Center on Japanese Economy and Business

日本経済経常研究所

Still More Lessons from the Financial Crisis

A WORLD LEADERS FORUM EVENT

December 7, 2009

Keynote Speaker

William C. Dudley

President and CEO of the Federal Reserve Bank of New York

Introduced by

Lee C. Bollinger

President, Columbia University

David E. Weinstein

Carl S. Shoup Professor of the Japanese Economy and Director, Program on Economic Research, Columbia University; Associate Director for Research, Center on Japanese Economy and Business, Columbia Business School

Moderated by

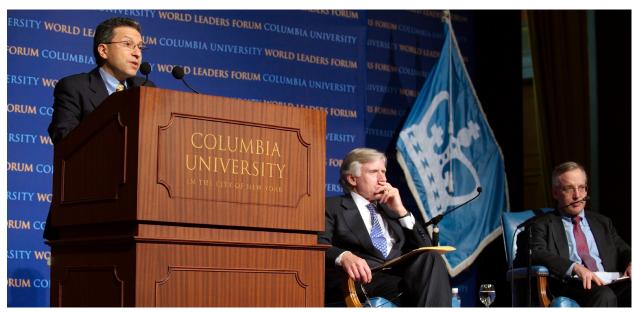
Michael Woodford

John Bates Clark Professor of Political Economy, Economics Department, Columbia University

Cosponsored by Columbia University's Program for Economic Research

Still More Lessons from the Financial Crisis

December 7, 2009



David E. Weinstein, Lee C. Bollinger, William C. Dudley

n December 7, 2009, the Columbia University World Leaders Forum, the Center on Japanese Economy and Business at the Columbia Business School, and the Program for Economic Research (PER) at Columbia's Department of Economics sponsored a keynote address by William C. Dudley, president and CEO of the Federal Reserve Bank of New York (FRBNY). David E. Weinstein, Carl S. Shoup Professor of Japanese Economy at Columbia's Department of Economics and director of PER, and Lee C. Bollinger, president of Columbia University, introduced Mr. Dudley, who presented a talk on "Still More Lessons from the Crisis" to more than 350 people at Columbia University's Low Library. Professor Michael Woodford, John Bates Clark Professor of Political Economy at Columbia's Department of Economics, moderated the question-and-answer session afterward.

Mr. Dudley succeeded Timothy Geithner as president and CEO of the FRBNY last January. In his introduction, President Bollinger said Mr. Dudley is one of the best equipped to discuss the financial crisis given his role as the Federal Reserve's (the Fed's) envoy to Wall Street, regulating the nation's most powerful financial institutions, and providing leadership in managing the Fed's more than \$2 trillion balance sheet. As vice chairman and a permanent member

of the Federal Open Market Committee (FOMC)—the body responsible for U.S. monetary policy—Mr. Dudley is also a key figure in managing the money supply.

Mr. Dudley began by saying the Fed's actions over the past two and a half years have been critical to stabilizing the financial system and preventing the extraordinary stress in markets from causing a deeper and more protracted economic downturn. This achievement is a result of its breadth and depth of knowledge and experience with financial institutions, financial markets, and financial market infrastructure, both inside and outside of the United States.

While the recession now appears to be over, the economy is still weak and the unemployment rate much too high. These circumstances underpin the FOMC's commitment to keeping short-term rates low—exceptionally low—for an extended period of time. The Fed will be willing and able to exit from this period smoothly when the time comes to ensure that inflation stays low and inflation expectation is well anchored.

Room for Improvement

However, Mr. Dudley-after noting his opinions are his own and not representative of his employer—admitted that regulators could have done more to prevent the crisis. It's now clear that they did not sufficiently understand some critical vulnerabilities in the financial system, including the consequences of inappropriate incentives, the opacity of the system, and the large number of self-amplifying mechanisms that were embedded within the system. The ramifications of the growth of the shadow banking system and its linkage back to regulated financial institutions were not fully appreciated until after the crisis began.

