Levy Economics Institute of Bard College

Conference Proceedings

25th Annual Hyman P. Minsky Conference on the State of the US and World Economies

Will the Global Economic Environment Constrain US Growth and Employment?

Blithewood
Annandale-on-Hudson, N.Y.
April 12–13, 2016

Organized by the Levy Economics Institute of Bard College
with support from the
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Contents

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

Foreword

I am delighted to welcome you to the 25th Annual Hyman P. Minsky Conference, "Will the Global Economic Environment Constrain US Growth and Employment?," organized by the Levy Economics Institute with the support of the Ford Foundation. As part of its monetary policy research, the Institute has partnered with the Foundation to examine financial instability and the reregulation of financial institutions and markets within the context of Minsky's path-breaking work on financial crises.

The first Minsky Conference was held at Blithewood in November 1991. It was Minsky's brainchild, organized with the aim of examining, and advancing policy solutions for, the pressing economic issues of the day. In 1991, those issues included the Latin American sovereign debt crisis and the lingering aftermath of the US savings and loan crisis, together with unsustainable levels of private sector debt and, in the United States, a real economy characterized by higher unemployment and economic contraction.

A quarter century later, and more than seven years after the worst global financial crisis since the Great Depression, many issues similar to those that characterized 1991 remain unresolved. This year's conference will explore some of these critical issues, which include the slowest recovery in US postwar history, a fragile global economy, and financial markets and institutions that remain volatile despite serious attempts to reform the US and global financial structure and limit systemic risks.

The 2016 Minsky Conference will address whether what appears to be a global economic slowdown will jeopardize the implementation and efficiency of Dodd-Frank regulatory reforms and similar reforms in Europe and elsewhere; the transition of monetary policy away from zero interest rates; whether the "new" normal of fiscal policy will constrain sustainable growth and full employment—and whether economic policies in this new economic environment will generate yet another Minsky moment. Panels will focus on global fragility and its implications for emerging markets; the regulation of commodities and derivatives; the current credit structure and its conduciveness to a financially stable recovery; the worsening of inequality and the outlook for monetary and fiscal policy; the prospects for the US economy; bank regulation, liquidity, and "too big to fail"; and the regulatory outlook for Europe.

I hope you will find these discussions informative, and I look forward to seeing you again at future Levy Institute events.

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

Program

Tuesday, April 12

9:00–9:15 a.m.	**WELCOME AND INTRODUCTION** Dimitri B. Papadimitriou, *President, Levy Institute*
9:15–10:30 a.m.	**SESSION 1** **Global Fragility and Emerging Markets Outlook** *Moderator:* Theo Francis, *Special Writer,* The Wall Street Journal Jan Kregel, *Director of Research, Levy Institute; Professor, Tallinn University of Technology* Fernando J. Cardim de Carvalho, *Senior Scholar, Levy Institute; Emeritus Professor of Economics, Federal University of Rio de Janeiro*
10:30 a.m. – 12:30 p.m.	**SESSION 2** **Commodities and Derivatives Regulation** *Moderator:* Izabella Kaminska, *Journalist,* Financial Times Michael Masters, *Founder and Chairman of the Board, Better Markets* Robert A. Johnson, *President, Institute for New Economic Thinking; Senior Fellow and Director, Franklin and Eleanor Roosevelt Institute*
12:30–2:15 p.m.	**SPEAKER** Robert J. Barbera, *Codirector, Center for Financial Economics, The Johns Hopkins University* "Six Degrees of Separation: Why the Fed's Strategy of Precautionary Unemployment Is Nutty"
2:15–4:45 p.m.	**SESSION 3** **Is the Current Credit Structure Conducive to Financially Stable Recovery?** *Moderator:* Jesse Eisinger, *Senior Reporter,* ProPublica Henry Kaufman, *President, Henry Kaufman & Company, Inc.* Richard Berner, *Director, Office of Financial Research, US Department of the Treasury* Martin L. Leibowitz, *Managing Director, Morgan Stanley* Albert M. Wojnilower, *Economic Consultant, Craig Drill Capital*
4:45–6:45 p.m.	**SESSION 4** **Minsky, Inequality, and the Monetary/Fiscal Policy Outlook** *Moderator:* Jan Kregel, *Director of Research, Levy Institute; Professor, Tallinn University of Technology* Stephanie A. Kelton, *Research Associate, Levy Institute; Chief Economist, US Senate Budget Committee; Professor, University of Missouri–Kansas City* Scott Fullwiler, *Professor of Economics and James A. Leach Chair in Banking and Monetary Economics, Wartburg College*

Wednesday, April 13

9:00–11:30 a.m.	**SESSION 5** **US Economic Outlook Forecast** *Moderator:* Eduardo Porter, *Columnist,* The New York Times Lakshman Achuthan, *Cofounder and Chief Operations Officer, Economic Cycle Research Institute* Bruce C. N. Greenwald, *Robert Heilbrunn Professor of Finance and Asset Management, Columbia University* Michalis Nikiforos, *Research Scholar, Levy Institute* Frank Veneroso, *President, Veneroso Associates, LLC*
11:30 a.m. – 1:30 p.m.	**SESSION 6** **Bank Regulation, Too Big to Fail, and Liquidity** *Moderator:* Peter Eavis, *Reporter,* The New York Times Edward Kane, Professor of Finance, Boston College Walker F. Todd, Trustee, American Institute for Economic Research L. Randall Wray, Senior Scholar, Levy Institute; Professor of Economics, Bard College
1:30–3:15 p.m.	**SPEAKER** Barney Frank, *Former US Representative (D-MA, 4)* "2016—The Year Class Warfare Became Respectable"
3:15–5:15 p.m.	**SESSION 7** **European Performance And Regulatory Outlook** *Moderator:* Thorvald G. Moe, *Research Associate, Levy Institute; Special Adviser, Financial Stability, Norges Bank* Mario Tonveronachi, *Professor of the Economics of Financial Systems, University of Siena* Loukas Tsoukalis, *Pierre Keller Visiting Professor, Harvard University*
5:15–7:00 p.m.	**SPEAKER** Vítor Constâncio, *Vice President, European Central Bank* "A Challenging International Economic Environment for Central Banks"

Welcome and Introduction

DIMITRI B. PAPADIMITRIOU

President, Levy Institute

I want to welcome you to the Levy Economics Institute's 25th Annual Hyman P. Minsky Conference. This conference is made possible with the generous support of the Ford Foundation and is part of the Levy Institute–Ford Foundation research project on "Financial Instability and the Reregulation of Financial Institutions and Markets," offering policy proposals that are drawn from Minsky's many years of research and writings on the subject. I thank the Ford Foundation for their generosity.

My sincere thanks for the organization of this conference also go to my longtime friend and colleague Jan Kregel, the Institute's senior scholar and director of research who heads our research program on monetary policy and financial structure.

As my letter in the conference program indicates, this year marks the conference's 25th year. Minsky conceived this annual conference back in 1991, when the United States was confronted with pressing economic and financial issues that were in need of a policy response. The American economy's financial structure was at center stage, unable to cope with the continuing S&L crisis, the explosion of consumer and other private debt, the aftermath of a housing bubble, and an economy in recession, the result of restrictive monetary policy aimed at reducing inflation. Minsky thought that the Levy Institute conference would bring together economists from the academy and those who professionally confront real-world problems, either in private finance or in public policy. This year's conference theme is to explore the connection between what appears to be a global slowdown in a period of very relaxed monetary policy, fiscal policy conservatism, and ongoing financial structural reform.

Twenty-five years ago, Minsky was well aware of the connection between financial regulatory reform and the performance of the real economy, which in turn was dependent on the existing regimes of monetary and fiscal policy. He was known for advocating big roles for both government (fiscal policy) and the central bank (monetary policy), and an efficient financial structure that would ensure the economy's capital development.

Having carefully studied previous periods of economic slowdowns and crises, Minsky was concerned about the dire consequences of not fixing that which was in need of fixing. In his mind, the financial structure in the United States needed fixing, and choosing the design of the policies to fix it was crucial. He worried about the tendency of policymakers and economists to choose the Smithian view, succinctly described in a passage from *The Wealth of Nations* that he was fond of quoting—"Every individual necessarily labours to render the annual revenues of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it . . . , and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention"—rather than choosing the Keynesian view, which states that "as the organization of investment markets improves, the risk of the predominance of speculation does increase. . . . Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes a bubble on a whirlpool of speculation. When the capital development of a country becomes by-product of the activities of a casino, the job is likely to be ill-done."

Minsky questioned the Smithian theory in maintaining that markets always lead to the promotion of the public welfare, in contrast to the Keynesian view that market processes may lead to the capital development of the economy being ill-done. If the choice for designing policy is the former, then intervention and regulation can only lead to mischief. However, if the choice is the latter view, which assumes that the capital development may be ill-done, then intervention and regulation will be beneficial.

Minsky was, of course, a Keynesian, and what he proposed and advocated was derived from Keynes. His mission was to offer an alternative policy for the modern, financial, capitalist economy. His views diverged from the well-known "Keynesian" mainstream prescriptions that emphasized "fine-tuning" aggregate demand, promoting investment, and instituting "welfare-statism" in order to provide a safety net. In his writings, he emphasized that fine-tuning is impossible; relying on investment-led growth to promote rising living standards generates destructive instability and inflation; and, finally, welfare institutionalizes unemployment. His alternative strategy relied on consumption, employment, and the use of institutions and regulations to constrain financial and economic instability.

Observing the evolving financial structure, Minsky was concerned with the transformation of the traditional banking system into a highly levered financial system that was fragile and consisted primarily of nonbanking institutions, including mutual funds, pension funds, and other "shadow banking" funds. Minsky maintained that these funds needed to be managed, and that the managers of these funds, who presumably operated in the interest of the owners or beneficial owners, also had their own interests. They were hungry for higher returns, and with more and more monies available for placement, they outgrew the traditional portfolios of high-quality stocks and bonds.

As we have seen, and as Minsky predicted, managers of these funds became buyers of specialized instruments such as securitized mortgages and other highly leveraged securities. The explosion of such instruments, together with the gradual adoption of the Smithian view of the infallibility of markets by the central banks and private banking institutions, created a self-regulated financial system that culminated in the global financial crisis of 2007–8 and the subsequent Great Recession, from which many countries have yet to recover.

The crisis forced the US Congress to get to work on reforming Wall Street by proposing new rules and regulations for financial institutions and giving enhanced responsibilities to the Federal Reserve through the passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act. Similarly, financial reforms have taken place in Europe and elsewhere, but a lot more work is needed with respect to global integration and regulatory harmonization, and the policy coordination required to reverse the trend toward fragmentation. In general, what we observe is that the impetus to fix what was broken has lost steam.

To be sure, some important regulatory changes have been put in place, including the Volcker rule aimed at prohibiting banks' proprietary trading; requiring big banks to submit "living wills" detailing resolution plans for regulators to follow should a bank fail, so as to prevent the need for another government-funded TARP; and, finally, establishing the Consumer Financial Protection Bureau at the Federal Reserve in an effort to prohibit misrepresentation in the selling of risky financial products to inadequately informed consumers. More work by the bureau will be necessary to protect consumers in an evolving world of faster and more technologically sophisticated payments. Strong federal oversight is needed to absolutely ensure the safety, transparency, soundness, and access of the technology-guided payments system.

Yet, even with the implementation of these and other measures, many other important reform issues dealing with unregulated money manager funds, the systemic and idiosyncratic risks of financial derivatives, and the "too big to fail" conditions of some banks remain almost as they were before the global financial crisis occurred, raising the specter that the current structure may be unable to prevent a financial crisis from happening again. As Sheila C. Bair, the former FDIC chair, put it, "Regulators should take very seriously the fact that the public is still overwhelmingly skeptical of whether these reforms have fundamentally changed anything."

To be sure, a number of policymakers—particularly Thomas Hoenig at the FDIC and, more recently, Neel Kashkari, the new president of the Minneapolis Fed and a key architect of Wall Street's 2008 bailout—are calling for the breakup of the largest US lenders, which are still "too big." Peter Eavis of *The New York Times* recently reported that four US banks have more than $1 trillion in assets and two have more than $2 trillion. There are also dissenting voices among the captains of the banking industry, like Jamie Dimon of JPMorgan, who recently argued in the annual letter to his bank's shareholders that "the US financial services industry does not conform to simple narratives," that it is "a complex ecosystem that depends on diverse business models coexisting because there is no other way to effectively serve America's vast array of customers and clients," and that banks like his perform "mission-critical services . . . that regional and community banks simply cannot do."

It is no secret that banks carry an urge to evolve in a way that maximizes revenue, and they often underprice risk to achieve it—as the cases of JPMorgan's "London whale" and Deutsche Bank's risky positions have shown.

Banks, in concert with markets, quickly create newer, riskier, and more profitable products. It is the very nature of modern finance to transform its structure in response to prevailing regulation, and to evade it successfully. And this, I believe, will continue, notwithstanding the significantly large fines levied on banks for the sale of risky mortgage-backed securities, their money-laundering practices, and colluding in the fixing of the LIBOR [benchmark rate].

Banks' continuing risky practices fuel danger and instability in our economic system and will ultimately lead us to another financial crisis. The regulatory structure, as Minsky advocated, must be constantly evolving and always subject to sophisticated reexamination as the world of finance develops.

The key role of banking is financing the economy's capital development, and this should also be the concern of the central bank.

In his first interviews since becoming president of the Minneapolis Fed, Neel Kashkari urged the Federal Reserve to work harder and do a better job in responding to the increasing economic anger for sluggish growth since the 2007–8 financial crisis. As reported in last November's American Values Survey, 72 percent of the population considers the US economy to be still in recession, even though the Great Recession officially ended in 2009. Reflecting on this anger, some of the presidential candidates, we have heard, are advocating for new barriers to protect US industry. Trade barriers, as Minsky said, can be a recipe for worsening the global slowdown.

Minsky proposed that a place to start in [terms of] enhancing financial stability and the integrity of the markets would be to reconstitute the financial structure by forcing banks to perform their traditional role and for regulators to begin by breaking them down into smaller units performing their designated functions. In Minsky's view—and, in a sense, providing an answer to Mr. Dimon's concerns [about] serving his customers' complex needs—a bank holding company structure with numerous types of subsidiaries, each one subject to strict limitations on the type of activities permitted, would be a valuable deterrent to risky behavior. Most of us would agree that we need banks that can earn competitive rates of return, banks that focus not on big risks but on financing the economy's capital development.

We need, therefore, reforms that limit profiting without producing and instead promote enterprise and industry over speculation. They will have to be as innovative, flexible, and opportunistic as the markets they aim to improve.

These reforms are also necessary, as I indicated earlier and Minsky long argued, because of the connection between financial stability and sustainable economic growth and employment. He would have been very concerned about policy increasingly turning to promoting investment for fueling economic growth rather than relying on increased consumption financed out of higher household incomes that have been stabilized by full employment.

To be sure, private sector investment is crucial, but government policy has little influence in stabilizing it. Even in a period of subzero interest rates adopted by the central banks in the eurozone and countries such as Sweden, Switzerland, Denmark, and Japan—which together produce a quarter of the world's GDP—the ability to stimulate growth through investment has proven to be very limited. Markets usually celebrate easy monetary policy, but they appear *uneasy* with the current trend toward negative rates. Economists and commentators talk about the dwindling firepower of central banks, and that their pursuit of negative interest rate policy may be even more dangerous. As PIMCO's Scott Mather recently put it, "It seems that financial markets increasingly view these experimental moves as desperate and consequently damaging to financial and economic stability." It would not be difficult, then, to conclude that policymakers have run out of options.

Stability of consumption, however, can be influenced by government policy that targets full employment, and Minsky proposed an employment policy that could ensure a level of full employment.

The Levy Institute continues to focus on strategic issues of economic policy relating to achieving financial stability, long-term higher economic growth, and employment in a period of sluggish growth, low inflation, severe income and wealth inequality, and alarming decreases in public spending in the name of fiscal conservatism.

This year's conference will explore some of the issues and linkages mentioned.

We invite you to take a look at or take with you some of our publications, available at the desk in the back of the room, and would very much welcome your comments.

We welcome you. Enjoy the conference. We hope you will find the presentations and discussions thoughtful.

Thank you very much for your attention.

Speakers

ROBERT J. BARBERA

Codirector, Center for Financial Economics, The Johns Hopkins University

Six Degrees of Separation: Why the Fed's Strategy of Precautionary Unemployment Is Nutty

Amid worldwide morose punditry I begin with a poem:

Syrian exit, growing risk of Brexit,
China elites exiting stage right,
Putin, Trump, Le Pen, itching for a fight.
Pundits quote Yeats as they watch the world unfold,
Gyrations are increasing and the center cannot hold.

We find ourselves today asking elemental questions: Is there anything left to the neoliberal[1] synthesis? Can we rescue anything from the Washington Consensus? More generally, is there an evolutionary way out of today's dire circumstances? In the United States, amid widespread disagreement about much, a majority agrees on one thing. They agree that it's not a fair deal or a new deal; it's a raw deal. Bernie [Sanders] is calling for revolution. Donald is threatening devolution. What animates many supporters of both is a belief that the regular Joe or Jane is not a part of anything that's good or that has any upside. So to me it begs a central question: Are there conventional steps that, if taken, would address many of the concerns of the frustrated majority? Or is this a moment where it just gets worse unless we are revolutionary or devolutionary?

Truth in advertising: I am biased. The first shaping of the neoliberal synthesis was done by Paul Tsongas, the late senator from Massachusetts. President Clinton operated under the framework, but Tsongas hammered it out. And I was on the Tsongas staff when he did so. I was 27 and wet behind the ears, and had nothing to do with its first construct. I did, however, spend a lot of time thereafter running down a lot of rabbit holes and coming to appreciate what he was talking about. So when I say that this framework has the right stuff to deal with today's woes, know that I am definitely not an impartial observer.

What does the Tsongas brand of neoliberalism have to offer? Tsongas emphasized hands-on pragmatism in lieu of steadfast wedding to ideology. Pragmatic approaches to problems delivered progress; ideological dictats sent you down hopeless rabbit holes. Let me give you a real-world example, circa 1979. We were bailing out Chrysler—this is the first bailout, not the most recent one—and the firm's financials made it clear that embracing business-as-usual practices would doom the company. The strategy of the Senate Banking Committee was to take all the stakeholders, force them to cough up something significant, and make federal government loan guarantees the icing for Chrysler, not the cake. And big concessions were absolutely necessary. The firm had to weather recession-level sales rates and endure the onslaught of Japanese cars that were cheaper, more fuel efficient, and a lot better. Concessions from the workforce, Tsongas asserted, should amount to a three-year freeze on hourly wage rates.

In the Senate hearing room, in the media, and, later that day in his office, amid 25 *big* UAW workers, all hell broke loose. I remember being in the Tsongas Senate office fearing for my life. The UAW was dumbfounded that any Democrat could demand something of the rank and file. It was heresy. The fact that the company, in its current construct, was doomed didn't seem to matter.

How militant were unions in the 1970s? How many of you remember the Woody Allen movie *Sleeper*? The protagonist is admitted to a hospital to get his ulcer fixed. He wakes up and it's 250 years later. He confronts a dystopian society, the tattered remains left after a nuclear war. Our 1970s protagonist muses aloud, "So was it the US or the Soviets that started Armageddon?" His guide to the new world explains, "Neither. A man named Albert Shanker got ahold of a nuclear device." Anyone remember Albert Shanker? He was the president of the New York State teachers union. Obviously, he was a visible, volatile, militant union leader. If we remade *Sleeper* today, who could we possibly substitute in that movie line for Albert Shanker? Nobody! There's no union leader anywhere near that virulent, visible, and crazy. But if we wanted virulent, visible, and crazy, we have a lot of people we could put in place, right? We've got Rush Limbaugh. We've got Glenn Beck. We've got Anne Coulter.

The Tsongas pragmatic perspective in the late 1970s compelled him to combat ardent lefties. Tsongas pragmatism in 2016, to my way of thinking, demands similar combat. But clearly, the ideologically driven notions that directly conflict with the reality of the situation now largely emanate from the other side of the aisle.

How can I claim that neoliberalism—a pragmatic, market-friendly, but social-equity-concerned approach—has something to offer today? Simple: we failed to use pragmatism for nearly a decade. Instead, Congress, controlled by Republicans, has been in the ideological thrall of Marx.

Consider Mitch McConnell. McConnell declared in 2008 that his number one job was to make sure that Obama was a one-term president. . . . [In his view,] his job was not to maximize the social welfare of the citizens of his state; his job was to make sure that Obama failed. To do so, he declared war on any White House initiative. And paralysis ensued. This is Marx, pure and simple. Many, I suspect, are not prone to believe me. So I went to the archives and identified the key rhetorical phrases. I present them verbatim:

> Your proposition may be good, but let's have one thing understood,
> —whatever it is, I'm against it. And even when you change it or condense it,
> I'm against it.

Now, that's pure Marx—Groucho, not Karl. Groucho, in his aptly named film *Horse Feathers*, offered up this tactic, sung with a harmonica. It is a perfect melodic aria describing the US political state of affairs since roughly 2012. And precisely because stalemate has been the rule for so long, I suspect a pragmatic approach could do wonders—hence my willingness to assert that evolutionary notions, informed by a neoliberal pragmatism, need to be given a chance, before we contemplate the nuclear option. Remember, in *Sleeper* it sure didn't work for Albert Shanker.

Larry Summers put it eloquently a few months back in the *FT*: economists overemphasize the "no free lunch" notion. In current circumstances, US policymakers are staring at a lot of low-hanging fruit. What are gains from trade? I am not talking about international trade; I am talking about gains from political trade. Say we sit down to bargain and contemplate a swap. Imagine my team is 10 times better off, post trade, and your team's circumstances marginally improve. If my dictat says, "Anything that is good for you, I can't do," then I don't make the trade. Well, for nearly eight years anything that improved Obama's lot was verboten, no matter the general upside. We are almost certainly, therefore, well inside our production-possibility space. Low-hanging fruit abounds.

