our current system of micro-prudential supervision. The "lessons learned" will undoubtedly enhance its conduct going forward.[16] But, regardless of how well micro-prudential supervision is executed, on its own it will never be adequate to safeguard the economy from the destructive boom and bust cycles that

Minsky considered endemic in capitalistic systems. Analogous to Keynes's paradox of thrift, the assumption that safe institutions automatically result in a safe system reflects a fallacy of composition. Thus, macro-prudential supervision—to protect the system as a whole—is needed to mitigate financial crises.

The roles of micro- and macro-prudential supervision are fundamentally different. In principle, many individual institutions could be managing risk reasonably well, while the system as a whole remained vulnerable due to interconnections among financial institutions that could lead to contagious cycles of loss and illiquidity. For example, it is prudent for institutions to sell risky assets and pay off debt when a decline in asset prices depletes capital. But the simultaneous behavior of many institutions to protect themselves in this way only intensifies the decline in prices. Moreover, when many institutions try to de-lever simultaneously, market liquidity can instantly evaporate. Systemic risk is endogenous to the working of the financial system.

Capital requirements could serve as a key tool of macro-prudential supervision. Most proposals for regulatory reform would impose higher capital requirements on systemically important institutions and also design them to vary in a procyclical manner. In other words, capital requirements would rise in economic upswings, so that institutions would build strength in good times, and they would fall in recessions. This pattern would counteract the natural tendency of leverage to amplify business cycle swings—serving as a kind of "automatic stabilizer" for the financial system. Financial stability might also be enhanced by reforming the accounting rules governing loan loss reserves. A more forward-looking system for reserving against such losses could make regulatory capital less sensitive to economic fluctuations.[17] In addition, most proposals for financial reform emphasize the need for stronger liquidity standards. The funding of long-term assets with short-term, often overnight liabilities, is a source of systemic vulnerability. One interesting recent proposal would disincent overreliance on short-term funding by relating an institution's capital charges to the degree of maturity mismatch between its assets and liabilities.[18] There has been considerable discussion recently of the need for a new macro-prudential or "financial stability" supervisor—whether the Fed or some other agency—with responsibility to monitor, assess, and mitigate systemic risks in the financial system as a whole.

At this stage, the proposed reforms involve broad principles. The translation of those principles into a detailed supervisory program will be challenging, to say the least. But I am hopeful that the lessons we have learned will help us build a more effective system to head off financial crises. If we are successful, then we will have gone a long way toward preventing another Minsky meltdown.

Notes

1. I would like to thank John Judd and Sam Zuckerman for exceptional assistance in preparing these remarks.
2. I want to give credit to PIMCO's always astute Paul McCulley—who gave the keynote address at last year's conference—for leading the Minsky revival and pointing out the relevance of Minsky's work to our current financial troubles.
3. For example, see H. P. Minsky, "The Financial Instability Hypothesis," Working Paper No. 74, Annandale-on-Hudson, N.Y.: The Levy Economics Institute of Bard College, May 1992; and R. Pollin, "The Relevance of Hyman Minsky," *Challenge*, March/April 1997.
4. A. Greenspan. "Federal Reserve Board's semiannual Monetary Policy Report to the Congress." Testimony before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, February 16, 2005.

5. B. S. Bernanke. "The Global Saving Glut and the U.S. Current Account Deficit." Remarks at the Sandridge Lecture, Virginia Association of Economics, Richmond, Va., March 10, 2005.
6. J. B. Taylor. "The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong." NBER Working Paper No. 14631. Washington, D.C.: National Bureau of Economic Research. January 2009.
7. A. Greenspan. "Monetary Policy under Uncertainty." Remarks at a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyo., August 29, 2003.
8. Paul McCulley has emphasized the importance of such a government role to address what he refers to as the "reverse Minsky journey." See "Saving Capitalistic Banking from Itself," Global Central Bank Focus, PIMCO, February 2009.
9. See D. L. Kohn. "Monetary Policy and Asset Prices Revisited," speech at the Cato Institute's 26th Annual Monetary Policy Conference, Washington, D.C., November 19, 2008; and F. S. Mishkin, "How Should We Respond to Asset Price Bubbles," speech at the Wharton Financial Institutions Center and Oliver Wyman Institute's Annual Financial Risk Roundtable, Philadelphia, Penn., May 15, 2008.
10. G. D. Rudebusch. "Monetary Policy and Asset Price Bubbles." *FRBSF Economic Letter* 2005-18, August 5, 2005.
11. J. Gallin, "The Long-Run Relationship between House Prices and Rents." Finance and Economics Discussion Series 2004-50. Washington, D.C.: Board of Governors of the Federal Reserve System. Forthcoming in *Real Estate Economics*.
12. K. Gerardi et al. "Making Sense of the Subprime Crisis." Brookings Papers on Economic Activity (Fall 2008): 69–160.
13. T. Adrian and H. S. Shin. "Money, Liquidity, and Monetary Policy." *American Economic Review Papers and Proceedings*, forthcoming.
14. The following conference volumes provide an introduction and references to the research literature now available: *Asset Price Bubbles: The Implications for Monetary, Regulatory, and International Policies*, ed. W. Hunter, G. Kaufman, and M. Pomerleano (Cambridge, Mass.: MIT Press, 2003); and *Asset Prices and Monetary Policy*, ed. A. Richards and T. Robinson (Reserve Bank of Australia, 2003).
15. See, for example, T. Geithner, Testimony before the House Financial Services Committee, March 26, 2009; B. S. Bernanke, "Financial Reform to Address Systemic Risk," speech at the Council on Foreign Relations, March 10, 2009; D. K. Tarullo, "Modernizing Bank Supervision and Regulation," testimony before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, March 19, 2009; Group of Thirty, "Financial Reform: A Framework for Financial Stability," January 2009; Markus Brunnermeier et al., "The Fundamental Principles of Financial Regulation" Geneva Reports on the World Economy 11, January 2009; and "Special Report on Regulatory Reform," Congressional Oversight Panel, January 2009.
16. See President's Working Group on Financial Markets, "Policy Statement on Financial Market Developments," March 13, 2008; Financial Stability Forum, "Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience,"April 7, 2008; Senior Supervisors Group, "Observations on Risk Management Practices during the Recent Market Turbulence," March 6, 2008.
17. See E. S. Rosengren, "Addressing the Credit Crisis and Restructuring the Financial Regulatory System: Lessons from Japan," speech at the Institute of International Bankers Annual Washington Conference, Washington, D.C., March 2, 2009.
18. Brunnermeier et al., 2009.

Q&A

I haven't heard anything in today's conference about hedge funds and their role in the crash. They are major purchasers of the mortgage-backed securities, particularly the riskiest tranches. There's evidence they made a fortune as the market went up during the bubble, and evidence they made a fortune in the market on the downside. What do you know about them?

The truth is that I don't know very much about them at all, and that's because we have allowed a regime in which we have almost no requirements whatsoever for the disclosure of anything about hedge funds. My hope would be that that system would change as we put in place appropriate reforms. At the very minimum, the most systemically important hedge funds I would treat as systemic institutions that require the same full-blown treatment we would give systemically important "too big to fail" institutions in terms of supervision and regulation. But I would say that the Fed has no better database or systematic understanding of what hedge funds did than anyone else out there.

If I'm remembering correctly, the idea of a systemic risk regulator passed into the conventional wisdom in 2006, when Treasury Secretary Paulson was unveiling his various plans for deregulation—inherent was the idea of a deus ex machina, in the form of a systemic risk regulator, to offset all that deregulation. It seems to me that if you are doing micro-prudential regulation properly, you never get to the point where you need a systemic risk regulator. Is there a danger, even though Paulson is now gone, that the idea of a systemic risk regulator is going to depress the appetite for adequate micro-prudential regulation?

I hope not, and I didn't in any way mean to suggest we don't need both macro- and micro-prudential supervision. If you look at most of the major reform proposals that are out there—the G30 and Treasury proposals, for example—they involve, not substituting a systemic risk regulator for strengthened micro-prudential supervision, but doing both. And I think both are very much needed. We also need to strengthen the supervision of individual institutions and probably also raise capital requirements, and the liquidity risk needs to be improved as well. It's a long agenda. . . .

You used the phrase "too big to fail"—an often heard excuse these days. Could you give us some perspective on why some institutions were too big to fail while others, like Lehman, were not?

I think Lehman *was* too big to fail. We saw what the consequences of its failure were, and it was devastating. . . . I was not involved in anything having to do with it. What I can tell you is what I've been told about the logic of that decision. . . .

We have the ability, under so-called 13-3 Depression-era powers, to lend to "individuals, partnerships, or corporations"—namely, nonbanks—on the basis of adequate collateral. We're not supposed to take risk onto our balance sheet. In some cases we've certainly pushed that—Bear Stearns, I would say, and probably AIG. But we need collateral to lend against. What I am told is that Lehman had insufficient unpledged collateral for us to take as the basis of the loan, so we didn't have a way to secure the loan. In the case of AIG, there was sufficient collateral. In the case of Bear Stearns, there were assets that we took in exchange. JP Morgan Chase took a first-loss position on them, and we have collateral against it. I am told that Lehman had insufficient collateral for us to be able to do that. . . . That's why I think it's so important for

Congress to pass legislation that would permit the orderly resolution of a nonbank institution. I'm sure it would have been used in the Lehman case if it had existed, but at the time there was no legislation that would permit the FDIC or the Fed or the Treasury to go in and put into receivership a firm like Lehman and wind down its activities in an orderly manner. For the Fed, I think Bear Stearns, AIG, and Lehman have all been horrendous, difficult, miserable transactions. They're situations where, when we have intervened, we have pushed the envelope in terms of our powers but have chosen to do so because the consequences of allowing any of those firms to fail seemed unthinkable.

I have to say that, after the Fed did step in, in the Bear Stearns case (and even before that), there were an awful lot of people who were talking about how terrible these rescues were because of moral hazard—that what we were doing was increasing moral hazard in the system. Some people even inside the Fed argued that everybody knew Lehman was in trouble. Months had gone by since Bear Stearns. Lehman's problems were well known in the marketplace; its creditors had time to protect themselves. So it wasn't like Bear Stearns, where the market would have been utterly aghast and totally surprised that something had happened. Its stock price was under pressure, and its CDS spread was rising to astronomical heights. So, fine: let it go. But for those who think that moral hazard should have been the most important consideration, and for those who argued that we couldn't end up with serious systemic consequences by allowing a firm of that size, that complexity, and that interconnectedness to fail, I think the lesson is clear. To my mind, that is when this entire financial crisis took a quantum leap in terms of seriousness, and the global impact of it escalated by an order of magnitude. Lehman *was* too big to fail.

So perhaps the assessors … implicitly assumed that there was a Bear Stearns precedent, and the precedent was that the firm's equity goes roughly to zero and its workers are fired. But what in fact happens is that the debt is sacrificed—the real crisis of the policy in terms of letting Lehman go is that its debt was put into play. There are a number of banks, I've been told, that currently have positions that are in trouble. Would you say that the debt of those banks cannot be put into play?

My understanding is that we did not have a means to intervene in the Lehman case. . . . There was systemic risk—we saw it play out—and we should have had a better tool kit. . . . Lehman was a systemically important institution. I don't want to make a blanket statement about this: institutions are different. Can it cause enormous problems to put debt into play? . . . Absolutely—it can. I would be reluctant to do it. On the other hand, lenders, especially of subordinated debt, take risks; and on behalf of the taxpayers I think our inclination should be to extract a price from people who knowingly took risks. I would always be inclined to do that, and that includes debt holders, not just stockholders—unless, in a specific case, a judgment were made that the consequences for everybody else in this society would be unacceptable. It's not to protect the debt holders; on the contrary. It's that we don't want the economy to go down the tubes. That's the trade-off I would be considering, and I think there are some institutions where you could not do that, especially when we don't have a resolution regime for anything other than a bank. So when you think about large bank holding companies—financial holding companies that have enormous investment banks, broker dealers, foreign subsidiaries, and so on—we don't have a resolution regime for dealing with a failure of that kind. If we did, it might be more thinkable for an FDIC to come in … and put it into receivership, and to make a conscious decision to hit some classes, particularly of subordinated debt holders. Outside a resolution regime, however, I think it's dangerous. . . .

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Minsky, U.S. Policy, and the Global Economy

I'm going to talk a little bit about Hyman Minsky, about monetary policy, and about the global economic backdrop.

I thought last night's talk was very interesting. Independent of the particulars of Janet Yellen's commentary, the title of her piece, "A Minsky Meltdown: Lessons for Central Bankers?" was a bit of a victory of sorts. A mainstream economist at the Fed talking about a "Minsky meltdown" means the concept has some cachet or legitimacy in terms of a mainstream formulation.

Is it, however, an oxymoron to say that Minsky could be in the mainstream? There are many who associate with Hy's work radical prescriptions for how we should change things, a consequence of his diagnosis that, periodically, we're always going to end up in the soup. I . . . had a great relationship with the gentleman while he was alive and appreciate his diagnoses as absolutely brilliant, but the punch line of my book [*The Cost of Capitalism*, 2009] is "Ne pas jeter le bebe avec l'eau de bain": no, you don't want to throw the baby out with the bathwater. And I do think that you can come to understand what I like to call the self-evident truths implicit in Minsky's ideas about how the economy works and yet not be compelled to embrace radical changes in order to survive. So, if I could, before I get into a formal talk about where I think we are, if we boil it down to its essence, we could say that there are four self-evident truths. . . .

The first one, basically, is, How do people come to create an opinion about the future? What is the consensus expectation for tomorrow? How is that formed? On any given day, you can find somebody who's telling you that inflation is going to be a real risk and you've got to buy gold, or somebody warning of the next depression or that meteors are heading toward the Earth and will wipe us out like the dinosaurs. There's always an outlier somewhere who's got a very risky view. On the other side are people who have opinions about how we're about to embark upon a spectacular universe. But since that's all out *there* and … forecasting the future is very hard, most people don't forecast the future; they forecast the recent past. As somebody who's been forecasting for almost 30 years, I can tell you that the consensus expectation for the next six months will invariably bear a rough resemblance to what has actually happened in the last three or four. Yesterday informs our opinion about tomorrow.

I'll give you an example that is delicious, I think. I was on CNBC the first week of December, waiting for the employment report. If you ever want to do something that's really psychotic, take that spot. It's 8:28 a.m., and they say, "So, Bob, what do you think the jobs report will be?" Now, it's going to come out in one minute and 58 seconds, but you have to give some idiot number and then have the real number come out and make you look stupid to whatever degree. . . . Lehman had gone under in September, credit spreads had exploded, stocks around the world were collapsing, initial unemployment claims were soaring, order books were falling, and any firm you talked to said they were in the midst of carnage. What was the consensus expectation for the November Payroll Employment Report at 8:28 a.m. on December 5? The consensus was minus 230,000, which (because everybody had some real guts) was 30,000 higher than the three-month average of the previous three months. Now, you had every possible piece of information telling you that we had just gone off a cliff, but the consensus was only step one small alpha away from the previous three-month average. As it turned out, the number was minus 513,000. What was the consensus expectation for December? Minus 500,000. So with every possible indication that it had happened, the conventional wisdom only accepted it as a reality a month after the data said that it had happened.

So, self-evident truth number one: the consensus expectation says the future is roughly approximating an average of the recent past. That's not because people are irrational; it's because forecasting is very hard, and you're always hearing a lot of conflicting tangential opinions. It's also because, if you think about the rational economic agent optimizing over intertemporal universe, there are probably only 15 people who can do that math, and most of the rest of us are just trying to get through the day. . . . Those 15 people actually imagine a universe where everybody is looking at it as they look at it. It's not reasonable, and it certainly doesn't describe the 28 years that I've lived through in terms of how we form our expectations.

The second point, then, is how those expectations change over time. This is really important, because it's the big distinction between Minsky and Charles Kindleberger. We all understand that if people go crazy, it's likely to end badly. But Minsky wasn't talking about crazy people. He was talking about people in general, in a situation where they don't know what the future will bring. How do expectations change? I would submit they change as follows: if you have a string of benign yesterdays, you do not begin to believe that tomorrow will be spectacular; you believe that tomorrow will be benign. But you *really* believe that. So what you do is cut the tails of the distribution off. It's not that you think four years of 3 percent real GDP growth means we're about to embark on six years of growth at that rate. It's just that after four years of 3 percent growth you really, really believe it will continue to grow at 3 percent. So you reduce your sense of what the tail risks are as the permanence of that backdrop stays in place.

Now, you could image a world—let's call it Never Never Land—where someone looked at business cycles. In Never Never Land they might notice that every seven to 10 years over the last 200 years, in about 100 countries, there was a recession. As a consequence, in an expansion age you would become anxious rather than more confident about the coming year. In some sense, that would be rational. But if you look at time series of credit spreads, or equity share prices, or surveys of economists, that's not how it works.

So you start with one simple observation: the recent past informs our opinion about the future. Add a second one: a string of happy yesterdays, and we're confident that the future will be okay. Then you get to the third piece: as we become more confident, clever people figure out ways to make big bets on a benign outcome. If I know that the economy is growing by 3 percent and profits are going to grow by 10 percent, I can be in a Vanguard index fund and make 10 percent. *Or,* I can lever up 10-to-1—not because I believe things are spectacular, but because I have this extraordinary confidence in that 10 percent gain. What you have then is the confidence in the reduction in the sense that those tails are what produce the aggressive use of leverage as the cycle matures. You then end up in a superleveraged state without a belief in a brave new world—without some sort of manic sense about 5 percent growth forever. When you have a financial system that is very much at risk, a small disappointment can have profound consequences.

On that score, I do take issue with the "black swan" notion—the idea that no one could have seen it coming. I think the black swan turns out to be a red herring. Think about our most recent experience with housing. I teach a class at Johns Hopkins, and I finally got through to them about Minsky's theory that stability is destabilizing, because housing is such a perfect illustration. My students don't know about balance sheets and income statements, but they do understand about buying a house. When two of them, a brother and sister, graduated not long ago, Mom gave each of them 50 grand and recommended they buy a house, putting 20 percent down and making sure the debt service was only about a third of their income. The son, Hal, who's very dutiful, did exactly what Mom said: he bought a $300,000 house. But the daughter, Hannah, a risk taker who has a friend who's an investment banker, had learned that from 1962 through 2002 house prices never fell. So she figured out that if she only put down 2 percent, she could buy twice the house that her slow-witted brother bought. She could have a view of Chesapeake Bay. At the end of two years, the 50 grand she had to service the debt that her income couldn't cover was gone. But what do house prices always do? They go up. So she refinanced, cashing out another 50 grand to service the next two years of debt—figuring that at the end of six years she would sell the house for $600,000 net, move to the West Coast, and laugh at her brother.

What's the lesson of Hal and Hannah? Most people would say you should listen to Mom. But I don't think that's the lesson. I think the lesson is how we form our opinions about leverage, debt, and risk taking. Everybody today knows that Hannah was on a fool's errand that was destined to end ugly. But if you go back to 2006, there were *four* best-selling books on how to make big money in real estate, each of them a disguised version of Hannah's appreciation of how to make leveraged bets in real estate. In a long cycle where the outcome had been benign, Hannah's notion about leverage came into play.

We then end up in a situation where we've got to acknowledge in formal terms that expectations are formed adaptively rather than rationally: it's backward-looking over the course of a cycle, so you're going to have a predisposition to excess. Janet said that maybe the Fed was going to have to think about bursting asset price bubbles. I think that makes it much more cumbersome and complex than it needs to be. In a paper I did here last year,[1] I pointed out that if you apply the standard Taylor Rule (which stipulates how much the Fed should change the nominal interest rate in response to divergences of actual GDP from potential GDP and of actual inflation rates from target inflation rates) to the inflation rate, the deviation of unemployment from what you believe is NAIRU, and the neutral real short rate (which Taylor said was 2), then plot the results against the Fed funds rate, you'll find that it fails miserably at business cycle turning points. Somehow the Taylor Rule says the Fed will ease 150 basis points, and instead, it eases 400. To be very candid, I made a career out of that observation, because all you had to do was say the Fed also looks at risk spreads, and when risk spreads blow out, the funds rate plunges—independent of what the Taylor Rule tells you. So a Minsky/Wicksell Modified Taylor Rule is a much better fit than a standard Taylor Rule from 1985 to 2009.

But the problem is, when you run that equation against the Fed funds rate, it does a very good job of predicting what the Fed will do on the way down, but it does a poor job of predicting what the Fed will do on the way up. In other words, it's a simple equation that demonstrates Alan Greenspan's asymmetry toward markets, and risk and response. When markets were getting giddier and giddier, and risk spreads were getting tighter and tighter, Greenspan would say, "Not my job. I can't outguess the markets. That's the best assessment the world can make." When you'd hit the "Minsky moment" and spreads would begin to widen dramatically, he would say, "There's an undue amount of fear here. People are irrationally backing away, and we need to come to the aid of the market." That's clear asymmetry: *I know better when you're bearish; I don't know better when you're bullish*. You can argue that that dynamic, over a 25-year period, played a central role in just how big the excesses of the last two years were.

The Fed doesn't have to think about bursting bubbles. It just has to be symmetric about risk spreads. When they're widening like mad, of course the Fed should ease aggressively; but as they're tightening and people are getting increasingly enthusiastic, it should lean against those risk appetites. Imagine the last seven years with risk spreads in a Taylor Rule formulation, and what does it do? It says the funds rate reaches 5.25 about a year or 15 months earlier than it did. Does that preclude all that unfolded? No, but it probably gives us a recession one year earlier. If you think about the last year of the housing fiasco—loans at 4 percent, with no money down, a free call, and a free put—and you could take that last year off of bank balance sheets, this would probably be just a very tough recession rather than an environment where we've run out of room from the Fed and we're having to invent all sorts of other responses. . . .