It must be ensured that ongoing changes in the financial system do not threaten its future stability. For instance, the crisis provoked a reevaluation of how to respond to asset bubbles. For years, central bank orthodoxy has been that asset bubbles cannot be identified very well; thus the strategy has been to move aggressively to clean up such bubbles after they have burst. But the costs of cleaning up after the fact have been immense.

So, Mr. Dudley said, bubbles—that is, persistent deviations in asset prices from their fundamental value—must be identified in real time. Following this, the task is to figure out how to limit their development and/or how to allow them to deflate in ways that will not damage the economy.

While identifying asset bubbles in real time is difficult, identifying variables often associated with asset bubbles, especially credit asset bubbles, may be less daunting. For example, there was a tremendous, observable increase in financial leverage in the U.S. financial system over the period from 2003 to 2007, particularly in the nonbank financial sector. Presumably this rise in leverage also raised the risk of a financial asset bubble. Limiting the overall increased leverage throughout the system could have reduced the risk of a bubble and the consequences if the bubble were to burst.

The fact that increases in leverage are also associated with financial asset bubbles suggests that limiting increases in leverage may help prevent bubbles from being created in the first place. There is a role for supervision and regulation in the bubble prevention process. It may be appropriate for the Federal Reserve, working with functional regulators such as the Securities and Exchange Commission, to monitor and limit the buildup in leverage at the major security firms and the leverage that these firms extend to their clients and counterparties.

Whether there's a role for monetary policy to limit asset bubbles is a more difficult question, Mr. Dudley said. On one hand, monetary policy is a blunt tool for use in preventing bubbles because it has other important consequences for real economic activity, employment, and inflation. On the other hand, there is evidence that monetary policy does have an impact on desired leverage through its impact on the shape of the yield curve. A tighter monetary policy by flattening the yield curve may limit the buildup in leverage. Whether it would be more effective to limit leverage directly by regulatory and supervisory means or via monetary policy is still an open question, but it is becoming increasingly clear that a totally hands-off approach is problematic.

Better Supervision

Mr. Dudley said there could have been better supervision of large, complex, commercial banking organizations. Recent reports issued by the Senior Supervisors Group, which is composed of regulators from five major countries, indicated that banking regulators both here and abroad should have been tougher in their assessment of the quality of management, of governance, and in terms of these banks' risk management capabilities.

The Fed should also have pushed harder for better management information systems and more simplified corporate organizations and structures. More could have been done to identify best practices in terms of risk management, liquidity, capital, and compensation.

The supervisory capital assessment process, or SCAP, is an important example of the value of broad horizontal examinations. In the SCAP, the Federal Reserve worked in conjunction with other U.S. regulators to assess the impact of a stressed economic environment on the 19 largest banking organizations in the country simultaneously.

This approach made the SCAP a particularly powerful exercise. It allowed the supervisors to ensure that the collective results of the individual banks were consistent with the top-down assessment of revenue and credit losses generated from an adverse stress scenario for the overall macro economy. These types of broad horizontal reviews are being incorporated more deeply into the Fed's supervisory process.

Other initiatives include several aimed at strengthening capital requirements to prevent some of the practices witnessed during the crisis—for example, a banking organization paying out dividends to demonstrate that it is strong, while this very action is making it weaker by depleting capital.

One goal is to better capture all of the risks in the capital assessment process. This, for example, includes the trading accounts of banks. Some institutions have clearly not set

aside adequate levels of capital given the risks that were embedded in their trading positions.

The potential for contingent capital is also being explored. The goal is to bolster the amount of common equity available to absorb losses in adverse economic environments. This might be done by allowing the issuance of dead instruments that would automatically convert into common equity in stressed environments under certain prespecified conditions. Such instruments might have proven very helpful had they been in place before and during the crisis. Investors would have anticipated this common equity would be replenished automatically if a firm came under stress, and this knowledge might have in turn tempered anxieties about counterparty risk. At a minimum, contingent capital instruments might have enabled common equity buffers at the weaker firms to be replenished earlier and automatically, thereby reducing uncertainty and the risk of failure.

