

# New Tools For Central Bankers?

**C**entral banks worldwide face criticism for the inability of their policies to restore the global economy to historic levels of economic activity. Central bank bond buying, it is often charged, has distorted financial markets. Negative real interest rates have weakened many banking sectors.

At this summer's Jackson Hole meeting, Federal Reserve Chair Janet Yellen proclaimed: "New policy tools, which helped the Federal Reserve respond to the financial crisis and Great Recession, are likely to remain useful in dealing with future downturns. Additional tools may be needed." What new tools should the central bank community consider? Or has monetary policy been perceived too much as some kind of magical pill? Should fiscal and regulatory reforms come into play?

**More than forty noted experts share their views.**

THE INTERNATIONAL  
ECONOMY

THE MAGAZINE OF INTERNATIONAL  
ECONOMIC POLICY

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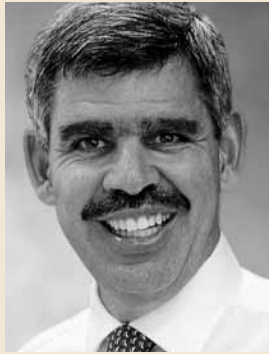
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*The answer is not to push central banks even deeper into what has become an increasingly “lose-lose” situation.*

**MOHAMED A. EL-ERIAN**

*Chief Economic Advisor, Allianz; Chair, President Obama’s Global Development Council; and author, The Only Game in Town: Central Banks, Instability, and Avoiding the Next Collapse (Random House, 2016)*

Reinhold Niebuhr’s “Serenity Prayer” makes an important distinction between having the courage to change the things that can be changed and the serenity to accept what cannot be changed. It also seeks the wisdom to know the difference. As such, it provides important insights for assessing the need and potential effectiveness of new tools for central banks.

By necessity rather than choice, and for too long already, central banks have been carrying an excessive policy burden. With tools only poorly suited to fix what ails advanced economies, they have found themselves compelled to experiment ever more despite outcomes that have consistently fallen short of their own policy expectations.

Given such protracted over-reliance on imperfect tools, it should come as no surprise that the benefits of such an unbalanced policy stance—with central banks effectively being “the only game in town” policy-wise—are declining while the risks of collateral damage and unintended consequences are rising.

As tempting as this may be, the answer is not to push central banks even deeper into what has become an increasingly “lose-lose” situation—“lose” for economies that already lack high and inclusive growth, and “lose” for central banks whose reputation and political autonomy are under increasing strain.

The right answer is to urgently broaden the policy response to include measures that can lift the binding constraints to prosperity—through pro-growth structural reforms such as tax system revamps, infrastructure programs, and labor market retooling; more active use of fiscal policy, especially where there is clearly scope and debt room; addressing pockets of crushing indebtedness; and improving cross-border policy coordination and the economic architecture, especially in Europe.

This does not mean that central banks should exit the policy stage. Rather, the time has come for them to

transition ... from the lead role in what essentially has been the equivalent of a “one-person show,” to playing a supporting role to politicians that finally step up to their economic governance responsibility and lift the constraints to a more comprehensive policy response.

Absent such a pivot, the quest for new tools for central banks may be associated with a much more disturbing and durable development—that of seeing central banks shift from being part of the solution to becoming part of the problem. And, certainly, this would not be in the interest of a global economy that, already, has operated well below its potential for too long.



*Take more targeted actions.*

**BENJAMIN M. FRIEDMAN**

*William Joseph Maier Professor of Political Economy, Harvard University*

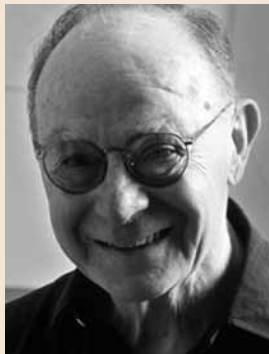
Since the 2007–2009 financial crisis, with short-term interest rates at or near zero, central banks have had varying degrees of success in lowering long-term rates by large-scale bond purchases, including in some cases purchases of privately issued securities (in the case of the Federal Reserve System, residential mortgages). But there is nothing about the way this action works that is special to a situation of zero short-term rates. Once central banks have “normalized” their policy interest rates, they should continue to entertain the possibility of using this new tool of monetary policy. Moreover, they should be prepared to use it symmetrically—that is, not just buying bonds when their goal is to lower long-term rates in order to stimulate the economy, but selling when higher long-term rates are desirable.

Such actions would also give central banks the ability to take more targeted actions. During the run-up to the crisis, Federal Reserve officials were right that raising short-term rates would have been a “blunt instrument” with which to attack even an obvious excess in one sector of the economy (in this case, home construction) or one specific market (mortgages). By contrast, selling mortgage-backed securities would have usefully widened the spread



between Treasury rates and mortgage lending rates. No one knows what needs of this kind may arise in the future.

A further implication of this proposal is that central banks should not “normalize” their balance sheets—in other words, shrink back to pre-crisis size—as they normalize their policy rates. They cannot sell securities that they do not own. Maintaining a symmetrical bond purchase/sale capability, as an additional monetary policy tool, requires having a sizeable portfolio to begin with. Most central banks now do. They should maintain it.



*Monetary policy cannot fix real problems.*

**ALLAN H. MELTZER**

*Allan H. Meltzer Professor of Political Economy, Tepper School of Business, Carnegie Mellon University, and Distinguished Visiting Fellow, Hoover Institution*

**T**he problem is not that policy tools have failed. The problem is that the developed countries do not have a monetary problem—a problem that central banks can relieve by reducing interest rates and increasing base money.

The United States, the European Union, and Japan have severe real problems. A first principle of economics separates real and monetary problems. Monetary policy cannot fix real problems.

The Obama Administration does not give priority to economic growth. It concentrates on redistribution toward its supporters. It regulates frequently and heavily, creating uncertainty. That’s a main reason for the virtual absence of any new private capital spending in the recovery. Without investment, workers do not learn new skills, so productivity growth is reduced. These are real problems. The fact that almost all the reserves that the Federal Reserve supplied from 2009 to the present are idle shows that the Federal Reserve was wrong to keep adding to idle reserves. Instead of adding more excess reserves and financing the huge budget deficits at very low rates, it should have made the government pay for its spending.

The European Central Bank has a different real problem. Unions in France and Italy are strong politically.

Production costs in both countries are uncompetitive. Unions prevent the parliaments from taking actions to lower unit labor costs. Germany, Netherlands, Spain, and Ireland made the cost adjustment. France and Italy, the second- and third-largest countries economically in the European Union, make the Union noncompetitive. Mr. Draghi is mistaken if he believes his central bank actions will bring economic expansion. The problem is real.

I served as honorary adviser to the Bank of Japan until 2000. Even then economists and officials understood that Japan’s problems required more competitive labor and commodity markets. That hasn’t changed in almost two decades. But it is now accepted by the Abe government.

Economics has not failed. Central bankers have.



*The Fed will resort to its one tool, not because it’s a good idea but to show that it can. Interest rates will rise.*

**JAMES K. GALBRAITH**

*Lloyd M. Bentsen, Jr., Chair in Government/Business Relations and Professor of Government, Lyndon B. Johnson School of Public Affairs, University of Texas at Austin*

**T**he mainstream economists have staggered, like drunks at midnight, from one monetary light-post to the next. Not long ago, money was “neutral”—affecting nothing save inflation. Then after the Great Financial Crisis, quantitative easing was—it was suggested—if not omnipotent, at least a powerful new tool for growth and jobs. Now, the disappointing results are in, and we hear that a central bank is impotent after all. Even getting to a bit more inflation, by mainstream lights the one thing monetary policy could do, seems out of reach.

In truth the Federal Reserve controls the short-term interest rate, which is the cost of funds to banks. It has discovered what is no surprise to any Keynesian, that lowering the short rate, even to zero, has only small effects on household cash flow and none to speak of on business investment; if households and businesses do not wish to borrow a low interest rate does not help.

But if you keep the short rate low for a long time, the long-term rate follows it down. And once that has happened, you’re stuck. A move to raise the short-rate then

flattens or inverts the yield curve, and hell breaks loose, somewhere in the world.

So the options narrow. And what the Fed has done is to resort to the art of heavy hints and dark warnings. Much is said, but nothing happens, a Talmudic obscurity descends, an industrial analysis of syntax, grammar, punctuation and facial tics. The great accountability reforms of H.Con.Res.133 in 1975 and the Humphrey-Hawkins Act in 1978, which gave us forty years of monetary policy hearings, meet at last the principle of diminishing returns. And we can understand why, under a Democratic president, good liberals are shunted to the central bank. It's because they are less trouble there than they might be somewhere else.

Transparency defeats credibility as the charades unfold. And yet, in the end, credibility bites back. Notwithstanding the damage, the Federal Reserve will resort to its one tool, not because it's a good idea but to show that it can. Interest rates will rise. Unlike the FBI, this year the Fed stood down through the election. Brace yourselves for the aftermath.



*In the next recession, central banks will again have to contemplate unconventional responses.*

**BARRY EICHENGREEN**

*George C. Pardee and Helen N. Pardee Professor of Economics and Political Science, University of California, Berkeley*

Is it possible to answer “all of the above”? Yes, we've been relying too heavily on monetary policy. Yes, excessive reliance on low interest rates and quantitative easing distorts financial markets and allows risks and imbalances to build up. And yes, the new monetary policy tools utilized during the financial crisis and the Great Recession are likely to remain useful in future downturns.

No question, it would be better if countries with fiscal space, like the United States, had used it more fully during the Great Recession, preventing central banks from having to conclude that monetary policy was the only game in town. Similarly, the current low level of interest rates in the United States and other advanced

countries is a once-in-a-lifetime opportunity for productive infrastructure investment that, were it undertaken, would enable central banks to begin normalizing interest rates sooner rather than later. But this is different from arguing that central banks should have shunned interest rate cuts and quantitative easing in the absence of an adequate fiscal response. It is different from arguing that they should immediately normalize the level of interest rates. There is no evidence that central banks, by doing less, can force fiscal policy makers to do more. Doing less would have meant more financial distress, a deeper downturn, and a slower recovery. If financial risks and imbalances develop, then this is first and foremost a problem to be addressed by regulators, including central banks, where the appropriate tools are macroprudential and microprudential policies.

Anyone who claims to know the date of the next recession is talking through his hat. What we do know is that, when the next one hits, policy rates are unlikely to have been restored to the higher levels of 3 percent or 4 percent to which we were accustomed before the Great Recession. Consequently, the monetary response to the next downturn is likely to again encounter what we used to think of as the “zero lower bound.” Central banks will again have to contemplate unconventional responses and their mixed blessing. Those seeking to minimize this prospect need to ensure that fiscal and macroprudential policy-makers are fully awake and on the job.