How do we deal with the zero balance? . . . We used to talk about the IS/LM model. Nobody knows what money is: we've given up on LM. And then some of the real simpleminded texts say, "Okay, well, it's an IS/MP curve, and the Fed sets the interest rate, and it intersects the IS curve, and we find out how much investment we'll get at a given interest rate." In other words, we threw away the LM curve, and we threw away the banking system and finance. Being in finance and believing that banks matter, I didn't like that, so I and Charles Weise, a friend at Gettysburg College, came up with the alternate formulation I presented here last year. The Fed may set the funds rate, but it's the risky real long rate that drives investment. The Fed funds rate can affect the risky real long rate, but that rate is a function of the Fed funds rate, the term structure, and credit spreads. If we reject the "rational market" notion, when recession looms and investment opportunities look a lot dimmer, you can argue that the market will then lower interest rates because of fewer investment opportunities, and it will clear. But if you watch, what you find out is, just when everybody decides that investment opportunities aren't as good as they thought, they also decide that they're much less willing to take any risk. Rather than modest easing, the Fed has to ease like mad to counter not only the weaker economic position but also the big change in risk spreads. That was the picture that I thought was in place until that fateful day in September.

Truth in advertising: I got that dead wrong—one of my most embarrassing moments in more than 25 years in business. I was saying to clients, "Well, we've established the Bear Stearns precedent. They appreciate the interconnectedness of all of this. They believe that they can, to some extent, deal with moral hazard because at Bear Stearns the employees lost their jobs. Since they were paid to a great degree with equity they were holding, they in some cases lost six or seven years' worth of their compensation, but you honor the debt in full because you wouldn't dare put the debt into play—because if you put the debt into play, it would be Armageddon within 24 hours." It was a great speech, but it cost my clients a lot of money—because, of course, they let Lehman go. I would submit that when they let Lehman go … if you look at that spread term—160 basis points between the BAA corporate bond rate and the 10-year Treasury when everybody's giddy, 200 basis points on average, 320 when it's a recession . . . you know you're in the midst of the big Fed ease. What does 560 (basis points) mean? If you do the calculation using the Minsky/Wicksell Modified Taylor Rule, 560 says, "No problem—all we need to do right now is take the Fed funds rate to -4." And for those of us on Wall Street, that does matter—a lot. In fact, I have a *New Yorker* cartoon on my refrigerator that's been there for almost 20 years—a cartoon of a talking head looking into the TV camera (probably CNN back in those days) and saying, "The stock market swooned in morning trading when news of a meteor careening towards Earth was presented, and the discussion was that it almost certainly would wipe out all of human civilization. It soared in the afternoon when the Fed cut the discount rate."

Throughout my career, the big Fed ease has been the way out from under the Minsky moment. What we have here is a situation that, in this simple arithmetic, says the big Fed ease requires a funds rate 400 basis points below the zero balance. But if you use this framework, what did the big Fed ease do for you traditionally? It made the risky rate go down. But if you want the risky interest rate to go down, you need to make the risky asset price go up—in other words, you're trying to bid up risky bond prices to get risky bond interest rates down so that everyone can live to lend and spend again. So all of a sudden, we discover the alphabet soup of TARP, TALF, public-private banks—that whole constellation of entities designed to push risky asset prices up. And I would submit it's not as different as you may think. It's a wild way to do it, but what the policymakers have been stripped of is a stealth way to drive risky asset prices up and risky interest rates down.

I'm not pretending that this is the mainstream assessment, and just for fun, I would like to read someone else's. This is by Casey Mulligan, a professor of economics at the University of Chicago, writing on the op-ed page of the *New York Times*. The time is mid-October 2008. Now, by mid-October 2008 I was hiding under my desk. . . . Lehman's already gone, the credit spreads are blowing up, companies everywhere are in a panic—and Mulligan writes the following:

> *I know that most everyone has been saying for a couple of weeks that something has to be done; a banking crisis could quickly become a wider crisis, pulling the rest of us down. For this reason, the Wall Street bailout is supposed to be better than no plan at all.*
>
> *Too bad this line of thinking is seriously flawed. The non-financial sectors of our economy will not suffer much from even a prolonged banking crisis, because the general economic importance of banks has been highly exaggerated.* (October 10, 2008)

If it takes a while for banks and lenders to get up and running again, what's the big deal? Only 3 percent of people work in the finance industry. Since we have right now a 6.1 unemployment rate, should we really spend $700 billion to bring it down to 5.9? From my perspective, if you understood Minsky and you saw what happened to Lehman, . . . you began to really worry—because, of course, banks are essential rather than ancillary to economic performance.

What were the linkages that were missing that would require Casey to get a mulligan on that speech? They're fairly straightforward: credit spreads widened dramatically, the commercial paper market shut down, and banks refused to lend to one another in the interbank market. Every CFO in the United States ran in to the CEO's office and said, "I'm panic-stricken that they are going to pull our credit lines. I don't know if we'll have working capital in the next 90 days." All of a sudden, a Wall Street event is a Main Street discussion in corporate America.

What do you do if you're panicked about the disappearance of your working capital? You horde cash. . . . And how do you horde cash? You run your two-and-a-half-months' worth of inventory on 27 things down to two weeks, which implicitly means you're going to cancel 27 orders, and over the next four weeks the order books. . . . Another way to horde cash is, of course, to fire people. Across the board, the thinking went like this: *Here are some workers we can do without, so we'll run down these inventories and we'll fire these* *workers.* And within 90 days of that event, orders collapsed, initial unemployment claims went from 450,000 to 650,000, and everyone began to wonder whether it was going to be minus 6 or minus 9 percent for the average of fourth quarter–first quarter real GDP decline. So a Minsky moment became a Minsky meltdown, and to believe that that didn't have profound axiomatic consequences on the real side is really striking.

So here we are, trying to get those risky asset prices up and those risky interest rates down. . . .

The whole alphabet soup, for me, is an explicit way of doing what we normally do implicitly. It was fun to take a shot at the University of Chicago, but if we step to the other side of the aisle, Paul Krugman wrote a few weeks back that he was shocked to find out that TALF and TARP involve an implicit subsidy. Of course there's an implicit subsidy. That's the whole point: to push risky asset prices up.

How does the subsidy work? An example: you're a big bank in an environment where nobody wants to take any risks. You're collecting all these consumer installment credit loans, which you usually bundle and sell. But you can't sell them now, and you're choking your bank. So you begin to change credit availability because you want to stop the flow—because you can't pass the baton. Before TALF, if you or I wanted to buy those assets, no one would finance them for us because of lack of risk appetite. We'd have to buy them, and we'd be on the hook for 100 cents on the dollar. Roughly speaking, what TALF says is, you put 20 percent down, I'll give you financing from the Fed at de minimus interest rates, and it's nonrecourse—in other words, you're only on the hook for the 20 percent. Now, if you've got five banks bidding for that asset, and on day one you've got to put 100 cents down, no financing, and you can lose 100 cents; and on day two you've only got to put 20 percent down and you've got this really cheap financing, the price of that asset goes up. That is definitely a subsidy relative to "mark to mayhem" prices.

Historically, if you look at implied default rates for junk bonds or implied futures in equity markets, if you look at the circumstances that are predicted at this crazy moment in the cycle, if you succeed, all of those expectations are wrong and you turn out to do much better than the implied carnage embedded in the asset markets. There's no question it's a subsidy ex ante, but if you succeed, it's well worth the effort, because you've gotten the interest rates and the economy functioning again.

On the issue of simply avoiding this and nationalizing the banks instead: you can make an argument about nationalizing the banks, but I would submit that whoever decided to let Lehman go isn't feeling great right now, and I sure wouldn't want to be the person to put the debt of a financial institution that's 20 times the size of Lehman into play. I don't understand how *any*one at this moment could contemplate putting big bank debt into play—and if you *can't* put the debt into play, then you're on the hook for the right-hand side of the balance sheet in its entirety (except for the equity stub). So the debate about whether or not to nationalize is not about who wants to spend all this additional money; it's about who you would rather have run the bank, bankers or bureaucrats. It's an interesting debate, but it's not the same as asking, "Why should we honor the financiers of this ill-fated endeavor? Let's just take the debt out and save ourselves a lot of money." Functionally, I don't think we can do that.

So, yes, it matters a lot: we've got to get those risky rates down. There are clearly subsidies in place, but based on the fact that both the right and the left are screaming that this is all wrong, it probably means the Fed is doing a spectacular job so far.

What does it mean for the U.S. and the global economy? . . . If you look at our net external position, the trade deficit is collapsing. That's not surprising, is it? Global trade is collapsing, and the good news about a collapse in global trade is, if you're a giant deficit country, your deficit collapses, and if you're a giant surplus economy, your surplus collapses. Looking at first-quarter GDP in '09, I think inventories are going to be down $120 billion, but imports are going to be down about $80 billion. So two-thirds of the giant drawdown of inventories in the United States is a drawdown of production, employment, and income somewhere other than here. The giant challenge for the world doesn't emanate from the States. The Europeans, like St. Augustine—"Lord, make me pure, but not yet"—want us to be pure, but not right now. The European viewpoint is: *Let's gin up the U.S. consumer again, because we don't have the stomach, functionally or viscerally, for homegrown growth.* This leads you, then, to China. I don't believe, as reported today, that the Chinese economy expanded 6.1 percent in the first quarter, though it was down (from 6.8 percent) on a year-over-year basis. If China is going to be the big engine, you've got to expect that our rebound will be more modest. So we've gotten something semipermanent for this big change in trade—but we're desperate for the rest of the world to fill in the gap.

Note

1. Barbera, R. J., with C. L. Weise. 2008. "Has Greenspan's Conundrum Morphed into Bernanke's Calamity? A Minsky/Wicksell Modified Taylor Rule." *17th Annual Hyman P. Minsky Conference on the State of the U.S. and World Economies. Credit, Markets, and the Real Economy: Is the Financial System Working?* Annandale-on-Hudson, N.Y.: The Levy Economics Institute. Pp. 33–38.

Q&A

How much is too much? The Fed balance sheet started out in August '07 at, say, $850 billion; it's now around $2.1 trillion. I hear via little birdies that they contemplate taking it to $3 trillion or $3.5 trillion, and that's assuming rosy scenarios—they might argue going as high as $5 trillion. Is there a point where you would cry uncle?

First, I understand the logic behind the notion that the central bank's "wildly" printing money will produce inflation. I just think it's wrong in the following sense: this is a global collapse. It's an explosion in the global output gap. Employment rates are soaring here, there, and everywhere. I don't see how you get the inflation without first shrinking those output gaps. So the idea that this works, associated with … moves that are being made abroad, and we then begin to have a strong economy and have to rein all of this in because it has the potential to produce inflation—that's a rich person's worry. Where do I sign? But the idea that we could suddenly have an inflation problem with the unemployment rate on its way from 8.5 to 10.5 percent—I guess some people can see how that works, but I can't.

Why do you think the stock market is up 28 percent or so in the last few weeks?

If you look at some of the bank stocks, when a stock goes from 100 down to 6 and then goes up to 12, you say, "God, I doubled my money!" But it's at 12, when it was at 100 15 months ago. So you've got a rebound in the market but you're still $30 trillion off of where you were a year and a half ago. I think part of it is that, in February, when Treasury Secretary Geithner came out and gave a speech that was, like, four pages long and we all expected a prospectus, and then he sort of said, "The dog ate my homework," the market responded with "All right, the economies are going down hard and we don't have policy"—and went into free fall. I think now people believe the economies are still suffering but that we have something that approximates policy that might work. . . .

NORBERT WALTER

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Financial Crisis—A Threat to European Economies

"Subprime crisis" was the label given the financial market crisis, which in my view was a red herring—a misnomer. . . The first transmission channel to hit Europe was toxic assets [commercial paper]. The institutions that were hit—UBS, IKB, and Landesbanken in Germany; my own bank as well—had a lot of deposits; they had little business to finance. But there was a wonderful alternative investment opportunity. Even our governments in Europe pursued policies to limit budget deficits, so these institutions couldn't buy risk-free government assets, either. So, in order to have *some*thing they bought triple-A-rated securities from the United States. . . [The crisis in U.S. financial markets hit so fast,] some of these banks were wiped out; others were in deep trouble and needed to be recapitalized. This, of course, had considerable implications: the banking sector began to shrink.

Due to the same kind of background and/or spirit, any firm in Europe that tried to use leverage over the last two-and-a-half years in order to get a merger going destroyed themselves. One of the mightiest banks, The Royal Bank of Scotland, wiped itself out, … because it considered ABN Amro an interesting target, and leveraged finance, the means to achieve it. And there are others—Lloyds Bank and HBOS, both in the U.K. So here we are.

But it wasn't limited to the financial sector. These leveraged takeovers were the killing device for quite a few firms in the real economy as well. In Germany, a very important supplier to the car industry, Schaeffler, took over another, larger supplier to the automotive sector, the rubber company Continental. Schaeffler, with €10 billion in debt, is now dead in the water. So the first channel through which this financial crisis translated into threats for Europe was through the banks, and through leveraged finance in overambitious merger activity.

I mentioned that I consider the subprime crisis to be a misnomer for what has happened. I believe there were much broader imbalances, and these had to do with a lack of macro prudence, particularly monetary policy. This monetary policy was not, of course, limited to the States and Alan Greenspan's policies. It was transmitted at full force to all those countries that insisted that packed exchange rates were the ones they wanted. Therefore, we got the same type of excessive expansion of liquidity in Russia, the Arab countries, and China. The very fact that the costs for capital moved into negative territory translated into business investment activity in some countries (e.g., China) and consumption in others—conspicuous consumption in Russia, for example.

Why was this lack of macro prudence allowed to go on for so long? Because inflation rates were contained by the integration of ever more talented and industrious people into the international division of labor, so those guys who produced excessive liquidity didn't feel the fallout in terms of inflation as in the past. We just got all of Central and Eastern Europe, which are emerging countries only in terms of income, not in terms of talent. They're as good as we are; they just hadn't the good system that we enjoyed. Now they're a part of that system. It's very obvious that this helped us to keep inflation at bay. Even more important was China, which added tens of millions of people per year to the labor force and made cheap shoes, textiles, flat screens, and mobile phones available to everyone.

But liquidity had its implications, and those implications were basically bubbles in several asset classes. One of the most prominent ones was, of course, real estate, but since the liquidity expansion was so pervasive, the implications for real estate were pervasive as well. While there is good information and a lot of comment about the [bubble in the] United States, there is little discussion about the same developments in Ireland, England, France, Spain, and Portugal. It was almost a universal phenomenon that real estate prices moved up, and that everyone understood that the most reasonable way to get rich was to be highly indebted and buy a house early. End of story.

In the 12-year period that ended in 2006–07, real estate prices in the United States more than doubled. The same happened in France. In England, real estate prices tripled. Prices increased by three-and-a-half times in Spain, and by four-and-a-half times in Ireland. For an idea of how crazy people went in the real economy as a consequence, consider the case of Spain. Over the last five years, 750,000 housing units were completed per year, in a country with a population of 42 million. Germany, with twice the population, has completed 250,000 per year in the same period. "A kind of imbalance—a little thing," people said. "Need for some correction, not just in the financial sector but also in the construction sector." Spain's construction industry needs to be cut by more than *half* in order to return to normal. Yet there was no international debate. Again, because everybody was concentrating on the financial sector, we overlooked that this crisis was already a crisis of the real economy. It was not just the financial sector: there was broad, international evidence of greedy behavior by people who were misled by macro policy.

When the Germans, for example, or the Japanese observed the situation, they felt, "These stupid countries made a lot of mistakes. They overspent on real estate; they overspent on private consumption. If they have a problem, they have to correct it. It won't hit us." That politicians would argue like that is at least partially understandable, but the businessman who believes that is stupid. I told my fellow countrymen that they were stupid. They, of course, considered this only further evidence that I'm an arrogant person. Fine. I continued to criticize. I told them, "If you are the export champion"—and Germany *was* the export champion for the sixth year in a row—"and the world economy turns south, you will be hit hard. If at the same time your currency moves from 80 cents to $1.60, safely assume that your price competitiveness will add to that problem." But they were proud, and they told me, "Norbert, you don't understand anything. We have a two-year backlog of orders. Even if the entire world breaks down, it doesn't have any impact on us. For two years we can continue in a healthy way in our production." I told them that, typically, in recessions a backlog of orders doesn't help a lot because order cancellation is more important. I said, "Hey, guys, haven't you heard that some of the customers that still want to get this airplane, or ship, or electrical plant from you are bankrupt and can't pay the bill, and that you will not produce that stuff under those circumstances?" They did not listen. They didn't care. Expectations based on the past, to go back to Barbera's statement, are wonderful. They make you feel so safe.

The trade channel was the important channel that was dramatically impacting the countries that were not affected by the other ills. Of course, if exports collapse, the investment activity of the exporters collapses—a double whammy. That Italy, Japan, Germany, and Slovakia would be hard hit by these events is very obvious, since they produce cars for the international market. . . . Ninety percent of the cars manufactured in Slovakia are destined for foreign markets; in Germany, that number is 80 percent.

This downturn was brutal because of the worldwide synchronization, and, of course, there were a few preexisting burdens—for example, the high commodity prices that caused disposable income to shrink. There's a lot of debate at the moment, particularly in financial markets, about Central and Eastern Europe, and the conclusions drawn are quite interesting. First, Central and Eastern Europe are very inhomogeneous. Some of these countries that are part of the eurozone—Slovenia and Slovakia—are established members of the European Union, but others are neither members of the European Union nor members of the eurozone. These institutional differences are of dramatic importance for the way these countries are affected by the international downturn. . . .

There is something else that makes these countries very different: some are lousy in terms of political stability and the pursuit of macroeconomic policy, and some are the most orthodox and stability-oriented countries you can think of. The Czech Republic has a central bank that is outstanding, and its independence is absolutely respected. For a long time Czech government paper had a lower return than German bunds, and for good reason: they pursued stability-oriented policies.

On the other hand, there's . . . Hungary, which doesn't pursue reasonable wage policies. The Hungarians behave as if they live on the moon or in yester-century. They don't seem to care about fiscal stability. They enjoy having their loans denominated in Swiss francs because the interest rates are so very low. Then, of course, after depreciation of the Hungarian forint, they have to pay back twice as much—and they are astonished that this is expensive! So Hungary is certainly a very different animal from the Czech Republic, their not-distant neighbor.

It's very obvious that Bulgaria and Romania, newly admitted to the European Union, should not have become members of the EU under the circumstances because their political and economic systems are marked by high-level corruption. They don't accept the rules that apply in the EU. Now, in this crisis, they are being hit very hard. They have risk premiums that are going sky-high. I don't complain about the current level of these risk premiums; I believe they are commensurate with the inherent risk. It is very obvious that it was the risk premiums that existed before that were nonsensical. This was all the result of financial markets that had misbehaved, that didn't look into the political realities of these countries.

Poland is an in-between case. It is the one member of the club of countries that I just mentioned that has at least some size—40 million people. But in terms of economic weight, Poland is smaller than Nordrhein-Westfalen—a single German state. Who discusses Nordrhein-Westfalen? Nobody—nobody cares. Yet Nordrhein-Westfalen is economically more important than Poland. When international observers look at Central and Eastern Europe, they draw conclusions as if Poland were a country with an economic weight equal to Germany's. There are debates as if Central and Eastern Europe have a bearing for Europe at large that is dramatic. Therefore we have this debate about whether the European Union will be in a position to help Central and Eastern Europe. Will the European Central Bank not come under pressure in such circumstances? Will the euro not implode?

Consider the following: for the past 60 years, the German states of Bremen and the Saarland have pursued the worst fiscal policy. Since we don't have explicit statistics, and since these are not nation-states, nobody took care. But the very fact that we have considerable parts of our country that consistently misbehave did not translate into a dynamic devaluation of the deutsche mark. The reverse was true. And the very fact that we had these two places that misbehaved fiscally did not translate into the bankruptcy of the German government. So why should Hungary and a few other small cases in Central and Eastern Europe let Europe go bankrupt? That's childish. That's nonanalysis. But, of course, I do understand: London and New York bankers need a new story in order to get some transactions going. I understand that. I have a lot of sympathy with that, because it is our own profit and loss as well. But economically, it doesn't fly.

Let me add to this the following statement: my country was left alone following unification. Any idea how much Germany spent on unification over the last 18 years in terms of its GDP? Seventy-five percent. And before this "unification" is remotely completed, we will certainly go beyond 100 percent of GDP. Has Germany gone bankrupt? Is the risk premium for German government assets sky-high? No. Isn't this an observation that should cause some reconsideration of the simplistic ideas that are now prevailing in the markets?

A few words about countermeasures in Europe: first of all, we got help. With the exception of Russia and Norway, which are suppliers of energy and commodities, the rest of us got wonderful help in terms of lower commodity costs. The reduction in commodity prices that we've observed in the last eight months amounts to as much as cutting 3 full percentage points from the value-added tax. That is a considerable economic impulse. Again, that's not something limited to Germany, or to Europe; it affects everyone who is a consumer of commodities. . . . We should not forget this important stabilizing factor.

Second, monetary policy: Viewed from Japan, or viewed from the Federal Reserve, what we have done in Europe is too little, too late. I come to the defense of the ECB. Why? Monetary policy and monetary policy effects are not something for the seminar at Harvard. They deal with men and women and their perceptions. I'm not guilty of it, but it's a fact of life: the Europeans have inflation paranoia. Again, I'm not guilty; I simply observe it. Last summer, when measured inflation in Europe was 3.8—at the high point of energy and agricultural price increases—the perceived (felt) inflation in Euroland was literally 13 percent. Can you imagine a credible central bank that would pursue a policy of dramatic interest rate decline under such circumstances? If this had happened, the credibility of this institution would have been ruined. These poor guys at the board level of the ECB have a difficult audience, and we should understand that. Again, we should work to change this inflation paranoia, but before changing it, you probably would end up with the wrong implications for the more important real rate of interest for long-term credit. So I defend the ECB. . . With the real economic agents that they had to deal with, they couldn't have done better. . . .

What will happen now? That's quite easy to answer: interest rates will go down. By May, [the ECB's benchmark rate] will be 1 percent. . . . More probably than not, the interest rate will go lower, but only if the exchange rates move in a certain direction. I understand that there's no consensus with respect to exchange rates. I believe the most important man to address this issue is the Obama administration's Larry Summers. Summers believes that after fiscal policy and monetary policy in the United States have run their course and the recession is still not over and some support factor is needed, he would opt for the dollar. However, he opts for the dollar for another reason entirely. He knows, because of his international relationships, that the Europeans will not respond to anything as reliably as further, considerable appreciation of the euro under the circumstances of a deep and dramatic recession. So you get the ECB acting much more courageously, and you probably get some of the European finance ministers acting a bit more willing than German Finance Minister Peer Steinbrück was over the last eight months or so to stimulate the domestic economy under a different exchange rate. Therefore, since Summers understands both arguments, the financial markets will move toward a depreciation of the dollar rather than to an appreciation. But again, this is debatable, and it is a question in the markets. The markets hold the view that the United States is recovering earlier than the rest of the world. If, of course, the cyclical recovery is more advanced in the United States earlier on, then there's a good reason for the dollar to appreciate. I fully understand the second argument; but again, my reading is that, between now and this autumn, it will probably go in the other direction.