Mr. Dudley acknowledged that there are many questions that need to be answered to determine the potential for contingent capital instruments to enhance financial stability, such as: What are the circumstances under which conversion would be triggered? How much common equity do the debt holders receive upon conversion? But it looks to be a promising mechanism for injecting common equity into the banking system in times of stress without unduly raising intermediation costs or pushing financial activity out of the banking sector into the unregulated sector.

On the Liquidity Front

There are a host of liquidity-related initiatives under way, Mr. Dudley said. Unlike at the start of the crisis, the Fed is now supervising most of the holding companies of the systemically important financial institutions—Goldman Sachs, Morgan Stanley, and Merrill Lynch, which is now a subsidiary of Bank of America—to make sure they have appropriate liquidity buffers and capital.

The Fed is also working with a broad range of private sector participants including dealers, clearing banks, and tri-party repo investors to dramatically reduce the structural instability of certain financial system utilities, such as the tri-party repo system.

The Basel Committee on Banking Supervision is working on establishing international standards for liquidity. There are two parts to this. The first is to require a short-term liquidity buffer of sufficient size so that an institution that

was shut out of the market for several weeks will still have sufficient liquidity to continue its operations unimpaired. The second is a liquidity standard that would limit the degree of permissible maturity transformation—that is, the amount of short-term borrowing that would be allowed to fund liquid long-term assets. Under these standards, a firm's holdings of liquid long-term assets would need to be funded mainly by equity and long-term debt.

Compensation Structures

Mr. Dudley said the issue of compensation is hugely potent, as there was a fundamental unfairness over the past few years. The actions to stabilize the financial system had the effect of rescuing many of the same financial institutions that contributed to the crisis. Many of those institutions are now prospering and many of their employees will be highly compensated.

The situation is even more galling in an environment in which the unemployment rate is 10 percent and many people are struggling to make ends meet, he said. But it is not feasible or practical for the Federal Reserve or any other supervisory entity to attempt to determine the level of compensation at individual firms on an ongoing basis.

A better approach is for supervisors to ensure that a firm's compensation regime is consistent within institutional safety and soundness and with broader financial stability. That could and should have important implications for the level of individual compensation. For example, a trader should not be paid solely on the basis of this year's accounting profits. If those profits are based on the evaluation of liquid assets held on the bank's books, that could easily go down considerably in value before they are liquidated.

The Fed is helping to make sure compensation structures curb rather than encourage excessive risk taking. It seeks a framework that will embed compensations practices more deeply into the supervisory process. The Fed has made clear to the major banks and dealers that 2009 compensation should be consistent with the recently developed financial stability board principles on compensation, which emphasize the importance of appropriate incentives.

"Too Big to Fail"

Mr. Dudley said there is considerable work under way on the "too big to fail" problem. The resolution mechanisms for large, complex bank holding companies and nonbank financial firms that become troubled must be improved. This initiative must be complemented by efforts to strengthen the financial market infrastructure. If regulators had at their disposal an effective resolution mechanism for large financial firms and the financial system was made more resilient to shocks, then the number of firms that were indeed "too big to fail" could be significantly reduced.

It must be made known that no special advantage persists from being perceived by creditors, counterparties, or investors that a firm is "too big to fail." Without this, it would be hard to build a resolution mechanism that credibly ensures that any firm will be allowed to fail under any circumstance. If there is a charge that a firm may be "too big to fail," then there should be an explicit quid pro quo for that status in the form of higher capital and liquidity requirements. For example, contingent capital could be made part of any additional regulatory capital requirements for firms that might be "too big to fail."

Addressing Criticism of the Fed

Mr. Dudley said that while criticism of the Federal Reserve and other regulators has at times been on target, at other times it has been off the mark. It has been singled out for criticism regarding failures of supervision, even though it did not have any regulatory responsibility for many of the large U.S. financial firms that collapsed during the crisis, such as the American International Group.