*The last thing we need is new tools for central bankers.*

**WILLIAM R. WHITE**

*Chairman, Economic and Development Review Committee, OECD, and former Economic Adviser, Bank for International Settlements*

The last thing we need is new tools for central bankers. What they have done to date has failed to restore strong and sustainable growth, in part due to the unexpected side effects of their own policies. More of the same experimentation threatens to dig the hole even deeper. Central bankers should have insisted years

ago that the global economy faces “real” problems that the provision of liquidity by central banks simply cannot solve. John Maynard Keynes himself came to this conclusion in his intellectual journey from the *Treatise* to the *General Theory*.

The recovery of the global economy since 2009 has been uncomfortably weak in spite of unprecedented efforts by central banks to stimulate demand. Increasingly, their efforts smell of panic, inducing those with the capacity to spend to just hunker down. Moreover, easy monetary conditions work by bringing spending forward in time, ratcheting up debt levels in the process. After seven years of this, the “headwinds” of debt are now blowing strongly in every part of the world. Whereas in 2009 the emerging markets were part of the solution, today they are part of the problem.

Among the many unexpected and undesirable side effects of easy money, two stand out. New tools will only increase their negative impact.

First, easy money threatens financial instability. Financial institutions are having their margins squeezed and their business models questioned. Financial markets are also being affected. With central bank policies so dominant, the price discovery mechanism has effectively disappeared. Dysfunctional market “anomalies” have become increasingly evident. Moreover, the high prices of many assets, both financial and real, are increasingly hard to reconcile with fundamentals.

Second, easy money threatens potential growth going forward. There was a serious misallocation of resources prior to the crisis—above all to construction. To some degree, easy money has helped lock in these misallocations as zombie banks have found it easier to support zombie companies. This impedes the growth of more efficient firms and also siphons funds away from new firms whose only collateral is the “next big idea.” Moreover, with financial markets no longer working properly, the longer-term benefits of both financial diversification and value investing have been further impaired.

What should G20 governments do? A blend of Hayek and Keynes seems called for. On the supply side, the debt overhang problem must be solved in an orderly way. In many jurisdictions, we also need better insolvency laws, especially for financial institutions. Structural reforms also offer many low-hanging fruit. On the demand side, those countries with fiscal room for manoeuvre should use it. Redistributing income to the relatively poor, whether through higher wages or direct transfers, also has significant merit. None of this will be politically easy, particularly given the need for international cooperation. However, the first step in that journey must be dispensing with the dangerous delusion that central banks can sort things out, if they would only try harder. Giving central banks more tools only strengthens that delusion.



*Enthusiasm for the wonders of monetary policy can create a dangerous illusion.*

**MILTON EZRATI**

*Chief Economist, Vested, and author, **Thirty Tomorrows: The Next Three Decades of Globalization, Demographics, and How We Will Live** (Thomas Dunne, 2014)*

All the talk about new monetary policy tools cuts two ways. On the positive side, it supports the ever-present desire to foster confidence. Central banks will also need new ways to cope with the situation that yesterday’s new tools have produced. On the less positive side, however, enthusiasm for the wonders of monetary policy can create a dangerous illusion that central bank action can somehow substitute for essential fiscal and regulatory reforms.

The Federal Reserve’s plan to make future policy less accommodative offers a concrete illustration of the need to find new ways to implement policy. For one, claiming to have sufficient options to keep matters in hand will help calm already jittery financial markets and so improve the likelihoods of policy success. For another, the Fed needs new ways to cope with the massive amounts of liquidity with which past new tools have flooded markets. Term auction facilities and term securities lending facilities, as well as quantitative easing over years, have enlarged the central bank’s balance sheet from a touch over \$900 billion before the financial crisis of 2008–2009 to about \$4.5 trillion. Old ways of manipulating short-term interest rates will have difficulty moving the much more massive amounts now required. Because past new tools have also inflated bank holdings of excess reserves from \$2.0 billion to some \$2.5 trillion, the Fed will also need direct ways to affect the returns banks receive (or pay) on their excess reserves.

If new tools are essential in these respects, their allure runs the risk of distracting the authorities from needed fiscal and regulatory reforms. In Europe, for example, several countries have a crying need to reform their labor and product market policies. Such reform could enable them to cope better with the austerities on which Berlin insists and actually perhaps grow fast enough to discharge their debt burdens without central bank help. In Japan, demographic imperatives demand new policies that

have nothing to do with money or the Bank of Japan. In the United States, growth has suffered under regulatory overreach and long-standing problems with the tax code. Monetary policy, however imaginative, cannot answer for any of these needs and can do harm by allowing the authorities to use the promise of monetary innovation as an excuse for inaction on these critical fronts. To this extent, the upbeat, confident talk at Jackson Hole is counterproductive to say the least.



*Time to look at the inflation target.*

**LAURENCE M. BALL**  
*Professor of Economics, Johns Hopkins University*

The lower bound on interest rates, which has handicapped monetary policy since 2008, is likely to be a persistent problem. The neutral real interest rate appears to be about 1 percent in advanced economies, and central banks target inflation rates close to 2 percent. By the Fisher equation, when economies are in long-run equilibrium, nominal interest rates will settle at about  $1 + 2 = 3$  percent.

As a result, when future adverse events cause recessions, central banks will be able to cut interest rates only 300 basis points before rates again reach zero. Over the past fifty years, policymakers have usually needed larger rate cuts to end recessions, even those of moderate size. This history suggests that conventional monetary easing will often be inadequate for restoring full employment.

With interest rates near zero, policymakers have resorted to a range of “unconventional” policies including quantitative easing and negative interest rates. Central banks have no alternative to unconventional policy if they need to stimulate weak economies and interest rates are near zero (assuming that a major fiscal expansion is precluded by politics). But quantitative easing and negative interest rates may not be ideal instruments of monetary policy. The magnitudes of their effects are unclear, and many people worry about adverse side effects on the financial system. It would be good to reduce future reliance on unconventional policies by keeping interest rates away from zero.

There is a simple way to accomplish this goal: an increase in inflation targets. If central banks raised their targets from 2 percent to 4 percent, then with a 1 percent real interest rate, policymakers would have 500 rather than 300 basis points of conventional easing available. The lower bound on rates would constrain policy less often and less severely.

This benefit would come at little cost: there is no evidence that economies operate less efficiently with a trend inflation rate of 4 percent than a rate of 2 percent. The public and policymakers were distressed by double digit inflation in the 1970s, but this problem was “conquered” once policymakers reduced inflation to about 4 percent in the late 1980s. Writing in 1996 about public opinion polls, now-Fed Vice Chair Stanley Fischer commented, “concern about inflation disappeared rapidly once inflation dropped below 5 percent.”

Central bankers often suggest that increasing their well-established inflation targets would reduce their “credibility.” But policymakers should seek credibility for their commitment to sound economic policies, not their commitment to a particular level of inflation that became conventional in the 1990s. We have learned that the lower bound on interest rates is a bigger problem than we thought a decade ago, so if 2 percent was the right inflation target then, it is too low today. Policymakers should recognize this point, explain it transparently to the public, and act accordingly.



*Solving the supply-side constraints on labor and productivity would allow fiscal and monetary policy to work as intended.*

**MARC SUMERLIN**  
*Managing Partner, Evenflow Macro, and former Deputy Director, National Economic Council*

With eight years of extraordinary monetary stimulus failing to deliver acceptable economic results, global policymakers should look to a combination of fiscal and regulatory reforms to revitalize economic growth. Former U.S. Treasury Secretary Lawrence Summers has resuscitated economist Alvin Hansen’s “secular stagnation” phrase as justification for a debt-financed



infrastructure expansion. Hansen's 1938 presidential address to the American Economic Association, from which Summers borrows, is a *tour de force* covering both the demand and supply sides of the U.S. economy.

Hansen started from a skepticism that an abundance of loanable funds at low interest rates would make much of a difference during a climate of investment stagnation. He had been persuaded by the Swedish economist Knut Wicksell that the prospective rate of profit on new investment was the dominant factor. Consistent with competent business judgement, the problem was not the cost of financing but the returns on the projects to be undertaken. He concluded: "I venture to assert that the role of the rate of interest as a determinant of investment has occupied a place larger than it deserves in our thinking."

Even as he searched for other remedies, Hansen was an uneasy advocate of expanded public spending. "Public spending is the easiest of all recovery methods, and therein lies its danger," he said. Hansen specifically argued for tapering of government spending as the economy approached full employment—he wanted to jump-start private spending but not supplant it. Still, he saw a clear cause for action in the face of a sick recovery that had left a large and immovable core of unemployment.

The challenge to Summers' infrastructure spending argument is that the United States, Germany, and Japan are all near full employment according to their respective central banks, yet economic growth is far from robust. Politically determined infrastructure projects take years to reach their peak demand impact, so the spending boost would come at a time when central banks are already projecting a shortage of qualified workers. At full employment, policymakers must include reforms to the supply side of the economy.

From a supply perspective, economic performance is based on the number of hours worked by labor, and the productivity of those hours, as influenced by both the skills of the workers and the capital available to them. The U.S. economy, for example, has over five million job openings today, but employers are struggling to find workers with the skills to meet their needs. The simplest way to address this problem is to change the immigration system to prioritize education and skills rather than family ties.

A key factor holding back U.S. productivity growth is that the political system favors low-productivity industries and punishes high-productivity industries. From 2005 to 2014, productivity growth in two-thirds of the economy, including the government sector and the healthcare industry, was zero. Further expansions of these sectors would reduce, not raise, productivity growth. In the remaining one-third of the U.S. economy, productivity grew a rapid 2.5 percent. Among the sectors with the strongest productivity growth have been oil and gas, pharmaceuticals, and

finance. But these industries are all targeted by regulators, stunting their ability to expand. Effective regulation has morphed into politically motivated interference. There is no level of interest rate that encourages the construction of pipelines if businesses cannot obtain government permits. Similarly, the development of new drugs will be retarded if the political system chooses to limit the profits born out of scientific discovery. Even on public infrastructure spending, the 1931 Davis-Bacon Act makes federal projects expensive and slow, sapping support of a public that demands value for money.

Solving the supply-side constraints on labor and productivity would allow fiscal and monetary policy to work as intended. Leaders truly committed to go for growth should work on both the demand and the supply sides, especially late in the business cycle.



*The whole array of supply-side reforms must be introduced in all monetary union countries.*

**JÖRG ASMUSSEN**

*Managing Director, Lazard, and former Member of the Executive Board, European Central Bank*

**W**hich of the challenges that emerged during and in the aftermath of the financial crisis are likely to persist? One is the structural shifts in financial intermediation. First, financial intermediation, especially cross-border, has been retreating significantly since the financial crisis, leading to spatial fragmentation. Second, non-bank financial intermediation has become considerably more important over time. As a consequence, traditional monetary transmission mechanisms, that operate through bank balance sheets, have become less relevant and force central banks to reconsider conventional monetary policy measures. Spatial fragmentation needs to be and has already been addressed by several measures such as a "wider" collateral policy and the maturity extension of lending operations. The growth of non-bank finance, on the other hand, is not necessarily unwelcome. In fact, non-bank financial intermediation, as part of the Capital Market Union project, mitigates the dependence on the traditional banking system and makes it easier for the

European Central Bank to provide liquidity via outright purchases.