Fiscal policy in Europe is quite diverse. First of all, some of the EU countries believe that they have too high a deficit to pursue expansionary fiscal policy; that's true in a number of cases, including Greece, Italy, and Belgium. The argument is that they have little trust in anticyclical measures to begin with, and therefore they are quite unwilling to do something. There was almost a uniform attitude until the turn of the year. Since then, there have been changes in a number of countries, and a particular turn has been observed in Germany, where we now have a fiscal expansion that is quite sizable by German standards—though not, of course, by Chinese or U.S. standards. In percent of GDP, in the United States the full program is something like 5 percent; in China, it's 8 percent; in Germany, it's something like a good 2 percent. In the rest of Europe, it's about half of that. So it's small, negligible. . . .

I want to qualify the measures that are called anticyclical or countercyclical in the United States and in Europe. I do consider them as being a combination of measures that are reasonable in the sense of pleasing different elements of your electorate; in many cases, they are interesting ideas to overcome low productivity, low efficiency, and low capital stock, particularly in infrastructure. All these arguments are something I consider very important, and I welcome these measures. But still, I was trained in a period when people understood Keynesianism—in the '60s, in the era of Walter Heller [who advised Presidents Kennedy and Johnson on economic policy]. I know that if you want to change the expectations of the private sector, . . . you need to do something that is very focused and capable of influencing spending activity on the spot. But . . . there was too little effort to move in this direction, and the good examples of focused and timely action that we could observe in a number of countries were not imitated elsewhere. The French did a very good thing, for example, but others didn't copy it. The French government now pays its bills after six days rather than after six months—very important for small- and medium-size industries, and almost the most important thing that could have happened in anticyclical terms. A wonderful move—and not emulated.

Gordon Brown, the United Kingdom's unloved prime minister, has done a lot of good things. He reduced the value-added tax for 2009 by 2.5 percentage points. Two-and-a-half percentage points—quite a few people don't believe that this is effective, but … we already do have considerable consequences as a result of such measures. So I congratulate Gordon Brown for this. But he was considered to have done the wrong thing. He was not copied, particularly not in my country. But my country did do a few things that were quite meaningful. They had this subsidy for the scrappage of old cars—scrap a vehicle more than nine years old and get a €2,500 discount on a new, fuel-efficient car—and they told their citizens, "We have just this €1.5 billion, and when this is gone, it's over." They got a wonderful reaction. Germans respond—if they can save taxes, they are just magnificent. Within three months, the money was gone, and now the government has extended the program, more than doubling the money available. [The scheme has sent German new car sales soaring.] This translates into copying—for example, Japan is now offering a subsidy for scrappage.

But will there be a systemic, systematic, coordinated action for a third fiscal package in Europe? The answer is no. There's a particular reason: . . . the lady at the helm of the German government, Angela Merkel, now has other targets. She wants to be reelected on the 27th of September, and between now and then, she cannot orchestrate something at the European level. And she won't do it. Therefore, we won't get it, and the fallout will be negative. In 2009, Europe will see the most dramatic decline of GDP since World War II. It will be close to 5 percent. That's nontrivial.

I was forecasting that already a while ago—I got a lot of fan mail. Now it seems as if several governments have joined in with that forecast. However, with the measures that I described, I would not rule out the economy stabilizing by the end of this year, and that we get a mild upturn in 2010. There's one caveat: … if too much of the support for the economy is given in the form of support to companies to avoid insolvency or bankruptcy, then the risk of protectionist action is substantially increased. . . . I sincerely hope this doesn't happen, and that institutions like international chambers of commerce keep their voices audible in these very difficult times in order not to allow such a development. And I sincerely hope that President Obama will be a guarantor of an open system. If small, open places like Europe give an indication that protectionism has become acceptable, then this will systematically harm Europe's prospects over the long term. The Slovaks can only perform if they can sell their cars worldwide. Airbus is not a company to sell airplanes to France and Germany alone. Therefore, it's clear that Europe is very dependent on a vigorous recovery worldwide. . . .

Thank you.

Q&A

The way I saw what happened is that Europe got caught short on dollars in a big way, and the U.S. Fed came in with their unlimited dollar swap lines. What role do you assign to that whole operation? It looked to me like it probably saved what might have been a currency collapse at that time….

There is already a history of successful cooperation between the European Central Bank and the Fed. . . Therefore, I do indeed assume that, with the talent at the helm of the ECB and the international connections of the Federal Reserve board, this cooperation will work in the future.

That's one of the reasons I do not believe there will be an inflationary outcome of the dramatic quantitative easing and the implications of the policies that the Fed has pursued over the last several months. I believe there will be no runaway inflation in the United States, because the Fed perfectly understands that there is an alternative reserve currency: the euro. The orientation of the ECB to keep inflation below 3 percent is credible. And technical assistance will be available. So I do assume that swap arrangements will always be around in sufficient size and in a cooperative way. The authorities understand that these are important, and that they can and should cooperate.

You seem to imply that any further easing by the ECB is conditional on appreciation of the euro.

No. The reduction to 1 percent is not conditional. It will happen anyhow.

But your near-term forecast was for the euro to appreciate.

Yes, but therefore I do forecast that the rate will go below 1 percent as a consequence.

Even though the recovery in Europe is likely to be somewhat delayed relative to that in the United States? It seems somewhat counterintuitive.

There are stock adjustments, and stock adjustments do play a role. Think of the 2,000 billion U.S. government assets in the hands of the Chinese. Before coming here, I had a visit with a Chinese banker who was a regulator, and a People's Bank of China person before that. The intensity with which he asked the question about foreign exchange reserve composition in much of Asia indicates to me that there is a latent tendency to readjust the portfolio mix in those places. Therefore, I believe a stock adjustment is more important than the valid argument of relative growth rates. Looking at relative growth rates, … nobody knows exactly what the U.S. trend growth rate is, … but it's certainly between 2.5 and 3. But Europe's, even if we include Central and Eastern Europe, is something like 2. Therefore, using relative GDP growth rates as the benchmark is nonsensical. There is a difference of perhaps a full percentage point. So if U.S. growth isn't one percentage point higher than the European growth rate, then in relative terms it's a reason for weakening of the dollar. . . .

A few days ago, the IMF suggested that, given the high exposure of Austrian and Italian banks to bad loans in Eastern Europe, the best solution was to allow these countries to enter the euro area on an accelerated path. Do you think that IMF loans are going to be enough to keep these economies afloat; or that, given a worsening situation, these countries are going to be allowed to enter the euro area?

You're asking me what is probable, but first, I'll tell you what I consider appropriate. I consider accelerated euro-ization appropriate for more than a small sample of countries, but I would not invite everybody. I clearly indicated Hungary is not ready for the euro, and therefore should not be invited—not before there is an indication that they understand what the logical implications of wage and fiscal policy are. Otherwise, they would quickly run into a situation that keeps them uncompetitive in a dramatic way. So we should differentiate. But I personally prefer an accelerated euro-ization of those countries that are oriented toward stability, and this includes the Baltic states, Poland, and certainly the Czech Republic. . . .

However, you asked what is probable. The Western Europeans will insist that not only the thrust of the stability and growth pact but also the letter of it has to be observed. Even the ECB will push in exactly this direction. Therefore, we will probably not have the Poles on board until 2012 at the earliest—more probably, not until 2013. . . Of course, there are not just retarding forces in Western Europe—and, by the way, these retarding forces are not only in the finance ministries and central banks but in academia as well; academia is a very important part of what's standing in the way of accelerated membership in the EMU. There are forces in Central and Eastern Europe that push in the same direction, toward entry into the eurozone. Some do it for very political reasons, like the president of the Czech Republic, Vaclav Klaus—a very, *very* intelligent man, and very well-trained, but all of his DNA comes from Chicago.

You said that criticisms of the eurozone were generated by London and U.S. investment banks seeking to drum up some transactions. But do you accept that, as a result of the credit bubble in the peripheries of Europe, in places like Spain and Ireland in particular, the labor forces in those countries are now uncompetitive relative to Germany, and that therefore it is difficult to regain an equilibrium within the European Monetary Union? If that is the case, will Germany be prepared to spend 75 percent of its GDP bailing out, not fellow Germans, but Mediterraneans and Celts on the peripheries of Europe?

If it is in our interest, yes, we will. It could happen because of the trade and investment relationships we hold. Volkswagen will thrive only if Skoda thrives, so we have every interest in Slovakia not falling from the cliff. . . On the other hand, Germany, due to the appreciation of the deutsche mark before the euro came into existence, … entered the eurozone with a completely nonsensical exchange rate. We were truly noncompetitive at the exchange rate we had at that time. Over the last seven to eight years, Germany has corrected that. We got a real depreciation through strong wage restraints and a very big effort to get productivity going wherever we could. This combination of policies is exactly what our beloved friends in the Mediterranean area now have to emulate. I wish them well.

HENRY KAUFMAN
Henry Kaufman & Company, Inc.
Who is Primarily Responsible for the Credit Crisis?

We are now in the midst of the worst financial crisis since World War II. Not surprisingly, given the breadth and depth of the turmoil, many market participants have been called to account. But I am convinced that the misbehavior of some would have been much rarer—and far less damaging to our economy—if the Federal Reserve and, to a lesser extent, other supervisory authorities had measured up to their responsibilities.

More than any other entity, the Federal Reserve is the guardian of our financial system. The role of a financial guardian is somewhat akin to that of a parent. A parent should not be a friend to his or her child but should, rather, hold the child accountable to a set of clear, consistent, and fair behavioral standards. In similar fashion, the official guardian of our financial system must hold financial institutions to a code of conduct, and never should be viewed as a friend or a hero of Wall Street or other interest groups. By the very nature of their responsibility, the leaders of the Fed should not become folk heroes. Indeed, the "rules of the game" is a key concept in economics, for without such rules market economies cannot function. Recently, Albert Wojnilower drew a memorable parallel between financial rules and the rules that govern sports, saying that all organized sports depend on rules and boundaries—and referees. Even children are coached to evade the rules when the referee isn't looking. But without referees, and police to watch the referees, there would be no game. The same is true for financial markets.

Seen in this way, much of the recent extreme financial behavior is rooted in faulty monetary policies. Poor policies encourage excessive risk taking. Too often in recent decades, the Federal Reserve followed policies that failed to recognize, in a timely fashion, behavioral and structural changes in the marketplace. At the same time, the Fed has espoused a laissez-faire economic ideology while failing to follow it consistently. Both of these shortcomings played a central role in steering the U.S. economy onto an unsustainable path. Accordingly, to emerge from the current muddle and chart a sounder course, we need to fundamentally reconsider the role of the Federal Reserve and, more broadly, the supervision of our financial institutions.

Financial markets have changed enormously in the near century since the Federal Reserve System was created in 1913. The Fed was established to cure four major defects in the U.S. financial system, and virtually all the significant developments that shaped its structure, operations, and effectiveness occurred prior to World War II. First, commercial banking was highly decentralized at the time, which caused a number of frailties. There was, quite simply, no national conservator of the money market. Instead, bank reserves were scattered and immobile; it was impossible to price reserves in a national market. Second, bank credit was unresponsive to seasonal, regional, and other needs. Third, the foreign exchange and money transfer system was inefficient. And fourth, the U.S. Treasury's depository system contributed to the poor distribution of bank reserves and to banks' dependence on U.S. Treasury funds.

During the Great Depression, Congress made major changes to the Federal Reserve System through the Banking Acts of 1933 and 1935. This legislation established the Federal Deposit Insurance Corporation; prohibited interest on demand deposits; separated securities affiliates from commercial banks; created a Federal Open Market Committee; dissolved the old Federal Reserve Board and called for a Board of Governors; granted power to the Board to set differential reserve requirements according to "country" and "reserve city" bank classifications; and gave the Board the authority to regulate the rate of interest paid by member banks on time deposits.

The Fed's authority remained largely unaltered in the postwar period, with the exception of the Treasury Accord of March 1951. The Accord freed the Fed from its war-related obligations to support government bond prices, thus permitting the central bank to use open-market operations for economic stabilization. Somewhat later, the Fed also was granted authority to regulate bank holding companies.

While the authority and structure of the Fed remained basically unchanged for decades, U.S. financial markets have changed dramatically since World War II, even more so since 1913, when most of the country's financial structure was still under the purview of the central bank. When the Federal Reserve was founded, total debt outstanding amounted to only $62 billion, compared with $33 trillion today. In 1912, there was only $1.3 billion in U.S. Government debt and $15 billion in consumer and mortgage debt, while business debt accounted for $36 billion. Today, U.S. Government debt amounts to $6.4 trillion; business debt, $11 trillion; and household debt, $14 trillion.

In 1912, commercial banks were the dominant financial institution; they held $21 billion, or 65 percent, of the assets of all financial intermediaries. Although banks now hold total assets of about $13 trillion, their relative importance in the financial system has diminished somewhat. A wide array of intermediaries—many of which did not exist in their modern-day form back in 1912—have become influential. Moreover, financial institutions created a large variety of new credit instruments, many of which, although proxies for credit obligations, nevertheless play a prominent role in our financial markets. Moreover, huge financial conglomerates now dominate the markets. The glaring differences between today's financial structure and that of a century ago—even setting aside policy missteps—are ample reason to question whether the Federal Reserve is well constituted to meet our current needs.

In the current crisis, the Fed's performance can be judged by the answers to two key questions. What did monetary policymakers do to prevent, or at least mitigate, the crisis? And what actions did the central bankers undertake once they recognized the enormity of the problem?

I hardly need to demonstrate here that the Fed failed to recognize promptly the dimensions of the credit crisis; this has already been well documented. Just a few months before the credit problems reached full bloom, senior Fed officials stated that the meltdown of the subprime mortgage market was well contained. Right up to the brink of the crisis, monetary officials continued to profess the view that our financial institutions were strong. Only when the extent of the credit crunch became abundantly clear did the Fed begin to move gradually to contain it.

Fortunately, after this belated start, the central bank began to act with full force and considerable ingenuity. It put forth a series of countermeasures, including: the Term Auction Facility, an emergency lending authority to provide primary-dealer access to central bank credit; the Term Securities Lending Facility, which lends Treasury securities to dealers; programs that backstop money market funds; the Commercial Paper Funding Facility; the Term Asset-Backed Securities Loan Facility; and the purchase of high-quality assets, including private credit obligations, by the Fed. The Fed also facilitated the purchase of Bear Stearns by JPMorgan Chase and prevented the default of AIG. I mention all these Fed measures to give full credit to its resourcefulness and innovativeness in working to revive the credit market. For this, the Fed deserves to be commended. Even so, these actions came *after* the crisis had gained considerable momentum.

The Fed has been hobbled by at least two major shortcomings. One has been its failure to recognize the significance for monetary policy of structural changes in the financial markets—changes that surfaced quite early in the post–World War II era. In 1962, in the first in a series of deregulatory measures, the Fed raised the Regulation Q ceiling on the interest rate paid on time and savings deposits. While I do not criticize this action, it seemed to me at the time that the Fed failed to incorporate this liberalization into its policy formulations. Abandoning Regulation Q enabled banks to become intermediaries, in the sense that they no longer had to bear the money rate risk. As long as these institutions could maintain a favorable spread between the cost of liabilities and the return on their assets, it no longer mattered to bankers how high interest rates were pushed by the monetary authorities. The combination of the freedom to bid for funds in the open market and the advent of floating-rate financing became a powerful force for the creation of new credit. This new dynamic had serious long-range consequences. Because the relationship between the availability of funds and the demanders of credit had changed, interest rates now had to be driven up to extraordinary heights for the central bank to achieve a restraining effect, or credit quality had to deteriorate rapidly to cause market alarm.

We've now learned the hard way that financial deregulation still facilitates the creation of debt because it spurs competition and reinforces the drive for new markets and enlarged market standing. Monetary policymakers neither anticipated these realities nor incorporated them into their policy calculations.

The Federal Reserve also failed to grasp early (or, with sufficient clarity, later on) the significance of financial innovations that, by their very nature, facilitate the creation of new credit—innovations that could not have been financed at all using earlier techniques. Perhaps the most far-reaching of these innovations was the securitization of nonmarketable obligations. This tended to create the illusion that credit risk could be reduced if the instruments became marketable. Quite a few holders of securitized obligations believed they had the foresight to sell before markets adjusted to a decrease in creditworthiness. Moreover, elaborate new techniques employed in securitization (such as credit guarantees and insurance) blurred credit risks and—from my perspective many years ago—raised the vexing question, Who is the real guardian of credit? Instead of addressing these issues, the Federal Reserve was actually quite supportive of securitization. Alan Greenspan, when he was Fed chairman, stated that securitization was very beneficial because it helped spread risk over a broader spectrum of the financial markets.

One of the Federal Reserve's biggest blind spots when it comes to structural changes has been its failure to recognize the problems that huge financial conglomerates would pose for financial stability—including their key role in the current debt overload. The Fed allowed the Glass-Steagall Act to succumb without much fanfare, and without appreciating the negative consequences of its demise. Within two decades or so, financial conglomerates—or, as some like to call them, "large, integrated financial institutions"—have come to utterly dominate financial markets and financial behavior. The 10 largest U.S. financial institutions now hold more than 50 percent of U.S financial assets, up from only 10 percent in 1990. The 20 largest institutions hold more than 70 percent, compared with 12 percent in early 1990. In fact, the latest credit crisis has increased financial concentration by leaps and bounds.

Official policymakers actually encouraged huge financial institutions to merge in order to avoid insolvency and market disruptions. But monetary policymakers failed to recognize that these financial behemoths are honeycombed with conflicts of interest that interfere with effective credit allocation. Instead of cultivating transparency about their myriad activities, financial conglomerates have become more and more opaque, especially where their (vast) off-balance-sheet activities are concerned. The Fed failed to rein in the problem, even when off-balance-sheet entities were created by subsidiaries of bank holding companies over which the Fed has direct oversight. The special investment vehicles that financed longer-dated mortgages by issuing commercial paper are a now-infamous example.

Nor did the Fed recognize the crucial role that the large financial conglomerates have played in changing the public's perception of liquidity. Traditionally, liquidity was an asset-based concept. But in recent decades, the concept shifted to the liability side, as liquidity came to be virtually synonymous with very easy access to borrowing. This would not have happened without the massive marketing efforts of large institutions, which, of course, have issued billions of credit cards and aggressively promoted seamless ways to enlarge mortgage debt. The same leading firms also created a panoply of debt obligations designed to finance corporate mergers and takeovers. All of this contributed to the loosening of credit standards.

My second major concern about the conduct of monetary policy is the Fed's prevailing philosophy of economic libertarianism. At the heart of this economic dogma, as it pertains to monetary policy, is the belief that markets know best, and that those who compete well will prosper, while those who do not will fail.

How did this affect the Fed's actions and behavior? First, it explains to a large extent why the agency did not strongly oppose the removal of the Glass-Steagall Act, which in turn contributed to a massive consolidation of the financial system.

Second, it also helps explain why the Fed failed to recognize that abandoning Glass-Steagall created more institutions that were "too big to fail." The Fed never admitted that large institutions were "too big to fail" until the current crisis took hold.

Third, it diminished the supervisory role of the Fed, especially its direct responsibility to regulate bank holding companies. To be sure, the Fed's supervisory responsibilities have never been very visible in the monetary policy decision-making process. But its tilt toward an economic libertarian approach pushed supervision down a notch just when financial market complexity was on the rise.

Fourth, as hands-on supervision slackened, quantitative risk modeling became increasingly acceptable. This approach, especially quantitative modeling to assess the safety of a financial institution, was—considering the complexity of markets and the vast structural changes in the markets—far from adequate. But it worked hand in glove with a philosophy that markets know best.

Fifth, adherence to economic libertarianism inhibited the Fed from using the bully pulpit or moral suasion to constrain market excesses. Greenspan spoke about "irrational exuberance" only as a theoretical concept, not as a warning to the market to curb excessive behavior. It is difficult to believe that recourse to moral suasion by a Fed chairman would be ineffective. Such public pronouncements about financial excesses are hard to ignore. They reach not only major market participants but the broad public as well.

Sixth, the Fed's increasingly libertarian philosophy also underpinned its view that it could not know how to recognize a credit bubble, but that it knew what to do once a credit bubble burst. This approach, which became known in the markets as "the Greenspan put," offered considerable solace to risk takers. But it is a philosophy plagued with fallacies. Credit bubbles can be detected in a number of ways, such as rapid growth of credit, very high P/E ratios, and very narrow yield spreads between high- and low-quality debt. At the same time, limiting the fallout from a bursting credit bubble is no easy task. Witness the widespread damage to economic and financial participants in the current crisis despite the Fed's many valiant efforts.

By guiding monetary policy in a libertarian direction, the Federal Reserve played a central role in creating a financial environment defined by excessive credit growth and unrestrained profit seeking. Major participants came to fear that, if they failed to embrace the new world of securitized debt, proxy debt instruments, and quantitative risk analysis, they stood a very good chance of seeing their market shares shrink, their top producers defect, and their profits dwindle.

Ironically, the problem was made worse by the fact that the Fed applied its libertarian approach inconsistently. Rather than pursuing the approach uniformly through all phases of the business cycle, the central bank maintained its hands-off stance during monetary expansion but abandoned it when constraint was necessary—and that, in turn, projected an unpredictable and inconsistent set of "rules of the game."

Developments are now in train that may push our economy in a more socialistic direction, away from economic democracy, whatever its imperfections. Credit crises tend to disenfranchise the middle class, impoverish low-income groups, threaten democratic institutions, and encourage the growth of central government. History has shown that when credit crises are severe enough, they can lead to political realignment or even social upheaval.