Monetary policy, of course, is the one policy arm not caught up in stalemate. It receives enormous scrutiny relative to, say, budget debates. Why? We all know the budget is stuck on dysfunctional autopilot. Monetary policy, in stark contrast, is very much in play. It's been the only game in town in the United States and abroad. Monetary policy does, however, have its ideologues, to be sure. A rational approach right now, I would argue, must allow for how complex inflation dynamics are relative to our simple—indeed, simple-minded—models suggest they are.

Do we need radical changes to monetary policy? I think not. We do, however, need to be clearer in our thinking. There are some simple notions that upon closer inspection don't hold up. Start with a Taylor rule. We can assert that u^* equals 5 percent and that π^* equals 2 percent. Embrace r^* of 2 percent and the fed funds today should be 4 percent, not 0.4 percent. OMG, we are off by an order of magnitude! The Taylor rule says rates are too low, and the pace of jobs growth, using a simple model, appears much too strong. If we assume no rebound for labor force participation, we can support about 100,000 new jobs per month. The trend of the past several years is more than twice that pace. Our simple model tells us bad things will surely happen if this keeps up. What are those bad things? If employment grows too quickly, unemployment falls too far, and wages accelerate too rapidly, we get a big inflation problem, and it ensures we must endure a recession, to rid us of this inflationary excess. Simple, neat—and likely to be wrong.

To make the "too hot" case, a litany of assumptions has to be made about participation levels, slack wage dynamics, labor productivity, and inflation expectations formation. All of these concerns are highly problematic. Jon Faust, a colleague of mine at JHU, coauthored a paper delivered at Jackson Hole in August 2015.[2] The paper notes that *disparate confounding dynamics*—essentially items like the ones I listed above—habitually thwart the predicted changes in inflation that simple labor market conditions predict. Once we allow for these other issues, it is not clear at all that strong jobs growth for the next few years would turn out to be anything but good news.

Let us explore some of these disconnects: what if participation rates rebound? Unemployment may fall but wages may not accelerate. Unemployment may fall, wages may accelerate, but labor productivity may also accelerate, so there are no unit labor cost pressures. Unemployment may fall, real wages may accelerate faster than labor productivity, but wages may recover some lost share of national income instead of generating accelerating inflation. Unemployment may fall, wages may accelerate, real wage rates may accelerate faster than labor productivity, and inflation may accelerate, but after four years of being under forecast and under target and two years meaningfully under target, a couple years above target would be fine.

How might participation rise amid an aging workforce? Allow for a partial recovery for prime-age participation and the overall participation rate can rise for two years. Indeed, this could accommodate two years of monthly jobs growth of 200,000, with the jobless rate slipping to 4.5 percent.

Let's say you don't have that much of a rebound and the unemployment rate goes to 4 percent. In the wildly deflationary world that we've been confronting, it's not ipso facto categorical that we get a big acceleration for wages. So it may turn out that the participation rate rises some, that the unemployment rate falls more than you thought it would, but you still don't have an acceleration for wages.

What if wages accelerate, and what if wages accelerate adjusted for inflation faster than labor productivity? Now, this is the Holy Grail. This is where you run headlong into monetary policy doctrine. If real wages rise faster than labor productivity, we suffer upward pressure on unit labor costs, and this inexorably leads to accelerating inflation. Even left-leaning economists acquiesce to this linkage. How many times have you heard the following: "Well, you know we want productivity to accelerate so we can get real wages to accelerate, but we understand that we can't let real wages run faster than productivity, because of the clear inflationary implications."

Okay, but I went to a seminar on a different topic a few weeks back. At this seminar we lamented the fall in wages as a share of national income. You all need to appreciate this delicious irony. The only way wages can go up as a share of national income is if real wages accelerate faster than labor productivity. It's an accounting identity. It's de rigueur now to point out that real wages have been falling or didn't keep up with productivity since 1980. From 2000 to 2013 you go from 57.5 percent all the way down to 53 percent, as labor's share really gets nailed. It at 54.4 percent now—we've had a one-year rally.

Let's posit that over the next two years we allow wages as a share of nominal GDP to go from 54.4 percent to 55.4 percent. What would that mean for average hourly earnings? It means that if inflation is around 2 percent, wages will climb 4 percent with productivity at 1 percent. In this construct, wage earners' share of national income climbs modestly, with 4 percent wage increases, and nothing of any substance happens to inflation.

Now, alternatively, we could begin to see some pressure on inflation. What's inflation done recently? Well, it's been below 2 percent for four years. The core rate's been below 2 for four years. We use the PCE deflator core and we're talking about 1.3–1.4 percent over the last two years. Well, you know, you want to be symmetric—how about 2.7–2.6 percent over the next two years? And I have a calculator that does this for me: it sounds like it averages to 2. So if we're not apoplectic about 1.3–1.4, we don't have to be apoplectic about 2.6–2.7 for a couple of years. If that unfolding allows for some of this to go on with participation, with wage earners' share, we could find ourselves in a situation where as a consequence of leverage—and I am not talking about Minsky's leverage, I am talking about leverage in the labor market—as a consequence of leverage in the labor market, wage earners could get a rising share over the next several years. And I see that as vanilla ice cream monetary policy rather than a radical set of steps that would need to be taken, and if that unfolded at the margin it might be positive, in fact—reasonably positive.

My point? One need not leap to radical solutions. Pragmatic approaches can steer us to a better place. We simply need to be *for them*, not *against them.*

NOTES

1. Neoliberal in the sense that was used in the United States in the 1980s, not neoliberal as it is used in the UK or Continental Europe.
2. Jon Faust and Eric Leeper, "The Myth of Normal: The Bumpy Story of Inflation and Monetary Policy," prepared for the Federal Reserve Bank of Kansas City Economic Policy Symposium, Jackson Hole, Wyoming, August 27–29, 2015.

Q&A

Q: Actually, I have two factoids. I saw a report that said that the cross-tabs . . . show a large proportion of voters in the Democratic primaries self-identifying as liberals. I don't think you can conceivably imagine people responding that way eight years ago. . . . The second thing is, my sense is that the Reagan supply-side revolution that was appropriately labeled "voodoo economics" in 1980 has now essentially discredited itself empirically. Nobody actually believes that, even though you see it—

RB: Just to interrupt, every Republican candidate is running on that.

Q: Yes.

RB: I think you are one election away from being able to say what you just said. All right, so the question is, or the statement was, isn't it true that a lot more people are self-identified as liberals? I think since Bernie made it okay to be a socialist, it's clearly okay to be a liberal. And the second point is, hasn't supply-side voodoo economics been demonstrated to be false? Well, it was demonstrated to be false in 1984, but it's been the centerpiece of the Republican platform ever since, and so I was not being funny when I said we're one election away from being able to say that. . . .

I'm going to tell you an Art Laffer story. This is true. I'm in the Pentagon, . . . and [Michael] Mullen is the head of the joint chiefs at the time, and we're giving a briefing. There are six of us. I was in charge of speaking about energy, and I stated, you know, painfully obvious things, and pointed out that . . . we spend this enormous amount on defense associated with the Middle East, and it might be nice to make a big push toward solar, battery, and everything and make our interaction there a lot less economically important. And Art Laffer, who was there, got up and banged the table, and he goes, "My god, don't you know any [Ricardian theory]? Don't you know anything about gains from trade? I mean, they've got this oil and we've got this. . . ." And I'm sitting there looking, and then one of the other economists there who was an ardent Republican stood up and looked at Art and said, "Art, we're in the *war* room." You know: wars triumph gains from trade.

When Art drew the Laffer curve, the top [tax] rate was 70 percent. Now, I'm not saying it was right then. I didn't think cutting taxes from 70 to 60 raises revenues. But 70 percent—it was an interesting notion. You knew he was right if you went from 70 to 100—very few people go to work if 100 percent of your income goes to taxes. But if you look at where the tax rates are now, it's theater of the absurd to profess that revenues would go up if taxes were cut. . . .

I worked at the Congressional Budget Office for a couple years. Congressional Budget Office conventional wisdom will tell you that we have a big debt problem. [The ratio of] debt to GDP is going to go from 73 to 105 percent of GDP over the next 25 years, and that's a problem. They don't mention the fact that it's 230 percent in Japan and their bond yield is negative, but they insist it's a problem.

Why is it a problem? Well, if you look at their numbers, the primary deficit, according to their forecast, is 1.5 percent of GDP in 25 years. So how the hell does the debt go up? The reason the debt goes up is because they have an interest rate that's 50 basis points above the real GDP growth rate—the real interest rate. Notwithstanding the fact that for the last 50 years, the real interest rate that the government borrows at is 70 basis points *below* the real growth rate. And all you have to do is say, I've got an idea: I'm going to run your numbers but I'm going to use the historical 50-year average for *r* minus *g*. There's no deficit problem. There's no debt problem. It's *gone*. It's completely captive to your assumption about what the real growth rate is versus the inflation rate.

Why do I bring that up? Because you could cut taxes and end up with a much smaller deficit problem than anybody thought—not because you know anything about taxes but because the forecast of deficits is all wrong because they've got the wrong *r* minus *g*. I would propose fiscal stimulus and say that we had a multiplier of four, and all that really would be is I would be changing *r* minus *g*. . . .

You know, I wondered why we were in the Pentagon. Why did they invite us there? And of course [Mullen] was just meeting with people he thought were politically connected, because he was worried about the defense budget. He didn't care about our analysis. Another question . . . ?

Q: Do you think the obstructionism of McConnell would have just surfaced if somebody else was the Republican leader of the Senate?

RB: Do I think that McConnell's obstructionism is idiosyncratic to him or is it generic to the party? Boy, you know, we've got a lot of data here, don't we? It looks like it has been the strategy. I must say, the obstruction in terms of the Supreme Court appointment, to me, is striking, because you didn't have to do it, right? I mean, you were in a perfect position to play nice-nice and turn him down. So it actually was quite, quite striking. Game theory—I can't get my way around it. I don't know. . . .

Q: You talked about tax policy and individuals. How about tax policy and corporations . . . ?

RB: What we've got, obviously, across a lot of categories, both tax policy and monetary policy—and I apologize for this; I skipped a bit of the speech—but when you put things in an international context, increasingly we've got to state the brutally obvious. We have large multinational firms that can pick and choose where they do what, and we have national tax codes. Eighty years ago, it was the reason all the rivers were so polluted, because you had various municipalities that had individual control and you couldn't come to a common solution. I imagine—I mean, if you want to dream dreams—you might have an election in which someone was actually in charge across categories of government, a consequence of a particular one or two people who one side put up. In such a circumstance, you could actually have tax overhaul on both sides. But I think the problem you've got, again, is, you're dealing with how to do it within the context of the rest of the world, and I don't pretend to have any expertise.

The reason I should have added this on the monetary policy side, especially in light of the nature of this conference—you all remember the taper tantrum? All right, so [Fed Chairman Ben] Bernanke gets up and says, well, maybe in our lifetime interest rates will go up again. And everybody decided, oh, we're going to be okay—we're not Japan. And quite spectacularly in the US, the 10-year yield over six months went from 1.6 to 3 percent. The yield on the two-year went from 18 basis points to 68 basis points. And in that environment, you began the process of wild reversal of the capital inflows into the emerging world. So something that was mildly important in the US—he gave a speech, some of our interest rates went up—caused this disgorging of money into the developing world. And a lot of those countries—you can argue whether it was China or Bernanke, but some combination of China and Bernanke—went into deep recessions.

Now, how do you conduct monetary policy? You can't pretend that you have a large closed economy where you can model what the 10-year yield does to housing when in fact what the 10-year yield did was bring hundreds of billions back out of Brazil, out of much of the developing world, and those economies plunged. So in a global context, I think you'd have to deal with both the tax and the monetary policy.

Q: How do you account for that in the Taylor model?

RB: How do you account for that in the Taylor rule? Very good question. First of all, the whole idea that you can have an equation that tells you what to do—you know, all of my career, that's been demonstrated to not be true. You can't get out from under judgment. Now, if you say in the current circumstances I gave you a long list of how employment in the US could do better than a simple Taylor rule suggests you might want to risk, we didn't even talk about what happens globally if you respond and how that might negatively affect things in the US. And, of course, we didn't talk about the fact that you're not just designing policy associated with the modal outcome—you know, what's most likely to happen—you are also designing policy on the what-ifs. That's one of the other big pieces. Again, quoting my buddy Jon Faust, he said, imagine you are in a plane and the pilot comes on and says, "We're cruising at about 100 feet, and it looks pretty good. Right now, the wind shear is such that there's an equal chance that we'll get blown up 100 feet or down 100 feet." Well, you might say the risks are equal, but when I multiply them times the consequences, I am a bit more concerned about the down 100 feet than I am the up 100 feet. And in the circumstances right now, that's not a bad description of the US. . . . If it turned out that the economy was much stronger and employment did much better and inflation accelerated somewhat over the next four years, I don't even know if I'm upset but I'm certainly not apoplectic; whereas, do you really want to find yourself trying to figure out how to make this thing go when you start with the funds rate at 37 basis points and it's turned back down? So when you put global and risk context in, the Taylor rule just isn't going to tell you what you need to do.

Q: . . . I think a lot of people now sort of have the view that in the US and all developed markets . . . it's basically impossible for central banks to ever raise rates or create inflation. You have every central bank out there that says we want to create inflation—all the developed-market central banks that say we want to create inflation. What happens if they're right? What happens if they get what they want?

RB: If they get inflation, you mean? Then they'll be happy.

Q: How do markets sort of deal with that?

RB: First, a couple of things. I must have had 25 screaming matches with a gentleman who is regularly on CNBC (who will remain nameless) for about six years. I think it's important to realize that I'm anxious that inflation might take off. To me, it had a more reasonable sound to it about six years ago. It's been *spectacularly* missing in action now for a very long time, so much so that I think it would be somewhat welcome. The point is, if you go back and look, it's not true that you "let the genie out of the bottle." There isn't any sort of self-reinforcing positive second derivative associated with an inflation that begins to move up, and if you find yourself in a position where you have to deal with an inflation rate that's higher than you want and enduring, . . . you can tighten 1,000 basis points. Whereas, if you find yourself with the economy turning down again, you're faced with all sorts of painful negative rates, buying the 10-year, helicopter money—all sorts of stuff you really don't want any part of. That's the asymmetry to me.

You know, if you think, "I'd much rather have monetary policy in a firmer position," then run fiscal policy right now—have a big fiscal thrust right now—and if you argue it's too much of a good thing and it requires *some* monetary tightening, maybe you'd actually find yourself with interest rates that were more traditionally able to respond to a declining economy.

Q: How can you respond to rising inflation when you have $19 trillion in debt and the government is the biggest debtor and you have to pay the interest on that? . . . You lose that degree of freedom.

RB: When I look around the world at countries with much higher debt, debt-to-GDP ratios, and deficits [relative to the United States, that are] much lower in terms of real economic prospects, and I look at their interest rates—look at Italy: Italy right now is borrowing for 10 years at 120, and they don't even have a central bank that really has their back—although at least [ECB President Mario] Draghi is Italian. And when you look at Japan—Japan, to me, is the most spectacular. Japan has raised the VAT four times over the last 25 years, and each time they raise the VAT, the economy tanks and the debt-to-GDP ratio goes up. I'd lower the VAT—keep cutting it until the bond rate is 3 percent. I mean, it's been absolutely perverse now for 25 years, and their debt-to-GDP ratio, what is it now—235, something like that?

I have to stop now. . . . Thank you.

BARNEY FRANK

Former US Representative (D-MA, 4)

2016—The Year Class Warfare Became Respectable

I am very happy to be at this event. It's an organization that I have long admired, respected, and benefited from, so I thank you for the invitation. Please, if you are still eating, I have no audiovisuals, there are no graphics—you don't have to look at me. Don't twist yourself around. Please continue to eat and don't worry about turning around. I spent 32 years speaking to people on the floor of the House of Representatives, and if you watched that, you know I was getting varying degrees of attention. So there is no problem. I once was speaking and a baby started to cry, and I said, to be honest, that talking while the baby was crying was not nearly as disruptive as talking while Newt Gingrich was listening. So I want you to feel relaxed.

I am actually going to be picking up, to a certain extent, where I left off in the comment that Peter Eavis asked me to make, and that is, I think there is not a sufficient understanding of the enormous upheaval, I would say, in the political culture of this country that's taken place. It's an extraordinary election year. Obviously, the antics of the Republican candidates in particular have taken a lot of that attention, and I should say, I apologize: I did ask that I be able to speak before you were all through. I am meeting some friends for dinner tonight at the Trump Tower, and I do want to get there on time.

Political change, particularly in America, doesn't happen rapidly. But I think it has changed drastically, and if people want to ask me questions when we get to the question period—and it may be about the financial reform bill, which I would tell you I refer to as the "financial reform bill," and not by the name that is most commonly used, because in the history of the world, I think people who refer to themselves in the third person come across as kind of pompous twits. The only human being I have ever observed to be able to refer to himself in the third person and not look a little bit ridiculous was Charles de Gaulle. Not being General de Gaulle, and not wanting to raise my arms over my head, I am going to refer to it as the financial reform bill.

But I think that in the interpretation of what's going to happen going forward, there's been a failure to understand this, and that's why I titled my talk "The Year that Class Warfare Became Respectable." For many years, those of us who have been trying to put some attention on the distribution of wealth in America have been told that we are just wrong—that that's class warfare. We don't do that in America. All we needed to do was to focus on growth, and that was made very explicit. There was a metaphor that was used—I will tell you, I am a great believer in free speech. I think people ought to be able to call each other names, and I think the response ought to be to young people whose feelings have been hurt that they should get over it. But with regard to free speech, there are two changes I would make. One, I would make it a misdemeanor to use the words “pragmatic” and “idealistic” as if they were opposed: they are either interrelated or you are irrelevant. But I would also make it a felony to use metaphors in the discussion of public policy—that’s especially the case in foreign policy. What happens is, in my experience, people start debating the metaphor as if it was reality. And there was a metaphor that was very compelling here: the rising tide will lift all boats. John Kennedy actually said it, which gave the right wing some leverage in citing it. The argument was that if you simply work to increase the overall economic output, that will make everybody better off, and therefore you should not engage in public policies that seek to alter the distribution—one, because it’s not very necessary and in fact it’s counterproductive, because you will be interfering with incentives, and the argument was that if you began to worry about the distribution, you would be putting a drag on the overall increase, and the overall increase would take care of things.

Now, obviously this is an example. You start debating and yes, the rising tide does lift all boats. I know that because I represented the most lucrative fishing port in America, the city of New Bedford, and I could see the rising tide go up and down with the boats. But the economy is not a tide; people are not boats. In fact, I tried to get into the metaphor experiment by pointing out that if you are standing in the water on your tiptoes because you are too poor to afford a boat, the rising tide goes up your nose—i.e., if you don’t have a boat and you are in an area where everybody is getting richer, you are worse off.

But still, it was frustrating. That argument that class warfare was un-American and counterproductive and unnecessary—all three—was a serious problem. For much of my tenure in Congress, one of my greatest frustrations was the popular support that existed for repealing the estate tax, a tax which affected a tiny sliver of people, but you had this “I could be rich someday and that’s not what we do.” As an example of this shift I am talking about, that’s over. What’s striking about this year—and obviously, the personalities, the very interesting personalities, in both fields—I mean, it’s very clear that whoever gets elected president this year will be a person who, 20 years ago, could not have been elected for one reason or another—gender, age, ideology, commitment to rationality—there are a series of things that would have been a bar that no longer appears to be. But as you look at that, look at the underlying argument, and this is the year in which we have written the obituary for the notion that worrying about the distribution of income is class warfare and unacceptable.

I cannot overestimate the extent to which many of us were frustrated by this. It was clearly the Republican side, but a lot of the Democrats believe that too. And it’s pretty much over. Obviously, on the Democratic side, there is an agreement between Senator Sanders and Secretary Clinton that we need to do more to deal with the unfairness of the distribution. But what confirms it is, even on the Republican side—and not just with Donald Trump: it’s happened because the Republicans faced a real dilemma this year in campaigning against Obama, and it is that the American economy . . . has done better than any other developed world economy since the crisis—and, in fact, it’s a crisis that Obama inherited.

Well, what do you do if you are a Republican campaigning against a party which has presided over a very good, overall, economic pattern of growth? Interestingly, the answer is to stress that the growth has not been fairly shared, and that’s what’s really quite striking: that if you listen to the Republican rhetoric, they are also engaging in what used to be called “class warfare”—namely, in fact, denigrating the importance of overall economic growth and saying no, that’s not valid, we need to do more to alter the shares.

Now, I am, as a Democrat, a long-term optimist, and as a liberal who wants to see government used even more as an instrument for social interventions and economic interventions, I am optimistic for two reasons. One is that the Republicans have gotten themselves in such a terrible situation. But two, the fact that we have this agreement now that overall economic growth is not enough and that in fact you have to focus on how you make sure the growth is most fairly shared, in almost every instance, that's a Democratic argument—that is, every public policy that would be relevant to dealing with the distribution is our issue. In a primary campaign, when people on the Republican side are appealing to each other, that's one thing, but if you are the Republican nominee or a Republican senator or representative going forward, I'll tell you two arguments that are hard to make simultaneously: (1) we have not done enough to see that lower-income people and middle-income people have participated—that too much of the increase has gone to the very rich; (2) let's reduce taxes on the very rich. That's a very difficult tightrope to walk: let's not do the minimum wage, let's not make it easier for people to go to school. The terms of the debate have shifted.

This frustration, for me, was that for many years, even where the Democratic position, the *liberal* position—we'll leave aside the partisanship—where the liberal position was more popular and specific, there was a headwind against us, which was the general view that you looked at the overall economy and that class warfare was a bad thing. That's now reversed. There will now be, going forward, a general predisposition—the argument will *begin* with the notion that more attention has to be paid to increasing the extent to which that new wealth is shared better than it has. It will have one very specific—it's already had one very specific—relevance, which I want to talk about for the rest of this, which some people here may be less happy about.