Mr. Dudley explained that the Fed learned about the significant liquidity problems AIG was experiencing only shortly before the Lehman bankruptcy. It had been reassured that a private-sector consortium was being assembled to provide AIG with liquidity support if necessary. But once Lehman filed its Chapter 11 petition on September 15, the environment worsened and the lending consortium fell apart.

A recent report by the Special Inspector General for the Troubled Asset Release Program (SIGTARP) suggested that the Federal Reserve should have had a contingency plan in place for AIG. But the reality was that the Fed was the contingency plan. After the private sector backed away, the Fed—with the full support of the Treasury—was called upon to do something extraordinary and lend to AIG. Despite having no oversight authority over AIG, it stepped into the breach and lent to AIG to prevent a catastrophic collapse in the financial system and to protect the public from the fall-out that would have resulted from such a collapse.



William C. Dudley

The SIGTARP report and others have also charged that the Federal Reserve should have forced AIG's major counterparties to take haircuts in conjunction with the formation of Maiden Lane III, the holding company created when the U.S. government took over AIG. But from the moment the U.S. government made it clear that its goal was to prevent AIG's bankruptcy in order to stem a broader collapse of the financial system, this undercut the ability to obtain concessions from AIG's counterparties.

Power in a negotiation comes either from being able to issue a credible threat or from coercion. Bankruptcy at that point for AIG was simply not credible given the actions taken to rescue the firm in the first place. Moreover, threatening bankruptcy would have been at cross-purposes with the broader goal of stabilizing the financial system, as well as an abuse of the Fed's supervisory power.

Mr. Dudley said the case of AIG provides a stark illustration of two critical shortcomings in the current regulatory system. The first is the fact that a large, systemically important institution like AIG was able to slip through the cracks in the regulatory structure and put the entire system at risk. The second is the lack of an effective resolution regime for large bank holding companies and nonbank financial institu-

tions. Without such a regime, a commitment to support a failing firm inevitably results in the loss of leverage in negotiating with counterparties and creditors.

Another difficult issue is that some of the very same individuals and financial firms that precipitated this crisis have also benefited so directly from the response to the crisis. But once the crisis was under way, one goal took precedence over making sure those people did not benefit: keeping the financial system from collapsing.

During the Great Depression, the unemployment rate climbed to 24 percent. It's generally agreed that the authorities at the time—by not responding sooner and more aggressively-contributed greatly to the severity and duration of the Depression. In contrast, during this crisis, the Fed and other agencies acted much more aggressively to ward off a total collapse of the financial system. Liquidity was restored to markets and the banking system was recapitalized much more quickly. This helped prevent the deep protracted crisis that occurred during the 1930s.

Perhaps most critical among the challenges facing policy makers and lawmakers is how to establish a more effective regulatory structure. Mr. Dudley said the Federal Reserve's monetary policy, lender of last resort, and supervisory functions should remain in place. These functions are interrelated, so that the execution of one of these responsibilities helps the Federal Reserve in its conduct of the others.

For the Fed to act as lender of last resort effectively, it must have firsthand knowledge about banks, capital markets, and payment and settlement systems. If supervisory and other financial oversight responsibilities were taken from the Fed, it would make it much more difficult to perform the lender of last resort function safely.

Likewise, in the conduct of monetary policy, it's important to understand how changes in the federal fund trade or on the interest rate on excess reserves affect financial conditions. A detailed understanding of banks, capital markets, and the payment and settlement systems is essential to properly understand the linkage between monetary policy, the financial system, and the real economy. If the Fed loses its oversight of the financial system, the ability of Fed policy makers to understand how their actions will affect financial conditions will be impaired and the economy will suffer.

Economic Outlook

Mr. Dudley said the economic outlook is slowly improving. Output is recovering, and the pace of job losses has slowed substantially. In the second half of this year, it looks like real GDP growth will average about 3 to 3.5 percent at an annualized rate; 2010, however, will probably be slightly weaker, mostly because some of the current sources of strength that are supporting activity are temporary, such as the inventory cycle and the fiscal stimulus.