Another, and probably more severe, challenge is the effective lower bound on interest rates. Although the combination of low growth and low interest rates is partly driven by structural problems (especially weak demographics and low productivity growth), the European Central Bank has successfully alleviated cyclical disturbances by large-scale purchases of public and private sector assets, by providing forward guidance, and by implementing a negative interest rate policy. The European Central Bank expected these unconventional measures to be a transitional solution, as governments would provide cyclical support and tackle the structural problems. However, political actors did not play their part. As structural problems lie beyond the scope of the European Central Bank's mandate, its unconventional measures start to provide diminishing marginal returns and unintended negative side effects become more visible (for example, lower profitability of financial institutions and in turn riskier behavior driven by a search for yield).

How can we escape this situation? The discussion about helicopter money is misplaced since the root causes of low growth and unemployment can not be cured by monetary policy. As long as a country has fiscal space, governments need to stimulate public investment (not public consumption). The whole array of supply-side reforms must be introduced in all monetary union countries, and trade policies that make globalization work for all should play a role, such as Comprehensive Economic and Trade Agreement with Canada or an improved Transatlantic Trade and Investment Partnership.

Europe will be hit by a next economic crisis. We do not know whether this will happen in six months or six years—but I fear the European monetary union will be ill-prepared for such a crisis. After the last financial crisis, it was the European Central Bank that ultimately brought back stability to the euro area, not the governments. It bought time for the governments to strengthen the monetary union, to invest, and to reform their domestic economies. I consider this time has not been used effectively.

Europe is taking a risky bet by hoping the next crisis could be again solved by last-minute stabilization measures and by relying on a powerful ECB response. The current criticism of the European Central Bank and the discussion about the limits of its mandate are indications that the scope for another forceful ECB intervention may be limited. That is why governments should step in today and build a stronger monetary union: Complete the banking union, and start a fiscal union, accompanied step-by-step by a political union. One should not leave the European Central Bank alone in rescuing the euro area.

*The views expressed here are solely those of Mr. Asmussen.*



*Central banks  
have been asked  
to do too much.*

**MARTIN NEIL BAILY**

*Bernard L. Schwartz Chair in Economic Policy Development and Senior Fellow and Director of the Business and Public Policy Initiative, Brookings Institution*

Central banks in the United States and Europe have been asked to do too much. Monetary policy is very effective at slowing an overheating economy and in reducing inflation. But it is much less effective at stimulating an economy where investment is low and the interest rate is at or close to zero.

In the United States, there was a fiscal stimulus that helped the recovery from the Great Recession, and when this was combined with a near-zero federal funds rate and quantitative easing, the economy climbed back, albeit slowly, to full employment. Thanks to that stronger economic footing, the Federal Reserve has raised rates once and is likely to raise them a second time in December. The U.S. recovery has not been particularly strong because of the persistence of risk aversion after the recession and a lack of innovation and investment opportunities. As a result, growth is stuck in low gear and there is little monetary policy can do about it. The next president should undertake a major infrastructure spending initiative, together with a realistic and compassionate plan to reduce the federal deficit over ten to fifteen years. A review of regulatory and corporate tax policy could also be helpful in stimulating private investment.

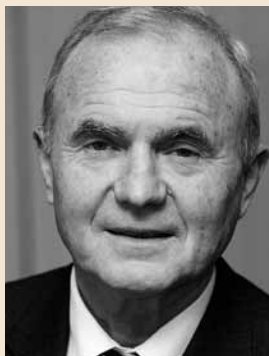
The policy challenge has been even tougher in Europe where the financial crisis and the subsequent euro crisis were compounded by fiscal restraint. I understand why some European policymakers believed they had to adopt fiscal consolidation in order to avoid the potential of a collapse of confidence in their government bonds. There had been overspending and over-borrowing in some countries, and not all EU members had liberalized their economies as needed for the single market. However, for Europe as a whole, fiscal restraint was exactly the wrong policy response to a severe recession—when the private sector pulls back, that is exactly when government spending should fill the gap to keep the economy from falling even further. I do not understand why these proven findings of macroeconomics were ignored by policymakers.



Those countries that could enact expansionary fiscal policies, without risking a loss of confidence in their government debt securities, should have done so.

The overall weakness of demand growth in Europe is made much worse by the fact that some countries within the euro area are “too competitive” while others are still uncompetitive. The fact that Germany has a current account surplus of 8.4 percent of its GDP makes it extremely difficult for Greece, Italy, Portugal, and Spain to expand their exports and grow their economies. Germany, and other governments that have the necessary fiscal space, should spend on much-needed infrastructure and encourage private employers to give their workers bigger raises. A win for their own citizens and a win for Europe.

ECB President Mario Draghi is doing everything he can as a central banker to stimulate faster growth in Europe. In the process, there is some collateral damage to savers and to financial institutions that can no longer make a profit. Rather than berate him for being the one policymaker trying to drive growth, he should be given much more help from fiscal policymakers. The unemployment rate in the European Union is 10 percent, and has been too high for too long. EU leaders must set aside their differences and work together to restore full employment with a one-two punch of fiscal and monetary policy.



*Monetary policy has reached its limits not because there is a lack of more powerful instruments.*

**OTMAR ISSING**

*President, Center for Financial Studies, Goethe University Frankfurt, and founding Member of the Executive Board, European Central Bank*

**A**fter the financial crisis of 2008, major central banks did the utmost to prevent the world repeating the Great Depression of the 1930s. And they were successful. All kinds of unconventional measures have been applied. Eight years later, central bank interest rates are still at or close to the zero bound. However, inflation remains stubbornly at levels below target and growth is seen as disappointing. Monetary policy is widely perceived as having lost its previous effectiveness.

This diagnosis leads to discussions whether we would need new instruments with more firepower. One suggestion, for example, is to extend the territory of negative central bank interest rates by abolishing cash. But besides the fact that in this way unpredictable nonlinearities might evolve, the massive impact of a regime of negative interest rates on the whole financial system and its repercussions on the real sector would imply a journey in totally uncharted waters. Another extreme approach is presented under the headline “helicopter money.” Among the numerous suggestions, former chairman of Britain’s Financial Services Authority Adair Turner in his 2015 book *Between Debt and the Devil: Money, Credit, and Fixing Global Finance* has developed the most forceful version. In times of war or forms of political chaos, no rules will be respected. But this is not the issue. Can one really guarantee that once money has been given for free to the government, even an independent central bank will be able to control the money supply in the course of time?

Demography and technological factors are arguments that the growth rates of the past will not come back for the foreseeable future. Monetary policy is not the medicine to improve the situation. Higher productivity can only be achieved by all kinds of structural policies, while a continuation of zero interest rates will even undermine a better allocation of resources. And low inflation, to a large extent driven by cheap oil prices, is not a reason to search for new monetary policy instruments.

Monetary policy has reached its limits not because there is a lack of more powerful instruments. The search for those leads in the wrong direction.



*I am not sure whether they need new tools, or indeed, new mandates.*

**JIM O'NEILL**

*Former Commercial Secretary to the Treasury, United Kingdom, and former Chairman, Asset Management, Goldman Sachs International*

**I** am not sure about this—I have slightly contradictory views. On the one hand, if central banks are failing to achieve their stated mandate, such as hitting their

inflation target, then they clearly need to do more in terms of whatever monetary instruments they can use to achieve them. But it is unclear to me, in many places around the world, whether we are asking our central banks to do more than they were really mandated. This needs to be thought about more carefully. For example, it is not clear to me that central banks should regard their main mandate as achieving some sort of targeted real GDP growth rate or some level or rate of change of wages. This is not to say they might not have a view on such matters; indeed, they almost definitely should. But the idea that they somehow start to pursue these objectives is more open to doubt unless their direct mandate is changed by their (presumably) elected governments.

This is all against a background of more than eight years on from the financial crisis, apparent economic growth weaker than desired, apparent weak productivity, perceptions of widening inequality, angst about globalization, and misgivings about wide benefits of so-called quantitative easing. Indeed, British Prime Minister Theresa May recently offered some of her own views about aspects of all these issues, and those came as a bit of a surprise to many.

In this regard, I think it is perfectly within the capability of elected governments to choose fiscal policies including levels of and types of expenditure, as well as taxation, to influence actual levels of income distribution. This is clearly true in the United Kingdom, elsewhere in Europe as well as the United States, and in many other places. I would add that while there are clearly pockets of significant widening income and wealth differentiation as a consequence of the past decade or two, I am in the camp that it is generally a fallacy that has lived through an era of generally growing income equalities. Indeed, as a recent World Bank study shows, on a global basis, this perception is completely wrong. We have hundreds of millions taken out of poverty and truly global inequality has, and still probably continues, to decline. It is also the case that in many countries, income inequality has not widened, but actually declined, including the United Kingdom. What is true is that wealth inequality has widened here and throughout many western societies but that is a consequence of rising house prices largely, and perhaps to a lesser degree, the consequence of quantitative easing. These can be tackled by more serious efforts from policymakers to stimulate the supply of housing, boost the role of real equity ownership, and discourage the excessive use of share buybacks and other forms of price earnings reported performance that simply rewards the narrow few.

I do believe central banks need to question the real benefits of quantitative easing going forward but I am not sure whether they need new tools, or indeed, new mandates.



*The key to growth will not be found in a model, but in the psychology of those who make the business decisions.*

**PETER J. WALLISON**

*Arthur F. Burns Fellow in Financial Policy Studies, American Enterprise Institute, and author, Hidden in Plain Sight: What Really Caused the World's Worst Financial Crisis and Why It Could Happen Again (Encounter Books, 2015)*

**N**o new monetary policy can restore economic growth until the Dodd-Frank Act is repealed or substantially revised and regulation elsewhere is significantly slowed. Over the past eight years, the effect of changing monetary policies on economic growth has received almost exclusive attention from economists. This is true for a simple reason: changes in interest rates can be analyzed in economic models—the stock in trade of economists. But no model can explain why near-zero interest rates are not stimulating economic growth. If we want renewed economic growth, we should recognize that excessive regulation is the problem and monetary policy as a cure is at a dead end.

The key to growth will not be found in a model, but in the psychology of those who make the business decisions. No new plant or equipment makes economic sense, even if built with 1 percent financing, unless it will produce a profit. And if business decision-makers cannot foresee a profit—or are afraid their profit plans will be overturned by government regulations—they will not invest or expand capacity.

The vast regulatory explosion that followed the financial crisis impeded growth in two ways. First, it reduced the willingness of financial firms to take risks. The crisis was blamed on excessive risk-taking by—and insufficient regulation of—financial intermediaries. This empowered regulators, backed by the Dodd-Frank Act, to crack down on risk-taking. Community banks in particular were subjected to new and more stringent regulation, increasing their compliance costs and reducing the funds available to the start-up businesses that are the principal source of employment and economic growth in the U.S. economy.