I'm not now in Congress and I don't have the day-to-day information that I used to have, but I am pretty sure of this: I do not see how the legislation implementing the Trans-Pacific Partnership [TPP] can pass. It is a casualty of this notion. It's not just that the political culture has changed. I've been struck by a change in the economics profession. Once again, for me, 20 years ago, it was frustrating that even many liberal economists would—somewhat patronizingly, I must tell you—say to us, "Well, yes, we understand you good liberals only want to help the poor people, but you know, that minimum wage—that could do more harm than good." It was certainly not intellectually respectable 30 years ago, the minimum wage.

In addition, we were told that trade was, after all, a pretty good thing, and that this pandering to special-interest protectionism by being worried about the impact of trade wasn't very good. There was a kind of fairly casual assumption that, oh yeah, we'll take care of those people—we'll have trade-adjustment assistance. I am not a theologian, but I believe if you looked at some of the people that I once represented who had been engaged in some of these industries where they were hurt by imports, that getting into heaven for them would probably have been easier than getting trade-adjustment assistance. And that's also changed. I was particularly struck in reading—I don't know, you get a little behind, but either this, the previous week's issue, or two weeks ago—an issue of the *Economist* acknowledging that . . . they have seriously underestimated two things: first of all, the extent to which trade has contributed—not as the major factor but has *contributed*—to the erosion of wages for people in certain categories, particularly manufacturing; but also and even more so, they have wildly overestimated the extent to which the people who lost their jobs would get the new jobs that were being created. I was in a discussion the other day and I had to say that the assumption that 58-year-old coal miners in West Virginia were going to succeed as programmers in computers was pretty unrealistic. And I think this is part of it.

The economics profession now understands this, because the answer with trade is that it does good things and it does some bad things. It's a rule of American politics; there may be others. Basically, . . . people complain about the special interest as if it was malignant factor. What it is is the way human nature works here, and probably everywhere elsewhere; namely, that producer politics outweighs consumer politics most of the time because people get most of their income by one form—what they produce gives them one form of income. Their consumer income is widely spread, so most people are more easily organized in defense of the harm that may come to them as earners than they are in defense of the benefit they would get as consumers. A professor at Yale University by the name of Robert Dahl wrote about this years ago, calling it the "intensity factor" in politics. It is often the case when you look at public opinion polls that the side that has the majority in the public opinion poll has much less political influence—not for any malign reason, but because the minority of the people on the one side care much more deeply than the majority of people on the other side, and they are the ones who contact their legislators.

The best example of that is, the single, pound for pound, person for person, most influential political organization in America today is the National Rifle Association. And it's not because they give a lot of contributions. Frankly, the most important constituents of the National Rifle Association are, on the whole, working class or lower-middle-class people. What the NRA does when a bill is going to come up that would interfere with their right to have these massively destructive weapons with very little check is have everybody who is in the organization write to their representatives and senators and call them and say, "Don't do that." And the great majority of people think it would be a good idea to pass the law, but they are busy with other things. But that's where we are in many cases, and we're now there in trade. Yes, a lot of Americans benefit from the lowering of prices from trade, but the number of people who are convinced that they have lost income because of it—and that number is, I agree, more than, in fact, those who have—has now become very powerful.

Now, that's operated for a while, but there was an offset. The general cultural views do have an impact. And in fact, for a while trade got by, even though there were a lot of people unhappy about it and could look at what it did economically, because it was the right thing to do. Respectable opinion—that counts for a lot. People like to be respectable. People, particularly upper-middle-class people, like to think that. What's now changed is that the *New York Times*, the *Economist*, and other voices of opinion that enlightened middle-class and upper-middle-class people can go to have now said, "Yeah, we are on the whole in favor of trade, but it does have these negatives." And that's what you see this year. I mean, people have said, "Well, it's going to get ratified after the election." I don't see how people can look at the progress of both Senator Sanders and Donald Trump and the extent to which those running against them have moved toward them on the trade issue and have any sense that [the TPP] is going to get ratified.

And let me refute the hyper and inaccurate cynical view that "Oh yeah, that's just until the election." Once the election is over, they will all vote that way. One of the things people should understand in the modern communications era, with the Internet and everything else, is that the phrase "It's an election year" is now obsolete. It is *always* an election year. . . . It may be it used to be that you could say something in February of the odd year and people will have forgotten it by November of the even year, but it will be on YouTube. It will be repeated. I mean, . . . we're videotaped here, but I have gone to some groups and people say, "Well, this one's off the record." Yeah. "Off the record" is when I talk to my husband as one of us is getting out of the shower. Anything else, I will not say anything to almost anybody if I am not prepared to—I used to say "read it in the paper," but that shows how old I am—if I am not prepared to have it trumpeted on the Internet. . . .

I would say politically—not necessarily economically, but politically—the question of how income is distributed has become far more potent than the question of growth. If you had to choose, if you were a politician today, would you take credit for adding half a percent to GDP or would you rather take credit for altering by a couple of percentage points the shares of income as they go to the people? You'd rather do the latter from the purely political standpoint. So I'll make you this prediction: the trade bill is not going to get implemented in its current form. I do believe that trade properly done makes sense, so I have a proposal. I have written to the president about it, or I did an open letter. . . . For those of us who believe that the distribution [of income] is an important point, the only way you are going to get a trade bill passed, either implementing this one or going further, is to make a deal.

And the deal has to be this. I am a great supporter of President Obama. I did have this one criticism. He said that with regard to trade, "I acknowledge that there are people who are going to get hurt, but I am in favor of helping them, not just by trade adjustment assistance narrowly, but by supporting labor unions, by the minimum wage increase, by a massive construction project for infrastructure that will put people back to work." So yes, much of what the president says he wanted to do would help alleviate the negative distributional effects on some people in the trade bill. His mistake, though, was to say he was going to do them one after another—that first he was going to do the trade bill and then he would do the other. My criticism was that he was conferring on the people who were most in favor of the trade bill—the business community, on the whole—a favor without asking them for anything in return. That is, the elements in the American economy that have been the most strongly in favor of expanded trade are the ones who are also most determined to break unions, oppose a minimum wage increase, cut back on other programs, reduce Social Security—I guess that's called "controlling entitlements," basically dealing with all those free-spending 82-year-old women who are rolling, apparently, in somebody's idea of luxury.

What I would hope the president would do—if not this president, the next president, if she's inclined to do trade—is to go to people in the more reasonable part of the business community and say, "Okay, here's the deal. We can have a trade bill, but here are the things that have to be in it," not "We'll go first and then you'll give me that." So I predict you are going to see after the election—and I expect at this point, given the way it works, the likeliest thing is that Hillary Clinton will be president and there will be a good Democratic majority in the Senate, more Democrats than there now are in the House. I am hoping—by the way, I'll be partisan now—for two results in November: (1) a Democratic working majority, but (2) a Republican Party, a responsible conservative leadership, that now understands that they waited too long to take their party back from some of the people who were more extreme.

At any rate, I do think trade will be on the agenda next year, but there will only be a movement in trade if there is a package of measures that expand trade and at the same time deal with what is now widely acknowledged by economists and by others as a negative impact on some people in a way that diminishes their distribution. So that, I think, is clearly a factor in this year's politics. People haven't noticed it yet, but I think once the election is over people are going to see it.

With that, I am going to throw this open for questions and comments. I have the suspicion that there may be some topics other than the one I talked about that people may have on their mind. They may still want to talk about financial reform or the election or whatever—please feel free. And let me just say, for some reason moderators sometimes say, "Please put it in the form of a question." I never understood that. It is no harder for me to respond to a comment than to respond to a question. And if people want to make a comment and have me not respond, that's good too.

Q&A

Q: TPP has been very much fast tracked, hasn't it?

BF: Yes, but now the legislation implementing it has to go—that is, it's a two-step [process]. First, the president gets the authority to negotiate. What he has gotten is the authority to negotiate a deal, and what "fast track" means is, that deal then comes before the Congress for ratification. Both houses have to vote for it but they cannot amend it. . . . So the deal does not go into effect unless it is passed by both houses of Congress, and that's not going to happen without some substantial changes.

Q: That's not breaking the deal with the other countries though?

BF: Who made the deal with the other countries?

Q: Well, the administration.

BF: Okay, and who has got to pass the bill?

Q: Congress.

BF: Okay, what was your question? . . . By the way, in the current mood, if you want to undermine a bill that you are trying to get passed, go to the United States House of Representatives and say, "Please, we owe this to Indonesia. You gotta do this for Japan. Do you want me to lose credibility with Japan?" So that's the political reality.

But also, in fairness to the members of Congress, there's a little bootstrapping going on here. If you go back to TPP, fast-track authority is sold on the premise that you are giving us a right to make a deal but you have the right to say yes or no to the deal. Having gotten the bill through on that basis, it is really not legitimate, not intellectually decent, to go back and say, "Now you gotta do it." That's the glitch that they have. But it's also the case that . . . the economic reality will be there.

Q: We've been working here for two days and I haven't heard any discussion of the Panama Papers, but I was wondering if you would like to comment on how that might impact, or not, the implementation of Dodd-Frank.

BF: I don't see it as having a major effect. . . . I will say this: I think some of the panelists underestimated the extent to which the kind of political, cultural change I am talking about has made it easier to get the bill implemented. There's no question that those who were trying to slow it down are at risk. I would say this: it depends on the next election. If the Democrats win the next election, and I think that means Hillary Clinton, I think you're going to see a lot of the resistance to the financial reform bill diminish. Hope still is alive that they can roll it back, but [four more years of Democratic leadership] and I think rational people in the business community are going to say no, this is going to get too deeply involved.

To the extent that the Panama Papers have an impact, it will be to say, "See what's going on." It will strengthen the political hand of those who want to be tough. I must say, it's an interesting fact that there do not appear to have been any Americans involved. I was in Manhattan, and I could almost feel the sigh of relief. But what it will have an impact on is—and I believe again that this is something that may be high on the Democrats' agenda—changing the tax code to make it harder for American businesses to do things that reduce their United States tax obligation by relocating, to some extent, overseas; or, not by relocating overseas, but by sending their mailing address overseas while remaining here. I think it will have some impact in this effort. The administration just announced tougher rules on inversions, and any chance a congressman is going to be able to cut those back, I think, was substantially diminished by the Mossack Fonseca revelations.

Q: Mr. Frank, there is a narrative out there that has been out there since the financial crisis that links you to the GSEs in a way that contributed to the financial crisis. Are you familiar with that narrative, and is there any truth to it?

BF: Yes, and that is absolutely the opposite of the truth. I will recommend the appendices in my book [*Frank: A Life in Politics from the Great Society to Same-sex Marriage*]. Here is what you have. Well, I'll first give you the history. Yes, obviously a major factor in the financial crisis was loans being made to people for mortgages—mortgages being given to people who shouldn't have gotten them. And the right-wing narrative is, well, it's because liberals made banks lend money to poor people. One of the things they cite is the Community Reinvestment Act. I will tell you, there is not a respectable opinion on that one. Even the Republican members of the Financial Crisis Inquiry Commission repudiated that. The Community Reinvestment Act has nothing to do with the quality of loans.

The other argument is that we pushed Fannie Mae and Freddie Mac into it, and I was, in 2003, wrong about Fannie Mae and Freddie Mac—too optimistic. But specifically, what I was saying at the time was that the bad loans being made for mortgages were not sufficient to pull down the full operation. My major focus then—there's a famous quote about rolling the dice—was, do more multifamily housing. And by the way, the Fannie Mae and Freddie Mac multifamily unsubsidized housing portfolio always made money; it was never in trouble. In fact, my position was that we should be doing more rental housing as an alternative to homeownership for people who couldn't afford it. I was always skeptical of the notion that we were going to get poor people to own homes. I mean, it's almost definitional: if you live in New York and you own a home, you're not poor. It's kind of hard to maintain both being poor and owning a home in New York, unless you were talking about a massive level of subsidy.

Here is the history. Liberals, on the whole, became aware that there were abuses in the mortgage process. I'm not claiming prescience; it's not justified. It wasn't because we saw this precipitating a crisis; it was as a consumer protection. In 1994, which is the last year the Democrats had both houses of Congress before the Republicans took over for 12 years, Democrats passed a bill, the Home Ownership and Equity Protection Act—HOEPA was the ugly acronym—and it gave the Federal Reserve the power to regulate mortgages to prevent them from being given to people who shouldn't own them. Obviously, we were already under the influence of securitization, which was discussed in the panel. It took away the lender's incentive to be careful. Alan Greenspan—and he later admitted he was wrong about this—said, "No, I am not going to use those powers." He declined to use those powers. He said leave it to the market. When that happened, some states then decided on their own to regulate the granting of subprime mortgages, including Georgia—it wasn't all just liberal states.

At that point, the major lending institutions and the small ones went to the George W. Bush administration and said we can't have this. So George W. Bush, through his comptroller of the currency—Gary Clark, who was a Clinton holdover, but this was a Bush policy—used the federal powers of preemption and put out an order that said no state could regulate the banking activities of any nationally chartered bank. That is, the states could enforce the building code but they could not regulate anything about banking. So in that one gesture, the Bush administration prevented any state from regulating these. Many of us in Congress tried to stop that, but we didn't have the votes—the Republicans were running Congress. In fact, the comptroller of the currency at that point sent out a DVD to state-chartered banks saying hey, why don't you switch your charter to me, 'cause then you can't be subject to these pesky kinds of laws. It was sort of *Thomas á Becket*, with the comptroller of the currency as the king and the states as Thomas.

Then we tried to pass a federal law to regulate and stop these mortgages. . . . I am going to give you a little homework. The Democrats took over Congress in the 2006 election. In 2007, I became the chairman of the committee [House Financial Services Committee], and one of the things I did was to move a bill to prevent these subprime mortgages. I refer you to the November 7, 2006, editorial in the *Wall Street Journal*, in which I am harshly criticized for interfering with the market and preventing these minorities from getting loans. And it's extraordinary—I make them very angry, and sometimes they lose it when they get too angry—the lead line in the editorial was, "Why is Mr. Frank picking on these? They are doing very well. Eighty percent of them are paying on time. How's that for a good banking loan statistic—80 percent." And they blocked us. We weren't, until 2009, able to stop them. So there was a consistent record on the part of the conservatives, blocking us from trying to get things done. We got the bill through in the House, but they were able to block it in the Senate.

With the rise of the GSEs, it is true there was a time, I agree, we did not understand the extent to which the problems we saw in market—in single-family subprime mortgages—were going to hurt everybody else. But here's the deal on who is responsible for the failure to act on GSEs. The Republican Party controlled both houses of Congress from 1995 to 2006. They didn't do anything. In 2005, actually, the Republican chair of the committee, a man named Mike Oxley (who you will know from the Sarbanes-Oxley law), did get a bill through the House to regulate Fannie and Freddie. The Secretary of the Treasury liked it. The Bush administration thought it didn't go far enough, so the Republican Senate rejected the Republican House bill. Oxley tried to get the president to intervene. Oxley's quote in the *Financial Times*, I think the raciest they've ever had, was: "The bill lost because George Bush gave me the one-finger salute." But the fact is, from 1995 through 2006, nothing happened on the GSEs with the Republicans in control.

Now, I admit I was initially too slow to see that. By 2005 I was working with him. But then I refer you to Hank Paulson's memoir, and he says that in 2006 when he became secretary of the Treasury he called me up, because it was clear that we were going to take over the House, and said, "Can you help us do a bill to regulate Fannie and Freddie?" The first bill that passed the committee of any substance when I was chairman was the bill that Paulson asked for, putting Fannie and Freddie under constraints, and that's the one that finally was enacted in 2008 and put them in receivership.

So that's the answer: it was the Republicans and the conservatives who insisted on protecting the right of institutions to make these loans and securitize them where people couldn't pay them back. There was a bipartisan failure to see the problem of Fannie and Freddie, but it was the Democrats who finally looked into that and passed the bill. And they have been very successful. And the thing is, they needed to do that. This notion that it was liberals' excessive indulgence toward poor people and minorities that caused the crisis was a clear effort to protect deregulation. It was the alternative explanation to the deregulation. Actually, it was nonregulation, because we didn't so much deregulate as not regulate new things—securitization, all those things they came up when there were no regulations. So this was a Republican—a conservative—effort to say that it was the liberals who caused this and it was not a lack of regulation.

With regard to the *Wall Street Journal*, they now *thunder* against these subprime loans, but just go back and read them in 2006. I have said we've all known people who in their youth had an imaginary friend. With regard to subprime loans, the *Wall Street Journal* has an imaginary enemy. They imagine themselves as having been very much opposed to something which they staunchly protected. And I'm glad you asked me.

WALKER TODD: As I mentioned in the panel, I had to do an article, I guess about a year and a half ago, on Title XI of Dodd-Frank—that was the section 13(3) rewrite. Was there ever in the deliberations going into that any consideration given to just an outright repeal of 13(3), since the Fed, in my opinion, had heavily abused it? And the right answer is, as you said, do it through the Treasury. . . . That's the general line of questioning: was there any mention of stronger measures than actually were taken. . . ?

BF: Two points: first of all, at one point in fact, and I am not sure where the change came, but I at one point was on television, and I said, "Well, we repealed section 13(3)"—that's the grant from the '30s that let the Fed basically do whatever they want. The AIG thing is fascinating. AIG came to the Fed and said, "We're $85 billion short of paying off our credit default swaps." It was two days after Lehman, and Bernanke *and* Paulson—and this is the key point—together said, "We'll use the Fed authority to do the $85 billion." A week later, when Bernanke was telling us how much they were going to need for the TARP [Troubled Asset Relief Program] and enumerating so much for these banks, they said $85 billion for AIG, and we said, "Oh no, you already told us about the $85 billion." The answer was, "Oh no, no, no, this is a *second* $85 billion." AIG was not only short of the money to pay off a ton of credit default swaps, they had literally no idea how much they owed. They were $170 billion short of paying off rather than $85 billion.

My first response was, we were going to repeal the whole thing. We were then prevailed upon—my colleagues were; I was the chairman but I wasn't the king—that there needed to be some capacity. So the capacity that was added, there was some fight over this—Elizabeth Warren has been very helpful on this. What we said was, the Fed could, if there was a liquidity crisis, set up a facility that can lend, but not just to one institution. In fact, at first they said two, and we said no, it's got to be at least five—[that] was the new rule. If there was an institution that was illiquid but solvent they could make short-term loans. So yes, we might have been able to [repeal 13(3)]. The argument against it was there could be a kind of liquidity crisis. After all, the argument was that the failure of Lehman did cause a liquidity crisis for other institutions that were still solvent.

The one area where I don't agree is—maybe it will change in the future, and there was a time in the past when it would have been different, but in recent times, there has been a—I don't know how many Star Trek people are here, but there has been kind of a Vulcan mind meld of the Fed and the Treasury. It is at this point inconceivable: they will not differ with each other, and they will only go ahead if both will. . . .

By the way, for those who wonder whatever happened to bipartisanship, the answer is, Obama became president and did not get from the Republicans the cooperation we gave George Bush. In September 2008, just before the president's election, Bush sent Bernanke and Paulson to Harry Reid and Nancy [Pelosi] and, as their deputies, Chris Dodd and myself, and said, We're in terrible trouble and here's what you've got to do. You've got to do something that we think will be very helpful and enormously unpopular." And we did it, frustrated, by the way—I did agree with you—that much too little was done to restructure existing loans. . . . That was my great frustration, because here was our choice: we wrote into the legislation an authorization to use some of the money to restructure the loans for individuals, and Paulson refused to use it. He's a very decent man. He said, "I've got to use every penny to keep the system going." And we had a major fight—just a little side effect of that. He then finally agreed: he only asked for the first $350 billion. He agreed to ask for the second $350 billion and use some of it for restructuring, diminishing the indebtedness.

This is now November. One of the significant things that needs to get more attention is that we worked out this crisis during the worst period to do anything, the interregnum—the lame-duck period. We passed this thing in October. It was implemented after the election when Obama was coming in. Paulson did say to me, "Look, I'll ask for more money, but I am not going to do that without Obama's okay." And I went to Obama and said, "Would you let him do this and will you okay him doing it?" It was a replay of the Roosevelt–Hoover thing—you know, they made it better [shortened the lame-duck period] by moving the turnover [inauguration of a new president] from March 4 to January 20; that was a result of the Roosevelt–Hoover thing—but this was the only time I could think of since then where the fact that it happened in the lame-duck period was a factor. I asked Obama to please ask Paulson to release the money so he would use some of the money on mortgages, and the Obama people said—and I can understand—"But wait a minute, he has the authority to do it, right?" I said he did, "but he doesn't want to exercise that authority without your approval." And they said, "Well, look, he's running it. We can't run it. [We] don't want to get held responsible for something [we] am not in charge of." Paulson said, "Well, I don't want to do something that people are going to say I should have waited for him [to do]." And the Obama people actually, to try and mollify me said, "After all, we only have one president at a time," and my public comment was that that had overestimated the number of presidents we then had and that was part of the problem.

But that's along the side. The big issue was that the Fed and Treasury worked on this so closely together that I don't think it would have—I know it wouldn't have—made any difference then. Maybe that would in the future, to do it, and I do agree on that, but the other thing too is this. There was a time, maybe, you know, under Greenspan, when there was a kind of mystery around the Fed, that when you did something through the Fed you were a little bit insulated—the political community could get insulated from some of the responsibility when it went through the Fed. That's over. . . .

By the way, the thing that did it, it was alluded to, were the AIG bonuses. When the AIG bonuses were announced in the early spring / late winter of 2009, I have never seen the country so angry. . . . It was like the Frankenstein movie—people were out in the streets with the torches and the pitchforks. We actually passed a bill in the House retroactively taxing [the AIG bonuses] away. It wasn't that the politicians were intimidated by it; it was constitutional. We have that part where you cannot retroactively do these things. It cost Chris Dodd a chance to run for reelection if he'd wanted to, very unfairly. And at that point, I will tell you, I was looking—and Bernanke says this in his memoir correctly: he'd been asking if I could support some more authority for the Fed. I guess they wanted to be more the lead guy in the FSOC [Financial Stability Oversight Council]. And he says that I reported to him that after the AIG bonuses—because it was, after all, the Fed that had paid the AIG debts—that there was no way we could rescind it; that we would be lucky to keep the Fed out of prison. There may be a point in the future, but the answer was, we did want to abolish the whole thing. . . .