The year 2010 will likely see a more moderate growth period in the aftermath of the crisis. Banks are still under pressure in terms of credit losses. The shadow banking system is still impaired, and securitization activity is recovering only very slowly. November saw the first commercial mortgagebacked securities deal in a year and a half. The constraints on credit availability will take considerably more time to fully abate. If growth is subdued, the unemployment rate will stay too high and inflation will stay low, so it will be appropriate to keep the federal funds rate target exceptionally low for an extended period of time.

Mr. Dudley said one risk is that inflation expectations could become less well anchored. People may worry about the expansion of the Federal Reserve's balance sheet and that the increase in the federal debt could prove inflationary over time. Some may worry that Congress could take actions that would call into question the Fed's independence and monetary policy, and that this could cause the Fed to be less willing to tighten monetary policy in a timely way in the future.

A rise in long-term inflation expectations above levels consistent with price stability would be very unwelcome because inflation expectations are an important determinate of actual inflation. If inflation expectations rise, this could push actual inflation up, despite the very high unemployment rate. Then this would make it difficult for the Fed to use monetary policy to achieve its dual objective of full employment and price stability.

Some worry that the rapid growth of the Fed's balance sheet over the past year will ultimately lead to an inflation problem. This anxiety stems from the fact that periods of rapid growth of the monetary base (currency plus bank reserves) have typically been followed by rapid credit growth and inflation.

But a new tool—the ability to pay interest on excess reserves-should allow the Fed to cut the length of time



Michael Woodford, William C. Dudley

between adjusting the size of its balance sheet and credit creation, and inflation. If the Fed raises the interest rate on excess reserves, it can incentivize banks to hold the excess reserves with the Fed rather than lend them out, and that should work because the price of credit is an important determinate of credit demand.

If the FOMC were to raise the interest rate paid on excess reserve, this would raise the price of credit. That in turn would limit the demand for credit, and excess reserves wouldn't be lent out. Instead, the excess reserves would stay parked at the Fed

That said, the Fed's exit from its current monetary policy stance is going to be more complicated than it usually is. Normally it simply decides when to raise the federal funds rate target. Now some other factors need to be considered: Does it decide to drain reserves from the banking system? Is it better for the banking system to operate with \$500 billion of excess reserves or \$1 trillion? In the meantime, the Fed is testing its ability to drain reserves through the use of reverse purchase agreements.

Mr. Dudley noted that the Ron Paul amendment, which was inserted into the House Financial Services bill, would subject the Federal Reserve's monetary policy decisions to audit or review by the Government Accountability Office (GAO). However, he cautioned the audience to consider how market participants will react to the potential politicization

of the monetary policy process. If market participants know that the decision to raise interest rates today might be criticized by the GAO six months later, they could begin to worry about the Fed's willingness to make tough decisions in terms of tightening policy.

Inflation expectations could become less well anchored, which would make it more difficult to keep inflation under control. Mr. Dudley pointed out that the Fed's monetary policy decisions are already public and officials are available to explain rationales. He concluded by saying that it's been well established around the world that monetary policy independence leads to better outcomes in terms of unemployment and inflation. He said in his view, any legislation that would cast doubts about the Fed's independence in the conduct of monetary policy would not be beneficial.

QUESTION-AND-ANSWER PERIOD

What is the Fed doing to stem unemployment and foreclosures?

Mr. Dudley said it has pushed the short-term interest rate lever as hard as it can. The federal funds rate is 0 to 25 basis points. It has also embarked on a large-scale asset purchase program to push down mortgage rates to make housing more affordable.

What are the financial instruments that helped precipitate the crisis?

Mr. Dudley pointed to collateralized debt obligations (CDOs), and CDOs of CDOs, as the most problematic because they were incredibly opaque and thus difficult to value. If you don't know what something is worth, it causes uncertainty and investors pull back. Simplified financial asset products are needed that are more transparent about the content and price of products, and are better modeled.

What is fundamental value?