These are several of the reasons why I recommend that we should fundamentally reexamine the role of the Federal Reserve and the supervision of our financial institutions. Are the current arrangements within the Fed structure adequate, from its regional representation to its compensation for chairman and governors to its terms of office for governors? How can the Fed's decision-making process be improved? . . . In essence, if we were to create a new central bank from the ground up today, how would it differ from the incumbent system? At a minimum, the Fed's sensitivity to financial excesses must be improved.

I have long advocated centralized supervision of our financial system. The first time I did so was in a paper I delivered at the Federal Reserve Bank of Kansas City Annual Economic Symposium at Jackson Hole, Wyoming, 25 years ago. At the heart of the oversight issue is how to deal with the huge financial conglomerates that are now recognized as too big to fail. Here are two proposals to consider. One is to require them to spin off assets in their holding company structure, especially those that created conflicts of interest and contributed to excessive practices. The other is to make sure they are "too good to fail." This will require tight oversight and constraints on their assets and profit growth. These conglomerates would essentially become financial public utilities.

To oversee these too-big-to-fail institutions we need a new institution that we can provisionally call the Federal Financial Oversight Authority (FFOA). Among other things, the FFOA would assess capital adequacy, the soundness of trading practices, vulnerability to conflicts of interest, and other measures of stability and competitiveness. It would set guidelines for the participants in the financial derivatives markets, such as limits on the creation of derivatives and the extent to which the issuers of securitized debt (the underwriters) should share the lending risk.

The chairman of the new Authority should serve as a voting member of the Federal Reserve's Open Market Committee, in order to provide the nation's monetary authorities valuable input about the well-being of our largest institutions. This kind of input has been sorely lacking in recent decades. The FFOA chairman, along with the chairman of the Federal Reserve, should be required to cosign an annual report, prepared for Congressional review, on the safety and soundness of the financial institutions under their purview.

At the same time, I strongly oppose the creation of an independent risk regulator. At first blush, this sounds very appealing. However, a separate regulator of this sort will fail, chiefly because financial soundness and credit creation are linked. They cannot be separated from the monetary authority that controls the key variable: the growth of money and credit.

I have also advocated for a long time that the other industrial countries establish the same oversight arrangements I just outlined, and that these new official oversight institutions harmonize their activities through the operations of a Board of Overseers of Major Institutions and Markets. Of course, a number of countries may not readily agree. If so, we should nevertheless proceed on our own. Some will claim that this will put U.S. financial institutions at a disadvantage because transactions and financing will move abroad. So be it. American demanders of credit will still be served. In the short run, this approach will lower U.S. financial income. But in the long run, when future credit crises emanate from abroad, American financial institutions once again will be anchors of stability.

Q&A

Three weeks ago, the Financial Services Authority in the United Kingdom, under the leadership of its new chairman, Adair Turner, came out with a report on how the crisis had changed British financial regulation. One major conclusion was that regulators must now be more intrusive—they must have the right and responsibility to tell bankers that what they're doing is high-risk, dangerous, and potentially destructive. Given the realities of the U.S. public sector—the low salaries, and the lack of stature accorded our public servants—how can we find sophisticated, knowledgeable people to tell someone like Stan O'Neill, or Charles Prince, or even Jamie Diamond, "You're destroying your company—you're taking too much risk"?

This is a critical issue. As you know, the chairman of the Federal Reserve makes about $192,000 a year, and he is supposed to be the chief guardian of a financial system valued at over $30 trillion a year. Governors serving on the board make $171,000 to $172,000 annually, and are supposed to serve 14 years, though hardly anybody serves 14 years today; it's an anachronism. There is every need to revamp this entire compensation structure, so that enough competent people in the private sector can at least consider the idea of serving. . . . But I would also say that, if the growth of profits is going to be more moderate in financial institutions—and since rapid growth of financial profits as a percentage of total profits is over—there's no way that the compensation level in the financial markets will continue to be as high as it has been up till now. There is going to be a closing of the gap between private and public sector salaries, which will help to some extent.

Do you think that there's been too much effort made recently in the crisis to salvage the derivatives books of some of the biggest players?

That's a very difficult question, because the derivatives book is a perfect illustration of how interconnected and interrelated institutions have become. Large institutions are so dependent on other firms and how they behave, and when that behavior goes wrong, big institutions are terribly affected. That's at the heart of one of the problems we now face, which is, in the brave new world of supervision and regulation, there will be a much more intensive look at where those exposures are. There should be limits on the degree of securitization, on credit derivative creation by individual institutions. That's why we should have an official body intensively monitoring the 15 or 20 largest institutions. Of course, their profit profile is not going to be anything like the profit profile that we saw over the last 10 years, so that will mitigate the issue.

What earthly good does securitization do for the real economy?

One value of securitization is that it allows a larger body of investors to participate in the financing of the housing market. In that sense, you're able to capture some savings that are not employed that effectively. Two, the securitization of mortgages eliminated the regionalism and the localism that was endemic in the mortgage market for a long, long period in American history. So securitization, if it's done right, allows you to tap a broader body of savings. If it's done wrong, you create an excess of credit, credit is weakened, and you have a problem. That's why it needs to be monitored. . . .

Thank you.

JOSEPH E. STIGLITZ
Columbia University

Thank you for this chance to share some of my views on the current crisis. Obviously, the subject is so broad, one doesn't really know where to begin. What I'm going to do is focus my remarks very briefly on three themes, hopefully leaving time for questions afterward.

The first is a response to the sense of optimism that you heard expressed this morning. To try to keep some balance here, I want to share with you why many economists are a little more pessimistic. Most economists think things will get better from the bottom, but the real question is, Will we be rather quickly moving into a sustained recovery, or is it more likely that we will have a malaise of some duration?

The second thing I want to talk about is the problem of bank restructuring and what I call Plan B, because Plan A is failing, or it will fail.

The third is, what are the lessons of the crisis for economic theory? One of the remarkable things about this crisis is that we've all learned a lot of lessons. Dr. Kaufman gave a very clear articulation of what the Federal Reserve did wrong. I want to talk about what the economics profession did wrong. A little introspection is always a good thing. . . .

One of the reasons for this pessimism is that, if we go back to before the crisis, you have to ask the question, What sustained the global economy? It was the housing bubble. What was one of the reasons that the Fed kept interest rates so low? It was in part to keep the economy going—and it worked, in a particularly myopic way. I think blaming the Fed or China for excess liquidity is wrong. Having low interest rates should be the foundation of a dynamic economy. Making capital available for business should be a good thing. . . . Yet investors took this wonderful opportunity and mischanneled capital that could have renovated our economy—and we certainly need investment in a whole variety of areas—into places where it wasn't productive. It's not the low interest rates that are to blame. That's a little bit like blaming the cop for not being there when the kid steals the candy. I don't think that's quite right. In this case, the kid *did* steal the candy, and it's true that the cop should have been on the beat; but when the kid sends the cop away, telling him he wasn't needed, the kid has a little bit more responsibility for the cop not being there in the first place. So I don't think that all the blame should be put on the Fed.

The point is that, even after we fix the financial system—which we're not doing a very good job of—we won't have the bubble, and it was the bubble that sustained the economy. It was the bubble that drove savings rates down to zero, and I don't think we're going to see savings rates back at zero. Economic theory makes it very clear that when people's wealth is destroyed to the extent to which it has been and you move into a world where you no longer allow people to borrow irresponsibly in the way that our financial system did, saving increases. It is almost surely the case that we're going to have savings rates of 4, 5, or 6 percent, or even higher. If savings rates are higher, that is going to mean a deficiency in aggregate demand. That's a problem in the United States.

Two other factors have contributed to that and are part of the perspective that our U.N. commission has been focusing on.[1] One is the growing inequality in the United States and most countries around the world, which means that you are redistributing income from people who would spend to people who don't spend. For a while we said to the poor, "That's okay, just continue to spend as if you had money." And for a while it worked, but it was based on debt-financed consumption, and that particular model is broken.

The other factor is that, from a global point of view, the high level of volatility (of which we're seeing a continuation) has meant that many countries have accumulated large amounts of reserves. This is a natural reaction to the kinds of volatility they face, exacerbated by the way the U.S. Treasury and the International Monetary Fund (IMF) handled the 1997–98 global financial crisis by going into these countries and taking away their economic sovereignty, converting downturns into recessions and recessions into depressions. I talked to the prime minister of one of those countries, and he said, "We were in the class of '97. We learned what happens if you don't have enough reserves. Never again will we allow that to happen." Throughout the developing world, there is a massive accumulation of reserves, and if we don't handle the current crisis better, they're likely to continue on this path. For each country individually it's rational, but it's the old paradox of thrift: when everybody is saving, it depresses the global economy, and in a globally integrated economy we have to look at global aggregate demand.

So on both of these accounts the question is, What will replace the almighty American consumer as the engine of global growth? Our global society has lots of needs—to address the problems and challenges of global warming and massive poverty, among many others—but the more likely outcome is that we're going to have the peculiar situation of excess capacity, underutilization of resources, and needs that go unmet. If that is the case, it's a testimony to the failure of our economic system.

That's for the good news. Now let me talk a bit about bank restructuring, which has met with an unprecedented negative response from the economics profession—and for good reason. The best thing that can be said for it is that it reflects good advertising but gross misrepresentation. The most basic problem is that, although we've heard discussions about … what we don't want the financial system to look like going forward (based on what's wrong with the system now), one hasn't heard a very clear description of what kind of financial system we ideally want in the future. We don't want to go back to the system we had in 2007. That, to me, seems clear (although it isn't so clear from what one hears from the administration). I was talking beforehand with Jamie Galbraith, and he pointed out that after every crisis, the banking sector shrinks, and the question is, What part of it should shrink the most? Should it be the part of our financial system that is actually doing what banks used to do, which is to lend to small businesses to try to support the entrepreneurial part of the American economy, or the part that was engaged in gambling? Those are at least some of the questions that I think one ought to be asking.

Looking at the failure of our financial system, one has to ask, "What are the things that a financial system is supposed to do?" It's supposed to manage risk and allocate capital, and to do it at low transaction cost. A good financial system is small; that is to say, people don't eat finance—it's a means to an end, not an end in itself. But our financial system became an end in itself. We created risk rather than managed risk; we misallocated capital—you can see the results of that—and we did that with huge resources.

There are some parts of our financial system that worked very well. . . . Our venture capital firms, for instance, have succeeded in getting capital to new firms like Google, and such entrepreneurship is the basis of the American economy's dynamism. But that's a small fraction of our financial market. Those are venture capital firms, not the big gambling institutions that we've heard so much about. It's those firms that we ought to be strengthening—the community banks, the regional banks. And I think—I hope—that as we go forward there's more discussion of what kind of a financial system we want.

I want to talk more particularly about the last set of proposals put forward, which was described as a partnership. As you well know, it was a very peculiar partnership, one in which the government—we, the taxpayers, but through a variety of institutional arrangements, including the FDIC—put up, or guaranteed, 92 percent of the money used to bail out Wall Street. The private sector put up only 8 percent but will get 50 percent of the profits, whereas we will bear almost all of the losses. I imagine all of you in the business community would love to have partners like that in everything you do.

The Obama administration tried to describe this approach as being motivated by a lack of liquidity in the financial system; but if that had been the true motivation, they could have provided the liquidity along with an equal share of the profits and losses. They didn't have to underwrite the losses if it were just a problem of liquidity. It was described (and I think they believed people wouldn't know what these words meant) as allowing "price discovery of the value of the asset." But, of course, it was a price discovery of the value of an *option* on the asset, … or the upside potential, since the private sector didn't bear the loss; the government bore the loss. It had nothing to do with the asset's value.

In an op-ed article in the *New York Times* on March 31, I gave a simple example of an asset that had a 50-50 chance of being worth either zero or $200 in a year's time, with an average value of $100. But at a price of $150, unless there is a very high charge for the guarantees that hasn't been announced, the private sector makes out like a bandit. . . . How does that work? It's because the taxpayer picks up the losses and the private sector gets the gains.[2]

In a way, that's probably what the Geithner plan was intended to do—to transfer money to the banking sector in ways that no one would know, because it was "Oh, we sold it at fair market value"—no, at the fair market value of the *option*, and without getting control. Because one of the constraints they've imposed on themselves is, they want to give money to the banks but don't want us to have control over what the money does. That's a recipe for disaster. . . . That is likely to solicit very peculiar behaviors, which we've already seen, where the government has provided these firms money to recapitalize and what do they do? … They *de*capitalize by paying out dividends and bonuses. . . .

Now, the funds were transferred in a very clever way; that is, the government provided guarantees through the FDIC. The FDIC was supposed to be insuring deposits, not this kind of activity, but if it makes a loss, who pays for it? There are two options. It's supposed to be self-financed, but either we, the taxpayers, bail it out or it raises the deposit insurance. What it should do is honor what I call the "polluter pays" principle. The big banks have polluted our global economy with these toxic assets, and they ought to pay for the cleanup. That would mean the banks that are a source of the problem pay the higher deposit rates. But a more likely outcome is that all deposit rates will be increased; and that means, rather than helping the small- and medium-size banks, the real sources of dynamism in our economy, we're going to be taxing them in effect, and all for the benefit of these banks that are "too big to fail." . . .

Some of the other problems with this bailout:

I and a number of other people described Secretary Paulson's first bailout plan as "paying cash for trash." Then, for a while, there was a proposal that I described as "buying trash in bulk"—we would just go in and buy large amounts of bad assets and call it a "bad bank." I call the latest proposal "privatizing the garbage hauling services." Here, we use the hedge funds to take the garbage and dump it on the U.S. taxpayer. But because we want to make sure that the "hauling companies" get enough business … what we've done is ensure that there is limited competition in the hauling business—there are at most five competitors bidding on the contract, a number that is usually not enough to sustain strong competition. Besides, there are likely to be important conflicts of interest, since some of the participants in this market will be among those that will be benefiting. . . . It doesn't take a lot of imagination to figure out how a few sweetheart deals between a bank and a hedge fund and deals between a couple of banks get you much the same effect—and if you can't figure out how to do that, you shouldn't be in the finance industry. It's actually fairly easy to figure out how you can circumvent these regulations. . . .

There are a couple of principles that … should affect our thinking about this. First, this is close to a zero-sum game, and we ought to begin with that as our approximation; that is, the banks and security markets made loans in the context of a bubble, the bubble burst, the mortgages are now under water, and there are large losses. The main question now is, Who's going to bear the losses? Taxpayers? Depositors? Banks? It's a straight distributive game, but with mega-amounts at risk. This is really the biggest distributive game that America has ever been involved in, with hundreds of billions of dollars on the table, and it's distribution going up, not down. . . .

Under this program, some of the losses will be borne by the FDIC. We haven't seen the details—we haven't seen any scoring; we haven't seen the models. There is a continuing fiction put forward by some people that this is just a matter of expectations: if we just let the green sprouts grow and everybody feels good in the spring, house prices are going to return to where they were. If you believe that, you're in fantasyland. The rate of decline may slow, that's true, and that would mean we were no longer in free fall. But the fact of the matter is, we had a housing bubble, and almost surely, prices aren't going to bounce back to where they were.

The result of this is that there is a large need for recapitalization. The IMF and others have estimated the amount of losses in the range of $1 trillion to $3 trillion. It's hard to know precisely because of the total lack of transparency, which is being made worse by changes in accounting standards that make it even more difficult to see what is going on.

That, as I say, is close to zero-sum, but it can be a negative sum because of perverse incentives. Whenever you provide insurance, you create moral hazard—you create perverse incentives. . . . Take as an example Citibank, where their losses are largely insured. The taxpayers picked up 90 percent of the losses on a pool of assets, and the bank remains in control. There's a broad consensus that if you have mortgages that are very much under water, you ought to restructure them very quickly. If you don't, the probability of problems festering increases. But think about it from the point of view of a bank that has insurance against the losses. If there's a small probability of the price going up again … who reaps the reward? You do. But if the price goes down, who reaps the losses? The government. Whenever you have this kind of symmetry, you get very perverse incentives. There is an incentive to delay and make the problems fester. Eventually, the problems do fester, there are foreclosures, and the community is hurt. In this way, you convert what was a zero-sum game into a negative-sum gain.

The Obama administration has always tried to argue that there are some benefits if the banks start to lend. But if that had been the real intent, they could have done it much more simply—by, for instance, creating good banks, or forward-looking guarantees, rather than focusing on the so-called legacy assets. Basic Law and Economics, second lecture, we say, "Bygones are bygones—look forward." And what have we been doing? All of our energy has been focused on the legacy assets, because that's where all of our money is going. But the basic point is, … there's a major difference between an ability to lend and a willingness to lend. At most, what we've been doing is repairing the banks' ability to lend; we haven't been significantly affecting their willingness to lend.

One of the most exciting parts of what is going on is the generation of classroom exercises figuring out what is wrong with the administration's proposal. . . . One of the interesting problems … is the problem of asymmetric information. The banks get to choose which assets they sell, and that, of course, distorts the market even more. Peyton Young had a very interesting article along the same lines focusing on another aspect of that problem called the "winner's curse." But … this has evolved into the taxpayer's curse, because if you have a dispersion of views about the value, who is likely to win? Answer: the most optimistic. But if the most optimistic wins, that's because he's the most unrealistic, and who picks up the loss for that excess of optimism? The taxpayer. Now, you can say that that was always the intent: they're trying to get as much money as possible into the banking system without ever going back to Congress and asking for the money. But actually, as one hedge fund manager wrote to me, "This is a terrible deal for the taxpayer, but I'm going to make sure that my clients get the full benefit."

What's probably going to happen, especially now that there's been reform of the accounting rules—whereby we've made it more difficult for them to sell because it increased the cost of selling for the banks—is that we will wind up inadequately recapitalizing the banks while incurring large losses that must be borne by the taxpayer. . . .

Let me very quickly talk about my criteria for a Plan B, then eight basic principles, and then a brief description of the plan itself.

There are four criteria: rekindle lending—hasn't happened; keep the cost low—not likely; address the long-run problems—we're not doing anything about that (in fact, the most benefit goes to the banks that did the worst); and, finally, adhere to standards of good governance and transparency—what's actually happened in this area is really a model of what should *not* be done. If I were chief economist of the World Bank and a developing country had done this, I would have recommended cutting off all lending to that country. "This is a banana republic" is what we would have said in private.

So, where are we? I think there are eight principles or ideas that we need to think about:

The first is the conservation of matter, the zero-sum principle.

Second (and a corollary to the first), *some*body has to bear the loss, but it shouldn't be the taxpayer—it shouldn't be the mass of depositors. I hope all of you followed the results of the TARP Congressional Oversight Panel, which pointed out that in the first set of bailouts, the Treasury got back only about 66 cents for each dollar it paid, and assets (stock) that quickly went down in value.

Third, trickle-down economics is almost always inefficient and doesn't work. It's better to bail out those who really need it. That should be one of the lessons of AIG. Two hundred billion dollars disappeared down the drain, and very little of it went to systemically significant players. We could have targeted the money at the systemically significant players without spending anywhere near that amount.

Fourth, incentives matter—it's a basic principle of economics. But if you have perverse incentives, like we have, you're going to get bad outcomes.

Fifth, a point I made before: lending is a matter of, not just an ability to lend, but also the willingness to do so.

Sixth, we should look to the future, not the past.

Seventh, financial reorganizations given a fresh start are not the end of the world; they can be the beginning of a new world.

And the eighth is the polluter-pays principle: if you pollute the world, you pay for cleanup—it's a matter of equity and efficiency. This is a basic tenet of environmental economics but we have not yet recognized that principle in terms of dealing with our current financial problem.

There is a whole set of problems that have to be addressed when thinking about a restructuring: how do we deal with the shareholders, insured depositors, uninsured creditors at home, and uninsured depositors abroad? … The proposal that was talked about by the administration earlier was to create a "bad bank" in order to concentrate the toxic assets, and because this idea got badly tarnished, they discarded it. But what they should have begun with was the "good bank" idea. What you do here is, you strip out the banks' good assets and the deposits that the government insures, and if there's a shortfall between the good assets and the insured deposits, then that becomes a senior liability of the bad bank.

Once you have a good bank with assets you can value and well-defined liabilities, you can recapitalize it. The government might help, and if we have well-functioning financial markets, the private sector could do it. We've eliminated the main source of risk, so now we have an institution that can operate as a well-functioning bank. We've gotten rid of the toxic assets in the good bank. The bad assets are now in the bad bank. We don't know what the value of the bad banks is. Some of them may be sufficiently good that they can go on but most of them probably aren't—they can't accept deposits—so they have the task of winding themselves down. Let the private sector figure out what is the best way of dealing with that.

The bad-bank idea was to say, we'll dump on the government all the bad assets, and you figure out what to do with them. It should really be just the opposite. This will also be the best way of keeping the flow of credit going in an effective way.

Let me spend just a few minutes talking about the lessons for economics. The Great Depression transformed the economics profession. Even as the economy sunk into depression, mainstream economists argued that nothing should be done, as government intervention would only make things worse. As the Depression faded into distant memory, the economics profession lost sight of these lessons. Dogmas and doctrines holding that markets worked well and that they were self-correcting once again came to predominate. This time, the theories were more sophisticated, but the underlying assumptions were equally irrelevant. These ideas helped shape the intellectual milieu that gave rise to the flawed policies that in turn gave rise to the current crisis. To some extent, they are shaping policies today as we attempt to respond to the crisis.

The advocates of free markets in all their versions say that crises are rare events, though they have been happening with increasing frequency as we change the rules to reflect beliefs in perfect markets. I would argue that economists, like doctors, have much to learn from pathology. We see more clearly in these unusual events how the economy really functions. In the aftermath of the Great Depression, a peculiar doctrine came to be accepted, the so-called "neoclassical synthesis." It argued that once markets were restored to full employment, neoclassical principles would apply. The economy would be efficient. We should be clear: this was not a theorem but a religious belief. The idea was always suspect.

Why should market failures only occur in big doses? Rather, recessions can be seen as the tip of the iceberg. Underneath, there are many smaller market failures giving rise in aggregate to huge inefficiencies—illustrated, for instance, by the myriad of tax paradoxes. We should remember, too, that while megafailures have been rare in the United States, on a global scale such failures have in fact been frequent. This is just the largest, most recent of the financial crises that have occurred since America's savings-and-loan debacle or the bailouts with country names—Mexico, Brazil, Korea, Indonesia, Argentina, Thailand, Russia—which were really bailouts of Western lenders as a result of the inadequate assessment of creditworthiness.