But then what happened was the Fed, which never liked losing 13(3)—it was a great thing to have in its old form—did do a preliminary rule on the liquidity facility that was much too lax. Elizabeth Warren, to her credit, raised hell with them and they have tightened it up considerably, almost to the point where she is satisfied—which is a very elusive point.

Q: Can you give us any background in terms of why they let Lehman go?

BF: Yes, very simple: England.

Q: They bailed out Bear Stearns and, two days later, AIG—

BF: No, it's a very good question. There was some speculation that it was because of Republican pressure. The Republican Party, particularly in the House—

Q: —due to the fact that Paulson was from Goldman Sachs.

BF: No, it had nothing to do with that. Actually, Goldman probably would have been better off if he had been able to pay some of it. You know, I don't think Goldman ever really thought of Lehman Brothers as a real competitor. They are a little loftier than that. And after all, Paulson, to his credit, engineered the Bear Stearns takeover and he engineered or encouraged Bank of America to buy Merrill Lynch—the one thing [Bank of America CEO] Ken Lewis did that people liked. He then followed it up by buying Countrywide, which was about the stupidest thing that any financial executive ever did, and the bank suffered and that's what toppled him.

But it was a Republican attack on Paulson and Bernanke for Bear. And so the Republicans said no more bailouts. And in fact in the Republican platform of 2008 it said "no bailouts." One argument is that Paulson allowed Lehman to go under because he was afraid of the criticism from the Republicans. I know that is inaccurate, for this reason. Starting in late 2007 all through 2008, I never had a good weekend. Maybe occasionally I had a good weekend. By the time—I was chairman of the committee—generally around four o'clock, four thirty, five o'clock, after the markets closed, I would get a call from Paulson with more bad news—this was failing, that was failing, they were waiting to announce it. I was at a fundraiser in Manhattan over that weekend when it [Lehman] failed and he called me several times. The last call I got from him before I went home and went to bed was, "I think it's okay—[the UK bank] Barclays is going to take it over." Remember, he was out of American banks to do it: Bank of America had bought Merrill, JPMorgan Chase had bought Bear, Wells Fargo had bought Wachovia, and CitiCorp needed somebody to buy *it*. Nobody thought CitiCorp at that point could buy *any*body. So he then turned to Barclays. And I know on, whatever, Sunday night I think, he thought he had the deal with Barclays, and the Financial Services Authority in England said, "No, you are not sending us that problem," and they vetoed it, and I woke up the next morning to learn that. I was at a session at the Kennedy School, where the guy who was then the deputy head of the Bank of England, who was at the Kennedy School because he didn't get to be the head, said yes, that was the case. So in fairness to Paulson, he was prepared to do it.

Now, a number of the pure free-market Republicans felt vindicated by that. In fact—and again, Ben Bernanke quotes me in the book—they said, "Let it fail. You know, let's show this." Well, almost everybody was stunned that the consequences of the Lehman failure were greater than they thought, and as Bernanke knows—that was on Monday—by Wednesday they were responding to AIG. And I announced that I was going to file a bill to declare that Monday "Free Enterprise Day" because it was the one day in American history when we had in fact free enterprise but we decided we didn't really like it that much.

I thank you all. This has been very enjoyable.

VÍTOR CONSTÂNCIO

Vice President, European Central Bank

A Challenging International Economic Environment for Central Banks

I want to start by thanking the Levy Institute for inviting me again to address this important conference honoring Hyman Minsky, the economist that the Great Recession justifiably brought into the limelight. His work provides crucial insights, identifying not only the key mechanisms by which periods of financial calm sow the seeds for ensuing crises but also the specific challenges that economies face in recovering from such crises.[1] Moreover, Minsky displayed a keen understanding of the damaging effects of uncertainty, not just on economic performance but also, ultimately, on the fabric of civil society and democratic institutions.[2] These insights have acquired renewed urgency in view of the worldwide resurgence of "easy-answer populism," whose simple but flawed solutions to complex problems become more appealing the greater the uncertainty.

This year's conference has a very topical title, "Will the Global Economic Environment Constrain US Growth and Employment?" Indeed, the prospects for the full recovery of the US economy and the normalization of its monetary policy are of utmost importance but can only be properly assessed in an international context. Conversely, international spillovers from the US to the other economies must be well understood, to appreciate the most likely scenarios for the global economy.

Nine years after the inception of the Great Recession, it is no secret that economists and policymakers are baffled and disappointed with the lackluster nature of the ongoing recovery. The perplexities and anxieties generated by the present situation were summed up in a rather open and pessimistic way by the governor of the Bank of England in a recent speech, who noted that "the global economy risks becoming trapped in a low growth, low inflation, and low interest rate equilibrium."[3] But equilibrium implies a prolonged stable situation, and while that might be emerging in economic terms, the same is not the case in social terms. Put differently, the social equilibrium is not stable. Advanced economies must either radically change their economic prospects by generating growth and jobs, or they will be forced to adjust their social systems in uncharted ways.

In the rest of my remarks, I will first discuss some of the hypotheses put forward in the literature to explain the determinants of this prolonged low-growth period, sometimes characterized as a global liquidity trap. I will then review some of the proposed measures to exit from the liquidity trap, including fiscal and structural policies. While each of these measures has specific benefits, they also all have limitations or are subject to constraints. Against this background, it is important to emphasize that, while having to resort to nonstandard tools, monetary policies also remain effective in fighting the global liquidity trap, even against international headwinds. For the euro area, I will conclude that only an encompassing policy mix can deliver stability and prosperity.

GLOBAL LIQUIDITY TRAPS

The literature about liquidity traps and their international contagion is vast. A subset of that literature considers the implications of a liquidity trap in the open economy and highlights the importance of a global response to the trap.[4] For example, Jeanne (2009) demonstrates how a recessionary shock in a country can lead the world into a global liquidity trap. This is particularly the case when monetary policy interest rates reach the lower bound (or LB). The author argues that increasing the expected inflation rate in both countries through monetary policy, if feasible, is the more efficient response to the global liquidity trap, more efficient than an increase in public expenditures.

Hélène Rey (2013) shows how monetary policy spillovers from major advanced economies create a global financial cycle that reduces the efficiency of monetary policy even in a regime of flexible exchange rates.[5] The trilemma of international economics (free capital movements, and independent monetary policies being only possible with flexible exchange rates) is thus reduced to a dilemma that can be resolved with capital controls and effective macroprudential policies to limit the leverage of the financial system. Cook and Devereux (2014) use a two-country, New Keynesian model to illustrate how the liquidity trap can propagate from one country at the LB to the world economy, through the interconnected international financial system. This international contagion undermines the effectiveness of domestic monetary policy even in a regime of floating exchange rates. Capital controls are proposed as a solution to restore the independence of monetary policies.

This strand of literature is also linked with the "savings glut" explanations of the Great Recession. Put forward by Ben Bernanke in 2005, it was later used by him in 2007 and 2010[6] to justify how capital inflows had depressed US medium-term interest rates and fueled the subsequent housing bubble. Despite being contested, this hypothesis has been quite influential and has been supported since 2008 by the theory that explained global imbalances by a "shortage of safe assets" in countries with underdeveloped financial systems. The ensuing search for those assets, particularly in the US, generated capital flows, decreased medium-term yields, and allegedly conditioned US monetary policy. Until 2008, the imbalances resulting from excessive savings in search of safe assets could be equilibrated by the decrease of interest rates. After the crisis, the decrease of yields was accentuated by the reduction of the stock of assets resulting from weaker private issuers and from weaker European sovereigns. Interest rates were therefore pushed down to the LB and the phenomenon propagated to other countries through the financial markets.

The recent paper by Caballero, Farhi, and Gourinchas (2015) models what happened after the LB was reached.[7] With interest rate variations prevented by the LB, the supply and demand of safe assets could only be balanced through recessionary variations of output. This would explain the weakness of the worldwide recovery and the temptation felt by all countries to try to use the exchange rate as a way to stimulate their own economy—hence the expression "currency wars" in the paper's title. The authors highlight that the US, by adopting a very expansionary monetary policy earlier, was able to benefit from a depreciating US dollar (USD), but this changed after 2014 when both Europe and Japan also embarked on more expansionary, unconventional monetary policies. Due to a non-Ricardian treatment of public finances, there is a role for fiscal policy in dealing with the situation. The paper also finds that countries with more wage and price flexibility have a smaller share of the world recessionary trend, but "at the global level, more downward price or wage flexibility exacerbates the global recession."

The idea of a prolonged global liquidity trap is connected with the notion of secular stagnation; i.e., the possibility of a prolonged situation of low inflation and low growth at the global level. The secular stagnation hypothesis in this case refers to the demand-side version promoted by Larry Summers,[8] where a trend of planned savings systematically higher than planned investment implies a situation of persistent lack of demand and a negative output gap, interest rates at the LB, and low inflation or even deflation. The real equilibrium rate that ensures the savings investment balance at full employment may indeed become negative, as recent estimates for the US indicate.

Eggertsson and Mehrotra (2014) and Caballero and Farhi (2015) modeled secular stagnation in a closed economy, and, more recently, Eggertsson, Mehrotra, Singh, and Summers (2015)[9] presented a model of secular stagnation in a multicountry context in which exit policies may include a global increase of the inflation target (if made credible), fiscal policy stimulus, or capital controls for the countries with a domestic positive real equilibrium interest rate. The effectiveness of both monetary and fiscal policy is strongly amplified by possible international coordination of their use.

SOME EXIT SOLUTIONS

The whole literature on global liquidity traps provides an overall consistent view of how the world economy works and leads to a bleak outlook on the feasible exit solutions from the present quagmire.

The first solution is credible forward guidance about future policy rates linked to a somewhat higher inflation target in order to influence inflation expectations. In the type of models used in this literature, forward guidance is the only available monetary policy tool. The measure would be more efficient if applied simultaneously by all major jurisdictions. The shortcoming of this approach is the lack of a sufficiently credible commitment mechanism that would convince markets about the central bank "committing to be irresponsible," no matter what.

The second solution is to use the exchange rate as a policy target in order to stimulate growth via net exports. Obviously, this is a zero-sum game if all countries try to do it. The hope in many countries has been to depreciate against the dollar as a result of the US recovery, but the [past few] months have proved that this is not an assured development, or perhaps that the US is not ready to accept these consequences. I will return to this point later.

The third exit solution proposed in the literature is the use of capital controls that would restore independence to national monetary policy, so that real equilibrium interest rates could differ across countries. For those with a positive real rate, capital controls would avoid the fall into the LB. It is indeed the case that the international community and the International Monetary Fund (IMF) have now lightly condoned the use of capital controls as a macroprudential tool in developing countries. However, the implication of the literature would be to use capital controls among advanced economies, an option that stands out as unrealistic for political and ideological reasons.

The fourth exit solution is to use tariffs and protectionism. Jeanne (2009) illustrates this option in his model, but points out that it would be less efficient. Going beyond models, a generalized rush toward protectionism would aggravate, rather than solve, the world economy predicament.

The fifth and final solution is to rely on fiscal policy, the traditional way out in situations of liquidity traps. All the models concur with this prescription, which is particularly efficient at the LB[10] and amplified if adopted internationally in an effort of international coordination. Fiscal policy, however, seems to be out of bounds in all major economies. In the euro area, fiscal policy is strictly conditioned by the legislation of the Stability and Growth Pact, and in the US it is seemingly blocked by political partisanship. Apparently, only if the state of the world economy deteriorated considerably would governments step up the use of all the tools at their disposal.

One can therefore understand the dispirited conclusion of Caballero, Farhi, and Gourinchas (2015): "Unfortunately, this state of affairs is not likely to go away any time soon. In particular, there are no good substitutes in sight for the role played by US Treasuries in satisfying global safe asset demand. With a mature US growing at rates lower than those of safe asset demander countries . . . , its debt and currency are likely to remain under upward pressure, dragging down (safe) interest rates and inflation, and therefore keeping the world economy (too) near the dangerous ZLB zone."

Nevertheless, as I will argue later, this list of solutions to the global liquidity crisis dismisses too easily nonstandard monetary policy tools. Thanks to such tools, international headwinds may hamper, but do not annul, the effectiveness of major central banks in influencing economic outcomes.

THE STRUCTURAL REFORMS SOLUTION

Before moving on to monetary policy, let me first recall that another proposed option to boost the recovery is to increase growth potential in the medium and long term through structural reforms. However, structural reforms [often] entail short-term contractionary effects. . . . Eggertsson, Ferrero, and Raffo (2014) highlight that such contractionary short-term effects are amplified at the LB, because they cannot be offset by expansionary monetary policy through a reduction in interest rates.[11] A recent IMF working paper by Bordon, Ebeke, and Shirono (2016) concludes that "existing studies have shown that the long-run effects of structural reforms on growth and employment are positive.[12] However, the evidence on the short-run effects of structural reforms is rather mixed and limited." The recently published April 2016 IMF *WEO* [*World Economic Outlook*] agrees . . . : "Product market reforms deliver gains in the short term, while the impact of labor market reforms varies across types of reforms and depends on overall economic conditions. Reductions in labor tax wedges and increases in public spending on active labor market policies have larger effects during periods of slack, in part because they usually entail some degree of fiscal stimulus. In contrast, reforms to employment protection arrangements and unemployment benefit systems have positive effects in good times but can become contractionary in periods of slack. These results suggest the need for carefully prioritizing and sequencing reforms."

To summarize, the effects of structural reforms are contingent on the state of the cycle and the degree of slack in the economy, as well as on the accompanying stance of macroeconomic policies. That is why the IMF *WEO* pleads for the use of structural reforms accompanied by fiscal policy when there is fiscal space, a concept that has several different interpretations. In their recent Shanghai meeting, the G20 pleaded for the same approach, although one can be skeptical about delivery. We can recall the embarrassing results of the G20 . . . plan [agreed upon] in Brisbane two years ago to generate an additional 2 percent in world growth via a long list of concrete reforms put forward by the IMF and the OECD [Organisation for Economic Co-operation and Development]. Less than half was implemented, and in fact, the world economy now risks not even attaining what was then considered the baseline scenario.

So, on both the demand and supply sides, there are constraints to effective policy action. I would like to add two key issues to this discouraging perspective: one that aggravates the challenges with a different version of secular stagnation and another that offers some hope related to the role of monetary policy.

ANOTHER VERSION OF SECULAR STAGNATION

The version of the secular stagnation hypothesis promoted by Robert Gordon in a series of papers and in his recent magisterial book is a supply-side phenomenon.[13] The two broad frameworks for secular stagnation are not mutually exclusive. One emphasizes supply-side factors that lower potential growth while the other points at chronic weakness in demand as the root cause of secular stagnation. Demand and supply factors may, in fact, reinforce each other because a chronic weakness in demand would amplify and exacerbate supply constraints as, for instance, persistent unemployment may hamper workers' set of skills, thereby curtailing the productive capacity of the economy.[14]

Gordon diagnoses a slowdown in the pace of innovation with regard to so-called general-purpose technologies, consisting of inventions that revolutionize living standards and business practices. As he points out, many of these technologies, such as electricity, clean running water, cars, and planes, as well as vaccines and antibiotics, were brought to large sections of the population in the time between 1870 and 1970, which he has dubbed the "special century."[15] By contrast, he argues that current innovations, such as the Internet, improve existing technologies in a less spectacular and more marginal way. The reduction of total productivity growth in the US and other advanced economies, decade after decade since the '70s, offers a compelling empirical case for Gordon's views.

This gloomy assessment has not gone unchallenged. Most prominently, Joel Mokyr, Erik Brynjolfsson, and Andrew McAfee argue that, given recent advances in robotics, genetic modifications, 3D printing, and further innovative technologies, we stand at the cusp of a new industrial revolution.[16] This scenario is certainly desirable. But, as Robert Gordon has also pointed out, even if innovation is not slowing in absolute terms, [the] global economy is still facing an uphill battle, given the challenges of population aging, rising inequality, failing education systems, and debt overhang.

The role of demographics is especially dominant here. As Charles Goodhart and colleagues (2015) have noted, recent decades have benefited from a positive global labor supply shock, deriving from the baby-boomer generation in the 1970s, and from the integration and expansion of emerging markets as part of the global economy. These demographic headwinds are fading out, implying that another crucial source of growth is drying up, at least until a demographic reversal takes place in about 25 to 30 years' time.[17]

Beyond these factors, doubts can also be raised about the depth of the economic traction of the innovations that are in the pipeline. The technological changes at the turn of the 20th century and after the Second World War led to the creation of mass products widely used in association with the urbanization explosion that is about to end. The second wave of income growth was triggered by women's participation in the labor force and jump in education levels, developments that cannot now be repeated to the same degree. So far, the new products or services associated with the digital economy have not [had] a similar impact on jobs and income. Part of their value is not even paid for in a market, as is the case with the Internet or social media. To count these and other intangibles that clearly improve our lives and personal productivity would only be justified in an indicator of well-being but not in a GDP concept that aims to measure traded goods and services that generate monetary income and, consequently, jobs. Robotics is expected to introduce an important new wave of innovation, but that will only make the question of jobs more complicated, requiring significant and difficult changes in the income-redistribution systems of our societies.

This secular stagnation thesis and the related declining real productivity also provide an explanation for the continuously decreasing real equilibrium interest rate. Other contributing factors to this phenomenon are the demographic decline, greater income inequality, and lower public investment.

The declining real equilibrium interest rate cannot be ignored by monetary policy that grounds its rationale in real variables and tries to achieve a real rate that ensures macroeconomic stability with low inflation and a zero output gap. Facing the Great Recession and this development of the real equilibrium rate, central banks had no alternative but to reduce rates until the zero lower bound was attained.

In other words, the low level of nominal interest rates in advanced economies before and after the crisis cannot be explained only by the "savings glut" view or by the "shortage of safe assets" theory that is its mirror image. These views provide an explanation for what happened to nominal market rates but not to the evolution of the real equilibrium interest rate over time. What is more, monetary policy also has a decisive influence on interest rates that cannot be explained by the loanable-funds theory alone. Short-term market nominal rates are directly influenced by monetary policy rates and via expectations of future policy rates, and risk premia policy rates also influence medium- and long-term market rates.

This means that monetary policy cannot escape responsibility for the low level of rates before the crisis. It must, however, be acknowledged that central banks were doing so in pursuit of their mandates, which exclude assets prices or other aspects of financial stability from their primary objectives. In the period of the so-called "Great Moderation," they ensured low inflation and reasonable growth while the financial system brewed credit booms and instability. The fact remains that central banks cannot pursue several objectives with the same instrument, and that, in order to ensure financial stability, they need to be given regulatory powers of a macroprudential nature that can [smooth out] the financial cycle by controlling leverage of the credit institutions. What happened before the crisis was a failure of financial regulation and supervision that did not react to excessive leverage, credit booms, and growing debt, believing in the rhetoric of the efficient markets hypothesis that blessed all market practices and accepting that the risk-management techniques behind securitization and the "originate-and-distribute model" were safe and sound.

In another criticism of the "savings glut" view of the crisis, Claudio Borio and Piti Disyatat (2011)[18] are correct in pointing out that "a focus on current accounts in the analysis of cross-border capital flows diverts attention away from the global financing patterns that are at the core of financial fragility. By construction, current accounts and net capital flows reveal little about financing. They capture changes in net claims on a country arising from trade in real goods and services and hence net resource flows. But they exclude the underlying changes in gross flows and their contributions to existing stocks, including all the transactions involving only trade in financial assets, which make up the bulk of cross-border financial activity."

They also underline the importance of monetary policy in determining interest rates, and other analyses have added to the criticism of the vision that external influences were behind the low interest rates that led to various asset price bubbles. Hélène Rey (2013) also indicates that "a VAR analysis suggests that one of the determinants of the global financial cycle is monetary policy in the centre country, which affects leverage of global banks, capital flows and credit growth in the international financial system."[19]

To sum up, there are some good points against the view that the "savings glut" or "safe assets shortage" theory, while useful in understanding key aspects of the present global economy framework, contains all the truth. In particular, they fail to fully capture the responsibilities of the major central banks' monetary policy. But they also fail to capture their possibilities.

POSSIBILITIES AND CHALLENGES OF MONETARY POLICY

Turning to the challenges of monetary policy, perhaps the most salient issue to reference is that monetary policy has gone beyond the lower bound on nominal interest rates and is actually into negative territory, even though, as there is a floor to negative rates, one can say that this has only displaced the lower level further down. While this monetary policy move is unprecedented [from] a historical perspective, it is entirely standard insofar as it relies on the traditional interest rate instrument. From a purely monetary policy point of view, it is entirely consistent to aim at negative rates when the real interest rate has itself turned negative.

Speaking from the perspective of the ECB, negative rates have only been applied to the deposit facility that banks use to credit funds to the central bank at an overnight maturity. The main objectives of this measure are twofold: first, to further lower money market rates and the longer end of the yield curve via expectations effects; and second, to increase the velocity of circulation of excess reserves in the interbank market toward the banks that need liquidity to sustain or expand their credit portfolio. The banks with excess liquidity have an incentive to pass it on to other institutions or use it to fund new loans. We have had some success on both scores, and the stimulus to demand has benefited the European and global economies.

Many market commentators link negative deposit facility rates mostly with exchange rate policy. This interpretation may well be correct in the case of small countries trying to avert the risk of excessive currency appreciation. However, recent experience clearly demonstrates that it does not work the same way for larger economies. In spite of the ECB's and the Bank of Japan's decision to implement negative deposit facility rates, both the euro and the yen have been appreciating against the US dollar. There is no inexorable link between the levels of deposit facility rates and exchange rates, as even the possibility of some form of carry trade depends on the general situation of risk aversion. Additionally, recent empirical evidence points to a relatively limited pass-through of the exchange rate to the economy.[20]

It is, nevertheless, important to recall that there are clear limits to the use of negative deposit facility rates as a policy instrument. First, there is always the possibility of hitting the limit where the preference for cash withdrawals would set in, even if the threshold seems to be significantly distant in view of the costs of cash storage, safety, and insurance.[21] Second, the instruments should not push banks to pass on their additional direct costs by turning deposit rates negative or increasing lending rates to increase margins. Both developments would be problematic for our monetary policy goals. Tier systems that simply pass [on] direct costs at the margin can mitigate this concern but cannot dispel it altogether.