Second, excessive regulation directly affects business psychology by reducing confidence about the future. This has affected larger and established businesses. Without some assurance that government regulation will not reduce the likely profitability of investments, businesses are

reluctant to take on debt and grow. This accounts for the decline in initial public offerings—taking on the costs of public ownership makes no sense if additional equity will not produce profitable expansion—as well as the fact that historically low interest rates have not caused larger businesses to issue low-cost debt for expansion. It also explains why banks say they are willing to lend but businesses are not interested in borrowing. The banks’ credibility is validated by the spread of negative interest rates; there is no point in accepting deposits if they can’t be lent profitably.

The most important statement ever made by President Reagan was made in his first inaugural address: “Government is not the solution to our problems,” he said, “government is the problem.” That was a signal to the private sector that the constant rain of regulations was over. To be sure, Reagan’s tax policies were important, but they would not on their own have produced the powerful economic growth of the Reagan era without what amounted to a moratorium on significant new regulation.



*In Europe, forget the fiscal side and a lighter touch. The ECB had better come up with some new solutions soon.*

**LORENZO CODOGNO**

*Visiting Professor, London School of Economics and Political Science, and Founder and Chief Economist, LC Macro Advisors Ltd.*

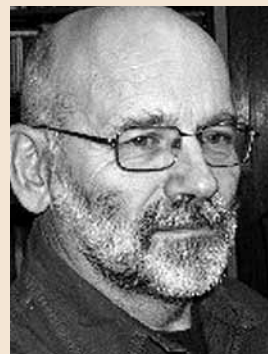
It is astonishing to see how eight or nine years into the crisis (I am assuming here that the crisis has not effectively ended), there is little consensus on the policy tools that need to be deployed to return to growth and inflation. It is not just monetary policy. The new Washington consensus calls for global policy coordination, contribution by fiscal policy whenever possible, that is, when public debt is not too high, on top of continuing monetary policy accommodation. This position has many merits, but we have to acknowledge that policies so far have failed to bring growth and potential growth back to pre-crisis levels.

To be fair, we cannot even pretend from demand management policies what supply-side policies are supposed to do. However, there is also a need to maintain a reasonably stable backdrop for aggregate demand over

the near term so that supply-side policies can deliver. This aim is challenged by the limits of unconventional monetary policy and by the headwinds of increased financial regulation, while fiscal policy remains constrained by the high level of debt in many countries. There are also more radical thinkers who would agree that monetary policy has almost exhausted its tools, and thus there is a need for unorthodox fiscal policy stimulus. These proposals are worth considering, but there is simply not enough evidence suggesting this is really the route to follow.

There is also another school of thought, unfortunately very well represented in Europe, which thinks that monetary policy not only has run out of proper instruments, but also is already producing major negative side effects and damaging stability in the financial sector. At the same time, fiscal policy should refrain from giving any kind of contribution, not even when there is fiscal space, and structural reforms should remain the only tool.

This line of reasoning has led to substantial current account surpluses in the eurozone, a deflationary bias, and sluggish domestic demand. The debate on current “new policy tools” and possible additional future tools for central banks needs to be considered in this context. I am afraid that, at least in Europe, there won’t be much help coming from the fiscal side and not even a lighter touch from regulation. Thus, the heavy lifting will be again on the European Central Bank. Hence, they’d better be very creative and come up with solutions pretty soon!



*Monetary and fiscal policies cannot serve as the substitute for structural and institutional reforms.*

**MAREK DABROWSKI**

*Non-Resident Scholar, Bruegel, CASE Fellow, CASE-Center for Social and Economic Research, and Professor, Moscow Higher School of Economics*

The global financial crisis of 2007–2009 triggered deep financial disintermediation in most of advanced economies. Moreover, policy response to the crisis, including tighter financial regulation in the post-crisis period, further deepened this trend. As result, the money multiplier in major monetary areas collapsed, most



spectacularly in the case of the U.S. dollar (approximately, by factor of three between 2007 and 2013).

To compensate for the declining money multiplier and respond to increasing demand for broad money balances, central banks expanded rapidly their supply of reserve (base) money. Because they ran out of traditional “ammunition” quickly, they decided to resort to unconventional tools. The latter involved, among other things, massive asset purchases, including government bonds, popularly called quantitative easing, and negative nominal interest rates for commercial bank deposits in central banks. The unconventional tools allowed avoiding deep deflation similar to that of the early 1930s.

However, their marginal effectiveness has declined over time and their continuation may involve numerous risks. The ultra-loose monetary policies can lead to building new financial bubbles and further financial disintermediation. As the most powerful tool of these policies, quantitative easing may compromise central banks’ independence because of its intended or unintended quasi-fiscal effects and indirect monetization of fiscal deficits. For example, at the end of 2015, the Bank of Japan’s net credit to the non-financial public sector reached the level of 57.8 percent of GDP. In case of the eurozone, continuation of government bond purchases by the European Central Bank can create internal political tensions because of different fiscal sustainability perspectives of individual member states.

In turn, negative interest rates, while less controversial in terms of their potential quasi-fiscal character, put negative pressure on the profitability of banks, life insurance companies, and pension funds.

When assessed from the perspective of central banks in emerging market economies, which often continue to struggle with limited credibility of their currencies and currency substitution, quantitative easing and other unconventional measures should not be included in their recommended toolkits at all. These are too risky for the monetary and financial stability of those countries.

Looking ahead, central banks should think about returning to a normal policy environment rather than further developing unconventional measures. From a monetary policy perspective, money multipliers will not continue falling forever; they may start rising once the post-crisis deleveraging process and repairing the financial sector is completed. If this happens, central banks must be prepared to downsize their balance sheets (including some assets of problematic quality), which greatly expanded in the last decade. Finally, neither monetary nor fiscal policy is able to push up growth rates in advanced economies unless supply-side bottlenecks, such as the consequences of shrinking working-age populations and labor market rigidities, are removed. Monetary and fiscal policies cannot serve as the substitute for structural and institutional reforms.



*Bring back the  
reserve ratio.*

**JOHN WILLIAMSON**

*Senior Fellow (retired), Peterson Institute for International Economics*

It seems unlikely that central banks will revert to managing the economy by manipulating a single variable—the short-term interest rate—in the manner that became habitual before the Great Recession. This is not primarily because this policy tool becomes unavailable at the zero lower bound, although that also needs to be considered, but because it was the direct cause of the crisis.

To the rhetorical question: “Would you have risked pushing the whole economy into recession in order to control the housing boom,” the only possible answer involves the assertion that one favors the use of other policies than interest rates to control housing.

The next question is, who should control these other policies, the so-called “prudential regulations.” It seems to me that the most logical candidate is the central bank, because any change in prudential regulation creates a need to adjust monetary policy appropriately. It is in principle possible to adjust monetary policy retrospectively in order to offset the impact of a change in regulation, but this threatens to lead to inefficiency, and possibly instability.

Hence one concludes that central banks should wield all the instruments which may influence any market which may throw the macro-economy out of kilter. While one cannot be certain of the range of markets which may in the future endanger macroeconomic balance, and therefore it may prove necessary to add new prudential tools in the future, a preliminary list would certainly include both the size of down payments (on housing, for hire purchase), and margin requirements.

Although it has not been used in the United States for many years, we were also taught in graduate school that the Fed has an additional policy instrument: the reserve ratio. This also deserves to be disinterred. (One cannot simply add it to the preceding list, for it is like the short-term interest rate in influencing primarily the macro-economy rather than a particular market.)

In addition, central banks need the ability to stimulate demand when the short-term interest rate reaches the zero lower bound. I have to say that quantitative easing has proved more effective than I had initially expected, and I am not at all impressed with the argument that it has produced “distortions” like negative short-term interest rates. (It works by reducing the long-term interest rate.) Negative rates do not fit the standard definition of a distortion—they are simply an alternative possible state of the world which a competent banker needs to be prepared to face. That said, it is of course true that when a recession is so severe that there is also a need for support by fiscal policy, there should be no shame in admitting it. Governments need to ensure that fiscal policy remains usable, first by running surpluses in good times, and second by changing the criterion by which fiscal policy is judged from gross debt to net debt (which implies that investment in income-earning assets is never precluded by debt worries).



*You cannot push on a string.*

**RICHARD N. COOPER**  
*Maurits C. Boas Professor of International Economics,  
 Harvard University*

The English economist Dennis Robertson observed many decades ago, speaking of monetary policy, that you cannot push on a string. Tighter monetary policy can restrain an economy, but easy policy by itself cannot revive one. Even low interest rates will not induce investment if businesses see poor prospects for selling increased output. Formal economic models typically over-rate business response to interest rates.

Robertson wrote during a period of relatively closed economies and fixed exchange rates. With more open economies and flexible exchange rates, easy monetary policy has an additional channel of influence, via foreign trade as influenced by depreciation of the currency. But of course there is a problem of global consistency: a few countries can exploit this channel, but not all. For the global economy, this is largely a redistribution game in terms of output and employment.

In a world of inadequate aggregate demand, such as at present, what is required is favorable fiscal action—especially now that long-term interest rates are at a historic low—combined where appropriate with reforms to reduce rigidities in product and labor markets. Germany (and Switzerland) are especially culpable at present, running fiscal surpluses and exporting their surplus production through current account surpluses amounting to 8–10 percent of GDP. They enjoy relative economic prosperity at the expense of their trading partners. But dysfunctional fiscal policy in some other countries, notably the United States, contributes to the problem.

So the leading central banks are doing what they can, as a second-best policy, to avoid a serious collapse of world demand by pulling down long-term interest rates, with a view to stimulating construction, purchases of consumer durables, and perhaps some business investment in more modern machinery. That policy of course has disadvantages, some of which become more serious with the passage of time, especially for savers and their institutional counterparts such as pension funds and life insurance companies. Some of the disadvantages, but not all, can be addressed through new or revived tools of monetary policy, such as putting limits on borrowing to purchase assets, including down-payment requirements on mortgages or borrowing limits on stock purchases.

In the real world, policies typically involve setting priorities among partially competing objectives and choices among unpalatable actions. The path we are on involves just such choices. Without fiscal support in major countries—and our politicians do not look as though they will provide such relief soon—the alternative of even slacker demand may be more disagreeable than the uncomfortable present.



*The only answer is a “re-capitalismization.”*

**BERNARD CONNOLLY**  
*CEO, Connolly Insight, LP*

All the five largest market economies except France’s are virtually at full employment. The problem is that the “natural” rate—the short rate at which there is

no output gap in the economy—has trended down over the past fifteen years or so, a trend whose recent progress can be seen in successive Fed dot plots. This trend is largely the result of past monetary policy mistakes. Once those mistakes, such as Fed policy in the mid-1990s and the catastrophic imposition of monetary union in Europe, had driven a wedge between the three key rates in a capitalist society—the *ex ante* real rate of interest, the anticipated rate of return on investment, and the rate of household time preference—full employment could be maintained or restored only by providing bigger and bigger incentives, particularly in the form of asset prices and credit availability inflated by low interest rates and the consequent “reach for yield” in order to bring spending forward from tomorrow to today. Tomorrow keeps approaching, so the incentives have to be ever bigger.

Central banks are terrified by the question of what additional incentives can be given when the starting point is one of rates close to or even below zero. If there were no lower bound for short rates, the outcome would ultimately be a downward-sloping yield curve wholly in the negative range. As well as the massive social problems such an outcome would cause, it would make the function of finance hard to discern. It would be a path to socialism.