The main difference between these crises and the current one is, the consequences were felt in the periphery, and the cost of bailouts was largely borne in the periphery. The irony, of course, was that other strands of modern economic theory, including the theory of imperfect information, were simultaneously explaining why markets often do not work so well. Bruce Greenwald and I, in *Towards a New Paradigm in Monetary Economics* (2003), showed that the reason Adam Smith's invisible hand often appeared invisible was that it *wasn't there*. Market equilibria were not Pareto-optimal whenever there were information imperfections, and asymmetries, and imperfect risk markets. That is always. At the same time, the most successful countries ever in terms of growth and poverty reduction, the countries of East Asia, follow policies with active government involvement.

One would have thought that this powerful combination of theory and evidence might have dampened the enthusiasm for unfettered and under-regulated markets, but evidently it did not. I understand the unbridled enthusiasm of special interests that found the arguments for deregulation profit enhancing. I'm not so clear on what motivated so many economists.

Some have argued that risk is the price we have to pay for innovation, and America's financial markets have been extraordinarily innovative. However, financial markets did not create risk products that would have enabled individuals to manage the risk they faced: the simple risk of homeownership. Rather, the innovations consisted mostly of tax, regulatory, and accounting arbitrage. Their financial alchemy—converting F-rated toxic mortgages and financial products that could be held by fiduciaries—had a private, but not necessarily social, payoff.

Such repackaging, we know from the Modigliani-Miller theorem, should have a limited value. Meanwhile, many in the financial sector actually resisted innovations that would have made markets work better—innovations like GDP, inflation index bonds, Danish mortgage bonds, and better auctions of Treasury bills. The models that are predominating within macroeconomics, which assume representations with rational expectations, are particularly disturbing. These models have particular influence among central bankers. If I were giving my litany of criticisms of the central bankers, I would say they should have begun inflation targeting and with the models that they have, which are actually badly flawed.

What I find even more striking is that some economists still argue that this crisis has not shaken their belief in rational expectations. To me, the evidence of irrationality and intellectually inconsistency abounds—I can give dozens of examples. It's just astounding.

Even today, flawed thinking continues. We are encouraging mergers among the big banks that cause them to be even bigger. We talk about tight regulation of systemically significant institutions, failing to note that there can be systemic effects of correlated behavior on the part of institutions, even if each is not systemically significant.

Representative Asian models that have dominated the economics professions ignore the rich diversity of our economy, a diversity that is at the heart of some of the problems it faces. An economy with a single individual has no lenders and no borrowers, no problems of asymmetric information (unless individuals are subject to schizophrenia), no need for banks, no need to ascertain creditworthiness—in short, it is missing everything that is important. Remarkably, much of the economics profession focused on models that have almost nothing to say about the crisis we are facing. And there *were* those who were pursuing alternative strands of thought. Among these was Hyman P. Minsky, who this conference is honoring. I had the good fortune of knowing him quite well, and he pushed using macroeconomic models. So there were alternative models out there, but they were systematically ignored by much of the economics profession.

Hopefully, we will learn, at least for a while, some important lessons from this crisis. Unfettered financial markets do not work, and the current regulation and regulatory institutions failed, partly because one is not likely to get effective regulation when there are regulators who do not believe in regulation. Markets are not self-adjusting, at least within a relevant time frame.

More broadly, Darwinian natural selection may not work either. Rather, like Gresham's law, which holds that bad money drives out good, reckless firms forced more conservative firms to follow similarly reckless investment strategies. More prudent firms might have done better in the long run, but they could not survive to take advantage of that long run.

Our financial system failed in its core mission, allocating capital and managing risk, with disastrous economic and social consequences—not just in misallocated capital in the past but also in the huge disparity between potential and actual GDP in the coming years, sums that almost surely will be in the trillions of dollars. Regrettably, flawed economic theories aided and abetted both those in the public sector and those in the private sector in pursuing policies that almost inevitably led to the current calamity.

We need to do a better job of managing our economy, but this will require better research that is less framed by the flawed models of the past, less driven by certain simplistic ideas, and more attuned to the realities of today. There is a rich research agenda ahead.

Notes

1. The Commission of Experts of the President of the U.N. General Assembly on Reforms of the International Monetary and Financial System, of which Stiglitz is chair.
2. See J. Stiglitz, "Obama's Ersatz Capitalism," Op-ed, *The New York Times*, March 31, 2009: "Assume that one of the public-private partnerships the Treasury has promised to create is willing to pay $150 for the asset. That's 50 percent more than its true value, and the bank is more than happy to sell. So the private partner puts up $12, and the government supplies the rest — $12 in 'equity' plus $126 in the form of a guaranteed loan. If, in a year's time, it turns out that the true value of the asset is zero, the private partner loses the $12, and the government loses $138. If the true value is $200, the government and the private partner split the $74 that's left over after paying back the $126 loan. In that rosy scenario, the private partner more than triples his $12 investment. But the taxpayer, having risked $138, gains a mere $37."

Q&A

The doomsayers of Wall Street have a habit of quoting very large numbers for derivatives outstanding—something like $200 trillion, with $90 trillion allocated to one bank, which is Chase. And they say the number is more like $600 trillion worldwide. Is there any meaning in these figures, and if so, why aren't we giving up? Because these sums are so enormous compared with government billions.

It's one of the examples of the peculiar aspects I mentioned above. These are gross numbers, so there are bets between A and B that the oil price will go up, and other bets that the oil price will go down. However, these don't quite net out, and that is one of the crazy aspects of our financial markets. If A owes B and B owes A, they're taking bets on the same thing. Normally, they net out, except under one condition: if either A or B goes bankrupt, then A can repay B (or vice versa) but B can't pay A (or vice versa). So, what nets out when people are financially healthy doesn't net out when they get sick.

When I ask people in the industry why they didn't net out, they say they never expected anybody to go bankrupt. But then you say to them, "Some of the securities you were betting on were credit default swaps (CDSs), which are bets on other firms going bankrupt—that's what your business was," they say, "Well, that was another *part* of our business."

So this is one of those examples of trying to figure out where the intellectual coherence was. How could you say we don't need to net out when part of the market you're betting on was the probability of banks, or of counterparties, going belly-up. So the bottom line is, yes, we ought to be worrying about the securities.

One of the other problems is that many CDSs are over-the-counter, so they're not standardized. We don't know exactly the extent to which they net out, because the terms can be a little bit different from one to the next. If they're identical—if they're exchange rated—then you can net out. So the answer is, you *should* be worried. . . .

In researching your book on the cost of the Iraq war, did you find at all that that linked into this moment?

That's a good question. The book, which I coauthored with Linda Bilmes, was called *The Three Trillion Dollar War: The True Cost of the Iraq Conflict*, and when it was published early last year, a trillion dollars was still a big sum. Now everybody says, "Three trillion dollars? Oh, that's nothing—look at the amount we're giving to the banks." This crisis has debased our currency.

One of the points I made in the book is, there was a lot of creative accounting so that we wouldn't know what the costs of the war were. . . . For instance, one of the reasons I spent so much time earlier on the public/private partnership is because it's all intended to hide what the costs are. . . . The Credit Reform Act says that when you issue a guarantee, you're supposed to use actuarial accounting to determine the value of what is at risk—you're supposed to run models that will tell you what the risk is. Obviously, the models they've gotten from the financial sector don't have a lot of credibility right now, but still, they should be doing that. However, the whole point is to keep this off-balance-sheet. It's a zero-sum game, but we're giving money to the banks, and most of it is not showing up on our books. I think that's one of the real problems.

I don't know if you've been following this, but the whole thing is riddled with euphemisms. The Troubled-Asset Relief Program (TARP)—we went from toxic assets to troubled assets, because *troubled* sounds better than *toxic*. The original discussion surrounding TARP was, "Don't worry, you're going to get your money back. It's a good investment." You don't hear that anymore. The Congressional Budget Office, at last scoring, said $359 billion … was the net cost to us from the first round of TARP payouts. So this is real money, and part of what is going on here, when I said poor transparency, is that they're trying to hide the cost. . . .

When you're giving away lots of money, you get lots of corruption, almost inevitably, along the fine line that separates excessive risk taking and corruption. You might say it's a legal distinction—whether you wind up in prison or not—but the point is, the cost to us and the inefficiencies are there. . . .

With the increase in government debt, what is your prognosis for interest rates and inflation?

I just came back from China, and there obviously is a lot of concern there about two things: the increase in the national debt, and the blowing up of the U.S. Fed's balance sheet. They feel very, very strongly about this, because they have a lot of money tied up in dollar-denominated assets, and they've learned enough about economics, to be aware that the United States has an incentive to inflate away the debt.

Central bankers in general have as part of their genetic code—whether they have it at the time they're chosen to be head of the central bank, or whether they get a gene-altering injection at that point—are very inflation averse. That's … most of their identity. As a central banker you can't go to a conference of central bank governors and say, "I really helped my country—I inflated away the national debt." You don't do that.

In my mind what the Fed is saying is, "Don't worry. We'll take out the liquidity from the economy just as it's needed." Anybody who's watched the Fed in recent years won't have that much confidence in their ability to do this, but I think there is probably a higher probability that they will step on the brake too hard than that they let the high inflation go. The more likely scenario is moderate inflation for an extended period of time—3, 4, 5, or 6 percent over 10 years is a way of inflating away the debt without being dramatic about it. So I don't see high inflation as an issue. . . .

Do you agree with the claim that it's the imbalance of power that has caused this problem—that it's the result of a financial structure and policies imposed by one group on another group that must assume the costs?

I think that most observers looking at what happened in the period of deregulation clearly saw it as the influence of certain vested interests. I was in the Clinton administration and very strongly opposed to the repeal of Glass-Steagall. I saw it as opening up the whole set of problems that we had prior to regulation, including conflicts of interest, converting a "boring" banking culture into one of risk-taking banking, subverting what should be a very strong fiduciary responsibility of what Kaufman called a public utility and leading to increasing concentration.

When we had that discussion during the Clinton years the response that came back was, "Don't worry about conflicts of interest; we'll create Chinese walls." And I said, "You're going to create very low Chinese walls, and you'll walk over them. But if you do need to create Chinese walls, then what is the argument for putting these things together? The only reason to put them together is to take advantage of the economies of scope. But if you say you're not going to be able to take advantage of the economies of scope, then why put them together? It's risk without any reward."

Regardless, they did it, and it was very clear why they were doing it. You could follow the money. So it seems to me that that kind of influence is obviously playing out in some of the discussions of how we do the restructuring, including who pays for it. At the beginning of the bailout, there was some discussion about losses being paid for by the industry. . . . The industry was at that point saying, "No, there won't be any losses." I said, "If you really believe that, just step forward and put your money where your mouth is. If there are no losses, say you'll take them!" Of course, they knew that there were losses, and that's why they weren't willing to take them. But I think that's where this principle of polluter pay, which we've come to recognize as a principle of both efficiency and equity, is an important principle that we ought to be talking about in this context, and one that I think most Americans can understand. That's why it's been so successful in environmental economics, and it's something that we ought to be pushing as part of the discussion.

Thank you.

Sessions

SESSION 1

Assessment of Fed/Treasury Response to Crisis

Greg Hannsgen, William Kurt Black, Marshall Auerback, Jane D'Arista, and Thomas Ferguson

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WILLIAM KURT BLACK, author of *The Best Way to Rob a Bank Is to Own One* (2005), stated that all levels of government must take fraud seriously when dealing with this crisis. Black said he believed that standard economic policies create a criminogenic environment that fosters perverse incentive structures and large-scale criminality, or control fraud, whereby a person in control of a seemingly legitimate corporation or government agency uses it as a weapon to defraud. During the inflation stage of a bubble, standard econometric analyses recommend policies that optimize a criminogenic environment and produce the worst frauds because the weapon of choice for control fraud is accounting (i.e., the numbers are fictional).

Black maintained that economics ignores the economic principles most relevant to fraud—for example, Gresham's law (bad money drives out good), and articles by George Romer and Paul Akerlof (the latter a Nobel Prize winner)—as well as white-collar criminology. Moral hazard does not lead only to excessive risk, since standard finance insurance theory leads to control fraud. However, this is not recognized by economics because it falsifies the claims of theoclassical economists. Markets and contracts will not be efficient in an environment of accounting control fraud because there will be a consistent bias related to overstated earnings and share prices. And, if fraud creates a competitive advantage, market discipline will drive honest firms from the marketplace (Gresham's dynamic). We have reverse Pareto optimality; that is, both parties to transactions are made worse off and dishonest agents win (as in the case of subprime mortgages). So, the markets perform opposite to theory, we have financial bubbles, and elite institutions become the leading causes of crisis.

A lack of regulatory, business, or accounting heroes has produced an ethical crisis whereupon we have had the greatest destruction of American working-class wealth and income in modern history, which is concentrated among minorities. Why are progressive economists irresponsible about diagnosing fraud as a problem? (We have a progressive administration that is seeking to re-create a secondary market in nonprime loans that proved to be the best way to destroy the wealth of the working class.) Control fraud epidemics don't falsify progressive economic views, which would be strengthened using theory and input related to criminology (i.e., fraud is not random). For example, fraud associated with the savings-and-loan (S&L) crisis was stopped using criminology theory, and insolvent banks were closed.

The FBI warned about an epidemic of mortgage fraud in September 2004, stating that 80 percent of the fraud was induced by lenders, not borrowers. The high number of criminal referrals on mortgage fraud does not represent the (much higher) actual number, because there was significant nonregulated lending and borrowing, and most frauds were either undiscovered or unreported (referrals are uneven and biased). Estimates of the incidence of mortgage fraud exceed a half million per year, but there were no CEO indictments. Contrary to government press releases, property crime is at unprecedented heights. Moreover, why does the Securities and Exchange Commission not have a chief criminologist?

IndyMac caused more losses than the entire S&L crisis in only four years of operation. The reason rating agencies could give a triple-A rating to fraudulent "liars' loans" is that they never looked at a single loan file, nor did the people who bought the mortgages ($2 trillion of toxic waste). The banks, investment banks, and insurance companies did not have access to the loan files, in spite of warnings by the FBI.

MARSHALL AUERBACK noted that his presentation, titled "The Return of the State," reflected his personal views, not those of his company, and that his real-world observations were from the perspective of a financial practitioner. He applauded the notion that government involvement would represent a substantially larger component in the economy, since an activist government and significant state intervention have very beneficial impacts. For example, East Asian countries such as Philippines, Thailand, Korea, and Japan sustained the greatest quantum leap in living standards in the shortest recorded time in history. According to Robert Wade (*Governing the Market*, 1990), these governments created above-normal market returns (rents) by "distorting" the markets through industrial policies. These policies were essential to inducing "more-than-free-market investment" in activities considered important for the economy's transformation, and to sustaining a political coalition in support of these policies.

Auerback outlined a number of similar experiences in the United States: national building programs (e.g., canals in the 19th century, highways in the 20th); and the New Deal, which created the foundation for decades of prosperity. He noted that the unemployment rate during that time has been disputed by conservative economists and others, but the anomaly is largely based on a statistical quirk on the part of the Bureau of Labor Statistics. Self-interested policies since then, however, have eviscerated the structure of this excellent foundation and set the stage for the recent collapse of the U.S. economy (financial deregulation was a misguided notion).

Auerback expressed doubts about the direction of the new, progressive government because it has spent the state's resources in the wrong way. The largest fiscal stimulus package in history is probably insufficient, we are spending trillions of dollars on financial guarantees for dubious "legacy assets" that probably have no fundamental value, and we are presiding over one of the largest and most regressive transfers of taxpayer wealth in history. Thus, it is important to use the state properly. However, we are starting with a big conceptual flaw. Unblocking credit as a first step in reviving the economy is the wrong way around. Rather, the objective should be to repair personal balance sheets and strengthen aggregate demand, which will help restore creditworthiness. Japan's "balance-sheet recession" occurred when its banks were well capitalized and willing to lend but there was no counterparty. Growth occurred only after repeated attempts by the government to stimulate the economy through the application of fiscal policy.

The notion that the government that governs best, governs least, is misconceived, and we should welcome a return of the state, which should act as a neutral umpire among competing interests. In the United States, however, a significant amount of favoritism toward the financial sector (a bipartisan problem) remains. There is a conflict of interest when government officials and advisors are directly linked to the financial industry, such as National Economic Council Director Lawrence Summers's work with the hedge fund industry and White House Chief of Staff Rahm Emmanuel's campaign to release bailout funds to the banking industry. In Auerback's view, it is questionable whether the president actually has an FDR-type New Deal in him.

JANE D'ARISTA was also distressed about the way the new administration has handled the financial problems. Rather than fixing the financial system per se, the administration has focused on a rather small segment that consists of huge institutions with a culture of proprietary trading, funding interdependence, and enormous leverage. It is an insular world of self-dealing through both trading and investing. The problem with this approach is that the world can only be saved at the expense of the real economy.

D'Arista agreed with the *Financial Times*' Martin Wolf, who stated that losses for creditors must be part of any durable solution to the crisis. She was astonished that the model used in the handling of Long-Term Capital Management in 1998 (when the head of the New York Fed gathered the main creditors together in order to net out the counterparty contracts) was not used in the current crisis. Instead, companies like AIG were paid 100 cents on the dollar with federal money, and these counterparty contracts are expanding in number rather than disappearing. Reliance on the stress test, a failed component of the capital adequacy regulatory regime's tool kit that focuses on individual institutions, is further evidence that the government does not understand that the current crisis is a systemic one. Moreover, no intellectual program has been posited that will deal with the procyclical bias in the financial system.

Capital is possibly at the core of the problem, D'Arista said. There would have been a significant difference if all of the money in the federal stimulus package had been given to the real economy rather than the financial sector. Capital adequacy was reinstated in the 1980s as part of the deregulatory mechanism, under the notion that market forces were superior to regulation and capital was expected to govern credit flows as well as institutions. However, the bank capital adequacy requirement in a stripped-down regulatory system was a failure from the beginning. The question not being addressed is, How does using bank capital to govern credit and bolster the system fit in with the rules of a market-based rather than a bank-based system? An illustration: mark-to-market accounting has been modified recently to save capital, but the assumption that capital has been a cushion for the financial system is wrong. Rather, capital became the conduit to insolvency. Therefore, we must rethink the role of capital in the financial system as a whole.

A new (integrated) dynamic developed within the system, so that a fall in asset prices reduced the capital of both borrowers and lenders. D'Arista noted that financial cushions were very important to Minsky, especially the reserve accounts held by the Federal Reserve. In 1951, banks held 65 percent of credit market assets and Fed reserve accounts accounted for 11 percent of their assets and liabilities. Today, those accounts represent less than two-tenths of 1 percent. When Fed officials decided there was a use for reserve accounts, they petitioned Congress and received an interest payment on these accounts. Now these accounts sit on the asset side of the balance sheet and are as good as gold. They remain at face value and will not be a charge against capital. Rather than making loans, banks now have a reason to horde, because it protects capital. Since the reserve accounts have increased from $67 billion in September 2008 to $900 billion in January 2009, the Fed's handling of the crisis has not been adequate. A vision of what the financial system and monetary policy ought to be is missing, due to a lack of understanding by the administration. Countercyclical policy is no longer effective. Massive lending in place of interest rate policy is making the Federal Reserve the system's bank.

Other features that are poorly understood are the quantitative requirements to improve the central bank's influence over credit, how to handle securitization, and, most importantly, how to recreate a cushion for the financial system. D'Arista proposed a liability reserve system where the Fed would create reserve accounts for all financial institutions and put them on the liability side of balance sheets by engaging in repurchase operations with individual institutions, including those that are not currently benefiting from the Fed programs. The virtue of this system is that you would be replacing an institution's asset with a liability, thus creating an imbalance in the balance sheet and an incentive to buy a new asset or make a new loan.

THOMAS FERGUSON, author of *Golden Rule: The Investment Theory of Party Competition and the Logic of Money-driven Political Systems* (1995), presented a broad assessment of how the Treasury and the Fed have done in this crisis. In his view, there has been a series of major errors ("political responses"). The first mistake was the shadow bailout in August 2007, when the Fed and Treasury realized that the major financial institutions were on the verge of failing. The bailout was an effort to keep the impending crisis out of the press in the middle of the presidential election and included rate cuts, a broadening of the definition of collateral, and provision of enormous amounts of money to banks through such entities as the Federal Home Loan Bank system. This response over a period of one and a half years meant that the problem was not resolved quickly (as in Sweden, where bad assets were swept into a single "bad bank"), and the situation deteriorated to the point where it became, in a fundamental sense, "too big to bail."

The second mistake was the Bear Stearns bailout (without any similar provision for the public), which subsequently led to a rally in financial stocks and the belief that the government would honor the notion of "too big to fail." This was followed by "the great reversal," when the government allowed Lehman Brothers to fail, AIG was nationalized, and Washington Mutual's creditors were essentially wiped out in its takeover by JPMorgan Chase. The apparent lesson at that point was, nobody's safe.

Ferguson objected to Stanford professor John Taylor's urban legend that the Lehman bankruptcy was not a policy failure and could have been contained. Taylor claimed that the markets broke down because then–Treasury Secretary Henry Paulson and Fed Chairman Ben Bernanke decided to plead their case before Congress, which responded by creating the Troubled Asset Relief Program (TARP). Ferguson, however, showed that all of the indices of financial turbulence peaked with the collapse of Lehman (e.g., credit default swap prices, bond spreads versus U.S. Treasuries, the inversion of the whole LIBOR term structure, the collapse of the commercial paper markets, and the run on money market funds).

In Ferguson's view, the U.S. press, which failed to report the spending of significant government funds, should share responsibility for the financial system's collapse. The shadow bailout repressed the problems of the FDIC (its bailout fund was running out) and set up taxpayers for very large liabilities after the election. An aspect of the shadow bailout that helped bring down the system was Paulson's advice to Fannie Mae and Freddie Mac to expand lending at precisely the moment the rest of the mortgage economy was contracting. The run on Fannie and Freddie debt partially collapsed the Carlyle hedge fund in Amsterdam, and Bear Stearns was a huge creditor of this fund. The Bear Stearns rescue marked the end of the shadow bailout.