Overall, broadly counting all the effects that negative deposit facility rates have on banks' profitability, the aggregate result comes up positive for the euro area as a whole. Negative money market rates reduce the cost of funding for many banks, the lowering of yields for several asset classes produces capital gains, and the support to the recovery reduces impairment costs on nonperforming loans.

In more general terms, there has recently been quite some pushback against monetary policy in certain quarters, in particular questioning its effectiveness in the present situation. More sophisticated critiques focus on the alleged exclusive, short-term effects of monetary policy that can only buy time for other policies, presumably structural reforms, to do the real job.

The main common idea behind these arguments is the more general view that monetary policy is merely about the short term, with supply policies determining the longer term. This separation between the short and long terms is an analytical device, a needed abstraction, to build simpler models and theories. However, such distinctions are artificial when we consider chronological real time. Monetary policy can stimulate demand and investment, and as this creates productive capacity, a link is established with the supply side and the long term. Also, by speeding up the closing of output or unemployment gaps, monetary policy influences future potential output and growth. By avoiding protracted periods of recession, monetary policy helps avoid [the] hysteresis[22] that affects productive capital efficiency when equipment is not upgraded when needed or when the quality of human resources deteriorates due to periods of long unemployment. Both forms of hysteresis influence the supply side and the long-term potential of the economy. As Keynes wrote, "Life and history are made up of short runs," which implies that the long run is just a sum of many different short terms. Monetary policy cannot be reduced to a short-term gimmick, since our economies do not spontaneously return quickly to zero output gaps and full employment.

US AND EURO AREA MONETARY POLICY

After the crisis, monetary policy responded forcefully everywhere, particularly in the US, with the early implementation of QE and credit easing measures. The US recovery has been stronger than in the euro area, and for 2016 buoyant growth was expected, accompanied by a gradual normalization of interest rates. This would have been a vital development for [the] world economy, and at the same time, an important proof that, even with a restrictive fiscal policy, monetary policy can play a decisive role in generating a meaningful recovery and getting firmly away from the LB. This would be a relevant disproval of the more somber views about the world economic system and monetary policy.

Although this possibility is still very much alive, it has apparently been delayed by some mixed results since the fourth quarter of 2015. Turmoil in financial markets and the external environment seem to have affected the economy. In the blogosphere and some market literature, we could see minority views about a possible double dip or significant slowdown, and market expectations for further rate increases this year became quite weak. Importantly, Chair Janet Yellen has said recently that while "global financial developments could produce a slowing in the economy, I think we want to be careful not to jump to a premature conclusion about what is in store for the US economy."

So, we can continue to hope that the center of the world economy will hold and will prove its resilience, independent of some external headwinds.

On our side, the ECB has confronted the severe and persistent disinflationary forces affecting the euro area economy with a broad set of measures. In particular, since mid-2014 we have adopted a range of monetary policy tools that is unprecedented in scope and scale for the euro area. These tools have followed a three-pronged approach: first, they have entailed targeted measures to revitalize specific market segments and strengthen bank lending, which is a particularly relevant conduit of monetary impulses in the euro area; second, they have effectuated a broad-based easing of overall financial conditions, most notably through central bank purchases in the large and liquid sovereign debt market; and third, they included cuts in the main ECB interest rates, including by taking the deposit facility rate to negative territory.

Given that monetary policy takes time to transmit to the real economy, the full effects of these measures on macroeconomic conditions have yet to fully materialize. However, the adjustment in financing conditions, via which monetary policy transmission operates, provides encouraging signals. For instance, since June 2014, the GDP-weighted average of euro area 10-year sovereign bond yields has fallen by more than 130 basis points and bank lending rates to euro area companies by about 95 basis points. The lion's share of these declines can be directly attributed to the monetary policy measures that the ECB has taken since then.

Our measures have also helped arrest the contraction of loans to companies, which have, in fact, started to grow again and are granted at more favorable conditions. As a result, fewer SMEs report that credit is a limiting factor for their businesses.

Ultimately, what matters for the assessment of our measures is whether they contribute to a sustained adjustment in the path of inflation. Applying a large and diverse set of models to account for the uncertainties surrounding such analysis, ECB staff estimate that our measures will have a substantial effect on growth and inflation. In the absence of these measures, inflation would have been negative in 2015 and would be projected to remain in negative territory also this year as well. Regarding growth, two-thirds of 1 percent of the registered growth in the past two years can be attributed to our monetary policy. We will continue to do whatever is necessary, in accordance with our mandate, to bring the euro area inflation rate close to our objective.

From a global perspective, monetary policy measures that strengthen the resilience of the domestic recovery do not amount to a zero-sum game, in which different jurisdictions merely aim to debase their currencies vis-à-vis each other. In fact, monetary policy accommodation, by improving domestic credit conditions and stimulating nominal spending, creates additional global demand rather than just leading to demand switching from one economy to the other—as some observers have suggested.

Vice versa, a large literature has reported a decline in the exchange rate pass-through to inflation, suggesting that the relative role of this channel is likely to have become less relevant in the quest to reflate the domestic economies.[23] Moreover, as [a study] by Kristin Forbes and colleagues for the UK economy shows, there are indications that exchange rate fluctuations originating from monetary policy shocks display a relatively limited pass-through to consumer prices.[24]

Notwithstanding a forceful response, monetary policy can only be one element of an encompassing policy mix. Other policy domains, both at national and European levels, have to step up to their responsibilities to transform the prevailing uncertainty into a positive scenario. I refer, naturally, to full use of any existing fiscal space, especially for infrastructure expenditures; to the continuation of structural reforms to improve the business climate, educational levels, judicial system efficiency, and product market competition, especially in services; and, finally, to institutional progress at [the] European level. This refers in particular to completing [the] banking union and taking the first steps [toward] fiscal union, thus proving the willingness of member-states to create better conditions for the successful functioning of a monetary union that can deliver stability and prosperity.

Thank you for your attention.

NOTES

1. Minsky (1994).
2. Minsky (1996).
3. Carney (2016).
4. See Svensson (2003), Jeanne (2009), Cook and Devereux (2013, 2014), Devereux and Yetman (2014), and Caballero, Farhi, and Gourinchas (2015).
5. See Rey (2013).
6. See Bernanke (2005, 2007, 2010).
7. See Caballero, Farhi, and Gourinchas (2015).
8. See Summers (2016).
9. See Eggertsson and Mehrotra (2014), Caballero and Fahri (2015), and Eggertsson et al. (2015).
10. See Christiano, Eichenbaum, and Rebelo (2011).
11. See Eggertsson, Ferrero, and Raffo (2014).
12. See Bordon, Ebeke, and Shirono (2016).
13. See Gordon (2016).
14. See Blanchard and Summers (1986).
15. See Gordon (2016).
16. See Mokyr (2013) and Brynjolfsson and McAfee (2014).
17. See Goodhart, Pardeshi, and Pradhan (2015).
18. See Borio and Disyatat (2011).
19. See Rey (2013).
20. See Forbes, Hjortsoe, and Nenova, (2015).
21. See Cecchetti and Schoenholtz (2016).
22. See Blanchard and Summers (1986) and Blanchard, Cerutti, and Summers (2015).
23. See ECB (2015).
24. See Forbes, Hjortsoe, and Nenova (2015).

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Q&A

Q: I appreciate your clear picture of the situation, but the monetary policy is implemented by the European Central Bank in the framework of a Phillips curve in which you use unemployment as a buffer stock. What about using labor as a buffer stock, in which the central bank fixes a minimum wage that is capable to finance any amount of supply of labor at this level? This is a counterfactual experiment, just a short-run experiment, which directly addresses the stability and the problem of achieving the 2 percent level [of inflation]. It's possible in the current framework, and it suggests a different tool [that] can work better in the short run than the current policy situation in which the central bank is trying to double the quantitative easing amount in an attempt to increase inflation.

VC: Two remarks [in response] to your question: first, of course, we could not fix any minimum wage, but also let me say that in the present circumstances, where the economy is with an output gap that is negative, there is what Blanchard called "the divine coincidence." By having an expansionary monetary policy, we deal at the same time with stimulating demand and growth and also to increase inflation. So there is in this present situation no contradiction between the two objectives, and so what we are doing is what the central bank, indeed, should do.

WALKER TODD: On negative rates, from time to time the subject comes up in the United States, and even [Fed Chair] Janet Yellen has said that we would consider it in the event of a downturn. There seems to be a natural tendency in the US financial markets for significant periods over the last year for rates to go down to or below the Fed's threshold floor in the short-term Treasury secondary market, which is the closest thing you could get to a proxy for what would happen in the absence of central bank intervention. Often those rates either go to the floor or sometimes all the way into negative territory, as they currently do for inflation-corrected Treasury securities. What do you think about the European experience with negative rates so far? Should the United States consider the experiment of at least a brief period of negative rates before trying to allow rates to rise again, just to clear the market? In other words, we have the impression that the market wants to go negative and the Fed won't let it.

VC: I don't know about that, but my view on your question is that the situations in Europe and the US are very much different. And in the stage of the economic cycle where the US economy is—

growing, as it is, much more than in Europe—I don't really see that the debate about negative rates in the US would make sense at this time, because the situation is quite different. And by the way, with general approval, in December the Fed started to increase rates. Then there was some international turmoil and some people changed their minds, but, not having such a short memory, most market literature and analysts in December were okay with the beginning of increasing rates in the US. So the economy is getting stronger. Investment is not yet buoyant, but it should come at the intermediate stage of the economic cycle. That is what is to be expected, whereas in Europe we are in a different situation. By the way, inflation also is higher in the US than in Europe. We have had two successive months of negative headline inflation in January and February, and the forecast of our staff that has been just published indicates an average for this year of 0.1 [percent]. So we are in a totally different universe. According to that situation, what we did was to try, indeed, to [bring] down the whole spectrum of money market rates, reducing funding rates for the banks that use the interbank market to fund themselves, and help also that the yield curve was brought down, so the cost of financing and the cost of capital would follow the same pattern. And that is what we are doing. That is not justified for the US economy right now, in my view. There are pessimists, but they are a minority, that indeed think that the US could face a slowdown. Well, then, if that happens, that will be a different situation, but that is not the current situation in my view.

Q: While I appreciate the overview that you gave us regarding both your own opinion about the current state of affairs and also that you did sort of pat yourself on the back for some growth in the system, you did say that you're practically in a deflationary environment still. . . . So you have some growth, but you're at 0.1 percent or whatever inflation is. But I would like to ask you something more precise, which has to do with the fact that you currently . . . have negative rates. . . . You have banks [that] are in a position right now where they are highly liquid—they have all these reserves in the system, just like they had in the US. My concern here is . . . , if we start from the premise that these banks do not need these reserves in order to carry out their commercial lending—if that is the case—then why in the world are you taxing these banks when you're the ones who have created those reserves and that they clearly cannot get rid of them? In the total picture of things here, even if one lends them the so-called "reserves," it just happens to go somewhere else in the system. So unless you have the actual public holding more cash or something, there will not be any change in the actual amount that the banks will be holding of those reserves. All you are doing, in a sense, is taxing them indirectly. What is the object of that?

VC: I just mentioned what were the two objectives, the two main objectives, of our policy. And, of course, you are right—and some commentators get it wrong—that when a central bank creates monetary base and, say, "excess" reserves to what would be the minimum reserves, those reserves stay there on the balance sheet of the central bank. We can read sometimes, well, the banks are having those reserves all go into the central bank instead of passing them on to the economy. Well, they cannot pass them on: they are there. So, yes. But there are two objectives. The first objective of doing that—I mean the deposit facility negative rates—as I said, was to [bring] down the whole spectrum of money market rates [for] one year. And we achieved that. And that is important for many banks—not all banks but many banks—that still continue to fund themselves in the interbank market, in the wholesale market. So they get cheaper funding in those markets. Also, the banks, by having this situation, have been funding themselves this way and so have been repaying medium-term bonds instead of reissuing medium-term bonds. So they have reduced the overall cost of their funding, which then is reflected in their lending rates—which, indeed, have been going down. Those are the normal objectives of an expansionary monetary policy: to bring down the cost of financing for the economy—*for the economy*—and that has been achieved.

At the same time, the second objective is, by having these negative rates we create an incentive for the banks to increase the circulation of those reserves among themselves. It's important, because there are banks that have enough liquidity and have more deposits than credit for instance. But there are other banks in the euro area that continue to finance themselves in those same markets, and so they would need and appreciate if the banks with more excess reserves in the central bank would lend them in the interbank market at negative rates. That is the second purpose of this policy. And on both scores we did indeed achieve our objectives, and to answer the question, that indeed we are creating, not taxing. It's not a tax, no, no, no. We charge—it's not a tax. But the answer to that question, for the banks that indeed have to pay that for the excess reserves, is that the overall effects of our policies indeed have improved the profitability of banks as a whole, because, as I said, for some banks there is a reduction in the cost of funding.

Second, our policy, by bringing down money market rates and medium- and long-term rates, has induced capital gains in the banks in 2014 and '15 that were significant in their profit-and-loss accounts. By doing what we did in supporting the recovery, the impairment costs with nonperforming loans have been reduced in the euro area. And at the same time, last year it was the first time that the net interest amount gained by the banks increased as a result of the increase in the volume of credit, which also is a result of our policies. So if you take all these effects and not just the direct costs of paying for the excess reserves with the deposit facility rates, . . . the net effect has been positive in the profitability of banks in the euro area. That is important: to consider this more general equilibrium effect and not just the direct costs of our policy. That explains why we have done it. So that's my answer.

Q: All right, so I'll keep on this topic. If I understand it well, what you are saying is that with these negative rates of interest on reserves, you are inducing the banks with excess reserves—essentially from the north—to lend their reserves to the banks who are in deficit in the south, so as to hopefully at the same time reduce the Target2 balances. But . . . at some point during some of the presentations we said that Japan was telling us what might happen to other countries. Switzerland has had zero interest rates for a long time. Aren't you scared that in Europe you might see the same as in Switzerland, which is that—and I think you mentioned it briefly—which is that mortgage rates in Switzerland are now higher than they were before they had negative interest rates?

VC: That's why I said that there are limits to the policy of negative deposit facility rates. So, yes, there are limits. It's not an instrument that can be used indefinitely, and all the banks—all the central banks—that have embarked into this are experimenting and trying to see what that lower lower bound is. No one knows for sure; it is a matter of continuing to experiment, of course, and that's what we have said that we are doing. There is no natural threshold or a threshold that can be forecasted with certainty before we get there. So that is the gist of the situation. Of course, there are limits to what can be done, but it's just another instrument that is a complement to QE in terms of the effects of QE on longer maturities of longer-term yields. That is how we see this policy that we have started.

Q: Thank you. Thorvald Moe, Central Bank of Norway. I think this was a very fascinating presentation, and it reminds me of an IMF paper on untraditional monetary policy where, clearly, what is untraditional has been moving along as we are—you know, as we are moving in time here. We had a discussion yesterday where many were saying, when are central banks going to admit that their ammunition is getting less and less traction? And also, I refer to [IMF Director Christine] Lagarde's comment that monetary policy probably shouldn't be the alpha and omega, and I think she was clearly alluding to perhaps an expanding world for fiscal policy. But obviously this is a political issue, so I don't expect you to address that. But really, . . . the two issues pose the following question. I mean, if we can agree that there is less traction—I mean, there is sort of a marginal decrease in the efficiency here of monetary policy—but there is strong resistance to fiscal policy. I mean, what are the options? We heard in the last panel that . . . you could do some technical things maybe. I guess my question to you would be to comment on Adair Turner's idea of helicopter money. I was surprised when he presented this at an IMF conference, I think last fall, and that Lars Svensson, who I expected to be opposing his proposal, actually admitted that that was a pretty sensible technical proposal and he didn't have very strong objections. So what is your view on helicopter money, or are there any alternatives that could be even more untraditional in terms of which type of monetary policy instruments central banks could employ, given the fact that there are both ideological and practical limitations to fiscal policy?

VC: It is in a way true, and this morning it was also recalled that the central banks are in a situation where if other policies do not help, then we have to do our job. We have a mandate. Inflation is very low in Europe. We are away from our explicit target for inflation, so we have to apply an expansionary monetary policy. And that policy has effects, as I mentioned before, which are not just measured by looking. Well, you started last year with more aggressive policy but the inflation is now zero. Okay, It would have been quite negative if we had not done that, and that's what came out of several models, not just one model—not just, you know, Phillips curves or whatever, but several models to produce a counterfactual. So that's part of my answer. And indeed, what comes out of part of it, the literature that I mentioned about global liquidity traps, is indeed that fiscal policy would be an answer, but for various reasons—either because many countries already have very high debt ratios and this and that, and political disputes in some countries—it's not happening anywhere. So, that's it.

So, helicopter money: first let me say that with such low interest rates, particularly in Europe, for governments helicopter money will not make a big difference, because they could already fund increases in expenditure [at] very, very, very low interest rates. Ten-year bonds for Germany are now at 16 basis points and five-years are negative, so who needs helicopter money? It's something that, of course, we are very much limited by the Treaty to embark on. So that's then, perhaps, for other countries that do not have a legal mandate as we have, but it's something that we could not contemplate. But, as I say, interest rates as a result of our policy are so low that, indeed, that would not be, certainly, an obstacle to an increase in expenditures. There are other reasons.

Q: You explained very well that the negative rates are an expectation for even longer rates to bring the yield curve down. But in spite of that, as this gentleman pointed out, net net, . . . if the banks cannot pass on the negative rates, it is effectively a bank tax. And I sort of agree with this gentleman, but we can choose to disagree. The point, though, is, it is also at some level fiscally contractionary. You are taking euros out of the system, right?

VC: But we are issuing a lot of euros with other elements of our policy, so you cannot just analyze the things—

Q: Well, no. If you set up your fiscal spending and then you take out euros, half a percent a year, it's fiscally contractionary. Where are the other euros coming from?

VC: No, sorry, we are buying government bonds and creating money to pay for them—that's what we are doing. So we are increasing our high-powered money, our monetary base, whatever you want to call it, by huge amounts that totally, totally more than offset the meager result that you are quoting that we are doing by taking out euros from circulation. So there is no comparison. You have to see all the policies that we are applying and where the global deficits are. Also, on the profitability of banks, I precisely explained that there are other effects that must be counted.

Q: I understand the profitability issue. Having said that, though, bringing the lower rates down: let's say bank lending rates go from 2 percent to 1.5—well, there are some projects that wouldn't have financed at 2 but will finance at 1.5, but that is kind of marginal. Are you also worried about some of the issues that came up with the US, which is why shouldn't well-rated companies go and issue bonds and buy their stock back? Because that would be a logical thing to do. If you can borrow money for 10, 20, 30 years at sub–2 percent, . . . are you concerned that you might distort equity prices this way?

VC: I don't think that you can rationalize a policy by firms that have their own business model, just by taking advantage of issuing debt and then buying their own stocks. That has limits. . . . But again, as it was very well discussed and explained, here in the US when QE started, one of the channels of transmission of QE was precisely that rebalancing portfolio effect—meaning that by buying government bonds and injecting money, then the investors who sold the government bonds do something with that money, and that will then have repercussions in other financial asset markets, including equities. And that's part of the objective of the policy, which is to bring down the cost of capital. That's what monetary policy is about.

The second thing is, I know that negative deposit facility rates create this problem. But in pure economic terms—and I very seldom do that, "in pure economic terms"—but in pure economic terms, one has to reason in real terms, and if indeed the real equilibrium rate is now negative—and that's a situation that was not created by monetary policy, by all means; it was not created by monetary policy—we are just adjusting to that new reality, which is unfortunate but has other explanations. And that is important also for investment projects, because proper decisions about investment projects should also be done in real terms, not in nominal terms. I know that, in spite of all the rationality assumptions of economics that are excessive, there is a lot of money illusion out there, contrary to the more orthodox thinking of economics that really thinks in real terms. So I will qualify this, but on first approximation, it's true.

Q: One last question, please. I thought you mentioned something about fiscal union.

VC: Yes.

Q: What did you mean by that?

VC: There is a report [that] was issued recently, the so-called "Five Presidents' Report." The president of the European Union, the president of the European Parliament, the president of the ECB, the president of the Euro Group, the president of the [European] Commission—five presidents issued a report about the path toward a genuine monetary union. There is a chapter there about steps to fiscal union—a very long-term thing but, indeed, initial steps are mentioned there—and that, of course, as also a counterpart to conditions for that movement to be possible. But, for instance, the illusion is there that there is this sort of additional budget at [the] European level for euro-area countries that would be used to smooth out the economic cycle in members of the euro area. It will be part of that very embryonic step, but it is alluded to, and there is a chapter in that "Five Presidents' Report" about the long, very long-term, objective. So that's what I was referring to.

Sessions

SESSION 1

Global Fragility and Emerging Markets Outlook

Fernando J. Cardim de Carvalho, Jan Kregel, Theo Francis

MODERATOR:

THEO FRANCIS

The Wall Street Journal

JAN KREGEL

Levy Institute and Tallinn University of Technology

FERNANDO J. CARDIM DE CARVALHO

Levy Institute and Federal University of Rio de Janeiro

KREGEL presented his Minskyan overview of the situation in emerging markets, identifying potential sources of increased financial fragility.