Fortunately, legal and institutional barriers will probably prove strong enough to prevent that outcome. In some jurisdictions, long yields are still positive, so “forward guidance” and renewed asset purchases still have some mileage in them. But when all yields are at an effective lower bound, monetary policy, which is about maturity transformation, will be exhausted.

Budgetary “stimulus,” just a different way of bringing spending forward, would face similar problems: it would have to be provided in perpetuity. Even with zero bond yields, government debt ratios would rise without bound. Financial disaster could be avoided only if all government debt, and eventually all equities, were held by the central bank, with cash the only financial asset willingly held in private portfolios. That, too, would be a path to socialism.

As I wrote here eight years ago, the only way to avoid an ultimate choice—one now increasingly apparent—between a “liquidation” and, potentially, depression and sociopolitical upheaval, on the one hand, and the evils of proto-socialism, on the other, would be a “re-capitalismization” of the advanced economies, such that an increased anticipated rate of return on capital could allow real interest rates to rise back to an appropriate alignment with the rate of time preference without crushing business investment. Brexit provides one ray of hope. But in the world as whole, the trend of political “leadership” remains that of entrenching a global *nomenklatura* of which, unfortunately, central banks have become very much a part.



*The unlimited expansion of the central banks' balance sheets is not feasible.*

**JOSÉ DE GREGORIO**

*Professor of Economics, University of Chile, Nonresident Senior Fellow, Peterson Institute for International Economics, and former Governor, Central Bank of Chile*

**A**n aggressive central bank response in the form of easier monetary policy was key to containing the global financial crisis in major advanced economies, and it has been supportive of a very slow recovery. Since the crisis, non-conventional monetary policies in the form of quantitative easing and forward guidance have been shown to be important additions to the policy toolkit. They played an important role in containing the devastating effects of the financial crisis.

However, there is concern about how to conduct monetary policy in the future, given the significant decline in equilibrium long-term interest rates. Reaching the zero lower bound for interest rates will happen more frequently. Evidently, forward guidance and quantitative easing will still be available options. Nevertheless, the unlimited expansion of the central banks' balance sheets is not feasible, particularly given the distortions these policies can create in financial markets through the reduction of available long-term instruments.

Recently, some proposals have been put forward to provide greater flexibility to monetary policy. They include increasing the central bank's inflation target, following a price level target, and nominal GDP targeting. All of these strategies suggest a permanent or transitory increase in the rate of inflation, and in order to succeed they require an increase in inflationary expectations. In order for inflation to go up, all price and wage setters need to believe that inflation will indeed go up. This is not easy; indeed, it seems to be a titanic task. Policy announcements are not enough to convey strong commitment if they are not fully transmitted into inflationary expectations. In most models used to evaluate these options, inflationary expectations adjust to the new target. But in reality, perhaps the main problem with raising the inflation rate is how to do it without losing control over it. Inflation expectations seem to be stickier than what traditional macroeconomic models would suggest.



Japan is an interesting case on the difficulties of raising the inflation target once it has settled at depressed levels for a long time. In 2013, the Bank of Japan announced a 2 percent inflation targeting, whose achievement has been recently postponed to 2019, while current inflation is negative. Six years to reach the target is quite a long time. Once advanced economies have built credibility after decades of stability, it is tough to suddenly renege on that anchor. Central bankers will be reluctant to choose this option, not only because of the costs of higher inflation and the potential questioning of the price stability mandate, already very relevant issues, but also because the cost of not achieving higher and stable inflation would undermine the credibility of both the central bank's commitment to a new inflation target and the competence of policymakers.

In my view, traditional interest rate policies combined with forward guidance and some form of quantitative easing will be the main tools to provide monetary stimulus in the future. However, we also have to think about how this should be complemented with fiscal policy, which may need to be more proactive when there is a relevant probability of hitting the zero lower bound. Fiscal policies should strengthen automatic stabilizers while maintaining consistency with long-term fiscal sustainability.

One important lesson from the crisis is that what is needed is to avoid large recessions, and for that the focus must be placed on financial stability and how to make financial systems more resilient. This will not be achieved through monetary policy.



*The economic effectiveness and political acceptance of easy monetary policy is waning.*

**MANSOOR DAILAMI**

*Senior Advisor, Rock Creek Group, and Former Manager, Emerging Trends Team, World Bank Group*

**G**lobal macroeconomic policymakers are grappling with the realization that “central banks cannot be the only game in town,” as the IMF managing director recently put it. After eight years of ultra-low interest rates and flattening sovereign bond yields brought about by large-scale asset purchases by central banks in major

advanced economies, there is growing consensus that fiscal policy must do more to support global growth, with structural reforms working in tandem to boost potential growth and expand policy space. This new gospel is best articulated by the International Monetary Fund as a three-prong strategy of using monetary, fiscal, and structural policies in concert and in a coordinated manner across countries. Convincing governments to heed this message presents a host of challenges.

The world owes much to the creativity, boldness, and rapid (yet sustained) response of major central banks during the 2008–2009 global financial crisis and more recently to the reassurance they have provided to markets as dramatic economic or political shocks such as the Brexit referendum and the early 2016 China-related sell off threatened disorderly outcomes. But this power should not become the new normal. The issue is not that central banks are running out of ammunition, but that the economic effectiveness and political acceptance of advanced-economy easy monetary policy is waning. The politics of populist surge, supported in part by the adverse distributional effects of ultra-low interest rates, have the potential not only to threaten central banks' independence, but also to undermine governments' willingness to coordinate policies.

In today's multipolar economic order with interconnected financial markets, the operation of monetary policy in reserve currency countries requires more than solemnity of their central banks. It also requires sympathetic market atmosphere, and buy-in from emerging market policymakers. For their part, emerging market countries have done much to build economic resilience, but timely global financial safety nets are also needed to insure them against turbulent market reactions. The Fund has the intellectual capacity, policy toolkit, and lending firepower to provide such assurance to economies with sound policies in place.

It would be folly to read too much into the current calm in markets, built on the back of central banks' steadying hands. Powerful turbulent forces are at play. Global growth has continued to disappoint in recent years, and the populist backlash has further cast a downside risk. In asset markets, expectations are so priced-in that even small negative shocks could unravel them. And the world level of debt has reached \$152 trillion, more than twice the size of the world economy, creating headwinds to robust global growth resumption.

With global investors factoring in more expansionary fiscal policy, politicians in advanced countries will need to deliver their part of the deal. What is needed is to marshal legislative support for sensible public investment spending on infrastructure, health, and education, which could both bolster supply-side factors and crowd in private investment. An active fiscal policy could also enhance the effectiveness of monetary policy through increasing the supply of government bonds and raising the equilibrium

real interest rates. With the U.S. economy leading the global business cycle, it is incumbent upon the United States to lead this fiscal stimulus process.



*Monetary  
policymakers  
cannot continue  
to act alone.*

**CATHERINE L. MANN**

*Chief Economist, Organization for Economic Cooperation and Development*

**T**he extended period of modest growth outcomes combined with high inequality and stagnant incomes yields a more complicated political environment and increased challenges facing policymakers. The response, however, should not be to find new tools for central bankers, but rather to use the available fiscal and structural tools, to allow a less aggressive use of the monetary tools.

Monetary policymakers cannot continue to act alone, given the combination of low growth and mounting evidence of financial distortions. Short- and long-term interest rates remain very low, even negative in many cases. Around U.S. \$14 trillion of government bonds, more than 35 percent of OECD government debt, trades at negative yields. Widespread and substantial increases in asset prices, both internationally and across asset classes, including real estate in some markets, challenge macro-prudential policies. Credit spreads have tightened this year even as overall credit quality for corporate bonds has declined. Equity prices remain high and have continued to increase in many economies despite weak profit developments and reduced long-term growth expectations. A reassessment in financial markets of the path of interest rates could result in substantial re-pricing of assets and heightened financial volatility.

Indeed, the low interest rate environment opens the window wider to deploy fiscal policy. In many advanced economies, interest rates have fallen by more than GDP growth, thereby raising the sustainable debt level. Low interest rates have reduced interest expenses by more than 1 percentage point of GDP in many cases. Calculations suggest that many OECD economies could engage in fiscal initiatives amounting to 0.5 percent of GDP for four to five years while leaving debt/GDP unchanged in the

medium term. Hysteresis reinforces the case for a fiscal initiative: long-term gains from public investment rise by an additional 0.2 to 0.5 percentage point of GDP on a base of a 1.5 increase in GDP. Structural reforms to health and pension programs would cement fiscal sustainability for the longer term.

Overall, in order to reduce the burden on monetary policy and to enhance the effectiveness of fiscal initiatives, structural reform momentum needs to be intensified, rather than continue to slow. At the Hangzhou Summit, G20 countries were only around half-way to their target of 2 percent additional G20 GDP by 2018 due to sluggish progress on implementation. While each country has its own challenges, coherent policy packages need to address market competition, labor fluidity, and financial institution performance.

The more balanced policy mix, making greater use of fiscal and structural policies, would put the global economy on a stronger and more sustainable and inclusive growth path. Improved expectations of higher future growth from improved policy momentum would help to ease the burden on monetary policy and facilitate an eventual normalization of interest rates.



*Monetary policy  
can't levitate a  
broken economy.*

**THOMAS FERGUSON**

*Director of Research, Institute for New Economic Thinking, and Professor Emeritus, University of Massachusetts, Boston*

**C**entral bankers today irresistibly bring to mind the Wizard of Oz. Not just because of all the barely disguised political and economic cognates Frank Baum stuffed into his classic—William Jennings Bryan as the Cowardly Lion, “Oz” as an abbreviation for an ounce of gold, and so on. No, it’s the characters’ missing virtues that grab me: a heart, a brain, and courage. Central bankers today lack all three.

First, the brain. Two generations ago, almost every economist knew what a catastrophe a deficiency of effective demand could create. And in a real crunch, they knew what to do about that. They realized you couldn’t push on a string, so somebody—the government—had to borrow

and spend when private markets would not. From the 1980s on, though, the fundamental Keynesian point—the Principle of Effective Demand—disappeared in a cloud of statistical double-talk that, when you deconstruct it, turns out to imply estimating potential output as a lagged function of whatever foolish policy is being pursued.

Central bankers didn't take this giant step backwards to pre-Keynesian economics by themselves. In that sense, it's unfair to say they have only themselves to blame. But they swallowed it whole, helped subsidize it, and cheered it on. Now that they have rediscovered that monetary policy can't levitate a broken economy, except by begging the neighbors, it's time they admitted their errors and stopped acting like they could control everything. They could also admit what Gerald Epstein and I pointed out in the December, 1984, *Journal of Economic History*, based on the evidence of the Great Depression: that if you cut rates to zero and the yield curve collapses, banks get squeezed and financial instability increases. It's amazing how many economic historians writing about the Great Depression since then missed that simple point.