Another aspect of the shadow bailout was the unconventional expansion, starting in December 2007, of the Fed's balance sheet that bypassed Congress (with its real money). Ferguson outlined some of the government's rationalizations ("dodges") for its actions during the crisis, such as the assertion that Bear Stearns had good underlying collateral but Lehman Brothers did not.

The striking thing about the TARP story, said Ferguson, is that the Treasury and much of Congress did not initially want capital injections but obviously changed their minds. The "crazy character" of TARP appears to have destroyed the world economy, said Ferguson, because everybody knew that spending $700 billion on toxic assets was not going to save anything. Moreover, the bill did not include a housing rescue or any economic stimulus (Taylor mistakes the resulting move in the three-month LIBOR rate as the point at which government action precipitated the breakdown of the market).

In his review of campaign funding, Ferguson found that financial sector funding favored Barack Obama over Hillary Clinton. As a result, you can forget about financial reform, he said, because many of the people who caused the trouble are now in control of the Obama administration's financial policy.

SESSION 2

Proposals on Alternative Financial Regulation

Jane D'Arista, Alan S. Blinder, Christine M. Cumming, Michael Greenberger, and Martin Mayer

MODERATOR:

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ALAN S. BLINDER

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According to **ALAN S. BLINDER**, we have a long road ahead of us in terms of regulatory reform. He listed a number of things that need to be done: extricating the government from its "private sector" roles, improving the existing regulatory structure, and extending regulation into new domains, as well as addressing the role of rating agencies and issues of corporate governance.

Blinder said he expected that Fannie Mae and Freddie Mac would remain nationalized for some time, but it is unclear what will happen because we are not going back to the way it was. Although it is even less clear what will happen to AIG and other companies that are nationalized, this administration is not heading toward socialism. Blinder noted that the FDIC's temporary liquidity guarantee program has been very useful but it will not be a permanent feature of the financial landscape (money will have to return to the private sector). Moreover, the Fed's extraordinary lending and purchase programs—the Term Asset-Backed Securities Loan Facility, Term Auction Facility, and mortgage-backed securities purchase program—will have to be phased out.

In terms of its overall structure, Blinder suggested rearranging the regulatory deck chairs of government agencies, including the Federal Reserve, the Securities and Exchange Commission (SEC), the Commodity Futures Trading Commission, and the FDIC. He also suggested the need to regulate banks in terms of liquidity as well as capital, to redo Basel II, to seek uniform international policies, and to take consumer protection more seriously and create a new agency. Moreover, he expressed the need for an orderly resolution mechanism for large, complex financial institutions, and for better cross-border bank supervision and regulation—which, he acknowledged, is next to impossible.

In terms of extending regulation into new domains, Blinder elects to have the Fed (rather than a new agency) act as a systemic risk regulator because of its lender-of-last-resort function. In his view, institutions that are too big to fail should have to pay for that status (e.g., higher FDIC premiums). And if there is a regulator, it should have authority over the hedge funds and the large derivatives market in order to monitor systemic risk. The emphasis, he said, should be on regulatory transparency. Blinder observed that we forgot to include a national mortgage regulator (with a suitability standard) in the design of our financial system, so now we are paying the price. He proposed that we build a whole new system of mortgage finance almost from scratch.

The financial industry has become too concentrated, Blinder remarked—an issue related to the "too big to fail" doctrine and one that needs to be fixed. He wondered what to do with the rating agencies (where the issuer pays) and what should replace them. He also outlined several major corporate governance issues, including inadequate board oversight, a faulty risk management structure, and a compensation system that encourages risk behavior. The risk managers have been subordinate to the business line managers, and this relationship has been catastrophic for many institutions. Moreover, the compensation system was designed with go-for-broke incentives for traders and CEOs, so it also needs to change. Change, however, will have to come from the corporate sector (i.e., company board of directors) rather than government.

CHRISTINE M. CUMMING noted that her presentation reflected her own views and not those of the Federal Reserve Bank of New York. She provided a recent history of the ideas behind current discussions of regulatory reform. Many of the programs associated with the federal safety net (e.g., unemployment insurance) were created during the 1930s and had a test run in her home state of Minnesota. Ideas associated with the current financial crisis are not new but rather derived from ongoing concerns of the populace, including the policy community and industry. These concerns can be identified many years before the enactment of legislation.

In terms of systemic risk, the primary focus in the 1990s was the domino theory; that is, the risk of contagion between banks. Later on, the focus shifted to common risk practices associated with sales, and investor and consumer protection. The recent crisis reflects failures in terms of risk management. Fed Chairman Ben S. Bernanke addressed the matter of a systemic risk supervisor before the Council of Foreign Relations on March 10, 2009. The (financial) industry and official committees have been wrestling with common exposures and practices that have the potential to magnify the downside risk of firms (e.g., attempts by the central bank to understand bubbles). The problem is not confined to a particular institution or sector; rather, it is reflected across many parts of the financial industry, as well as the broader marketplace (e.g., real estate prices and practices). Thus, a systemic risk regulator, supervisor, or authority will have to improve our ability to identify the origins of systemic risk in the form of common exposures and practices, and consumer protection issues.

Cumming stated that contagion in the financial system has shifted from the world of interbank lending to a whole range of clearance and settlement transactions. An important source for problems in the current crisis is the triparty repo market, which is crucially dependent on liquidity and the clearance and settlement system for various instruments. Should we have a clearinghouse or an exchange for derivative instruments such as credit default swaps? Both of these options reduce complexity, enhance transparency, and encourage proper risk management, which contributes to financial stability. There is, however, a sacrifice in terms of tailoring the instruments to the particular risk issues of customers.

Issues related to resolution and insolvency are a very difficult assignment, Cumming observed. The evolution of our global financial institutions has confounded the regulatory structure, since the whole nature of activities has changed by including trading and derivatives. It is difficult to analyze any sort of trading book, as the "decay" factor of these assets is very rapid (these instruments need to be managed and placed in the hands of new managers). A major challenge for the insolvency process is how to quickly move the instruments from a failing institution to one that can actually manage them. Examples of notable progress include the auction of Enron's trading businesses and the failure of Lehman Brothers when broker dealers sold off the assets through the bankruptcy courts in a matter of days. Thus, the current crisis can be a galvanizing force that compels us to move much more quickly and effectively to make the necessary changes.

The insolvency regime is also challenged by vast global institutions (aside from banking) that have large trading operations. These institutions require oversight across borders, as evidenced by the fallout from the collapse of Lehman Brothers and the problems associated with the failure of Icelandic banks. Many countries that are members of the Bank for International Settlements (BIS) are wrestling with the same underlying issues as the United States. The challenge is to grab the opportunity for mutual assistance in a highly productive way.

MICHAEL GREENBERGER noted that the American public has not been given an adequate explanation of what happened during the financial crisis. However, the public clearly understood the situation where AIG was given more than $160 million in taxpayer funds that went toward employee bonuses, as well as in excess of $160 billion in bailout money that went out the back door to counterparties such as Goldman Sachs. Greenberger also noted that the Commodity Futures Trading Commission (CFTC), in response to the Long-Term Capital Management crisis, issued a "concept release" in 1998 that proposed a regulatory structure for over-the-counter derivative products, including credit default swaps. The notional value of this market (premiums for guarantees) ranges from $800 trillion, per BIS, to no more than $25 trillion, according to the International Swaps and Derivatives Association (ISDA), which argues against regulatory reform.

Credit default swaps supposedly insured the subprime market. In Greenberger's view, it was the completely unregulated credit default swaps market that gave people a false sense of security that if everything went wrong, they were hedged with insurance. The originators of collateralized debt obligations (CDOs) said these products were swaps, not insurance, because they were not administered by state insurance regulators, which have capital reserve requirements. These products were deregulated by the Commodity

Futures Modernization Act (2000), which SEC Chairman Christopher Cox called a "regulatory black hole" during his September 2008 testimony before the Senate Banking Committee regarding turmoil in U.S. credit markets.

The guarantors of these derivative products were under the utopian view, based on very scientific algorithms, that housing prices would always go up (i.e., no subprime borrower would ever default). However, the S&P/Case-Shiller home price indices continue to fall dramatically, triggering credit default swaps and guaranteeing companies such as AIG 100 cents on the dollar. Moreover, these swaps did not insure real risk because for each one issued to insure a CDO, three were issued to insure other CDOs. It's like insuring your neighbor's house against the buyer, which you cannot do in the insurance industry—that is, you cannot insure somebody else's risk. Thus, the guarantors were mispricing risk.

A major debate is whether new regulations will result from the system's failure. In Greenberger's view, a systemic regulator will be put into place. During the economic meltdown last fall, there was no doubt that over-the-counter derivative products would be regulated and the debate was private clearing operations versus exchange trading (favored by Greenberger), which gives public transparency and has a stronger capital adequacy format. For example, AIG's only capital related to its $400 billion credit default swaps was its triple-A rating. In an exchange-trading environment, you can mark-to-market twice a day because there is liquidity and trading, so the system cannot be affected by fraud and manipulation. No one has gone to jail in a completely unregulated market because they are operating under a lawless system that has been approved by the U.S. Congress.

The forces arguing against exchange trading are groups such as the ISDA and the Coalition for Business Reform (i.e., JPMorgan, Goldman Sachs, Citibank, and so on). They don't want mandatory clearing and standardization, they say, does not allow for detailed over-the-counter derivative products (one-offs) for companies such as Exxon Mobil. Greenberger noted that people in the futures markets don't get one-off contracts but use standardized contracts to hedge. Unregulated one-off contracts to avoid basis risk lead to systemic risk, which is worse. Furthermore, a systemic regulator cannot regulate bubbles because it cannot identify excessive leverage or overexposure.

The best way to regulate a guarantee for a credit default swap is transaction by transaction as in the equity markets, where companies have to meet net capital requirements, post margin, and mark-to-market every day. There needs to be an investigation similar to the Senate inquiry into Wall Street banking and stock brokerage practices during the Hoover administration that led to the Securities Act of 1933. This approach is necessary in order to understand the causes of the current crisis and who to blame, and to assess what the remedy should be. Greenberger fears a commission led by former officers of financial companies such as Goldman Sachs, because they are supposedly the only ones who understand these markets.

MARTIN MAYER commented on some earlier remarks by presenters. In Session 1, Thomas Ferguson remarked that the Fed managed to lend Lehman Brothers $50 billion to $60 billion after it went bankrupt, in spite of earlier statements by the Fed that it did not have the authority to do so. Mayer explained that Lehman's brokerage operation could not be sold to Barclay's Bank until Lehman had replaced the stock that it had borrowed from other customers (money was not in cash but in collateralized obligations that had to be sold). However, the Fed's activity was quasi-criminal because it is unclear whether or not the agency had the authority to make this type of loan. The purpose of the loan was a disgrace, said Mayer, and no one has proposed any precautionary measures. People should not be allowed to fail and receive help for free when reasonable penalties for transaction failures would suffice. In terms of the matter of risk, most of what is called risk is not risk (see, for example, *Risk, Uncertainty, and Profit*, 1921, by Frank Knight). In reference to Jane D'Arista's comment about excess reserves in the system as a result of actions by the Fed, Mayer stated that these reserves lead to quantitative easing, not the printing of more money, and that there is no "high-powered money," or monetary base (it's dollar for dollar).

Vice has worsened as a result of strategies used by the Treasury and the Fed in response to the crisis; that is, the accidental use of government-insured deposits and other instruments for the protection of large creditors (and the elimination of bank runs). The "too big to fail" doctrine, which began with Reagan Comptroller Todd Conover's testimony to Congress in the mid-1980s, has created incomprehensible dimensions of moral hazard. Since then, the share of the financial sector in U.S. corporate profits has tripled amid (failed) legislative attempts to create a source of market discipline on promiscuous borrowing. The regulators and supervisors have not received the blame that they deserve because there is much to lose by damaging public confidence in them. However, much of the ruin is the result of regulator refusal to exercise authority in terms of the mortgage markets, bank holding company leverage, and dishonesty in over-the-counter derivatives trading. The Fed and SEC supported increasing leverage and profitability above ethical standards (e.g., the code of conduct negotiated between the Federal Reserve Bank of New York and the derivatives dealers). They also encouraged over-the-counter rather than exchange trading of derivatives, as well as underwriting of securities by banks. Bernanke, then Treasury Secretary Henry Paulson, and Timothy Geithner, in his role as head of the New York Fed, made the situation even worse through their incoherent performance in September 2008, when Fannie Mae and Freddie Mac were nationalized, Lehman counterparties were thrown to the wolves, and AIG was rescued and made whole in spite of activity that may have been fraudulent.

Mayer noted that he had appeared with Henry Kaufman on a Senate banking committee in 1987, and that the world had not changed much since then in spite of technological change. For example, most big banks acquired funds in the (international) market rather than through deposits, and sought profits by locking in spreads between their cost of funds and earnings on loans (i.e., securitization). At that time, Kaufman wrote that what was needed was an official central authority to oversee the capital requirements for all major financial institutions and markets. The three activities of lending, securities underwriting, and equity investing must be kept apart.

Mayer was astonished by the Basel Accords' endorsement of the credit ratings game. The buyers, not the sellers, should commission and pay for the ratings and authentications, he said, and there is no reason why cooperatives of bond buyers should not commission new agencies on that basis, since they pay for the ratings anyway. He related that Kaufman leaned toward a narrow bank as the solution, in accordance with everyone who takes a theoretical rather than an industry-oriented view of the banking regulation problem. The modern form of the narrow bank idea can be traced back to Henry Simons, founder of the Chicago School. Minsky praised Simons's 1934 proposal for a monetary regime in which bank deposits would be matched by interest-free Treasury paper in the banks' vaults. A narrow bank confined to investing in Treasury bills would be compatible with Janet Yellen's stance that the Fed should be allowed to issue its own paper. It would also give us a repository for all of the T-bills that the Fed will have to absorb when the crisis leads to a flood of liquidity, said Mayer. However, supporters of a narrow bank are struggling to be heard above the industry view.

Mayer observed that the real logic behind Glass-Steagall is that commercial and investment banking are incompatible activities, but in his earlier presentation, Dennis Lockhart (president of the Federal Reserve of Atlanta) said that he doesn't think there is anything to the legislation's revival. In order to regulate institutions that operate both as commercial and investment enterprises, you have to regulate the instruments that they trade. We should have a central authority that sets the rules for banking, but this does not mesh with decisions on monetary policy. Moreover, some activities by bank holding companies do not go well with banking (e.g., the insurance of financial instruments).

Toxic instruments make toxic waste, and clearinghouse rules are better protection than any amount of bank examination. We need more help from academia, which has supported financial innovation and narrowly focused on ways to increase arbitrage. The combination of diversification and probability analysis invites overleveraging, which was caused by the ongoing repurchase of own equity by most large corporations (including banks). While Alan Greenspan blames Harry Markowitz for the model that failed, Mayer blamed Franco Modigliani and Merton Miller (both Nobel winners in economics) for setting us off in the wrong direction; that is, using mathematical proof that debt versus equity financing doesn't matter.

The next year offers unprecedented opportunities to get something done, said Mayer. The entire financial sector is now a ward of the state—not because of TARP, but because only federal insurance makes the sector's liabilities saleable in the market. Telling bankers what they can and cannot do with insured deposits is the name of the game. Society does not need all of this over-the-counter trading in specialized instruments. The time has come to take back control through regulation of the instruments, not the institutions.

SESSION 3

Levy Institute–Ford Project Proposals on Reregulation of the Financial System

Greg Hannsgen, Jan Kregel, C. P. Chandrasekhar, Mario Tonveronachi, and Éric Tymoigne

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JAN KREGEL noted that the Levy Institute has tried to draw attention to the broader range of Minsky's work in addition to the "Minsky moment" and Ponzi schemes. For example, Minsky made a rich set of recommendations for reregulating the financial system beginning in the 1960s. He believed that the financial system was inherently unstable, and that the market was not self-stabilizing or self-regulating. Thus, a very different regulatory approach was required.

According to Minsky, a functioning capitalist system is a system in which individuals issue debt in order to hold the capital stock, and the financial system is a series of interconnected balance sheets (cash receipts from assets and cash commitments on liabilities). He identified two basic sets of balance sheets: households, which hold the liabilities of corporations in order to make payments in the transaction system and store wealth; and business firms, which issue liabilities to acquire productive capital assets and provide income and employment to households. Thus, the objectives of a well-functioning capitalist economy requires a financial system that provides a safe and secure means of payment, and a reliable store of value that ensures financing of a level of investment in capital assets sufficient to provide near full employment. Financial stability requires an institution or framework that guarantees that cash commitments can always be met.

The banking system lends the money and then tries to fund the loan. This procedure is completely opposite to what is normally taught in money and banking courses. Minsky's basic idea is that the banks and business firms are always short of cash, so the problem of financial stability is how to cover their short-cash positions. The central bank (government) holds the key because it is the only institution that can create cash (liquidity). In the evolution of financial markets, the financial sector was given the responsibility to oversee a financial cushion and to create liquidity, but its institutions do not hold the kinds of assets that can be readily converted into cash. Banks lend without having to fund and reserves are provided by the central bank, which requires a government deficit (the government does not have to borrow to deficit spend). Minsky's "Big Government" represents the ability to create the liquidity required to allow private sector institutions, business firms, and financial institutions to meet their cash commitments on a continuous basis.

Another aspect of Minsky's system (proposed in 1960) is that the central bank should be willing to lend to all financial institutions to cover their short-cash positions. Moreover, this mechanism should be permanent rather than temporary, as argued by the Fed. If this were the case, Lehman Brothers would not have collapsed, and we would have been able to stop the financial crisis at the level of the subprime mortgage industry. Financial fragility requires the provision of macro and micro liquidity, and this means that the government must run a fiscal deficit over time.

Kregel reviewed two basic changes in the U.S. financial structure: the Glass-Steagall Act of 1932 (regulation by function) and the Financial Modernization Act of 1999. In the former, commercial banks were not permitted to engage in investment banking activities through affiliates. In the latter, the decision was made to adopt a bank holding company structure whereupon it would be necessary to mix the deposit banking structure with investment banking. So far, there has been no discussion about the design of this new structure. The first question is whether we are going to have regulation by function or by institution. We have adopted the bank holding company model without changing the regulatory structure established by Glass-Steagall.

Minsky favored a unit-banking model where banks are small and local, and bankers accept and buy loans from clients. This means that the banks have to check the creditworthiness of borrowers, which is something that no longer occurs under the originate-and-distribute model. He also favored the bank holding company model in the 1990s because he believed that the banking unit could be independently capitalized and isolated by "Chinese walls"—the ethical barriers between different divisions within a financial institution to avoid conflict of interest. Since it is unlikely that we can return to Glass-Steagall, we could provide a de facto separation of the deposit and investment functions within the bank holding company system, while retaining the system's structure. The goal would be to limit each type of holding company to activities linked to core functions and to ensure that each company was small enough to be effectively managed and supervised (i.e., we currently create banks that are "too big to regulate").

The first thing that needs to be done in order to change the regulations is to restore stability to the system. A potential alternative to using government funds is the approach adopted by German bankers during currency conversion in 1948 and unification in 1990. The Bundesbank used equilibrium bonds to replace the impaired loans of East German banks so that they remained solvent (and balance sheets remained balanced). This simple proposition does not require pricing or doing anything with assets. This approach could be used to provide a similar offset for households holding fraudulent mortgage assets. A government asset would take the place of negative home equities or an alternative government agency would allow households to repay the mortgages. This, in turn, means that the legacy assets get repaid, so there is no need to buy them back. Moreover, this is a simple way to shore up household balance sheets, while eliminating toxic assets and the need for a "bad bank." Minsky would have approved of this approach, said Kregel, since it takes care of the balance sheet problem and has been applied in the most conservative banking system in the Western Hemisphere.

C. P. CHANDRASEKHAR stated that despite notions of decoupling in terms of emerging markets such as India and China, these countries have been adversely affected by the global financial and economic crisis. The cross-border effects include their dependence on the developed countries for exports and capital (especially short-term portfolio and debt capital), while other effects stem from the structural weaknesses of their domestic financial and economic systems. The relative importance of these effects varies among countries, so the most important effect is not necessarily related to exports, and the least effect is not necessarily related to a country's internal structure.

In times of crisis, there is a trend toward capital reversals because of the need to sell assets to meet payment commitments or cover losses. These reversals can be particularly damaging if they come in the wake of a supply-side surge (i.e., an inflow of capital). In India, for example, access to capital shrunk by close to $35 billion in the fourth quarter of 2008. Moreover, foreign investment flows have risen sharply since the mid-1990s (from $5 billion to $62 billion), such that capital flows now exceed 9 percent of GDP even though the current account deficit is just 1.5 percent of GDP. Although a huge excess supply of foreign exchange has entered the country, the surge has been confined to the last four years, long after India liberalized its financial sector in the early 1990s. Thus, the impact of the reversal in response to the crisis will be more damaging than otherwise.

Contrary to the belief that debt would be controlled in the aftermath of the 1997 Asian crisis, there was a large increase in external commercial borrowing by private sector firms when caps were relaxed, Chandrasekhar said. Indian firms engaged in a version of the carry trade, borrowing money in foreign exchanges from the international markets where interest rates were lower. Thus, another element of significant inflow of capital has been debt ($42 billion in 2007–08), so that the stock of India's liabilities in the form of debt securities, trade credits, and loans has risen from $105 billion in 2006 (June) to $176 billion in 2008 (September).

A consequence of capital outflow is a collapse of stock markets, because the capital inflow had triggered a speculative bubble in both the stock and real estate markets. Another consequence is the sharp depreciation of currencies such as the rupee, despite the strong performance of India's service exports and large central bank reserves. Firms overcommitted with debt and dealing with currency depreciation face bankruptcy, while speculation leads to capital flight.

In order to attract capital, countries liberalized their financial policies by providing space for foreign institutions and relaxing regulations in order to reshape their financial structure and regulatory environment in the image of the developed capitalist world (e.g., allowing risk transfer through securitization).

Growth has depended on credit-financed consumption and investment. In India, for example, there has been a huge increase in the credit-to-GDP ratio and in the credit-to-deposit ratio (where money sustains credit-financed consumption), and a corresponding decline in the investment-to-deposit ratio. Retail loans by banks have been a prime driver of credit growth.