If we examine the current state of capital flows and capital markets, he said, we can see some evidence of history repeating itself in emerging markets. There have been, Kregel observed, two broader Minsky crises in emerging markets: the Latin American crisis that played out over the course the 1970s and early ’80s and the 1997 Russian and Asian crises. The recycling of petrodollar surpluses driven by negative interest rates set the stage for the Latin American crisis. The subsequent reversal of interest rates—which rose sharply higher under Fed Chairman Paul Volcker—and appreciation of the US dollar led to the insolvency of emerging market borrowers, who had, Kregel noted, borrowed in dollars at what were effectively flexible exchange rates. All of this culminated in the 1980s in a lost decade of zero growth in Latin America. The Russian and Asian rerun of the late

’90s was also set up by an interest rate and exchange rate environment that encouraged financial institutions to move funds into Asia. Sharp readjustments and competitive devaluations led to the disintegration of the trading system in Southeast Asia and, ultimately, a Minskyan debt deflation.

If we compare the situation in today’s emerging markets with these prior Minsky crises, Kregel observed, there is one basic difference and one basic similarity. In terms of domestic lending in emerging markets, he said, since the late 1990s crises there has been a significant change in the way banks finance the domestic economy, characterized by an increase in lending to households for consumption purposes (consumer loans, auto loans, mortgages, and so on). This creates the conditions in which a global slowdown generates problems in the form of nonperforming loans. In terms of international lending, Kregel noted, the similarity is that we have returned to a situation in which low rates (in the context of zero or negative interest rate policies) have encouraged borrowing.

However, Kregel pointed out that although there has been a significant increase in capital flows into emerging markets, US banks have not been active participants. Although some have suggested that the Federal Reserve’s expansion of its balance sheet is to blame for these capital inflows, the evidence, he said, suggests this is not the case. Referring to data from the Bank for International Settlements, Kregel explained that the expansion of funds flowing into emerging markets was primarily generated by nonfinancial, non-US-resident corporations issuing US dollar bonds. That is, the rise in US dollar lending is occurring outside the United States. Noting that the funds, borrowed at US dollar interest rates, are being used as the source of carry trades (which have driven increases in exchange rates and inflows into emerging market countries), Kregel asked whether this is “1982/1997 all over again”—that is, a rerun of the Latin American and Asia/Russia crises. If the Federal Reserve drastically increases interest rates, will this generate a major financial collapse in emerging markets? The difference this time, Kregel emphasized, is that US banks are not exposed. Those who are exposed, primarily, are the aforementioned nonfinancial, non-US-resident dollar borrowers. Although those borrowers will not be subject to rapid pass-through of interest rates (since the obligations in question are fixed-interest obligations), they are vulnerable to reversals in exchange rates, potentially leading to a sell-off and collapse of low-quality bond markets outside the United States. To make matters worse, he observed, despite these signs of increasing fragility in emerging markets, investor enthusiasm is leading to greater exposures to these markets and potentially worse difficulties once the Federal Reserve normalizes policy.

CARDIM DE CARVALHO presented his analysis of the situation in Brazil. The country is experiencing a continuation of its economic and political crisis, with GDP falling and unemployment increasing, all in the context of rising inflation (an annual rate of just under 10 percent), a budget deficit at 10 percent of GDP, and already elevated interest rates (Brazil’s equivalent of the federal funds rate is above 14 percent). Meanwhile, the current president (Dilma Rousseff) is undergoing impeachment proceedings in the wake of a corruption scandal related to the state oil company, Petrobras, which has implicated almost the entirety of Brazil’s political leadership.

Cardim de Carvalho commented that, for once, this is a Brazilian crisis that has nothing to do with the balance of payments. In fact, the balance of payments has been the only sector of the economy that has been sustaining demand. This has been an entirely domestically generated crisis, he said.

Tracing the roots of the crisis, Cardim de Carvalho explained that, in the wake of the 1998 balance-of-payments crisis and under the direction of the International Monetary Fund, Brazilian policy roughly followed the so-called "new macroeconomic consensus" from 1999 to 2010, which featured three policy regime changes: (1) inflation targeting, (2) a floating exchange rate (although Cardim de Carvalho noted that in reality this involved "dirty" floating, as the central bank did intervene to limit volatility), and (3) a fiscal policy regime dominated by the idea that government's role is to balance the budget. This policy regime, he said, led to permanently high interest rates, an overvalued currency, and low (volatile) GDP growth. Cardim de Carvalho commented that, although there was a common view that Brazil had achieved "Chinese growth rates" in 2010 (when Brazil's GDP grew at 7.5 percent), in reality this was not the start of a trend, and growth rates were significantly lower after 2010. Moreover, he emphasized, the new macroeconomic consensus regime corresponded with a shift toward deindustrialization. Brazilian growth became dependent upon commodity exports to China.

In response to disappointing growth rates after 2010, the Rousseff government attempted to stimulate the economy through expansionary policies, but without addressing the failed "new consensus" regime—something Cardim de Carvalho identified as a serious mistake. The result, he explained, was convoluted policy "tinkering" that included manipulating the fiscal accounts to create illusory surpluses and manipulating the price of utilities. (The latter, he argued, was ultimately connected with the corruption scandal that is still roiling the government.) Given that traditional demand-side expansionary policies would simply produce current account deficits in the economic reality fashioned by adoption of the new consensus regime, the government opted for supply-side policies instead. These policies, which were mainly directed at the manufacturing sector, failed, Cardim de Carvalho argued, referring to data in his Levy Institute working paper showing that the manufacturing sector had continued to shrink (No. 860, "Looking Into the Abyss? Brazil at the Mid-2010s").

In 2015, immediately after her reelection, President Rousseff declared she would implement austerity policies, in contrast with the central message of her campaign. The announcement had a significant negative impact on economic expectations, he argued. (Although, as Cardim de Carvalho noted, few of the policies were actually implemented, given a lack of support in Congress.) More important, this reversal coincided with the collapse of political support for Rousseff, leading to a political crisis that worsened the economic downturn. There is significant uncertainty with respect to the stability of political leadership, and as a result, he said, the policymaking process is paralyzed and incapable of addressing the deepening economic crisis.

SESSION 2
Commodities and Derivatives Regulation

Michael Masters, Robert A. Johnson, Izabella Kaminska

MODERATOR:
IZABELLA KAMINSKA
Financial Times

MICHAEL MASTERS
Better Markets

ROBERT A. JOHNSON
Institute for New Economic Thinking and Franklin and Eleanor Roosevelt Institute

MASTERS challenged a set of perspectives or narratives about commodities markets that he said are commonly expressed by participants in the shadow financial system (hedge funds, private equity sponsors, and other kinds of intermediaries beyond traditional, regulated banks) and presented alternative viewpoints.

The first "consensus" investor view—a view influenced by the 2004–14 commodities investment supercycle, Masters commented—is that when commodity markets go down, this is an indication we ought to be concerned about future economic demand (and that when commodity prices rise, this suggests a strengthening real economy). The problem with this consensus view, Masters argued, is that price formation in commodity markets is largely driven by speculative flows. Movements in commodity prices may be indicators of broader economic demand, he said, or they may not. And commodity price formation can have as much to do with greater supply as it does with lower demand—particularly after the roughly trillion dollars' worth of capital expenditure in commodities over the last 10 years, he observed.

And even if commodity price formation could be relied upon as a reliable indicator of broader economic conditions, there are further biases built into financial market participants' views, Masters argued. In particular, investors tend to take the producer's (versus the consumer's) perspective, with respect to the movement of commodity prices. They only look at one side of the ledger due to this "financing bias," as Masters put it—hence, the sense among investors that the recent fall in commodity prices was a harbinger of economic downturn.

Financial innovation over the last 10–15 years has created new products that allow market participants to hedge a variety of risks they were previously unable to hedge, Masters emphasized. Such innovation has allowed the shadow financial system to spread its credit exposure to broader markets. This affects price formation and then raises concerns about the broader health of the economy, he said, even though these prices may not be signaling anything fundamental in either direction regarding the real economy. Courtesy of the shadow financial system, a "negative feedback loop" is created, he explained, with ultimately a variety of other market impacts—for example, on currencies, credit spreads, or equities.

The second investor perspective Masters presented is the view that expansionary monetary and fiscal policy is needed to counteract the deflationary bias of falling oil and/or commodity prices. The alternative view, he explained, is that while historically a fall in oil prices has initially had deflationary effects, after a period of time the effect of sustained lower oil prices has been strongly reflationary. And to the extent the second-order, reflationary effects have been ignored due to the biases of financial market participants, markets may be pricing in a deflationary scenario while the real economy moves in the opposite direction—which may ultimately lead to a rapid and severe adjustment in equities, currencies, and rates markets. Lower oil prices, Masters commented, have been the first "QE [quantitative easing] for the regular person." Given the money that was saved by sovereign wealth funds, for instance, over the 2004–14 period, there is the possibility, Masters suggested, of a sharp reversal given the lower oil prices: the possibility of moving from a global savings glut to a "global spending spree," as he put it.

Finally, Masters observed that for younger financial market participants, commodities market leadership has been the central (or only) investment dynamic of their careers—"their [formative] cycle." This, along with the memory of the global financial crisis, significantly skews investor perspectives, and there is a need, he concluded, among policymakers and market participants, to push back against these consensus narratives and realize that there are alternatives.

JOHNSON picked up where Masters left off, questioning a number of narratives or assumptions that tend to hold sway within or about the financial sector.

Describing his consulting experiences with hedge funds, Johnson noted that there were arguments taking place among financial market participants that took for granted that the arbitrage between the real economy and financial economy was frictionless; assuming, in an abstract mindset, that arbitrage was instantaneous. Johnson referred to the work of Wei Xiong on the financialization of commodities. Wei observed that, during the years of rising oil prices (pre-2014), Chinese commodity markets were segmented from the West by virtue of capital controls, such that while Western oil prices were going up in commodity markets, Chinese prices were not. Johnson also cited the work of Masters and that of David Frenk and Wallace Turbeville on how changes in the financial structure (e.g., index speculators) create "bursts" within financial markets. Economics, and particularly financial economics, Johnson noted, assumes a stochastic process with a stationary distribution or perfect foresight in a nonstochastic model. However, financial market practitioners know that they are, as he put it, "sailing in a fog"—that is, that they are operating within a realm of radical uncertainty that creates a range of possibilities for drawing inferences from prices from different sources. Moreover, he said, with the introduction of leveraged finance, how people rebalance their portfolios in the context of financial market difficulties can send financial shocks into commodity markets, which changes prices, leading people to draw inferences from those changes, which in turn feeds back into other markets. The use of leveraged finance, Johnson commented, magnifies the power of shocks. It is important to remember, he emphasized, that prices that are based on subjective psychological expectations are not very structural.

Referring to his work in China, Johnson discussed the modernization and international integration of the Chinese financial system. The importance of having a more open and skeptical financial theory, he said, is that it allows you to see that there are problems with the idea that setting up commodity markets will be universally helpful in a country in which per capita income is still under $10,000 per year and many people are highly sensitive to energy and food prices. Johnson related a discussion he had in Shanghai regarding the sequencing of the modernization of markets and subsequent international integration. Given the debt crises in the less developed countries, the savings and loan crisis, the Mexican crisis, Russian crisis, Asian financial crisis, dot-com crisis, great financial crisis, and taper tantrum, he asked his hosts, why is there such enthusiasm for such integration? But given the persistent desire for modernization, Johnson mentioned his advice for what should be the focus of this process, noting his recommendation that China be especially sensitive to the "plumbing" of its own domestic financial system and develop expertise in regulation and supervision in order to withstand the pressures and instability of international markets. Referring to concern among Chinese officials with regard to commodity markets—and particularly the danger of bubbles driving up the cost of energy and food—Johnson cautioned that we understand these markets less than we think we do, and that "simplistic parables" regarding inventories or arbitrage do not hold empirically. He concluded on a cautionary note concerning financial market theory and practice, citing a warning often attributed to Mark Twain: "It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so."

SESSION 3

Is the Current Credit Structure Conducive to Financially Stable Recovery?

Albert M. Wojnilower, Martin L. Leibowitz, Richard Berner, Henry Kaufman, Jesse Eisenger

MODERATOR:

JESSE EISINGER
ProPublica

HENRY KAUFMAN
Henry Kaufman & Company, Inc.

RICHARD BERNER
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KAUFMAN began by providing his answer to the question around which the panel was organized, stating that the current credit structure is not conducive to financial recovery. We find ourselves, he said, in a misaligned credit structure that was not foreseen by policymakers or many market participants.

Debt has been growing rapidly, and in a break with the early postwar years, Kaufman said, it is growing more rapidly than GDP—a gap that appeared in the mid-1990s and has widened since. The relative and absolute level of debt is not the only issue, he stated; there has also been a deterioration in the quality of debt in recent years. Moreover, corporations have come to rely increasingly on debt in their financing strategies. Growth of corporate debt has dwarfed any increases in equity, he pointed out, and debt is rapidly becoming a substitute for corporate equity.

Kaufman identified an increase in financial concentration as another major shift in American financial markets. This increase started in the 1990s, he said, and gained momentum during the Great Recession, to the point that the 10 largest financial institutions now likely hold over 80 percent of all financial assets. Financial concentration will have far-reaching implications, he warned. For instance, as markets become less diverse, they will become more vulnerable to sudden shifts, and this will not be confined to US financial markets but will become an international phenomenon.

The role of the central bank will also continue to be more visible and active, in part because the central bank will be forced to be the frontline provider of market liquidity. Although the volume of securities has risen over the last few decades, market making has become more concentrated. Financial market concentration also meant that the central bank's traditional measures of lowering interest rates and reserve requirements were not sufficient to deal with the 2008 crisis, given the systemic risk posed by the potential failure of any of the largest financial conglomerates. The Fed, Kaufman predicted, will not be able to withdraw from this new, highly visible role. But it put itself in this position, he argued, by failing to understand the monetary implications of structural changes in the financial markets, such as the securitization of financial assets and financial derivatives. The changing structure of financial markets will also prevent the Federal Reserve from returning to monetary policy "normalism." Kaufman questioned whether the Fed would be able to make meaningful progress to reduce its balance sheet, perhaps not even for the long term. Furthermore, he suggested, in the future the Fed may be forced to pursue an interventionist policy beyond quantitative easing, again due to market concentration. Specifically, it may need to engage in selective credit intervention, using direct guidance and moral suasion to stave off market speculation. This would act as a kind of "circuit-breaker," which Kaufman compared to the interest rate ceilings on time and savings deposits of the early postwar years. Given this expansion in the role of the Fed, the institution's "quasi" political independence will likely be challenged, he suggested, from both the left and the right.

The current structure of financial markets is such that they lack the capacity to finance a meaningful increase in economic activity, according to Kaufman, and only the federal government has the capacity to substantially increase its borrowing. Finally, although recent events have been described as exhibiting a "new normal," Kaufman criticized the use of the label. Economic normality, he argued, is a mere statistical construct, and it is an illusion to imagine that this construct can serve a useful purpose. Nevertheless, the concept of "normal" continues to shape analyses in the private and government sectors. We need, Kaufman concluded, a "new enlightenment" in economic and financial analysis.

BERNER began with a definition of financial stability. Stability is not about constraining volatility, he said, or about predicting or preventing financial shocks, but about resilience: when shocks arrive, the system continues to perform its basic functions. And since resilience is a systemic property, we need to examine institutions and markets across the financial system. According to Berner, the financial crisis revealed an insufficient understanding of the financial system, in terms of the data used to monitor financial activities, and insufficient policy tools to mitigate threats to stability.

Since the 2008 crisis, Berner stated, regulators have taken steps to make the financial system more resilient. In particular, he highlighted the role of stress tests. Nevertheless, Berner commented that he is not confident that the current credit structure is conducive to financially stable recovery, citing vulnerabilities that are difficult to monitor.

Although market signals appear benign at present, Berner cautioned that they might just as well be signaling rising market vulnerabilities, to the extent that they encourage investors to take on leverage. Indicators like low volatility, interest rate spreads, credit default swap spreads, and repo haircuts are better thought of as endogenous, as opposed to exogenous, indicators of risk—that is, leverage and volatility are codetermined. Low volatility promotes increased leverage and risk (in ways that will not always be captured by our risk measurement systems, he added). This "volatility paradox," said Berner, should change our thinking about early warning indicators, asset allocation, the macroprudential tool kit, and risk management.

One implication of this paradox, he elaborated, is that leverage and volatility risk are procyclical. The wide use by risk managers of metrics like value at risk (VaR) can lead to sell-offs intended to reduce risk, which then further depresses prices and increases incentives to sell. On the other side, low VaR can create incentives to increase leverage.

Berner described the development of the OFR's Financial Stability Monitor, which allows the OFR to track risks in banks, shadow banks, other nonbanks, and markets. This analysis is supplemented with market intelligence, he explained, aided by the launch of the Financial Markets Monitor. According to the OFR, threats to financial stability are at the "moderate" level. In general, risk-taking has diminished, but only somewhat, he cautioned, as accommodative credit and underwriting standards have seen credit growing at a rapid pace. And the combination of higher corporate leverage, commodity price declines, and reduced global growth has exposed corporate credit risks.

Although policy changes since the 2008 crisis have strengthened the banking system, there are vulnerabilities that persist outside the traditional banking sector. Analysis and measurement of these vulnerabilities are crucial to developing tools to combat them, but this is a challenge when financial activity moves into more opaque parts of the system. In that context, Berner highlighted the importance of improving financial data going forward. First, the quality of data needs to be improved, he insisted. Berner noted how counterparties could not assess their exposure to Lehman Brothers in 2008 and that regulators were at a loss in the absence of industry-wide data standards. He cited the OFR's role in helping create the Legal Entity Identifier system, which sets standards in identifying parties to financial transactions. Berner identified gaps that persist in terms of the data on securities financing transactions, including repo and securities lending. Data sharing across institutions and borders is also essential, he pointed out, and the OFR is working on linking data inventories across jurisdictions to provide a clearer global picture. Berner noted that data that measures system-wide leverage is better at measuring vulnerabilities than, for instance, indicators like market prices.

One element of the resilience of a financial system, **LEIBOWITZ** pointed out, is the question of how market participants react in the face of a crisis or serious downturn. In this context, he focused on the behavior during the financial crisis of a group of organizations controlling a fair amount of assets: the large endowments of US universities.

Leibowitz provided some background on the endowments' asset allocations, noting that they had been weighted more toward equities than the standard 60/40 distribution. They had also begun to "diversify," which in this context, Leibowitz explained, meant they had reduced their holdings of fixed income and equities and moved into positions in emerging markets: in international equity, real estate, hedge funds, and private equity. These allocations differed in terms of the size of the endowment, with smaller endowments engaging in less such "diversification," but among the larger endowments there was a high degree of similarity. Examining the volatility risk they were exposed to, Leibowitz noted that 90 percent of the risk in their portfolios was tied to underlying movements in US equities (even though they had reduced their direct S&P equity positions to around 25–30 percent). In other words, even as they "diversified" into other asset classes, their volatility risk did not change much because the global financial crisis caused correlations to tighten significantly.

The large endowments also became liquidity constrained when the crisis hit. They had reduced their fixed-income holdings to around 10 or 15 percent, their swap and derivative positions moved against them, and the hedge funds they were counting on to provide liquidity established gates. Moreover, the endowments had built up positions in private equity and private real estate positions to the point that many large endowments found themselves in a situation where the commitments they had made in these areas amounted to as much as 80 percent of their total fund. Examining the reasons why the general partners in these private equity funds did not call in those commitments (in part because the private equity funds realized they would destroy their client base if they attempted to do so), Leibowitz pointed out that if the crisis were to play out again, the behavior of private equity would likely be different. Since the crisis, sovereign wealth funds and pension funds—which are far more liquid—have displaced the endowments as major clients, and the endowments can therefore no longer count on being protected from a drawdown in the next crisis like they were during the last crisis. This is a situation, he observed, in which the market has evolved to the point where something that had previously been intended as a form of "disaster protection" is now just the opposite.

How have the endowments changed their behavior since the 2008 crisis? Comparing their asset allocation in 2007 and 2015, Leibowitz noted that for the most part very little had changed. Their developed market equity allocation went from 35 percent in 2007 to 27 percent in 2015, and that 8 percent reduction, Leibowitz explained, went unto private equity and venture capital. This shift is riskier and has worse liquidity prospects, but the explanation for this seemingly strange choice, he said, would not have surprised Hyman Minsky: the endowments made this move seeking higher returns. In general, he observed, institutional asset owners are return seekers, and will adjust their allocation to the point where they are holding the maximum amount of risk they can tolerate.

The endowments have also paid more attention to their commitments in real estate and private equity and have performed something akin to stress tests with respect to their derivatives and swaps. But for the most part, Leibowitz emphasized, they are largely in the same situation they were in before the crisis. He concluded with what he thought Minsky might say about this behavioral case study: "Those who live through a very bad time in history, if they're insufficiently burned, may live to relive it."

WOJNILOWER provided what he described as more of a macroeconomic perspective on these issues. Understanding that the flow of income is circular (your spending is my income, and so on), whatever income is not spent on goods and services goes into the financial sector by being deposited into intermediary institutions, or is used to buy existing real estate, financial assets, or debt instruments, including buying back one's own debt (ignoring cash that is stuffed into a vault or mattress, he added). Until that saved income is used to buy freshly produced goods and services, the circular flow of income will diminish. In order for that flow of income to grow, the financial sector needs to lend more to nonbanks that it receives from them. In other words, Wojnilower stated, debt must increase. It should not be surprising, he commented, that quarterly growth in "nonfinancial debt" closely tracks nominal GDP growth rates. By contrast, he said, financial debt basically reflects movements in speculative activity. And although the conversion of saving into income could also occur through equity, net equity issuance by nonfinancial corporations has been negative for years.

Aggregate credit growth is necessary for the circular flow of income to increase: for every debt that is repaid, a larger debt needs to be incurred. From a macro perspective, Wojnilower observed, timely repayment of debts can even be undesirable (during recessions, for instance). The financial system is thus at odds with itself, he said, as it tries to simultaneously shrink and grow. This internal contradiction has negative effects in the realm of public finance, with the public tending to think the government should repay its debts like any household. However, he pointed out, if government borrowing does not expand sufficiently to maintain government spending as a share of GDP, private borrowing needs to rise even faster just to maintain economic growth. This reasoning, he explained, also applies to reductions in the Fed's balance sheet. Wojnilower also noted the government's off-budget role as a guarantor of debt (residential mortgages) and lender (student loans).