Next, courage. In the good old days, central bankers were given to heady talk about "taking away the punch bowl" before the party really got going. That may have been mostly rhetoric, but it at least paid lip service to some value bigger than banking. Contrast the Fed and the European Central Bank in recent decades. The European Central Bank barely moved a muscle as banks in the center moved wave after wave of money to the European periphery in the heady run-up to 2007–2008. The failure to take even a baby macro-prudential step to restrain the capital flow, along with the purely political decision to treat every country's debt the same, were crucial in bringing on the disaster that is still unfolding in the eurozone. Ditto the Fed, waiving details, under Greenspan and Bernanke, especially in regard to real estate lending. They just kept cheering on deregulation, until the whole world collapsed. Is it any wonder so many people no longer trust "experts"?

Finally, a heart. The European Central bank aided and abetted the move to throw the costs of the bank crisis onto the unsuspecting populace of Europe. That was quite a trick: to have the states assume the debts then start beating gongs about excess debt. The Fed took risks to save the banking system, but is already telling us we are close to full employment and professing to be alarmed about "inflation," when anyone can see that banks, insurers, and pension funds are clamoring for rate rises, just as in the 1930s. Both institutions need to start thinking about someone besides the financial community. If they don't, I do not doubt that we will not have seen the last of the anger that Donald Trump and Senator Bernie Sanders mobilized in such disparate ways in the United States, nor the upheavals now visibly threatening the European Union's very existence.

*The opinions expressed here are Dr. Ferguson's own.*



**WILLIAM BROCK**

*Former United States Trade Representative and former U.S. Secretary of Labor*

*Central bankers must acknowledge the limits of their ability to influence economic outcomes.*

It's often said that the most fundamental rule for medical practitioners is, "Do no harm." A similar rule for political leaders might be, "Be careful what you ask for."

In far too many nations around the world, including the United States, politicians have called upon their central bankers to cure the recent recession and take the lead in restoring growth. Most responded enthusiastically regarding the recession, and it is fair to argue that these efforts may have contributed to a slowing of its more pernicious effects. Few would go so far as to say they have been successful in reigniting significant levels of growth.

Today, many of the same politicians are pressing central bankers to become even more aggressive and find ever more "new tools" to reignite growth. While economic literacy has never been the hallmark of most political leaders, a tendency to duck hard and probably unpopular decisions is. That certainly is the case today.

Barriers to economic growth are virtually legion these days. They include increasing levels of protectionism around the world, significant new burdens on economic activity such as evermore intrusive and expensive regulations, very high taxes, exploding levels of debt and deficits, and an absence of needed domestic structural reforms.

Barriers to growth do not include an absence of stimulating initiatives on the part of a large number of central banks. They have acted.

It's time for political leaders to do the same. Enough passing the buck to someone else! Only the political system, only governments, are positioned to constructively address the above barriers to growth. Those barriers lie entirely outside the purview of central banks. It may not be politically popular to face them in the near term, but the consequences of a failure to act will be far less so.

Central banks have done their part, some might even argue more than they should, at least without risking the damage which will inevitably come from decisions to replace fiscal responsibility with monetary excess.



Whether they listen to the admonition to do no harm, or simply insist the politicians do what they were employed to do, it is critically important for central bankers to acknowledge the limits of their ability to influence economic outcomes when they alone are asked to carry the whole load. They cannot, nor should they try, “new tools” or no.

Do the central banks need “new tools” to stimulate growth? No. Do the politicians? Yes, and they include courage, integrity, and a sense of responsibility.



*Central banks  
have the ability  
to get much more  
bang out of their  
existing tool kit.*

**JAMES E. GLASSMAN**

*Head Economist, Chase Commercial Bank, JPMorgan Chase*

**F**iscal and monetary actions used together tend to offer the most effective way to address economic crises and lessen potential financial distortions that arise from leaning too heavily on interest rate policies. Worries that the Fed would have to go it alone in the event of a new economic crisis are misplaced. Just because our “fiscal hands” have been tied in recent years doesn’t mean that Congress would not step up to the plate in the face of a new crisis. After all, there has been no urgent call for fiscal stimulus lately, because the economy is not in crisis and, in fact, the Fed is gradually removing its accommodative policies.

Worries that traditional monetary tools are no longer adequate spring from a popular belief that monetary policies have failed to restore the global economy to historic levels of economic activity. But that applies only to economic growth and little else. Growth has been slow, but for structural reasons that are beyond the domain of central banks.

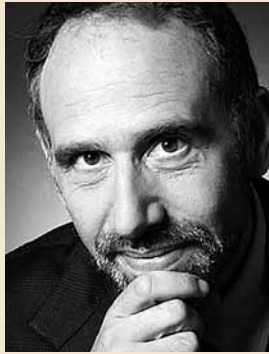
In fact, U.S. “economic activity,” as distinct from growth, has recovered from the worst downturn since the Great Depression and all in the span of seven to eight years. The “underwater” mortgage problem is history. The job market is healthy, with unemployment back down to “full employment” levels, pockets of hidden unemployment rapidly shrinking, employment up more than fifteen million from the bottom, and layoffs at record lows versus the size of the labor force (there’s a reason the roads are

jammed). The struggling auto industry is back on its feet. Construction activity is strong. Consumer spending has remained at a very high 70 percent of GDP throughout the economic cycle. The federal deficit has fallen back from frightening levels to a more sustainable 2.5 percent of GDP. Wage and price increases are beginning to quicken in predictable fashion. The lull in inflation in the recent year was a result of a correction in energy prices. And the value of equity shares relative to historically high profits has climbed to normal levels. Anyone who woke up from a seven-year sleep would call this a full recovery, would be stunned that it was accomplished in seven years, and, learning how austere fiscal policy had been, would conclude that the Federal Reserve’s policies were extraordinarily effective.

Central banks have the ability to get much more bang out of their existing tool kit. First, asset purchases have been used to indirectly dampen long-term interest rates. This is a soft version of the far more powerful option of pegging all Treasury yields that the Federal Reserve deployed in World War II. And, counter to popular wisdom, the ability to control long-term interest rates is far more powerful than the ability to peg short-term interest rates. Surely, the solid U.S. economic recovery, which has surpassed the bleak forecasts back in the dark days of 2009, is circumstantial evidence that the Fed’s interest rate policies have worked well. Second, regulatory policies tend to be pro-cyclical, restrictive during periods of economic stress and less so in good years. All else equal, this tends to amplify economic swings. A counter-cyclical posture that defers to the cautious behavior of lenders in difficult years and is diligent in good times would tend to modulate economic volatility.

Some frequently mentioned monetary options seem unproductive. Thankfully, central banks seem to be skeptical about the effectiveness of negative policy rates for a number of reasons. In another direction, some propose that the Federal Reserve raise its inflation target to compensate for the possibility that equilibrium real interest rates have fallen in order to enhance the effectiveness of interest rate policies. But this option makes sense only in theory. In practice, a stable, consistent, durable inflation target goes a long way toward clarifying the Fed’s long-run game plan and increasing the credibility of our fiat monetary system that some fear is vulnerable to political pressure. A credible transparent monetary system helps to keep credit costs as low as possible. To change the rules of the game when it becomes inconvenient undermines confidence in the monetary system.

The economic pessimism that was the centerpiece of the election season is more about the disruptive nature of innovation and the digital economy, particularly in manufacturing, than it is about the state of the economic cycle. Disruptive innovation has been under way for several decades.



*Stimulative  
monetary policy  
is better than doing  
nothing to boost  
the economy.*

**DEAN BAKER**

*Co-Director, Center for Economic and Policy Research*

In recent months, there has been a growing backlash against the policy of ultra-low and negative interest rates being pursued by central banks around the world. While many have correctly argued that fiscal policy would be more effective in boosting demand and employment, this option is largely foreclosed for political reasons in much of Europe and the United States. In this context, the relevant issue is not whether or not fiscal policy would be more desirable, but rather whether stimulative monetary policy is better than doing nothing to boost the economy. The answer to this is clearly yes, as the arguments on the other side have little merit.

Most of the claims on the evils of low interest rates center on the idea that they will distort the economy and possibly lead to dangerous bubbles. Neither of these claims can stand serious scrutiny.

The economic distortion claim implies both that we have reason to believe that the equilibrium interest rate is substantially higher than current rates and that there are substantial distortions from this gap. The first assertion is simply an empty assertion. We have all the major economies in the world operating far below their potential levels of output. Why would we believe interest rates are below some “natural” rate?

Furthermore, there is little reason to believe there would be major misallocations from any gap that might exist. We see huge fluctuations in the prices of major commodities such as oil all the time. While these fluctuations do result in some misallocation, no one considers such price fluctuations to be a major economic problem for the world economy, even if they might be for major oil exporters. Why would we think that a 1–2 percentage point change in real interest rates would lead to major distortions?

The argument on dangerous bubbles is even weaker. The bubbles whose crash led to the great recession were not difficult to see at the time to anyone who looked at the data with open eyes. In the United States, there was an unprecedented run-up in real house sale prices even as rents rose

virtually in step with inflation. How could this have been explained by the fundamentals of the housing market?

Furthermore, vacancy rates were already hitting record levels even as house prices continued to soar. This is not consistent with any sort of fundamentals based explanation of house prices. And the bad loans of the bubble era were hardly a secret. They were a frequent topic in the business press as commentators joked about things like “NINJA” loans, which stood for no income, no job, and no assets.

In addition, it was easy to see that the housing bubble was driving the economy. Residential construction hit record highs as a share of GDP in 2004–2005. Also, housing wealth-driven consumption was easy to see in the data. then-Fed Chair Alan Greenspan even co-authored several papers on the topic. Of course, it should have surprised no one that consumption driven by the bubble would disappear when the bubble burst.

In short, the idea that a dangerous bubble can grow undetected is absurd on its face. If the bubble is large enough to move the economy, then it can be seen. If it’s not large enough to move the economy, it is not dangerous.

In a weak global economy we have very good reasons to want low interest rates to help boost demand. There is not a serious argument on the other side.



*Central banks  
should stick  
to traditional  
monetary policy.*

**TAKESHI FUJIMAKI**

*Member, House of Councillors, Japan, and  
former Tokyo Branch Manager, Morgan Guaranty Trust  
Company of New York*

Central banks do not have to look for new policy tools. Instead, they should stick to traditional monetary policies which have proved to be efficient, powerful, and do not have any side effects.

If the economy is weak, central banks should simply lower interest rates, and if the economy is overheated, they should, again, simply raise interest rates.

It does not matter whether interest rates are positive or negative. Whether or not rates are above or below zero

percent has no significance. If rates are lowered from 3 percent to 1 percent, it stimulates the economy. If interest rates are lowered from 1 percent to negative-1 percent, this should also stimulate the economy. Equally, if interest rates are lowered from negative-1 percent to negative-3 percent, it will have the same effect on the economy.

Some people claim that negative interest rate policy does not work. I agree and disagree. I believe that interest rates at negative-0.1 percent will not help an economic recovery, but they would definitely work if the rate were at negative-10 percent.

When you store a valuable item such as a van Gogh painting in a safe, you would pay for the service. Likewise, under a deflation circumstance, money is valuable, it would make sense that you would pay (a negative interest rate) to safe-keep (deposit) money at a bank.