The proportion of short-term deposits has steadily risen along with the proportion of long-term loans, observed Chandrasekhar, so this asset liability mismatch has increased the liquidity risk of banks. An important consequence of this transformation is the banks' excessive exposure to the retail credit market (poor collateral), where there is an unknown proportion of subprime lending (including teaser interest rates below the benchmark prime lending rate). This imbalance could trigger a banking crisis, and there is a real danger of insolvency in India's financial sector if the crisis intensifies.

Countries have imported into their financial systems a structural contagion that has replicated the same problems worldwide, because all of the banks are exposed to "sensitive" sectors such as the capital, real estate, and commodity markets. Therefore, the idea that some countries are decoupled from other countries and can serve as shock absorbers is completely wrong.

MARIO TONVERONACHI criticized the laissez-faire approach to risk taking that is fundamental to current regulations. There are no limits concerning the mixture of risks within single institutions, and capitalism has disregarded the traditional tenets of banking; that is, liquidity and provisioning. Furthermore, there are problems with measuring and assessing risk by financial firms and supervisors, while capitalization ratios have been reduced despite a history of banking crises (when these ratios were much higher). Moreover, supervisors exhibit a market-friendly approach, and recent proposals give them more discretionary powers without changing the rules of the game.

Tonveronachi said he believed that we need a radical change of perspective by completely abandoning the Basel construction, overregulating for at least the next 10 to 15 years, simplifying regulation and reducing supervisors' discretionary powers, and increasing the autonomy and responsibility of local jurisdictions under a common international regulatory regime. In terms of a new regulatory structure, he opposed a rentier approach to wealth accumulation that would disallow highly risky financial instruments and institutions, and favored a shift from a risk-measurement to a risk-control model. Tonveronachi proposed structural measures to avoid hard-to-value risks and to limit the size of intermediaries, a return to a focus on margins of safety (liquidity and provisioning), and incentives redirected toward sustainable financing of the real economy.

Tonveronachi's proposed structural measures include the following features: regulator agreement on an explicit list of financial instruments and institutions; excluding hard-to-value and hard-to-manage instruments and intermediaries; extending common rules to all leveraged financial firms; restricting regulated institutions to interact with only those countries that have adopted similar regulations; allowing foreign banks to operate only as subsidiaries; banning leveraged institutions from entering into securities and derivative contracts that are traded outside the organized secondary markets; obliging supervisors to set up clear and binding crisis resolution procedures for all leveraged institutions; criminal prosecution for false information to the supervisory authorities and other corporate fraud; and separation of leveraged financial firms from collective investment schemes, insurance companies, pension funds, and commerce.

The proposed prudential measures would stipulate that all regulatory requirements be observed on both a standalone and a consolidated basis; that foreign subsidiaries meet regulatory requirements on a local basis; and that a specific reserve fund for trading losses be set up to smooth the effects of gains or losses on the income account. Moreover, fair value accounting could not be applied to banking (evaluated at amortized cost) or to the trading book (marked to market).

In terms of prudential measures related to capitalization, the main features proposed by Tonveronachi include imposing maximum limits to unweighted leverage ratios, distinguishing between banking and trading books; setting a limit to the maximum leverage for the trading book (defined in terms of its gross value at market prices) that is lower than that allowed for the banking book; and establishing maximum leverage requirements in relation to categories of intermediaries that are defined in terms of size intervals (an inverse size-to-leverage-ratio relationship).

In terms of prudential measures related to liquidity, the main features include the following: coefficients to limit maturity mismatches; liquidity requirements are met with cash or risk-free assets; different liquidity requirements for the banking and trading books; dynamic provisions are introduced as a direct function of interest income and fiscal treatment of provisions must follow supervisory rules, not vice versa; and reductions in regulatory requirements from risk transfer are admitted only when risks are integrally shifted to unconnected subjects without any linkage of new obligations.

ÉRIC TYMOIGNE's presentation was based on an assessment of seven financial reform reports issued in 2008–09. He began by outlining the bad-bank (traditional) and Minskyan approaches to bank regulation. In the former approach, bank failures result from the idiosyncratic characteristics of banks, such as mismanagement and fraud. Therefore, the goal of regulation and supervision should be to train supervisors to detect fraud, set incentives to foster "proper" behavior and norms that define "imprudent" risk management, allow the financial sector to innovate and the "market" to select the "good" innovations, and foster maximum competition and self-regulation.

The problems of the bad-bank model are that it ignores systemic risk, the source and need for position-making operations, and the dynamics during long periods of economic growth when financial decisions take more risks. In addition, this approach focuses on detecting "bubbles" and mispricing that are difficult to justify and highly unpopular; furthermore, it is both too permissive (e.g., if the regulatory ratios are met then the financial institutions are assumed to be prudently managed) and too rigid (e.g., it does not account for financial innovations and may set up overly stringent regulatory standards that constrain economic growth). Regulators should be concerned when everything appears to be "normal," said Tymoigne. Other implications of the bad-bank approach are that new regulations are made irrelevant by new financial products and practices, the power of regulators and supervisors is weakened by focusing on the wrong indicators of financial sustainability, and traditional regulation is subject to tremendous political and social pressures.

According to Tymoigne, we need a new framework that is more proactive and based on the works of Minsky, one that emphasizes defensive position-making financial operations. This means refinancing and liquidation in order to service debt commitments related to three types of financial position: hedge, speculative, and Ponzi. While no position-making operations would be expected under a hedge position, they would be expected under a Ponzi position, which is highly unsustainable. The mortgage and consumer finance booms were Ponzi processes, and these processes can be either legal or illegal (legal Ponzi processes are very dangerous). There are two ways to escape Ponzi finance: by transforming it into hedge finance if it's a temporary Ponzi (a production-related financing operation), or by allowing the process to collapse in favor of financial restructuring (a pyramid process). During periods of enduring economic expansion, an increasing number of economic units move away from hedge finance toward Ponzi finance.

The position-making approach to financial regulation focuses on detecting the sensitivity of balance sheets (i.e., cash flows) to adverse changes such as asset prices, expectations, and interest rates; the position-making needs and sources of financial institutions; systemic risk at the individual, sector, and macroeconomic levels; and Ponzi finance. This approach focuses on both the legal and illegal financial practices that sustain a trend (e.g., production and price) rather than on the trend itself. It is not necessarily a question of fraud, mispricing, market imperfections, greed, or behavioral biases, said Tymoigne. Market mechanisms may force even the most altruistic and conservative economic units into Ponzi finance in order to survive.

In terms of the policy implications of the Minskyan approach, all financial institutions need to be regulated, independent of size. Unregulated financial institutions are prone to Ponzi finance, which may be sustained by many small lenders. Cash-flow accounting at the macroeconomic level needs to be developed, since cash flows are central to detecting Ponzi processes and position-making needs (cash flows and profits are different). Also, there needs to be government oversight and approval of financial innovations in order to protect the population and promote constructive rather than free-market competition (e.g., a patent system in order to improve the quality rather than increase the number of financial innovations). A good innovation should not be judged by its profitability (see *Traders, Guns, and Money*, 2006, by Satyajit Das). There should also be a financial structure that limits the growth of financial fragility (e.g., maturity and cash-flow matching, limiting the size of financial institutions so that they can be properly supervised and regulated, and supporting a cash-flow-oriented rather than a collateral-oriented financial system). Credit ratings are not based on cash flows (i.e., how the borrower can repay) but on credit history.

Tymoigne concluded by outlining the need to promote the financial education and independence of financial regulators, whose agencies have been understaffed, underfunded, and undermined. Their training should focus on detecting legal and illegal Ponzi processes, which are the main sources of fraud and moral hazard.

SESSION 4

The Institutional Shape of the Future Financial System

Jan Kregel, Richard Bookstaber, Alex J. Pollock, and Walker F. Todd

MODERATOR:

JAN KREGEL

Senior Scholar, The Levy Economics Institute

RICHARD BOOKSTABER

Author and financial economist

ALEX J. POLLOCK

American Enterprise Institute

WALKER F. TODD

American Institute for Economic Research

RICHARD BOOKSTABER favored a market stability regulator many years ago because there was no one in the regulatory environment who could deal with systemic risk and crisis (see his book *A Demon of Our Own Design*, 2007). Two aspects of market structure lead to crisis: complexity and leverage. Increasing market complexity arises from innovations in securities and derivatives (in order to make money), and leads to unexpected linkages and nonlinearities between markets. Increasing leverage ("gaming the system") leads to a liquidity crisis cycle that accentuates any shocks to the marketplace.

Leverage is a natural market dynamic when the cost of entry is minimal (if the strategy is working) and volatility is lower than normal. An example of the liquidity crisis cycle dynamic is Long-Term Capital Management (LTCM), which was destroyed when Russia defaulted. The company did not have a lot of exposure in Russia but other participants in the market did, and they held instruments in the same markets as LTCM. Highly leveraged participants had to liquidate their positions, so the impact was felt from one market to the next. Another example is the Hunt brothers' silver bubble, where the price of cattle declined along with the price of silver as they sold off their cattle positions to post margin. Thus, a prudent investor or bank may be unable to understand or avoid the implications of systemic risk.

The government is the only entity that can oversee the entire marketplace and maintain confidentiality, observed Bookstaber. The first task for a systemic risk manager would be to get data about leverage, where people are in the credit cycle, and what kind of shock will force them to the exits. It includes knowing positions; that is, who is levered and what do they own? A major failing of the regulatory environment is that regulators do not know these things in sufficient detail, including the web of counterparties. A regulator's first step should be to collect data for the top 20 banks and hedge funds. This would not be a difficult task, since these companies are already managing their positions on a daily basis and aggregating the data would help to defend against a systemic crisis (in essence, we need to have bar codes for financial goods).

The second task would be to hold accountable the chief risk officers of banks, including the investment banks. Blame should not be directed toward the banks' models because the problem is related to organization, communication, and incentives. The risk manager at the government level should act as an ombudsman that oversees these chief risk officers. The third task would be to have the equivalent of a National Transportation Safety Board and Consumer Product Safety Commission at the regulatory (government) level in order to analyze the financial instruments before implementation. The fourth task would be to provide an environment that is more open in terms of information flows and manned by people who understand what is going on in terms of the markets, the types of instruments and risks, the communication networks, and imbalances related to incentives. Therefore, said Bookstaber, it is advisable to bring expertise and talent from the private sector into the regulatory sector, and to make the necessary adjustments in terms of incentives and pay scales. The cost would be far less than a trillion-dollar loss.

ALEX J. POLLOCK noted that financial cycles have related political cycles. The political reaction to every bust is to search for the guilty and to "do something," such as increase regulation and reorganize or create new regulatory bodies. These actions are accompanied by unwarranted optimism that crises will never happen again. For example, Janet Yellen exclaimed the previous evening of the conference that she would be initially impressed but ultimately disappointed with new methods of analyzing credit risk. Thus, major banking legislation has been remarkably frequent in response to periodic crises throughout history. And Treasury Secretary Timothy Geithner's plan for improving the financial system reiterated the response of a savings-and-loan regulator in 1989: capital, capital, capital. Alas, said Pollock, there are no new ideas in finance.

In answer to the question "Does moving the boxes on the regulatory organization chart alter Minsky's concept of inherent market fragility?" Pollock said no. Quoting from Minsky, when everybody makes money for an extended period, "short-term financing of long positions becomes a normal way of life." And when it does, said Pollock, it sets up the bust.

Pollock observed that no one at the conference had focused sufficiently on the role of short-term lenders who provide the short-term debt, which creates leverage and allows all of this to happen. The short-term lenders are very risk-averse, but when they discover that they are seriously at risk (and subsequently panic), they all become conservative at once, so liquidity disappears. Liquidity is not a substance but a metaphor summarizing a group belief in the reliability of prices and the solvency of counterparties.

The importance of liquidity risk, as well as the danger of leverage, is learned from every crisis. Nevertheless, regardless of the regulatory system, Minsky's fragility theorem is safe.

Pollock stated he was not in favor of a systemic risk regulator or the idea that the Federal Reserve should be the regulator. The task is impossible, because the key reality of financial systems is an extremely high level of recursiveness in the creation of uncertainty. Moreover, the Fed is too conflicted between its monetary duties and systemic regulation. Furthermore, a money-printing central bank in a fiat money regime is a huge source of systemic risk.

Pollock is in favor of a philosopher; that is, the notion of creating a very high-level and extremely competent international advisory body to think about systemic risk, in spite of skepticism about its possible success. This body should communicate with all of the important financial actors (including politicians and central bankers) and look for hidden leverage and the normality of short-term funding. It should also look for points of concentrated potential failure (Gould's principle) such as the credit rating agencies, and Fannie Mae and Freddie Mac, which became the biggest investors in nonprime mortgages and failed after assuming too much credit risk. The people hired to organize this body, however, are more important than how the body is constituted.

In conclusion, Pollock observed that Minskyan mistakes will continue, in spite of regulatory organization charts, because uncertainty (change) is fundamental. As written by Frank H. Knight, "If the law of the change is known, . . . no profits can arise."

WALKER F. TODD prefaced his remarks by saying that they were his personal views and not necessarily those of the American Institute for Economic Research. He outlined the journey that led to his study of financial history after accounting principles were suspended as a result of the third world debt crisis; in particular, a 1951 book by Jesse Jones titled *Fifty Billion Dollars: My Thirteen Years with the RFC, 1932–1945*. Although it was a revelatory work, the party line in Washington was not interested in how situations were handled in the United States in the 1930s. Rather, Washington thought something might be learned from foreign countries such as Japan and Sweden—which, in fact, had modeled their approaches on the U.S. government's response to the 1930s banking crisis.

Todd outlined the stress-test procedures outlined by Jones when confronting the crisis in the '30s, whereby some banks were deemed to need assistance from the Reconstruction Finance Corporation (RFC) typically in the form of preferred stock purchases with warrants for common stock that were convertible (dollar-for-dollar) after five or 10 years (see his "History of and Rationales for the Reconstruction Finance Corporation" in *Economic Review*, Federal Reserve of Cleveland, Vol. 28, Quarter 4, 1992). This stress test was applied in Sweden (1993) and in Japan (1999) because in both cases federal regulators would not face up to the inherent insolvency of banks.

The answer to why Washington does not want to examine the U.S. model in the 1930s may be related to the question, "How big is too much?"—a reference to monetary policy exercised by the Fed. Blowing up the monetary base could lead to the situation Germany found itself in when its central bank decided to pursue a similar policy in the 1920s. The Fed got us into this mess without an adequate exit strategy, said Todd, and this speaks volumes about why the agency should not be the super-regulator. In order to draw back all the liquidity it has provided, the Fed would have to raise interest rates so high that it would kill the rest of the economy. Instead of selling Treasuries into the open market to mop up liquidity, the Fed will have to sell subprime mortgage-backed securities.

The Fed should not be issuing its own liability instruments to absorb all of this liquidity. If it does, however, each Federal Reserve bank should be individually responsible for the liability notes issued, without loss-sharing among the banks. Either all of the reserve banks should be branches headed by the members of the Fed's governing board or all of the banks' presidents should be politically appointed. Todd noted that three ("and a half") of the Fed's regional presidents have rebeled since the beginning of this year (Richmond, Philadelphia, and Kansas City, with leanings from St. Louis). If the regional reserve bank–types must go to the gallows, remarked Todd, then the Board of Governors should hang first. The crisis was driven by New York and funded by Washington, and it is uncertain whether the rest of the country will fall in line in terms of proposed solutions (e.g., the negative reaction to the AIG bonuses).

SESSION 5

Current Conditions and Forecasts

Ajit Zacharias, Dean Maki, James W. Paulsen, and Lakshman Achuthan

MODERATOR:
AJIT ZACHARIAS
Senior Scholar, The Levy Economics Institute

DEAN MAKI
Barclays Capital

JAMES W. PAULSEN
Wells Capital Management

LAKSHMAN ACHUTHAN
Economic Cycle Research Institute

DEAN MAKI outlined his company's economic forecast for 2009. He expected a return to positive growth by the third quarter, a rise in the unemployment rate to 9.8 percent by the end of the year, negative headline inflation until the fourth quarter, no persistent deflation, and a steady Fed funds rate at the current level. He noted that this is neither a bullish forecast nor a typical business cycle recovery, because the positive 2 percent rebound in the GDP growth rate in the fourth quarter is far below the 8 percent growth rate following previous deep recessions. Nevertheless, real consumer spending has turned positive, housing investment is expected to flatten out in the second half of this year (and contribute a full percentage point to GDP), and policy will play a role in the recovery, particularly in 2010.

The reason that consumer spending is moving into the black is that energy prices have declined, leading to a surge in real income (i.e., basic economic forces are working the way they should). Consumer spending is expected to stabilize because of policy, which is acting as a bridge until industrial production moves back into positive territory (e.g., the lowering of withholding schedules related to the stimulus plan). Disposable income in the second quarter will be strong despite the weak labor market and production will pick up by the third quarter and boost consumer income. Thus, consumption will stabilize even though manufacturing production has gone into a severe tailspin.

There is a huge gap between consumption and production, said Maki, so inventories are being drained at a very significant rate (as in 2001). The second quarter is forecast to experience the largest inventory decline on record, and this feature has always indicated the end of a recession. In terms of housing, inventories of new homes for sale are also falling at the fastest pace on record, so stabilization is expected in the second quarter. Single-family home sales versus home starts are always coincident. Housing starts will recover because mortgage rates are at record lows, and the housing affordability index is even higher than it was during the real estate boom. Moreover, we are already far below previous recession troughs in terms of housing and auto sales as a percentage of GDP.

The federal budget deficit in 2009 will approach 14 percent of GDP ($2 trillion) and includes the largest stimulus package in the postwar period (5.6 percent of GDP). In addition, the Fed's balance sheet will be $4 trillion by the end of the year, which is almost 30 percent of GDP (the Fed is the only actor in the system with an unlimited balance sheet). Thus, policy will contribute toward pushing GDP growth back into positive territory.

JAMES W. PAULSEN agreed with Maki that there would be positive growth by the second half of this year, but he expected a somewhat higher growth rate of, say, 3 percent, with a pull back as the expansion matures. His forecast was based on a massive policy stimulus, the effect of buying power on the sidelines, and a "healthy player" thaw. Even before Obama's stimulus packages, there was huge growth in the inflation-adjusted M2 money supply and in federal government deficit spending (i.e., most of the stimulus came in August/September 2008). When real GDP growth is compared with the fiscal-adjusted money supply growth rate, the latter leads the former by six months. Therefore, this crisis is not lacking stimulus but the patience for the stimulus to work.

Private cash holdings of households, nonfinancial corporations, and noncorporate businesses as a percent of nominal GDP are at a historical high level (more than 70 percent), observed Paulsen, so this is a wonderful asset that is ready to be employed. Among the problems identified with this crisis (e.g., a credit freeze, high consumer debt, global recession, and depressed housing and auto sales), the most important one is fear and panic by the majority (92 percent) who have a job but have quit spending. Instead of continuing to medicate the impaired players with our policies, we should be treating the healthy players by enhancing confidence.

We are going to come out of this crisis in the old-fashioned way, said Paulsen; that is, the interaction between free markets and the economy. Wall Street leads Main Street, and the best news is that Wall Street is entirely stabilized (stocks, bonds, and commodities), so the economy should bottom within a few months. And when Wall Street takes off, economic confidence on Main Street will improve, spurring Wall Street to take off even more than before. The market without government intervention will help us exit this crisis.

Paulsen outlined four reasons why the banking crisis is winding down. The first is that there was a needless run on bank stocks created by our leadership; that is, you cannot talk about nationalizing the banks if you don't want to run those stocks down to zero. The second is that there has been an easing of mark-to-market, which leads to a better measurement of bank capital. The third is that there is a good "operational atmosphere" for banks (e.g., ample deposits, free Fed funds, wide lending spreads) that has resulted in surprising operational profitability. And the fourth and biggest reason is that Wall Street is starting to sense an end to the economic free-fall, enabling us to forecast the peak unemployment rate and the bottom of the housing market. When this happens (we are getting close), the crisis goes away.

The overwhelming consensus is that the consumer will be strapped for some time based on the savings rate and the U.S. household financial obligations ratio. This view is based on the worst of 20 savings measures calculated by the government in combination with this financial obligations ratio. However, if energy costs are included in an adjusted obligations ratio, then the culprit in shutting down the consumer is energy prices, not debt. Moreover, the refinancing machine is back in motion, with mortgage rates at new lows, followed by an increase in the mortgage bankers' refinancing applications index.

Paulsen reviewed the contribution of the various sectors—consumer, business, and trade—to U.S. growth, and concluded that growth could be maintained at a 3 percent rate in spite of a significant reduction in consumer spending. Rather, the composition of growth would be more equally divided among the three sectors. The key is generating (manufacturing and net export) growth based on the young demographics of the emerging world.

In place of new and one-off regulations to alleviate the crisis, we should have enforced the antitrust laws that have always been central to capitalists. There has been an increase in the concentration ratios of the largest companies in the financial, energy, and health care sectors for the past 30 years, so a lot of our issues (e.g., "too big to fail") have to do with a lack of enforcement of monopoly power laws. Moreover, the only areas with supergross salaries are protected monopolies. A perfectly competitive firm worried about profitability and profit maximization would not overlend, since the risk of loss would be too high. Paulsen preferred applying the laws already on the books rather than trying all of the new government interventions in the economy (following Adam Smith's central thesis). In terms of the history of the stock market, he observed that there was a sharp recovery (as opposed to a slow process) following each of the six major collapses since 1900.

LAKSHMAN ACHUTHAN shared his insights into growth rate cycles. He outlined the original definition of a business cycle by Wesley Clair Mitchell (1927), which has stood the test of time (with the exception that a cycle's duration can exceed 10–12 years). Conventional wisdom is that a recession is defined by two (successive) negative quarters of GDP, but this definition is neither a necessary nor a sufficient condition. In the summer of 2008, for example, the economy had not experienced negative growth, leading policymakers and the markets to presume there was no recession, and the markets priced in a series of interest rate hikes by the end of the year. This response based on a rule of thumb makes a great deal of difference on a number of levels, said Achuthan. He noted that a recession is a vicious circle where sales, production, and employment fall when income falls. These declines were happening a year ago and subsequently used by policymakers when they wanted to pass the legislation establishing the Troubled Asset Relief Program in September.