The fallout from unavoidable human curiosity, risk taking, and gambling will always present the possibility of producing turmoil in financial markets, often amplified by the media, and such turmoil will occasionally affect the circular flow of income. When public hysteria reaches this point, public authorities have no choice but to arrange bailouts, he stated—and market participants, who understand this, plan accordingly.

Wojnilower predicted that large, systemically important financial institutions would begin to shrink over the next decade or two, in part due to tougher regulation and supervision, but primarily because their size will make them technologically uncompetitive. New, Internet-based intermediaries will be able to assess loans and transfer funds more efficiently, he said, and most bank branches will become redundant. These new intermediaries will find new ways to skirt rules and supervisors, such that regulation will lag behind innovation.

The purchasing power of the assets being acquired now to fund future retirements will depend crucially on whether, as Wojnilower put it, "oldsters" and "youngsters" continue to make sacrifices for each other (including funding education and family formation, and supporting the expanding cost of Social Security and medical expenses). Or, he asked, will populists drawing support from the young devalue the wealth of the mostly elderly rich?

While the frequency and intensity of financial crises can be reduced through public measures, he concluded, success on this front will be "intermittent and incomplete."

SESSION 4
Minsky, Inequality, and the Monetary/Fiscal Policy Outlook

Scott Fullwiler, Stephanie A. Kelton, Jan Kregel

MODERATOR:
JAN KREGEL
Levy Institute and Tallinn University of Technology

STEPHANIE A. KELTON
Levy Institute; US Senate Budget Committee; University of Missouri–Kansas City

SCOTT FULLWILER
Wartburg College

Concerns about the national debt act as a barrier to progress on almost every major national priority, **KELTON** argued, and the gatekeeper for this barrier is the Congressional Budget Office (CBO). Stories about a national debt crisis are underpinned by the CBO's forecasts, along with views—now simply accepted at face value, she noted—that budget deficits push up interest rates and crowd out investment. These views, of the dangers of deficits and a looming public debt crisis caused by entitlements and interest payments on the debt, are almost universally accepted in Washington, D.C., she observed. The only difference between the parties is how they propose to deal with the supposed crisis, with Democrats supporting revenue increases and Republicans pushing spending cuts. The problem, Kelton stated, is that they are both mistaken, and the theories underlying the CBO's warnings are fundamentally flawed.

Citing Hyman Minsky, Kelton pointed out that, by contrast with the view that market confidence is produced by balanced budgets or "getting the fiscal house in order," budget deficits are a source of profits in the aggregate. She suggested that the federal budget needs to be in a deficit position for the foreseeable future. That is, both deficit hawks, who argue for balancing the budget every calendar year, and deficit doves, who argue that deficits can be run when the economy is weak but surpluses are needed during booms, are mistaken.

A government deficit is a surplus for the nongovernment part of the economy, and as such, we are missing one side of the ledger when we focus only on these deficits. When we talk about a $1 trillion deficit, we might just as well speak of a $1 trillion surplus for the nongovernment sector, Kelton said. The large government deficits that alarmed everyone in the wake of the financial crisis and Great Recession produced the large private sector surpluses that allowed the private sector to deleverage and repair its balance sheets. During the debates over the Simpson–Bowles commission and the various plans dealing with the "fiscal cliff," it was taken for granted that some form of deficit reduction (with some people desiring more, others less) was necessary. But if we change our perspective, she suggested, then the question becomes: how rapidly do we want to reduce the size of the nongovernment surplus?

This also means, Kelton commented, that the Clinton-era budget surpluses should not be a model to which we aspire to return. With reference to Wynne Godley's work, she demonstrated that these budget surpluses meant the domestic private sector had to take a negative position. This allowed the domestic private sector to leverage up in ways that had not been seen in a long time, which is what drove economic growth—but, as she pointed out, it did not end well.

Kelton emphasized that government deficits can be both too small and too big. And while everyone in Washington worries about the latter, almost no one worries about the former. The way the budget "game" works in Washington, she explained, is through gimmicks. For instance, dynamic scoring is used to attempt to show that priorities politicians favor, such as tax cuts, will end up costing almost nothing due to positive macroeconomic feedbacks lessening the future budget impact; whereas when politicians do not support a program, generational accounting is used to make it look like these programs cost far more than might have been thought. Kelton cited the example of using extremely long time horizons to estimate the future cost of Social Security and Medicare.

On the fiscal side, Kelton concluded, the outlook is not good. The era of government shutdowns and debt ceiling fights is not over. And at the end of the day, she added, the likelihood that fiscal policy will be put out of commission for the foreseeable future places even more pressure on the Federal Reserve.

FULLWILER challenged a number of views about monetary policy with the aid of an analysis of accounting and central bank operations.

He began with a discussion of the inflationary potential of different versions of so-called "helicopter drops." The first version—quantitative easing (QE)—resulted in $2.8 to $3 trillion in reserve balances, but the hyperinflation that many predicted would be the result never materialized, he pointed out. Part of the reason it did not, Fullwiler explained, is that banks do not need reserves (or deposits) to make loans. Loans create deposits, and the central bank backstops the entire process because it has to sustain the payments system. But there are two mainstream explanations, according to Fullwiler, for why the expansion of reserves did not create inflation. The first attributes the absence of inflation to the fact the Fed paid interest (0.25 percent) on reserves. The second, which Fullwiler described as the "Paul Krugman view," is that, since interest rates are at zero, a bill or short-term investment is earning the same as money. The problem, he said, is that under a neoclassical paradigm, there are only two ways of doing QE—letting the interest rate fall to zero or letting the interest rate fall to interest on reserves—but these are the very conditions under which we are told QE will not be inflationary. Just as with QE, Fullwiler explained how an analysis of the accompanying operations and accounting shows that Treasury–central bank "coordination" (the second version of the helicopter drop in public discussion) would not cause inflation in itself. Finally, he demonstrated that, whether accomplished through money-financed deficit spending or through government-directed central bank transfers, financing government spending through "money printing" would not in and of itself be inflationary, much like the first two iterations of the helicopter drop. The spending itself can be inflationary, he emphasized, but the method of financing this spending does not matter from an inflationary perspective. Fullwiler also pointed out that, operationally, plain deficit spending is already a kind of helicopter drop.

Analyzing different justifications for a negative interest rate policy (NIRP) from the standpoint of the operations and accounting involved makes it clear, Fullwiler concluded, that NIRP would ultimately function by increasing private leverage. In fact, Fullwiler said, this is ultimately what stimulative monetary policy tends to do in general: that is, it aims to get consumers to spend more out of existing income. And although the "textbook view" is that fiscal policy and monetary policy are simply two different ways to increase aggregate demand, Fullwiler observed that fiscal policy increases demand by increasing income (government deficits reduce private leverage). This does not mean, he stressed, that stimulative monetary policy should never be used, but given the recent financial crisis, we ought to be skeptical about pursuing an economic recovery driven by an increase in household leverage.

Finally, Fullwiler criticized the use of the Taylor rule in monetary policy. The problem, he said, is that the Taylor rule does not include private sector or public sector debt in its equation. In laying out his principles for sustainable monetary policy, Fullwiler argued that an optimal interest rate rule should not ignore the effects on private and public debt service. Given the consequences of the financial balances approach discussed by Kelton—the need for private or public leverage to sustain growth in the absence of a trade surplus—a sustainable monetary policy would hold the interest rate below the rate of GDP growth (otherwise, the debt service of the sector in a deficit position would grow without limit). Fullwiler also noted that this state of affairs (an interest rate below the GDP growth rate) actually corresponds to the historical norm, and that interest rates on the national debt, in contrast with some mainstream views, tend to follow monetary policy rather than the size of the deficit. Rather than moving back to a Taylor-type rule, he suggested, holding the interest rate on national debt below the GDP growth rate would represent real monetary policy "normalization."

SESSION 5

US Economic Outlook Forecast

Frank Veneroso, Michalis Nikiforos, Bruce C. N. Greenwald, Lakshman Achuthan, Eduardo Porter

MODERATOR:
EDUARDO PORTER
The New York Times

LAKSHMAN ACHUTHAN
Economic Cycle Research Institute

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FRANK VENEROSO
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ACHUTHAN pointed out that there is a long-term pattern that has held since the 1970s of successively weaker recoveries following recessions. Part of this, he observed, has to do with a weakening of the so-called "V-shaped" phenomenon —that is, the view that the deeper the recession, the stronger the recovery. In fact, he noted, this relationship only holds for the first year. There is a correlation between the depth of the recession and the strength of the first year of the recovery, and this correlation has weakened—in other words, the strength of the first year of recovery (in relation to the severity of the preceding recession) has declined over time. But after the first year of the recovery, there is no statistically significant relationship between the severity of the recession and the average rate of growth during the expansion (after that first year). If anything, said Achuthan, a deeper recession is likely to be associated with more sluggish growth, but this is largely due to a long-term decline in trend growth.

Regarding long-term trend growth, Achuthan noted that if present trends continue—0.4 percent productivity growth and 0.4 percent labor force growth—we will be looking at a real GDP growth rate trend of 0.8 percent. What is driving this low productivity growth, he asked? In the 2010–14 period, the contribution of capital intensity (the ratio of capital to hours worked) to productivity growth was negative, while the contributions of labor composition and multifactor productivity were modestly positive. What has occurred, he observed, is that the economy has grown in a way that has been skewed toward growth in the number of hours worked in lower-wage service sector jobs, while capital investment has taken a hit. Without a revival of capital investment, we are unlikely to see significant improvement in productivity growth.

Although the Federal Reserve seems close to its dual-mandate targets, it nevertheless appears relatively dovish, Achuthan said. This may be due to what has become the Fed's "third mandate," as he put it: the Fed may fear a repeat of the 2001 and 2007–9 recessionary bear markets. Alternatively, he suggested, the Fed may be concerned about global growth. Achuthan shared his view that we are experiencing a global slowdown that will continue for the foreseeable future. However, there are also indications (downward trends in the growth of nonfarm payrolls, GDP, industrial production, and income and sales) that the United States may be experiencing a cyclical downturn in growth, layered on top of the previously mentioned longer-term structural decline in growth. Achuthan stated that the Fed's desire to raise rates may be on a "collision course" with this downturn, and there is a real risk that the Fed may be forced to reverse itself, much like the European Central Bank in 2011. As far as the Fed's credibility, there are questions raised by measures of five- to 10-year-ahead inflation expectations, which are around record lows. These measures, he noted, are lower than where they were during the Great Recession, and there has been a steep drop since 2014.

Achuthan suggested that the Fed's attempt to exit from its zero interest rate and quantitative easing (QE) policies is at risk of failing, along with two other "grand experiments": China's massive monetary easing and fiscal stimulus, and the policies that make up "Abenomics." The latter is particularly troubling, he said, since, if the US economy experiences another recession, the Fed may be facing a scenario similar to that of Japan.

GREENWALD took issue with Achuthan on the question of productivity growth, and observed that there is a great deal we can learn from the microeconomic data on firm-level productivity growth that is not apparent in the macro data. By contrast with economic theory suggesting all firms minimize costs, the firms that are most efficient typically do so at a cost between one-third and half of the industry average. At the firm level in the developed world, he said, most productivity growth comes from movement to (rather than on) the production possibility frontier. And if you examine the capital budget data, the critical variable is the capital associated with focused management attention on processes. This process productivity growth is crucial, Greenwald commented.

Greenwald pointed to the case of Japan and argued that the difference between pre- and post-1990 Japan is not about demographics or macro demand factors, but all about changes in productivity growth. Before 1990, he pointed out, productivity growth in Japan was 3 percent higher than in the United States; post-1990, it is half a percent below US productivity growth. And we can help explain what is going on in post-1990 Japan, he suggested, with the use of the aforementioned managerial model of analyzing productivity growth. Post-1990, Greenwald said, Japanese manufacturing has withered—they have focused their "managerial machine" on a dying industry. In other words, the story is primarily structural rather than cyclical.

During the Great Depression, he explained, the balance sheets of agricultural families deteriorated to the point that they were unable to move off of farms—outmigration from the agricultural sector stopped during the Depression. Productivity growth in agriculture continued to improve (with the same amount of people on farms producing more food) and agricultural incomes were driven down, further trapping this population. Productivity growth continued, he stressed, because it is not driven by investment cycles. And because this was a global issue, every country tried to export its way out of these difficulties—which is, he pointed out, impossible. The same thing that happened to agriculture is happening today with the death of manufacturing, according to Greenwald. Countries are trying to preserve their manufacturing sectors through exporting, with the United States "eating the surpluses," as he put it.

However, one particular difficulty with the shift from manufacturing to services (by contrast with the shift from agriculture to manufacturing) is that the shift is accompanied, Greenwald stated, not by an increase in wages but by rising profits. He cited barriers to entry stemming from natural monopolies as part of the reason for this rise in profits. A rising profit share has caused problems with the distribution of income, he observed, to the point where the bottom 80 percent of households are spending 110 percent of their income every year. This is not sustainable, Greenwald pointed out, and it also creates challenges for policymaking. We should not be surprised, he said, when gas prices fall and the bottom 80 percent of households do not spend the extra money, as they are already overextended. Greenwald argued that tax cuts and fiscal stimulus are not likely to be effective in such an environment. Moreover, state and local government finances, in part due to depressed interest rates and an overhang of pension debt, are impaired: expenditures have been flat since the crisis, and this been another drag on consumer demand. Until structural adjustments take place and the income distribution impacts of the shift to services have been dealt with, there is likely to be little improvement on the demand side, he concluded, and if countries in Europe and Japan continue to devote management attention to a dying manufacturing industry, productivity growth will continue to stagnate.

NIKIFOROS presented the Levy Institute's Strategic Analysis (*Destabilizing an Unstable Economy*, April 2016) on the prospects for the US economy. The last three economic recoveries have been the weakest, in terms of GDP growth, of all prior postwar recoveries, he observed, and the recovery that began in 2009 has been the weakest of them all. Likewise, the recoveries in the employment-to-population ratio and productivity growth have been among the weakest in postwar history. This is likely an indication that the jobs created over the course of the recovery have been low-paying, low-productivity jobs, but the slow recovery of productivity, he pointed out, has also made it possible for employment to grow faster than it otherwise would have.

Examining the components of GDP, Nikiforos explained that the historically slow recovery of consumption is likely tied to income inequality. There has been, he said, a significant redistribution from households with a high propensity to consume to households with a low propensity to consume, which drags down aggregate demand. Until the recent crisis, this was counteracted by a buildup of the household debt-to-income ratio. Another reason for the slow recovery, Nikiforos remarked, is the fact that this has been the only postwar economy recovery in which real government expenditure has decreased. And export growth started strong but has since flattened out, he observed. The only good news in this recovery, he noted, has been a significant shrinking of the trade deficit in petroleum products over the last few years, which was due to the development of new extraction methods (fracking).

Nikiforos argued that, beyond the dangers of exogenous shocks, there are structural instabilities in the US economy itself. He identified three major sources of instability: high income inequality, high external deficits, and fiscal conservatism. If an economy faces weak export demand and restrictive fiscal policy, growth will be dependent on rising private indebtedness—which was what powered the US economy prior to 2007. Due to inequality, this rise in the household debt-to-income ratio was concentrated among households at the bottom of the income distribution, he noted.

Nikiforos explained how the Levy Institute's Strategic Analysis produces a baseline scenario using the Congressional Budget Office's (CBO) projections for the path of the budget deficit and economic growth, and asks what conditions would have to hold for these projections to come true. Assuming, as the CBO does, that the primary deficit remains constant over the next few years, he asked, what would have to happen in the private sector for the CBO's GDP forecasts (2.7 percent in 2016; 2.5 percent in 2017; 2 percent thereafter) to materialize, given the situation in the external sector (using the International Monetary Fund's [IMF] projections for the growth and inflation rates of US trading partners)? For this to come to pass, the baseline scenario shows that the debt-to-income ratio of the private sector would have to increase and return to its precrisis level. The current account deficit would also converge to its precrisis levels, Nikiforos pointed out. This demonstrates, he said, that the current configuration of the US economy is unstable. He also observed that the stock market is at historically high levels, and it is difficult to argue that the current valuation of the market does not represent a bubble. The slowdown of the global economy represents another destabilizing factor.

Nikiforos presented three scenarios from the Strategic Analysis. In scenario 1, the dollar appreciates by an additional 20 percent over the period 2016–20 and the growth and inflation rates of US trading partners are 1 percent lower than IMF projections. This scenario would have a significant negative impact, with US growth rates 1 percent lower than in the baseline. In scenario 2, the stock market falls through 2016 and then stabilizes, and the private sector engages in another round of deleveraging at the end of 2016. This would result, Nikiforos related, in a GDP growth rate close to zero. Scenario 3 combines the first two scenarios, in which case, he said, GDP growth would be negative for the period 2017–20.

Based on the behavioral work of Vernon Smith, **VENEROSO** argued that we are entering the final bubble in the bubble era that began in the mid-1990s. Veneroso described an experiment conducted by Smith in which participants were asked to bid on a financial asset—a stream of cash flows over a limited period of time. Despite there being no uncertainty involved, the bids went higher and higher as they rose above the fundamental value of the asset. Smith then ran the experiment on the participants a second time, and the same phenomenon of bidding above the fundamental value occurred, but not as high and not as long. According to Veneroso, Smith described these two successive experiments as producing a "bubble" and an "echo bubble"—and when Smith ran the experiment a third time, there was no bubble behavior at all.

Veneroso observed that in both US and Chinese markets, we are witnessing the buildup of a rare third echo bubble. In the United States, for instance, we had a bubble in the 1990s and an echo bubble in the 2000s, and are now in the midst of the creation of the third bubble in a series. In China, Veneroso stated, there is no fundamental economic rationale behind the bubble in the Shanghai stock market—in fact, he pointed out, the market took off despite a weak economy and disappointing earnings. China increased nominal money when nominal stock prices were down, and did so faster than the increase in nominal GDP, to the point that the M2-to-GDP ratio rose above 200 percent, even while the market-cap-to-GDP ratio fell to its prebubble level. In other words, Veneroso said, there was a huge amount of money relative to a small equity base, and once market prices started to rise and money flowed into stocks, speculative herding behavior took hold, he remarked, independent of all fundamentals.

In the case of the Unites States, Veneroso argued, the explanation for the latest echo bubble goes beyond ZIRP (zero interest rate policy) and QE repressing bond yields and causing a shift in allocations from fixed income to equity. Referring to Hyman Minsky, Veneroso remarked that if we create tranquility in markets by guaranteeing against loss ("a central bank put"), we deform risk perceptions and raise asset prices. The 2008–9 bailout created a "mega moral hazard," in his view. Share buybacks and the "bonus culture" have also contributed to the echo bubbles, Veneroso added, as stock options turn managers in modern corporations into speculators.

Around the beginning of 2015, he observed, a disappointment in corporate earnings and US growth expectations, along with signs of a global slowdown, contributed to a buildup of bearish stock market sentiment. However, Veneroso pointed out, the bear market did not emerge, with the S&P only dropping 15 percent (yet cash positions grew to a decade-and-a-half high—a particularly bearish indicator, he noted). What supported the market, he asked? Part of the reason is that the selling of equities by the public abated in 2016—because they were effectively "sold out," as Veneroso put it. Meanwhile, the corporate bid on equities took off, Veneroso explained—and this massive bid is being financed with debt (some of which is not being captured in the flow-of-funds accounts, he added), creating a corporate debt bubble. Furthermore, central banks debased long-term debt instruments, prompting asset allocations into equities.

Veneroso predicted that public pressure for accommodative monetary policy (the public, he argued, have not been told that the cause of their stagnating incomes is the decline in productivity gains) will mean a continuation of debt-debasing policy; that long-term investors will allocate their portfolios to equities and the "sold out" public may return to the markets; and that the large corporate bid will persist. The "echo-echo bubble" will ultimately inflate to new highs, he warned, and will be prolonged by easy monetary policy—until we have the final crash of the bubble era.

SESSION 6

Bank Regulation, Too Big to Fail, and Liquidity

L. Randall Wray, Walker F. Todd, Edward Kane, Peter Eavis

MODERATOR:

PETER EAVIS

The New York Times

EDWARD KANE

Boston College

WALKER F. TODD

American Institute for Economic Research

L. RANDALL WRAY

Levy Institute and Bard College

KANE focused on how norms in megabanks and government executive cultures crowd out simple moral concepts of right and wrong and result in criminal activity, or, as he described it, "theft by safety net."

Using Edgar Schein's model of organizational culture, Kane highlighted the ways in which, in financial institutions and central banks, organizational "missions"—their espousal of goals and the strategies for achieving them—often conflict with "norms"; that is, the unspoken, deeply embedded behavioral norms and shared assumptions or beliefs about how to behave under particular circumstances. For instance, he said, regulators' espoused mission is to protect society from certain risk-taking behaviors in the financial sector. However, he pointed out, US megabanks are "at war" with foreign megabanks, and regulatory staff see it as their obligation to aid them in this battle. Second, regulators, politicians, and the banking industry prefer a disclosure regime that involves a great deal of deception, in part because they want to limit the possibility of outside access to adverse information causing runs and meltdowns. Third, regulators have short tenures and are therefore sensitive to criticism from potential future (industry) employers.

While the executive culture in megabanks is dominated by profit maximization, in government it is dominated by blame avoidance, according to Kane, and the interaction between these two cultures leaves little room for morality. Megabank executives are preoccupied on a daily basis with the following questions, he said: What is profitable? What can we get away with? And how can we defend and expand profit-making opportunities? The second question—legality—is as close as we get to moral considerations in megabank executive culture, but legality is still more a matter of power than morality, he remarked. Kane then described a cycle of scandal, cover-up, and denial that ethically challenged organizations—those that are more comfortable manipulating accounting measures of performance than they are managing culture or character—tend to run through.