I understand that people claim that negative interest rates weakened the banking sector. However, it is not because of negative interest rates. It is a result of quantitative easing that pushed down yields on long-term bonds.

In the old days, central banks only bought short-term bonds. They used to buy long-term bonds only when they wanted to provide money necessary for economic growth to avoid deflation. In other words, they bought long-term bonds when they did not have to absorb money later.

Today, however, central banks have been buying tons of long-term bonds under the quantitative easing scheme. These operations pushed down yields on long-term bonds and flattened the yield curve significantly.

If central banks had started a negative interest rate policy just after short-term interest rates reached zero percent, and maintained a positive yield curve, the effect on the banks wouldn't have been as negative. The Fed overcame the savings and loan crisis by steepening the yield curve in the late 1980s.

In Japan, only 10 percent of mega-banks' loans are fixed rate loans. The rest are floating rate loans or loans that have a maturity of less than one year. It means that lowering long-term interest rates will have very limited impact on economic recovery. Lowering long-term interest rates will only help the government's finances, which should be fixed by fiscal reform.

Negative interest rate policy will discourage banks from placing money in the central bank's current account, as they will be charged negative interest rates by doing so. On the other hand, quantitative easing encourages banks to deposit as much as possible at the central bank's current account. The impact is entirely different. So once central banks start quantitative easing, negative interest policies will have very little impact, if any.

Some people say that people will keep money at home during periods of negative interest rates, particularly, if the cost is larger than money transfer cost. However, I do not think that will happen, as there are clearly costs associated

with keeping money at home, such as risk of fire and burglary. Instead, they will consider making foreign currency deposits if they can earn interest. They may also consider buying stocks instead of making deposits.

History has taught us that quantitative easing has always led to hyper-inflation.

Central banks should stick to traditional monetary policy, which is adjusting interest rates, and avoid quantitative easing policies.

A negative-10 percent interest rate will definitely work. Although at that point, banks will have to charge negative interest rates to their individual customers as well.



*The path to stronger growth runs through supply-side structural reforms.*

**MICHAEL J. BOSKIN**

*Tully M. Friedman Professor of Economics and Hoover Institution Senior Fellow, Stanford University, and former Chair, President's Council of Economic Advisors*

In response to the financial crisis and Great Recession, central bankers expanded their previously utilized tool kits with major bailouts, massive bond buying, forward guidance, and even negative interest rates. While likely helpful during the crisis, the continuation of such policies year after year following the crisis has produced marginal benefits, if any, with potentially serious long-run costs. To name but a few of the costs, negative interest rates have reduced bank profitability and hence resources for private recapitalization; low interest rates and long-term government bond buying have, in some cases, abetted fiscal malpractice. The follow-on rounds of quantitative easing have made the eventual unwinding of central bank balance sheets riskier, more complex, and less transparent. And finally, they have left central banks, if not naked, then covered only with fig leaves to combat the next recession—when, not if, it occurs.

To be sure, this is not all the central bankers' fault. The path to stronger growth runs through supply-side structural reforms, such as restoring work and investment incentives, via tax, transfer, and entitlement policy reforms, and regulatory streamlining, not through monetary



policy. Short-sighted politicians have ignored necessary reforms for too long, kicking the can down the road, and thereby pressing central banks to do more than they are equipped to do; and as a result their credibility, and that of their central banks, is paying a price.

While the economic and financial situation differs among major economies, as a general prescription, fiscal and monetary policy should be headed toward a transparent, credible, but gradual renormalization.



*Central bankers need patience and humility much more than they need new tools.*

**HOLGER SCHMIEDING**  
*Chief Economist, Berenberg*

Central bankers need patience and humility much more than they need new tools. The tools they have deployed in the last few years remain adequate. The real problem is that many observers expect more from central bankers than they can deliver regardless of the tools they may use.

In the post-Lehman world, caution still reigns supreme. As a result, the impact of monetary policy has become somewhat asymmetric. While central banks can prevent the bust, they find it much more difficult to engineer the boom. That is no bad thing. In the absence of any new exuberance, the risk that a cleansing recession may be required in the foreseeable future is rather small.

As lenders of last resort, central banks can stop any financial panic and overcome any recession. The confidence effect still works very well. The Fed's embrace of full-scale quantitative easing in early 2009 ended the post-Lehman mega-recession, ECB President Mario Draghi's "whatever it takes" promise of July 2012 stopped the irrational panic that had gripped the eurozone in the wake of the Greek crisis, and the Bank of England's easing of August 2016 helped to contain the damage from the Brexit vote. In case of renewed recession risks, significant asset purchases would likely work again, as they have before.

However, central banks find it much more difficult to stimulate demand beyond its trend rate. Having learned a lesson from pre-2008 excesses, companies are more

reluctant to borrow in order to invest and households are more reluctant to finance purchases by credit than before. Because the credit channel of the monetary transmission mechanism works less well than in the past, the economic upswing is not gathering much steam even at record lows in borrowing costs. Attempts to artificially stimulate borrowing by cutting policy rates into negative territory, lowering longer-dated yields through additional asset purchases, or targeting the shape of the yield curve have yielded little result. If people don't want to party, offering them the beer more cheaply won't persuade them to dance on the tables. Exchange rate devaluations brought about by a monetary stimulus in one country that isn't matched by a similar stimulus in other countries make a sizeable difference only for small open economies but not for the United States and the eurozone.

Policymakers need to learn that demand growth of around 2 percent in the United States and 1.5 percent in the eurozone is in line with or arguably somewhat above the increase in the supply potential of these economies. As Japan has found out in twenty-five years of post-bubble policies, trying to artificially boost demand through wave after wave of fiscal or monetary stimulus has generated no lasting benefit. Instead of settling onto a steeper growth trajectory, the economy always returned to its miserly underlying rate of supply growth once the demand stimulus had run its course.

To augment growth beyond a small short-term kick, economies would need supply-side reforms rather than a monetary boost to demand. The tools to enhance supply are beyond the remit of monetary policy.



*The U.S. experience should lead the way.*

**MICHAEL HÜTHER**  
*Director, Cologne Institute for Economic Research, and Gerda Henkel Adjunct Professor, Stanford University*

Despite of the European Central Bank's accommodative monetary policy stance, euro area inflation expectations remain persistently depressed. Financial intermediaries' interest rate margins have been squeezed and the secondary market for sovereign debt is running

out of bonds. As a consequence, more and more European economists call for a tool of last resort—helicopter money.

Helicopter money means transferring central bank money directly to households, in order to stimulate nominal demand and thereby boost inflation. Helicopter advocates argue more money in the customers' pocket will lead to more expenditures.

But will it work? The effectiveness depends on the quantitative difference between the substitution and the income effect, since the helicopter drop can be used for higher expenditures now as well as in the future depending on the households' time preferences. To evaluate this net effect, we are lacking empirical evidence. However, in light of aging societies, the substitution effect is expected to be highly relevant.

Basically, we have two main insights into helicopter money's characteristics: first, transferring the same amount to every citizen (ignoring technical problems) will have distributional consequences. Although many people might like this—inequality would decrease—it is highly doubtful that we want central bankers with no democratic legitimization to decide about our redistribution scheme just like that.

Second, helicopter money can be expensive. Transferring €200 monthly to every citizen's account for one year would cost the central bank more than €800 billion—8 percent of the eurozone's GDP. Yes, the central bank can “just print” money at very low marginal cost, but helicopter money is central bank money not backed by assets.

Once the money is wired to the economy, there is no possibility to reverse the helicopter drop in case of overshooting inflation. We have no experience in conducting helicopter money, but there is historical evidence that all big inflations were caused by central banks doing quasi-fiscal policy. This is why helicopter money is dangerous: We wouldn't know where we are going, but for sure we couldn't go back. To be clear on this: Central banking is not an experimental laboratory. We cannot rely on central bankers to decide our future. Monetary policy did its job, now it is the governments' turn.

Instead of applying untested tools, the U.S. policy experience should lead the way. Unemployment is down from 10 percent to now slightly below 5 percent and expected to decrease even further—growth forecasts look promising. America's economic performance appears exceptional not only in comparison with sluggish growth in Europe, but also given that the U.S. financial sector was the origin of our generation's most devastating economic crisis—less than a decade ago.

Bold state-driven recapitalization of major U.S. financial intermediaries paved the way for the economic recovery and probably for the Fed's monetary policy normalization in the medium term. The European muddling-through approach, experienced by Italian banks today, led to a

weak bank lending still slowing down economic growth. Strengthening a second corporate financing channel, the capital market, is unavoidable in this context. The Capital Markets Union initiative goes in the right direction.

Right now, recapitalization of the euro area's banking sector is the trigger to stimulate bank lending. Moreover, the introduction of risk weights for government debt in European bank capital regulation is necessary. The current approach with a zero risk weight creates a bias for banks away from lending to the economy towards financing governments.



*It is hard to imagine that there are any “additional tools” left.*

**RICHARD JERRAM**  
*Chief Economist, Bank of Singapore*

Unconventional monetary policy tools have helped to stabilize financial systems and markets, but in recent years the impact of additional action has been limited. After an exhaustive search by some of the finest brains in the business, it is hard to imagine that there are any “additional tools” left. Conversely, we have been seeing a reappraisal of the policies adopted so far, rather than experimentation with new ideas.

However, if we are talking about future downturns, then we should also consider the potential for technological progress to create the opportunity for policy innovations. The most intriguing of these is the probable death of cash in developed economies and the shift to a fully digital payments system. This could solve the problem of negative interest rates, in terms of both the limit to how far below zero they can go, as well as reducing the damage to the banking system. This might not come in time for the next recession, but it is not too far away.

More immediately, it does not make much sense for so much of the burden to fall on monetary policy—conventional or otherwise—when there is so much else to be done. Government finances are not in great shape across the developed world, but low bond yields mean there is some room to support growth through fiscal policy if needed. Coordination would be useful as some of the

impact of fiscal stimulus leaks to trading partners, but this is hard to achieve, as seen in the hollow promises made at G20 meetings.

Structural reforms are always needed and would raise the potential growth rate—and hence the natural interest rate—which would make conventional monetary policy more effective. Reform, especially of the tax system, could have the added benefit of addressing some of the grievances that have fuelled populism.

Unfortunately, it is political constraints rather than economic logic that have pushed most of the burden onto monetary policy. Even though we can see some softening of the resistance to fiscal policy, the prospect of aggressive structural reform is slim. This means that the onus will remain on monetary policy and the search for more effective tools will continue.



*To ask for new instruments in monetary policy is like fighting the wars of yesterday.*

**MARTIN HÜFNER**  
*Chief Economist, Assenagon Asset Management*

**T**o ask for new instruments in monetary policy is like fighting the wars of yesterday. The world has changed. Central banks in the past have done a wonderful job of overcoming crises. We cannot be anything but grateful for what they have achieved. But now the time is up for these policies. The aims have been reached. The cyclical recovery is gaining strength. Jobs are being created.