Mr. Dudley explained that it is a range based on history. When the NASDAQ hit 5,000 in 2000, it was well outside any normal range. That big disparity between fundamental value and actual asset price proved to be a bubble.

Could AIG's counterparties have been made to bear costs shifted to taxpayers?

Mr. Dudley said the counterparties would only grant concessions to the Fed unanimously. In terms of fairness, he recognizes why concessions would have been better, but one cannot separate bankruptcy prevention from support of the counterparties.

How can regulatory reform be improved?

Mr. Dudley returned to the AIG case. A very small operation at AIG called AIG Financial Products was providing insurance on CDOs and other obligations that were virtually unregulated. AIG was using its triple-A rating to run this business with very little capital and collateral, creating a huge vulnerability in the system. If there had been a systemic risk regulator in place who had the authority to ferret out and prevent these kinds of practices, that aspect of the crisis could have been prevented. A systemic risk regulator can try to make sure that the financial system is stable so that mechanisms can dampen shocks rather than amplify them, and can also intervene in a more timely way to prevent unsafe and unsound practices.

Is the short-term effect of a stimulus package at odds with the long-term issue of global imbalances?

Mr. Dudley agreed that when the economy begins to return to health, it would be prudent to see less consumption and more investment and savings in the United States and more consumption and a lower savings rate in Asia.

What should be done about shadow banking?

Mr. Dudley said the growth of the sector meant there should be someone doing oversight-ideally a systemic risk regulator who can be aware of vulnerabilities existing just outside the banking system. The vulnerability in the crisis was about maturity transformation—that these entities were borrowing short term and using that to finance liquid long-term assets, which became a bigger problem when confidence was shaken.

金融危機の更なる教訓

2009年12月7日

ニューヨーク連邦準備銀行総裁ウィリアム・C・ダドリー氏による基調講演「金融危機の更なる教訓」が、コロンビア大学ワールド・リーダーズ・フォーラム、日本経済経営研究所(CJEB)、コロンビア大学経済学部経済研究プログラム(PER)の共催で、2009年12月7日にコロンビア大学にて行われた。コロンビア大学長のリー・C・ボリンジャー氏とカール・S・シャウプ日本経済学教授・PERディレクターのデイビッド・ワインスタイン氏が司会を務め、350名以上の参加者を集めた。

ダドリー総裁は、連邦準備制度理事会(FRB)がこの2年半にとってきた政策は、金融安定化を図り、経済冷え込みの深刻化と長期化によって金融市場に生じる膨大なストレスを回避するのに重要な役割を果たしたと述べた。これらの政策は、FRBが米国内外の金融機関、金融市場とそのインフラストラクチャーに精通し、豊富な経験を擁していたため可能なことであった。

しかし、不況に終止符が打たれたように見えるが、経済はいまだ脆弱であり失業率も非常に高い。このような状況を背景に、連邦公開市場委員会(FOMC)では、期間を延長して短期金利を非常に低いレベルで維持する方針である。インフレが低く抑えられ、インフレ期待も抑制されている状態が揺るぎないものとなれば、FRBはすみやかにこのような状況から脱するであろう。

ダドリー総裁は、FRBを含む各監督機関が、今回の金融危機を防ぐためにもっとできることはあったのではないかという指摘は正しいと述べた。各監督機関が、不適当なインセンティブの結果や金融システムに内在する自己増幅メカニズムの不透明性とその多さといった金融市場の重大な弱点をよく理解していなかったことが、今となっては明白である。影の銀行システムの拡大による影響や、それと規制対象になっている金融機関との関連性については、金融危機が始まるまで完全には理解されていなかった。

資産バブルを正確に識別し、それを抑制し収束させる 新しいアプローチが必要である。資産バブルは、レバレッジの急速な増加に注目することで、リアルタイムでの 識別が可能かもしれない。金融政策も役立つであろう。 レバレッジを直接制限するのに、規制や行政指導による手段と金融政策のどちらがより効果的であるかについてはいまだ答えが出ていないが、完全不介入のアプローチに問題があることは明白になりつつある。