Central bankers, Kane observed, often regard themselves as unfairly scapegoated heroes who are frequently assigned overly ambitious goals by politicians. They are also constantly focused on delivering short-term results, he said, and attracted to policies that can have negative long-term effects (here he cited the example of extending emergency loans to insolvent banks rather than confronting the problems with these troubled institutions). Kane argued that crisis management norms reveal how regulators prefer to deal with distressed megabanks. For instance, he noted, it is regarded as acceptable to mischaracterize the situation of a troubled bank if this will prevent a run on the institution, and, in the case of financial institutions that are difficult to unwind, there is a revealed preference for rescuing the creditors. He stated that these crisis management norms undermine stability, and that a "rescue mentality" is part of the (nonpublic) character of central bank regulatory cultures. No matter how much policies may change, Kane stressed, these norms need to be addressed—otherwise, we create incentives for megabanks and their creditors to undermine transparency and play games of "hide-and-seek" with regulators during booms and "chicken" during busts. One of the most significant central banker norms, he stressed, is the reluctance to prosecute high-ranking bankers for reckless behavior.

Taxpayers, Kane observed, are coerced suppliers of loss-absorbing equity funding for firms that are too big to fail. Bailouts should not be regarded as loans or insurance payments, he insisted, but as taxpayer puts in which the loss-limiting side of the contract is not exercised. Kane argued that the law should explicitly recognize and protect taxpayers' interests in crisis management policy. The law should also penalize extreme recklessness among bankers much like we do with reckless drivers, by prosecuting managers who engage in such behavior as well as regulators who tolerate it. The standard of proof, he suggested, may need to be changed and standards of reckless negligence established, so that prosecutors only need to demonstrate that managers *should have known* (rather than did know) that certain behaviors were dangerous.

TODD suggested ways in which the current regulatory framework could be improved by looking back to the history of the 1930s responses to the Great Depression, and specifically to the work of Jesse Jones and the Reconstruction Finance Corporation.

The elimination, in 1999, of the Glass-Steagall Act's 1933 separation of investment banking from traditional commercial banking was a mistake, Todd argued. The 2010 Dodd-Frank Act attempted to bring back this Glass-Steagall separation in the form of the Volcker rule, but in a much milder form, he noted. Paul Volcker's view, Todd said, was that banks should not be using taxpayer-funded insured deposits to place investment banking bets, and that banks should be required to trade for their own account using bank equity holders' funds. Todd noted that the taxpayer is asked to take on the investment bankers' risk, but without the investment bankers' reward. In the last bailout, there was no investment bankers' gain for the taxpayer—but there used to be, he said.

Todd recounted that in the 1930s the Federal Reserve was not the primary rescue device for the banking system. Although section 13(3) of the Federal Reserve Act was created in 1932, this was originally intended to enable the Fed to give direct assistance to individuals, partnerships, and corporations—not banks. To that end, Todd said, the Reconstruction Finance Corporation (RFC) was created, headed by Jesse Jones. During the March 1933 bank holiday, Jones sorted the banks into three categories: A, B, and C. Most banks fell into category B; these were banks that were short of full solvency but were close enough that they could survive with some assistance (these banks were also required to raise private capital). Category C banks were shut down. In all, Todd noted, 12,000 of the 18,000 banks reopened after the banking holiday. This was not, Todd observed, at all similar to what was done in the 2008 crisis.

There is a great deal of troubled "legacy debt" from 2008 that was never properly restructured (particularly homeowner debt) and is still burdening households, Todd pointed out. By contrast, the RFC and other 1930s-era institutions were instrumental in restructuring debt (Todd cited the Home Owners' Loan Corporation and its offer to refinance mortgages on generous terms). He also identified auto and student loans as troubling areas from a bank regulatory standpoint.

Todd pointed out that Jones dealt with the quality of management in the course of restructuring banks and other institutions. For any institution receiving assistance from the RFC, Jones asked for letters of resignation from top management (even if he did not accept them, Todd explained, they served as leverage). This would have been, Todd suggested, a useful tool for regulators in the 2008 crisis. He observed that in the '08 crisis, there was only one senior banker removed at the behest of the Fed or TARP (Troubled Asset Relief Program) officials.

A proper bank regulatory structure, Todd contended, would reflect the view that banks are or should be fiduciaries holding the public's funds as a public trust. And if the government is called upon to share in the risks of banking, particularly the risks of investment banking, the government should be a shareholder. Jones implemented this principle by demanding of all companies or banks that received loans that they provide a warrant convertible into a share of the bank's common voting equity for each dollar loaned. Although a similar concept was included in TARP, Todd noted, the ratio was $6 of loans to one warrant—whereas Jones required one-to-one (and repayment within 10 years or the warrants became convertible). The threat underlying the 1930s version, Todd explained, was that the government could end up owning a majority of stock, whereas in the case of TARP, borrowers only stood to lose control of around one-sixth or less.

Although Dodd-Frank represented a major improvement, Todd said, section 13(3) should have been repealed outright. Emergency lending, he argued, is by its nature fiscal, not monetary, policy, and it should be done by the Treasury or an agency directly accountable to the Treasury

WRAY observed that the 2008 crisis, just as in the 1930s, highlighted a fact long neglected by many economists: money and finance matter. This occasioned a turn to two proposals, much like in the 1930s: 100 percent money and functional finance. Wray began by discussing the 1930s variants of these proposals. The Chicago or narrow banking plan called for banks to hold reserves at the Fed or Treasury bonds as the asset against their deposit liabilities, which would, so the theory went, make banks perfectly safe. Wray remarked that Hyman Minsky thought this proposal, while worth considering, was an attempt to fix what was not broken. He then turned to Milton Friedman's proposal, described in a 1948 paper, which combined narrow banking with a functional finance approach. In Friedman's version of the approach, all government spending would be financed by currency emission, with the currency removed from the economy through taxes, and the government would no longer issue bonds—that is, Wray explained, all deficits would be money financed. Surpluses would decrease the money supply and deficits would increase it, with fiscal rules established democratically and the budget balanced at full employment. This would be, Wray observed, a powerful automatic stabilizer combining fiscal and monetary policy. But what is interesting, Wray noted, is that, apart from the narrow banking and fiscal rules, this is actually a description of how all sovereign governments work: all government spending is essentially money-financed, with deficits increasing the supply of the government's money and surpluses reducing it.

Wray then discussed Abba Lerner's functional finance approach and its two central fiscal and monetary components. The fiscal principle is that taxes should be cut and spending raised when there is unemployment, and spending should be cut and taxes raised when there is inflation. The monetary principle says that if the interest rate is too low, sell bonds to remove reserves from the banking system, and if the rate is too high, buy bonds to put reserves into the system. In other words, he commented, bond sales are not about financing a government's deficits but about conducting monetary policy by targeting interest rates.

Turning to the modern variants of the 100 percent money proposal—positive money and debt-free money—Wray explained that the idea is to separate money from lending so that money is free from debt, and to put an end to granting private banks the government's power of seigniorage, or money creation. This problem with this idea of debt-free money, Wray argued, is that all money is debt.

Wray discussed Minsky's conception of what banks do and their creation of money. According to Minsky, anyone can create money; the problem is in getting it accepted. And the reason bank money is accepted, Wray explained, is that we all owe the banks. Bank loans create deposits, he said, rather than the other way around. Bank lending is about making payments for customers, which is done by merely crediting other accounts—that is, Wray emphasized, bank money is created out of "thin air." Deposits make reserves, in the sense that the central bank creates the reserves that are needed if banks need to make payments to each other. Wray then sketched the factors that have led, since the 1980s, to the breakdown of the US banking system.

He concluded by arguing for a resuscitation of fiscal policy. Wray cited Beardsley Ruml, chairman of the New York Fed from 1941 to 1946, who argued from the experience of wartime finance that taxation for the purpose of raising revenue was obsolete. The purpose of taxes is not to raise revenue, Wray stated. Instead, taxes are for changing behavior (through "sin taxes," for instance) and fighting inflation. If you examine the history, he observed, it is clear that these ideas about taxation were understood as far back as the American colonial era. Since Great Britain retained a monopoly on coinage, the colonies were forced to issue paper money. In order to create demand for the paper currency to ensure its acceptance by the public, Wray explained, they authorized new taxes to redeem the notes, with the total estimated tax revenue set at the quantity of the notes issued. Wray pointed out that the notes have to be issued before the taxes can be paid—in other words, taxes drive demand for the notes and the spending has to come first, or "creation precedes redemption," as he put it. We need to think about currency emission by the government as a sovereign power rather than seigniorage, Wray remarked.

SESSION 7
European Performance and Regulatory Outlook

Loukas Tsoukalis, Mario Tonveronachi, Thorvald Grung Moe

MODERATOR:

THORVALD G. MOE
Levy Institute and Norges Bank

MARIO TONVERONACHI
University of Siena

LOUKAS TSOUKALIS
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TONVERONACHI presented his proposal for the establishment of a single financial market in the euro area. While the euro area has a single currency, he observed, it still does not have a single financial market—which was the main goal of the Economic and Monetary Union. To establish a single financial market, he explained, all financial operators need to have access to the same set of risk-free assets—to face the same yield curve—but the current reality is that they are dealing with 19 different yield curves. Financial convergence, he emphasized, is not the same as financial integration. Among other things, he noted, establishing a single financial market would enhance the efficacy of European Central Bank (ECB) monetary policy.

Sovereign debt mutualization—through the issuance of euro bonds, for instance—would be one straightforward solution to the problem, but this is not politically feasible according to Tonveronachi. His proposed solution operates through a reform of ECB operations and does not require any changes to existing euro treaties. The ECB, he said, is already authorized to issue the necessary risk-free financial instrument: it can issue debt certificates in the amount and across the range of maturities necessary to create a single risk-free yield curve for the euro area. The ECB could then match this emission of debt certificates by buying an equal amount of sovereign debt in the secondary market, according to the capital key of each country. In Tonveronachi's proposal, the ECB would use certificates in its open market operations, and in its operations with banks would only accept certificates as collateral.

While Tonveronachi emphasized that the primary purpose of the proposal is to create a single financial market, he also described what the fiscal effects of this reform of ECB operations would be. Since debt certificates would be less risky than national sovereign debt, the ECB would earn seigniorage on the sovereign debt in its portfolio, which it could then remit to member-countries according to their capital keys. This would, Tonveronachi noted, create additional fiscal space at the national level. Second, the ECB's acquisition of sovereign debt would decrease the amount held by the market, which would improve the rating and lower the cost of this debt. Finally, he argued that, far from creating national moral hazard, the proposal would allow for a redesign of the fiscal rules that would better enable debt discipline—as well address the current self-defeating deflationary fiscal stance.

Tonveronachi presented two scenarios: one in which the ECB's initial acquisition of debt amounts to one-third of total public securities, and another in which it amounts to one-half of public securities. As he demonstrated, in either scenario many countries (more in the second scenario than in the first) would immediately drop below the Maastricht Treaty's upper limit on their debt ratios (60 percent of GDP).

Fiscal rules, Tonveronachi stressed, should be focused primarily on debt sustainability (rather than deficits per se). In that spirit, he presented possible strategies for redesigning the fiscal rules governing national fiscal authorities. Countries with debt ratios above 60 percent of GDP would not be required to run fiscal surpluses because, due to the dynamics of the debt certificate proposal and increases in nominal GDP, their debt ratios would decline while running balanced budgets (maintaining the debt held by the market at a constant absolute level). And countries below the 60 percent limit could run whatever level of fiscal deficit would be consistent with stable debt ratios. Overall, Tonveronachi noted, the combined fiscal stance in the euro area would be much more reflationary, which in turn would help troubled countries lower their debt ratios more rapidly. If we wish to establish an even more rigorous debt sustainability standard, he added, we could lower the debt ratio limit to 30 percent of GDP and require that countries below 60 percent of GDP but above 30 percent maintain a fiscal stance consistent with declining debt ratios.

The proposal, Tonveronachi pointed out, could also help strengthen the enforcement of fiscal rules. Lack of compliance with the rules for a certain period of time, he suggested, could result in a country being expelled from the debt certificate scheme and returned to the old rules.

Comparing the current situation in the eurozone with the optimism of 10 years ago, **TSOUKALIS** suggested political leaders have been "lynched by reality." There is little reason to believe, he said, that the euro area's economic prospects will improve in the near future.

What began as an international crisis originating in the United States, he observed, produced an existential crisis in the eurozone only a year or two later. Yet, Tsoukalis observed, contrary to some initial expectations, the eurozone has not disintegrated—in fact, there are now more members than when the crisis began. The way the euro was designed, he remarked, was a terrible mistake, but it would be an even bigger mistake to undo it completely—and the euro, he suggested, is being held together by fear of the fallout from divorce.

Tsoukalis outlined the economic and political damage that has been inflicted by the eurozone crisis. Per capita GDP in the eurozone was the same in 2015 as it was in 2007, he noted; the average rate of unemployment is 11 percent; there has been economic divergence both between and within countries; public debt ratios have risen; there has been little deleveraging in the private sector (private debt as a share of GDP); and in large parts of the euro periphery there is the prospect of a "lost generation" due to joblessness. All of this has had political consequences. There has been increasing political fragmentation between countries, pitting creditors against debtors, and within countries, including income inequality and a rise of "antisystemic" political parties.

Tsoukalis listed a number of things that, he said, would have been unthinkable in 2008, but that probably helped saved the eurozone from complete dissolution. There have been bailouts of individual countries that were supposed to have been prohibited by the Maastricht Treaty, and these bailouts, he pointed out, were indirect ways of bailing out the banks that had lent to those countries. There was also a partial restructuring of Greek debt (though too late and insufficient, he added); new, stricter fiscal rules; a safety net in the form of the European Stability Mechanism; and the first steps toward banking union. But the most crucial factor in keeping the euro experiment alive, he said, has been the operations of the European Central Bank.

Why is it, Tsoukalis asked, that the eurozone fared worse than the United States? He offered three reasons: poor design, the wrong policies, and bad luck. The common currency, he noted, was not supported by the creation of the necessary institutions to make that currency sustainable. The bad luck, according to Tsoukalis, is that the first test of this young currency coincided with the bursting of the biggest bubble since 1929. As for the wrong policies, Tsoukalis identified two fundamental mistakes. First, he argued, there has been a denial of the actual nature of the crisis, which was portrayed for some time as primarily a result of fiscal laxity. While this may have been true of Greece, he said, it was not true for most other eurozone countries. This denial, he stated, delayed recognizing and addressing the true nature of the problem: a banking and debt crisis. The second mistake, according to Tsoukalis, is that the adjustment has been extremely asymmetrical, with the burden falling heavily on the deficit countries in the form of rapid fiscal consolidation. Germany, he pointed out, continued to have an inflation rate of close to 0 percent and a current account surplus around 8 percent of GDP. The eurozone is also relying too much on monetary policy, Tsoukalis said, while fiscal policy has disappeared from the euro area as an instrument for dealing with a prolonged recession.

Change, he concluded, needs to come at the political level, and one of the central problems that need to be addressed in the eurozone is the resistance on the part of creditor countries to sharing risk.

Participants

Cofounder and chief operations officer of the Economic Cycle Research Institute (ECRI), **LAKSHMAN ACHUTHAN** is managing editor of ECRI's forecasting publications. With an undergraduate degree from Fairleigh Dickenson University and a graduate degree from Long Island University, Achuthan joined Columbia University's Center for International Business Cycle Research in 1991. At Columbia he worked closely with Geoffrey H. Moore, who *The Wall Street Journal* called "the father of leading indicators." In 2004, Achuthan coauthored *Beating the Business Cycle*, published by Doubleday.

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VÍTOR CONSTÂNCIO is vice president of the European Central Bank (ECB), appointed June 1, 2010. In this capacity, he is also a member of the executive board, governing council, and general council of the ECB. He was governor of Banco de Portugal from 1985 to 1986. In this position, he was engaged in several reforms, paving the way for the country's European Economic Community (EEC) membership in 1986. In February 2000, he was reappointed governor of Banco de Portugal, a position he held until May 2010. Constâncio was executive director of Banco Português de Investimento from 1995 to 2000 and nonexecutive director of Electricidade de Portugal, the Portuguese national power utility, between 1998 and 2000. Prior to that, he served as finance minister in 1978 and secretary of state from 1974 to 1976, as well as president of the Commission for European Integration in 1977, in charge of the membership negotiations between Portugal with the EEC. He was also a member of parliament and president of the Parliamentary Commission on European Affairs between 1980 and 1981. Constâncio graduated in economics from Universidade Técnica de Lisboa, which he followed with postgraduate studies at Bristol University. He was visiting senior professor of economics at the Instituto Superior de Economia e Gestão from 1989 to 2010, serving as coordinator of the master's degree program in monetary and financial economics and teaching macroeconomics and monetary theory and policy. Constâncio has authored several articles and papers on macroeconomic and financial topics.

PETER EAVIS is a reporter at *The New York Times*, where he writes about banks and finance. He previously worked at *The Wall Street Journal*, where he was a member of the team that writes the "Heard on the Street" column.

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THEO FRANCIS covers corporate news for *The Wall Street Journal* from Washington, D.C., with an emphasis on complex financial, legal, accounting, and tax topics. He has previously written for *BusinessWeek*, Bloomberg News, *The New York Times'* DealBook, footnoted.com, and National Public Radio's *Planet Money*, among other outlets. In 2003, Francis was one of a team of *Journal* reporters awarded the Pulitzer Prize in explanatory reporting for a series of stories exposing corporate scandals. His work has also received George Polk and Gerald Loeb Awards for financial, economics, deadline, and beat reporting. He holds a master's degree from the Columbia University Graduate School of Journalism and an undergraduate degree from the University of Illinois at Urbana-Champaign.

BARNEY FRANK served as a US Congressman (D-MA, 4) from 1981 to 2013 and as chairman of the House Financial Services Committee from 2007 to 2011. While in Congress, he worked to adjust America's spending priorities to reduce the deficit by providing less funding for the military, thereby protecting funding for important quality-of-life needs at home. In particular, he focused on providing aid to local communities, and to building and preserving affordable rental housing for low-income people. Frank was also a leader in the fight against discrimination of various sorts. He championed the interests of the poor, the underprivileged, and the vulnerable, and won reelection 16 times by double-digit margins.

As chair of the House Financial Services Committee, Frank was instrumental in crafting the short-term $700 billion rescue plan in response to the mortgage crisis, and he then worked for the adoption of a sweeping set of financial regulations aimed at preventing a recurrence. He was coauthor of the Dodd-Frank Wall Street Reform and Consumer Protection Act, the regulatory overhaul bill signed into law in July 2010, and led the passage of the Credit Cardholders' Bill of Rights Act, a measure that drew praise from editorial boards and consumer advocates.

In 1987 Frank became the first member of Congress to voluntarily acknowledge that he is gay, and in 2012 he became the first member of Congress to marry his same-sex partner, James Ready. In 2014, shortly after his retirement, a documentary titled *Compared to What: The Improbable Journey of Barney Frank* was released. In it, Frank reflects on his 40 years in office and the role his own homosexuality played in his campaigns for social justice. In addition, he has written two books: *Speaking Frankly* (1992), a critique of some aspects of the Democrats' approach to public policy; and the political memoir *Frank: A Life in Politics from the Great Society to Same-sex Marriage* (2015). He has taught at Harvard University, Boston University, the University of Massachusetts Boston, and the UMass Dartmouth.

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IZABELLA KAMINSKA joined FT Alphaville in October 2008 as a financial blogger. Before that, she worked as a producer at CNBC, a natural gas reporter at Platts, and an associate editor of BP's internal magazine. She has also worked as a reporter on English-language business papers in Poland and Azerbaijan, and was a Reuters graduate trainee in 2004. Kaminska studied ancient history at University College London, and has a master's in journalism from the London College of Printing.

Professor **EDWARD KANE** is a past president and fellow of the American Finance Association, a former Guggenheim fellow, and a research associate of the National Bureau of Economic Research. He serves on the editorial boards of seven professional journals. A founding member of the Shadow Financial Regulatory Committee, Kane rejoined this committee in the summer of 2005. He also served for 12 years as a trustee and member of the finance committee of Teachers Insurance. Currently, he consults for the World Bank and is a senior fellow in the Federal Deposit Insurance Corporation's Center for Financial Research. Specific research areas include financial crisis management, deposit insurance, causes and implications of financial change, the changing structure of financial services competition and regulation, the politics of policymaking, and the taxation of financial institutions and instruments.

HENRY KAUFMAN is president of Henry Kaufman & Company, Inc., a firm established in 1988 specializing in economic and financial consulting. For the previous 26 years, he was with Salomon Brothers, Inc., where he was managing director, a member of the executive committee, and in charge of the firm's four research departments. He was also a vice chairman of the parent company, Salomon, Inc. Before joining Salomon Brothers, Kaufman was in commercial banking and served as an economist at the Federal Reserve Bank of New York. He was awarded the first George S. Eccles Prize for excellence in economic writing from the Columbia Business School for his book *Interest Rates, the Markets, and the New Financial World* (1986). His most recent book, *The Road to Financial Reformation*, was published in 2009. Kaufman is also active in a number of public organizations, including New York University (NYU), Tel Aviv University, the Institute of International Education, the Norton Museum of Art, the Jewish Museum, the Economic Club of New York, the Animal Medical Center, and the American Academy of Arts & Sciences. He holds a BA in economics from NYU, an MS in finance from Columbia University, and a Ph.D. in banking and finance from NYU's Graduate School of Business Administration.

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In 2011, Kregel was elected to the Accademia Nazionale dei Lincei, also known as the Lincean Academy, the oldest honorific scientific organization in the world. He studied under Joan Robinson and Nicholas Kaldor at the University of Cambridge, and received his Ph.D. from Rutgers University under the chairmanship of Paul Davidson. He is a life fellow of the Royal Economic Society (UK) and an elected member of the Società Italiana degli Economisti. In 2010, he was awarded the prestigious Veblen–Commons Award by the Association for Evolutionary Economics for his many contributions to the economics field.

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