Achuthan outlined the dynamics of growth rate, business, and deviation cycles. A business cycle recession is an actual decline in economic activity, while a deviation cycle is the deviation from the trend line through the business cycle's level of activity. The growth rate cycle trough is a very important moment, because it corresponds with the steepest decline in the level of activity of the business cycle, and is almost always followed in short order by the end of the recession (whereas the peak in the growth rate cycle can occur well before the peak in the business cycle).

A review of business cycle history in the United States in terms of the coincident index and business cycle recessions (17) shows that not every growth rate cycle downturn turns into a recession, but every growth rate cycle upturn (except one during the Great Depression) is followed by a business cycle upturn. Achuthan compared the long-leading indicator growth rate, which is designed to lead the turning points (an idea pioneered by Geoffrey Moore in connection with cyclical drivers of the business cycle); stock prices, which are a short-leading indicator of the business cycle; and the coincident index growth rate for each recession. In most cases, the long-leading indicator growth rate turns up before the trough of the coincident index growth rate, while stock prices often bottom and rise between the growth rate upturns. During the Great Depression, however, the coincident index growth rate cycle upturn firmed by 10 percent but then stalled and failed, along with the rise and fall of the long-leading indicator growth rate. By comparison, the coincident index growth rate firmed by only one-third of one percent last spring (2008).

A recession ends quickly after the growth rate cycle bottoms (one to four months). A review of the current recession (2007–09) shows what looks like a trough in the long-leading index growth rate in November 2008 and a trough in the weekly leading index in December. Stocks may have experienced a trough in March 2009. If the approximate pattern in the sequence of cyclical troughs repeats itself in the current recession, then we are likely to see a real growth rate cycle trough in very short order. Growth rate cycle upturns are followed by business cycle upturns in a matter of months, said Achuthan, and there is a great deal of evidence that the growth rate cycle trough is here.

SESSION 6

Alternative Stimulus and Bailout Proposals

Dimitri B. Papadimitriou, James K. Galbraith, Warren Mosler, Robert W. Parenteau, and L. Randall Wray

MODERATOR:

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By tracking the ratio of house-to-rental prices, economist Dean Baker was able to identify the housing bubble because the ratio was vastly out of line with historical averages (see *Plunder and Blunder*, 2009). **JAMES K. GALBRAITH** wondered if the same analytical principle could be applied to the economic slump. For example, the Congressional Budget Office projected as a baseline forecast that the unemployment rate would return to less than 5 percent after four or five years, despite the fact that real wages have been rising in the downturn.

The Keynesian case for a limited downturn with prospects for a relatively rapid start to a recovery argues that recessions are self-limiting through the inventory cycle; liquidation is followed by growth, which is reinforced by falling commodity prices that raise the real purchasing power of consumers; the service sector is a much larger proportion of the economy than it was in the 1920s and 1930s; government is also larger than before, so there is the benefit of automatic stabilizers, falling tax revenues, and greater government spending; and the administration moved quickly to propose a very substantial fiscal-expansion package.

The pessimistic perspective of a Keynesian rebound concerns the financial situation of households and banks (e.g., paying down debts will continue to depress household expenditures), an inordinate desire for liquidity (resources that might otherwise be used for consumption are withheld), and a decline in the value of household collateral (used to support consumption) and in the condition of banks, which is an important factor in restricting the flow of credit. A second caveat relates to the global pattern of production whereby an inordinately large destruction of U.S. capital stock is followed by a relatively larger share of overseas production (and higher U.S. imports than in the previous business cycle). This would result in an unbalanced recovery with a lower propensity to create jobs in the short run. A third major reservation is that there may be further disruption in the financial sector, particularly internationally (e.g., calls on credit default swaps seize-up or there is failure to unravel the carry trades). These events are distinct possibilities but comparatively imponderable so we should bear them in mind and monitor them, advised Galbraith.

In terms of what to expect with respect to a recovery, there are four things that can be said with a reasonable degree of assurance: (1) unemployment will be very slow to follow the turnaround in production and economic expansion; (2) the banking structure will be deeply problematic as a result of current policy choices (e.g., saving the large institutions while doing little to enforce changes in practices, such as auditing the documents underlying the mortgages, or in management); (3) higher commodity prices, which will cause problems for the sustainability of expansion; and (4) pressure on monetary policy to reverse its stance (i.e., a return to conventional orthodoxy that balances the budget and reduces the debt), which could bring about a repeat of the 1937–38 recession, with rapid fall in output and a dramatic rise in unemployment.

Galbraith outlined his priorities as the situation develops. In terms of regulation, the government should not telegraph its intentions because it faces a strategic situation as the financial sector downsizes—for example, should the burden fall on the smaller banks, which were not engaged in the fraudulent or speculative conduct that produced the crisis, or on larger institutions that are to big to regulate or manage internally? We should recognize that the New Deal created an effective network of social insurance, he noted, and that strengthening this security network is one of the most important things that can be done in an extreme slump, in order to mitigate the damage to the broader population (e.g., keep people in their homes and restore the income positions of the elderly). We also need to consider the longer-term ramifications of policy and programs by the Obama administration in order to sustain expansion and rebuild the economy (e.g., there is a deeply neglected public infrastructure and an incompatible energy infrastructure).

Galbraith proposed a national infrastructure fund as a first step in building an institutional framework for the funding of public capital investment on a sustained basis, in combination with a planning framework that sets the terms of investment. He said he believed that the United States is in a relatively privileged position in terms of the structure, scope, and flexibility of its government compared to the global system. As a result, the world crisis could worsen in spite of what we do here.

WARREN MOSLER outlined alternative proposals for a U.S. nonconvertible currency regime, including a comparison with the gold standard, using the tagline "The financial sector is a lot more trouble than it's worth." He pointed out that output and employment have declined because of a lack of aggregate demand, inventory liquidation, and a delayed fiscal response. Aggregate demand fell because of the end of the subprime expansion in 2006, which was based on fraud; the wind-down of the one-time fiscal adjustment in the second quarter of 2008; the huge commodity and business inventory liquidation in July 2008 in response to (Mike Masters's) legislation based on Mosler's paper about why passive commodity investments are counterproductive for pension funds (most real-economy recessions are inventory liquidations); and a shift in the propensity to spend due to the procyclical nature of creditworthiness (i.e., the banks stopped lending).

Mosler noted that financial sector losses do not materially reduce aggregate demand, and that the financial sector is procyclical out of necessity and opportunistically expands with the real economy. He also noted that nominal aggregate demand would be easy to restore, since the damage to the economy up to six months ago was nominal (as opposed to housing, labor, or material shortages per se).

According to Mosler, this is a data entry crisis. A gold standard is a self-imposed constraint on the supply side of a country's currency, but the United States is not on a gold standard. The federal government can immediately restore aggregate demand by making the correct entries on its (monetary system) spreadsheet—something it could not do if it was on a gold standard. Unfortunately, the administration (including the president, treasury secretary, Fed chairman, and all of their immediate advisors) does not understand how its monetary system works.

Mosler's proposals for restoring aggregate demand (August 2008) included: (1) a full payroll tax holiday, where the Treasury makes all payments for employees and employers to the trust funds so that people and businesses can make their (car and mortgage) payments; (2) $300 billion of revenue sharing for the states on a per capita basis so that there are no fairness questions, and shovel-ready, albeit ridiculous, projects; and (3) federal funding for an $8-per-hour job for anyone willing and able to work that includes federal health care benefits (a government employer-of-last-resort function à la Minsky and the *Jefes* program in Argentina, which represents an excellent transition mechanism and a bottom-up approach that includes universal health care).

A caveat to restoring aggregate demand is that it will also empower the Saudis to set ever higher prices for crude oil, unless U.S. demand for motor fuel is cut in half. Otherwise, oil price hikes will again cause our real terms of trade and standard of living to deteriorate. (This, added Mosler, is *not* a data entry problem.) When aggregate demand was left alone, GDP deteriorated and caused the automatic stabilizers to rapidly increase the federal deficit to over 6 percent by January 2009. A deficit-spending (ugly) monetary policy approach stems the tide but drives unemployment upward. Rather, the tide could have been countered proactively with a tax cut. Proactive fiscal adjustments are now kicking in, said Mosler, but there is no policy to immediately cut imported motor fuel consumption.

The obstacles to restoring aggregate demand include the belief that monetary policy works (this belief delays fiscal responses, while lowering interest rates creates a huge drop in aggregate demand by reducing income to the private sector, which saves), the belief that credit flows must be restored before the economy can recover (a top-down approach in place of restoring people's ability to make payments and reducing toxic assets), and deficit myths. These myths are that deficits reduce savings, are dependent on buyers of the debt, leave real debts to our children, make us dependent on foreigners, only shift funds from one agent to another, and are unsustainable (i.e., we can't go it alone). Monetary policy merely rearranges financial assets and is all about price (interest rates) rather than quantities, and interest rates are a weak macro force at best. However, there are modifications that can keep monetary policy from being disruptive and counterproductive.

In terms of proposals for the banking system, Mosler observed that the liability side of banking is not the place for market discipline (banks need to have unfettered access to funding), so regulation should be directed toward assets and capital. In terms of proposals for the Fed to replace current initiatives, he recommended that the Fed should lend unsecured and in unlimited quantities to member banks because the FDIC already insures bank deposits; demanding collateral is disruptive and it eliminates interbank markets, which are unnecessary. The banking system should only originate assets to hold, lend on credit analysis, mark to FDIC-approved credit models, and ban the use of LIBOR by banks; it should not be allowed to lend against financial assets or transact in the secondary markets. Bernanke's decision for unlimited and unsecured lending to all the weak banks worldwide in order to lower interest rates with unlimited Fed swap lines is complete madness, said Mosler.

In place of implementing Treasury Secretary Geithner's plan for a public-private investment partnership to aid failing banks, Mosler proposed something similar to England's banking system, such as selling FDIC-insured credit default insurance to member banks that want to protect their toxic assets. This proposal creates a "sheltered bad bank" within a "good bank" for a fee, since the FDIC is already the "bad bank." He also proposed an interest rate policy to permanently set all risk-free rates at zero in order to minimize cost pressures on output and investment, and to minimize rentier incomes, thereby encouraging higher labor force participation and an increase in real output.

In terms of government purchases of financial assets, Mosler suggested moving TARP (Troubled Asset Relief Program) and other new Treasury financial asset purchases to the Federal Reserve, since these transactions are in the realm of the Fed and are about price (interest rates), not quantity. He also suggested that the Treasury should cease all issuance of securities, which move income away from the real producing sectors, as well as all purchases of financial assets. In terms of trade and energy issues, Congress should unilaterally drop all import restrictions (exports are real costs and imports are real benefits) and implement policy to immediately cut imported motor fuel consumption in half. Deficits add to savings (by accounting identity), federal spending is not revenue constrained, there is no intergenerational transfer of goods and services, we don't need China to buy our debt—and there is no nominal limit to deficit spending. In fact, we are far better off going it alone!

Moser concluded that the recession is over. The automatic stabilizers ended it the "ugly" way and proactive fiscal adjustments are kicking in. The recovery will restore the financial sector and the housing markets, while high and lingering unemployment will contain real wages and direct real wealth toward rentiers and upper-income individuals. He observed that we have the first real populist president in memory presiding over the largest upward transfer of real wealth in the history of the world.

ROBERT W. PARENTEAU sought to bring Minsky's views into a broader public forum because we are experiencing more than a Minsky "moment," and Minsky had developed an entire conceptual framework. The prevailing macro view during the past 25 years has been that price adjustments will lead to full employment, deregulation or self-regulation is to be favored, monetary policy can correct most coordination failures, fiscal policy will tend to be neutralized (by crowding out, twin deficit, or tax-anticipation effects), financial markets adequately signal the correct size and distribution of tangible capital investment, asset bubbles cannot be identified in advance, and monetary policy can contain postbubble disruptions, including deflation episodes (even with a zero policy rate).

The great American economist Irving Fisher shared this macro view until 1929, when he lost his fortune and had a major rethink about macroeconomic dynamics—that is, when an economy starts with a very high debt load and price deflation is introduced. Fisher outlined the sequence of causal factors that would lead to a collapse in profitability and production, with no self-equilibrating dynamic. It begins with debt liquidation and leads to distress selling, a fall in the level of prices, a still greater fall in the net worth of businesses (precipitating bankruptcies), and a fall in profits. This in turn leads to a reduction in output, trade, and employment combined with pessimism and loss of confidence, which leads to hoarding and further slowing down of the velocity of circulation.

Parenteau compared Fisher's checklist with the situation today and found the same elements at play: a highly leveraged economy and deflation (including asset and product prices, and private income and debt). So far, there is no evidence that debt is being liquidated or paid down on the nonfinancial corporate side, but this is probably a couple of quarters away, said Parenteau. Moreover, households have begun paying down debt for the first time in 50 years (for which data is available).

An alternative macro view that should be used to formulate policy is that price adjustments can amplify market disequilibrium (especially for durable assets owned with leverage), active fiscal and monetary policy are required to achieve full employment, financial markets can signal major misallocations of tangible capital investment, asset bubbles and financial imbalances can be identified before they erupt into a financial crisis, evolving regulation can help set adequate margins of safety and corridors of stability in financial markets, and inflation stability is not a sufficient condition for financial stability (nor is it always the highest priority for the central bank).

Minsky argued that Fisher's debt deflation process (i.e., the Great Depression) could not happen again. His guardrails against this event include: (1) monetary policy, whereby monetary stimulus and lender-of-last-resort operations are directed at stabilizing asset prices (by lowering interest rates); (2) fiscal stimulus (i.e., deficit spending) is directed at stabilizing private incomes; and (3) the government plays an active role in managing an orderly wind-down of failing institutions that could trigger systemic risk.

In light of events in Asia (1997–98) and perhaps today, Minsky may have been partially wrong. Parenteau found that we have slammed into Minsky's guardrails in terms of an unprecedented rise in the Fed's balance sheet combined with an enormous reversion in the fiscal deficit (largely due to the effect of automatic stabilizers). The household sector went from being a net saver to a deficit spender in the 1990s (an unnatural position) but has dramatically reversed course in response to the bursting of the housing bubble. This response is placing an enormous strain on the Minsky debt deflation guardrails. At the same time, the current account balance has not been much of an offset since the United States remains the world's spender-of-last-resort (i.e., lower imports may be the road to a global debt deflation).

Parenteau pointed out that, for every net saver, there has to be a deficit spender. In the United States, the government sector's deficit is the mirror image of the private sector's ability to net save. Rather than inducing the banks to lend to the private sector, we should get the private sector into its natural net savings position so that it can pay down debt and reduce the financial fragility of the economy. The only sector willing to deficit spend is the government, but policy discussions are not occurring within this framework. Without deficit targets that meet legitimate estimates of private net savings, we are flirting with debt deflation, surmised Parenteau.

Current incentive structures are short-term oriented on the side of both managers and investors, there may be a generational shift toward net saving by the household sector for its retirement funds, and there is a chronic trade deficit. Can fiscal policy address these three elements? Parenteau suggested a return to John Maynard Keynes (in the original) and an aspect of his theory that has been overlooked; that is, public investment is a long-run stabilizer and driver of private growth (i.e., countercyclical fiscal policy). Thus, we should be pursuing long-run investment goals with large positive externalities such as energy independence, water infrastructure, clean technologies, and education. These goals can be accomplished without embracing a socialist economic model. Moreover, the capital spending reinvestment rate since 1970 has been very low in this country (with the exception of the tech and telecom bubble).

One challenge relating to monetary policy and quantitative easing is the view that the Fed's ballooning balance sheet will create an exit-strategy problem of inflation. In Parenteau's view, this balance sheet would self-liquidate endogenously because the lending facilities are orientated toward the short-term. However, if the Federal Reserve "renormalizes" the Fed funds rate and ceases Treasury purchases as the recovery proceeds, the implicit Treasury yield ceiling will disappear because there is no "natural" buyer with yields near historical lows. Therefore, the yield curve will likely shift higher and steeper, so that mortgage rates may rise accordingly and dampen any recovery.

Another challenge relating to quantitative easing is that the Fed, as buyer of last resort, may have to escalate its Treasury purchases in order to suppress the Treasury yield and push investors into riskier assets (a transition problem). As Fed balance sheets expand, "monetarist" investors add inflation hedges by buying commodities, which causes prices to rise and "confirms" investor inflation fears. And since commodities are inputs to production, an adverse shift in the aggregate supply and demand curve could prolong the recession.

Along with reorienting fiscal policy, there is a need to reorient monetary policy. Inflation stability is not a sufficient condition for financial stability, but the latter may be a necessary condition of the former. For example, the Fed was born out of an episode of financial instability (i.e., the Panic of 1907). A first step is the G-20 agreement to reposition the Bank for International Settlements' (BIS) Financial Stability Forum by giving it a higher profile. It is essential to monitor the conditions leading to financial instability with forward-looking indicators in combination with stock flow–coherent macro models, such as the one used by the Levy Institute. Unfortunately, this approach is not currently part of the ongoing dialogue. It's time for the economic profession to do a rethink in the manner of Irving Fisher, said Parenteau. We need to be very clear about the size and nature of fiscal injections and the orientation of monetary policy in order to deal correctly with the current recession.

L. RANDALL WRAY argued that we are living through the second collapse of finance capitalism. This new stage of capitalism is distinguished by complex long-lived capital assets that require external finance, which is actually a prior commitment of future earnings from which problems arise. The first version occurred in the presence of a small-government laissez-faire economy and failed decisively in the 1930s. The New Deal was a completely different form, which Minsky referred to as "paternalistic capitalism," with high wages and consumption, unions protecting workers, and welfare protecting others. Growth occurred on the basis of leveraging Treasuries, so that much of the finance was internal to firms or leveraging a very safe asset.

According to Minsky, the new "Big Government" economy after World War II had multiplier, cash flow, and portfolio effects. The cash flow effect is that budget deficits create private sector profits and allow firms to service their debts in an economic downturn. The portfolio effect is that budget deficits create very safe assets that are accumulated in the private sector. Minsky predicted as early as the 1950s that finance capital would return and it did, in the form of money manager capitalism, which is subject to booms and busts (e.g., the savings-and-loan crisis in the 1980s, the "new economy" and its irrational exuberance in the 1990s, and the real estate and commodity busts of this decade). Each crisis was worse than the previous one.

This is not a Minsky "moment," exclaimed Wray. The seeds of crisis were sown long ago (beginning in 1951), when the Fed increasingly used interest rates to fine-tune the economy. In response, financial institutions started to innovate in order to increase profitability, so credit became more elastic. In addition, there was gradual deregulation and the removal of New Deal constraints, leading to the growth of managed money with an appetite for risk. The problem is that the Big Bank, Big Government (the Treasury), and the Fed constrained instability and allowed fragility to increase over time. Managed money grew in spite of crises because not enough of it was wiped out to change behavior or the system. The weight of the financial system shifted away from the regulated and protected bank sector toward pension and mutual funds, hedge funds, sovereign wealth funds, and so on. Rather than leveraging Treasuries for growth, we leveraged riskier assets such as housing and commodities, and created a much riskier financial system. In Minsky's view, we evolved from hedge to speculative and finally to Ponzi positions.

In the postwar period, there was a nice virtuous cycle where stability encouraged and validated the innovations. Competition increased leverage ratios, which increased credit availability and pushed up asset prices, which encouraged even more innovations. Eventually, said Wray, the whole thing had to blow.

Wray expressed support for much of Obama's recovery plan but found that the good ideas had been compromised by the sideshow of trying to save Wall Street. Actually, they are trying to reproduce the conditions of 2006 and restore money manager capitalism—that is, high leverage, stated values, and opaque deals with the wrong incentive structure. According to the Congressional Oversight Panel's report, successful resolution of crises requires transparency (swift action to ensure the integrity of bank accounting, ascertain the value of bank assets, and assess bank solvency), assertiveness (willingness to take early, aggressive action to improve capital ratios of banks that can be rescued, along with shutting down banks that are irreparably insolvent), accountability (willingness to hold management accountable by replacing or prosecuting failed managers), and clarity (transparency in government reporting of all forms of assistance and clear explanations for the use of public sector funds). We have none of these aspects for a successful resolution, observed Wray, so the plan will fail.

In order to deal with the short-run problems, we should quickly resolve the liquidity problems (e.g., lend without limit or collateral to everybody and expand FDIC insurance), and discard and reverse where possible the Paulson-Geithner plans (the problems relate to economics, politics, and incentives rather than costs). There is no urgency to resolve the insolvency problems (rather, get the banks into receivership and replace and constrain management by following the law). You cannot allow the "too-big-to-fail" doctrine to become the doctrine of financial institutions unless you completely control them. Rather, it is preferable to adopt a "too-big-to-save" doctrine. In addition, we need fiscal stimulus in terms of tax relief (so households can restore their balance sheets) and government spending (on unemployment compensation and structure). Moreover, we need mortgage relief, a combination of private and socialized losses, and an expanded role for (a renationalized) Fannie Mae and Freddie Mac. Furthermore, we need to reduce leverage by saving the real economy so that assets will turn out to be good, and increase budgets directed toward adequate supervision (i.e., jail the crooks).

In terms of the long-run problems, we need payroll tax reform (these taxes are regressive, inflationary, and discourage employment) and to abolish the Social Security Trust Fund, which is just an accounting record. Rather, it is better to tax all sources of income in order to share the real burden of an aging society. We should also reverse the devolution toward state and local governments that has been going on since 1970, and eliminate regressive taxes and replace them with federal government revenue. This would help to overturn the procyclical nature of state and local government spending and taxation. Also, we should deal with inequality, which has returned to 1929 levels, by increasing union power, minimum wages, and jobs. Furthermore, we need to reform retirement with a more generous public system and reduce the subsidies to money managers who created the problems, nationalize and rationalize health care (the significant problems are in the private health care system); increase government spending during recovery in order to create the demand for the new plan and equipment (i.e., government spending needs to be a ratchet that gradually rises as a percentage of GDP) while enhancing stability; institute financial reform (government by and for Goldman Sachs is no way to run a country) that drives a stake through the heart of money manager capitalism; and provide a job guarantee (e.g., Minsky's employer-of-last resort program) in order to promote human rights, equity, efficiency, and economic and political stability.

All of this is affordable, said Wray, because the government can afford to buy anything for sale in its own currency. Moreover, the government can always achieve full employment and enhance price, economic, and financial stability.

Participants

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