ダドリー総裁は、巨大で複雑化した商業銀行組織に対する監督は、もっと強化できたはずであったと述べた。 FRBはこれらの金融機関に対し、経営情報システムの強化と会社組織の単純化をより強く求めていくべきであった。さらに、リスク管理、流動性、資本、報酬体系といった分野におけるベスト・プラクティスを探求する努力も不足していた。 FRBによるアメリカン・インターナショナル・グループ (AIG)の救済策については、民間の融資団による救済が実現しなかったことを受けて、金融システムの壊滅的な崩壊とその影響を未然に防ぐために対AIG融資の申し入れがあったため、FRBは介入したのであると、ダドリー総裁は述べた。

加えてダドリー総裁は、現行の規制システムには2点の重大な欠陥があることがAIGの実例からわかると述べた。第一に、巨大で金融システム上重要な金融機関が規制体系の隙間にすべり込み、システム全体を危険に晒すことが可能であるということである。第二には、大規模な銀行持ち株会社やノンバンク金融機関を対象とする効果的な対処システムがないことだ。そのような体制なしでは、苦境に陥った企業に対する支援をめぐる取引先や債権者との交渉が難航することは避けられない。

政策決定者や立法者が抱える課題のなかで恐らく最も重大なのは、より効果的な規制枠組みをどう構築するかということであろう。ダドリー総裁は、FRBの金融政策、最終融資者としての機能、そして管理指導機能は、維持されるべきであると述べた。これらの機能は相互的に関連しており、ひとつの機能の遂行が、FRBのその他の機能の遂行にもつながる。

2010年の展望についてダドリー総裁は、生産面は回復を見せており、雇用調整のペースもかなり減速してきたという。2010年後半には、実質GDP成長率は平均で年率3~3.5%となる見通しである。しかし、現在の経済活動を支えているのは在庫調整や景気刺激策といった一時的な要因であるため、通年での成長率は恐らく幾分低めとなるだろう。

ダドリー総裁は、2010年は金融危機の余波の中、緩やかな経済成長の年となりそうだと述べた。銀行は依然として貸し倒れの圧力を受けている。影の銀行システムはいまだ機能不全を起こしており、証券化の回復も遅々としている。ダドリー総裁は、金融政策決定プロセスが政治的に利用される可能性に対して警鐘を鳴らした。世界的にも、金融政策の独立性が失業やインフレ面でより良い成果につながることが確認されている。ダドリー総裁は結論として、金融政策実施におけるFRBの独立性に疑問を呈するような立法は有益とはならないであろうと述べた。

翻訳:小作尚美(日本経済経営研究所) 邦訳監修:高橋かほり(日本経済経営研究所)

Sponsors of the Center on Japanese Economy and Business

Lead Corporate Sponsors

Sumitomo Corporation of America

Senior Corporate Sponsors

Advantage Partners, LLP

Major Corporate Sponsors

Daiwa Securities America Inc. Kikkoman Corporation RISA Partners, Inc. Saga Investment Co., Inc. Takata Corporation Tsuchiya Co., Ltd.

Corporate Sponsors

Aflac Japan
Fuji Xerox Co., Ltd.

Japanese Chamber of Commerce & Industry of New York, Inc.
Mitsubishi International Corporation
Mitsubishi UFJ Trust and Banking Corporation
Mitsui Sumitomo Insurance Company, Ltd.
The Mitsui USA Foundation
Mori Building Co., Ltd.
The Tokyo Electric Power Company, Inc.

Individual Sponsors

Robert Alan Feldman Shigeru Masuda, CEO, ZERON Group, M.B.A. '74

Friends of the Center

John and Miyoko Davey
Itoh Shokai Co., Ltd.
Satoru Murase
Sumitomo Chemical Corporation
Sadao Taura
Yaskawa Electric Corporation

Center on Japanese Economy and Business

Columbia Business School 321 Uris Hall, 3022 Broadway New York, NY 10027 Phone: 212-854-3976 Fax: 212-678-6958

http://www.gsb.columbia.edu/cjek