At the same time, however, collateral damage from over-accommodative policy is coming to the forefront.

The priority now is to take care of this collateral damage. Overabundant liquidity and low or even negative interest rates over a long period of time are reducing private saving, dampening private retirement provisions in a time of increasing demographic challenges, distorting investment and an efficient allocation of resources, encouraging taking up debt, and weakening the financial sector. This cannot go on forever. Furthermore, central banks need to replenish their ammunition to fight future crises. For this, new instruments are not warranted. What is needed is first the courage to normalize policy without creating new

disequilibria. This is difficult enough. Until now, no central bank has lived up to these expectations. The Federal Reserve is hesitating to raise rates. The European Central Bank has not yet even begun to discuss the issue.

I do not think that central banks should strive to bring the economies back to the pre-crises potential rate as U.S. Fed Chair Janet Yellen proposed with her idea of a “high-pressure economy.” What was lost is lost and cannot be brought back. Nobody knows if a high-pressure economy really leads to the expected upward movement of potential growth. There is the risk that it just ends up with higher inflation. We then would come back to the pre-crisis world of low growth and high inflation. I rather adhere to the old theory that potential growth is not a matter of monetary policy but of fiscal and structural policy.

If new instruments are needed, then it is in the area of fiscal policy. There can be no doubt that additional efforts to renew the ailing infrastructures of our countries are urgent. The question is how to finance this. It is too simple to merely increase public deficits and thus boost the already-too-high public indebtedness. In the end, this would undermine investor confidence and jeopardize growth and jobs. We rather should think of new models pooling together public and private funds. There is an abundance of private money waiting for investment in profitable infrastructure projects.

What is of utmost importance to get more growth and more jobs is structural policy. This applies especially to Europe. It means opening markets to enhance competition, promoting global trade, making labor markets more flexible, and concentrating social security expenditures on those really in need. Here is where the wars of tomorrow will be fought.



*New nontraditional policy levers will probably not be necessary.*

**ALLEN SINAI**  
*Chief Global Economist, Strategist, and President, Decision Economics, Inc.*

**I**n the wake of the economic and financial crises spanning 2007 to 2012, and over the following five years of quite weak economic growth, disinflation, and deflation,



both traditional and nontraditional monetary policies have been used, including unprecedented aggressive easing, initially going to zero on policy rates, then outright purchases, quantitative easing, purchases of government bonds of all maturities, of other securities, forward guidance, open-ended inflation targeting and even negative interest rates. Strong economic growth and higher price inflation remain elusive.

Has monetary policy failed to do its job, proving impotent in achieving the macroeconomic goals of the United States and the world?

The answer is no!

The old and new tools of monetary policy have done their job, ending recessions—although with different timing—across the globe, lifting economic activity higher, reducing unemployment, and now producing higher price inflation.

Three major factors have interfered with the effectiveness of monetary policy. The first is fiscal restraint in the United States for the last five years; fiscal austerity that failed in Europe, making economies worse rather than better; and tax increases on consumers in Japan when tax reductions were called for. Usually, fiscal stimulus is used as a positive force.

The second factor is a collapse in crude oil and energy prices as well as commodity prices in response to the crises took down developing countries' economies, including that of China, in total well over 30 percent of the world economy.

Finally, the third factor is a collapse in banking and financial institutions, and subsequent regulation, that prevented the credit intermediation that is essential to a recovering and expanding economy, from both the supply and demand sides. The collapse of financial intermediation in the United States and elsewhere and outsourcing of more traditional financial intermediation to new financial firms has shifted down potential economic growth to far below what it might have been otherwise.

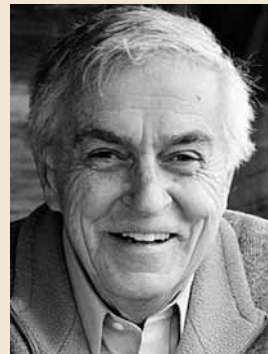
Financial systems collapsed in Japan, the United States, the eurozone, the United Kingdom, and developing countries, making it unable for firms to grow and invest in the way that a smoothly functioning financial system permits. The last time the financial system collapsed in this way was the 1930s, during a worldwide depression, when potential output was devastated and actual economic activity fell until the lift of World War II spending.

Similarly, a pickup now in fiscal stimulus, emerging around the globe, will make a huge difference. More production, increased productivity, and faster actual economic growth can be expected that will move monetary policy from major role to supporting player.

The range of old and new tools and instruments available to central banks around the world now is much greater given the experience of the last ten years and should

provide sufficient leeway for central banks to be supportive should trouble lie ahead.

But most likely, with the previous impediments to monetary policy effectiveness now moving out of the picture, new nontraditional policy levers probably will not be necessary. Instead, as economies improve, price inflation picks up, and productivity growth lifts higher, more traditional tools of monetary policy will hold sway rather than the nontraditional ones or the inventing of even newer ones. No new tools will be needed!



*Extremely low policy interest rates and large-scale central bank holdings of diverse financial assets are creating conditions that will lead to the next financial crisis.*

**RICHARD D. ERB**

*Former Deputy Managing Director, International Monetary Fund, and Research Professor, Economics Department, University of Montana*

In response to deflation in prices of goods and services, sharp declines in real economic activity, and sharp declines in equity and property values during the 2008–2009 financial crisis, a number of developed country central banks accumulated large holdings of diverse financial assets and set nominal interest rate policy targets close to zero.

Although recession and overall price deflation risks have receded, economic activity in many developed countries remains low relative to historical levels and goods-service inflation rates remain below central bank inflation targets. As a consequence, central banks in these countries remain under pressure from within and without to maintain nominal interest rates below recent inflation rates (that is, negative real rates) and in some cases are under pressure to experiment with negative nominal interest rates.

But I share the concern that extremely low policy interest rates and large-scale central bank holdings of diverse financial assets are creating conditions that will lead to the next financial crisis. In addition, delays in unwinding these policies will make eventual withdrawal even more convulsive. Of course, withdrawal must be implemented with great care, but the Fed's Hamlet-like approach is not a good model.

I believe it is also quite likely that financial distortions and risks are having a direct negative feedback effect on real sector investment decisions. In addition, excessive and enduring central bank intervention following the financial crisis has taken the pressure off of governments to implement policies that could have a positive impact on real sector investment decisions and thus long-term economic activity.

Central banks also need to take another look at their inflation targets. In my view, developed country central banks have placed much too much emphasis on achieving inflation targets that were established in higher inflation and higher real economic growth periods. Currently in the United States, inflation rates below 2 percent provide a positive environment in which consumer, business, and government decision makers need not spend a lot of time incorporating the impact of inflation when making decisions.

Finally, I am very concerned that experimental monetary policies in the major industrial countries will have a negative demonstration effect on monetary policies in many developing countries. After their experiences with high inflation rates during the 1970s and 1980s, many developing country governments adopted an independent central bank model that enabled them bring inflation under control. I'm sure that many political leaders in developing countries would like their central banks to maintain low interest rates and purchase a range of public sector and private sector financial instruments, including company stocks.



*The Fed needs to become a slimmed-down, old-time central bank.*

**STEPHEN AXILROD**

*Author, The Federal Reserve: What Everyone Needs to Know (Oxford University Press, 2013)*

**M**uch indeed can be learned from the experience of the past ten years of crisis about the use of monetary tools, new and old, and their potential. The tools obviously had to be rapidly adapted to changing economic conditions with generally successful results, but sometimes with harmful side effects and with implications for future tools as normalcy began to return.

In its very early days in 2006, the crisis lurked about within the federal funds market almost without recognition. It came full blast in a spectacular explosion around the last days of 2008 and beginning of 2009 when the handling of Lehman Bros. and AIG entailed a massive loss of confidence in governmental and private financial institutions and a sharp withdrawal of market liquidity.

The liquidity crisis faded away around mid-2009 when the economy began its very long (though felt as subpar) pace of recovery and the Fed began to draw down its very sizeable emergency short-term lending. That was then replaced by open market operations aimed at aiding the economic recovery. They turned into a massive and historically unique build up of credit sustained to this day, featuring acquisitions of longer-term Treasury debt and mortgage backed securities and comprising in effect a new policy tool.

The tool was employed to lower the cost of and encourage the allocation of credit to particular financial markets—for mortgage finance to help moderate the devastation in that sector of the economy and for Treasury finance to help achieve whatever might be the beneficial effects of a lower yield on Treasury bonds that traditionally benchmark capital market costs. The central bank had stepped up to be a credit institution akin to a private financial firm, filling a serious void left by investment fears arising in the wake of the crisis.

Clearly there had been a serious void. But by now the time has already passed when the Fed should have recognized that the markets could have financed themselves without so much help at near-prevailing interest rates. That may have been hard to tell because the Fed itself had come to loom so large as a market institution.

The Fed had in effect taken over the markets, so that they no longer effectively signaled broad supply and demand forces from the private sector. Instead, they had become more like markets with multiple sellers who are reduced to waiting breathlessly on signals from the unique powerful buyer looming over them. Not a good way to run that railroad in more normal times. One way of viewing the arbitrariness involved is seen in the huge build-up in banks' excess reserves left out of the market and more or less paralleling the rise in the Fed's own holdings of longer-term assets. (These days the Fed pays a slight premium over the funds rate on excess reserves that in effect turns them into required reserves.)

What I would recommend as a policy tool for the Fed's near-term future is simply to envision steps that will begin as quickly as practicable to turn itself back into a slimmed-down and old-time central bank. That means backing a way from its crisis role as a major credit institution, while sticking with its basic federal funds rate monetary policy course.

The Fed in its monetary policy function will then find out, as time goes on, to what extent the regulatory reforms

made in consequence of the crisis will have in the end made its life easier. The Fed will also discover whether the great hope for macro-economic policy, fostered by much earlier Keynesian analysis, that a cooperative connection with fiscal policy will help avoid deep recessions, still has any practical import, or perhaps from experience with political rejection in recent years has been somewhat rejuvenated.



*We need a  
different kind of  
economic policy.*

**W. BOWMAN CUTTER**  
*Senior Fellow and Director, Economic Policy Initiative,  
Roosevelt Institute*

This concern with new central banking tools reminds me most of all that “when all you have is a hammer, everything looks like a nail.” I’ll make three points: first, new tools for central banks are not even close to being the highest economic policy priority; second, credible fiscal policy is more important; and third, a true economic growth policy is the most important.

Let’s start with problem definition. The principal problem today of the developed nation economies is low growth. The United States is relatively close to full employment with low growth (I’m purposely ignoring for the moment the problems of under-employment and low labor market participation). Other developed economies have both low growth and considerably higher unemployment. Broad-gauged inflation is not a front burner issue today but that’s not forever.

In considering policy, it is useful to distinguish two kinds of growth: first, growth of the production frontier of a given economy (what that economy is capable of at any given time); and second, growth within the production frontier toward an economy’s limits. Obviously this is a conceptual distinction—both kinds of growth are occurring simultaneously. Macroeconomic policy is extremely important for the second kind of growth, but has next to nothing to say about the more fundamental growth of an economy’s capabilities. Public policy constantly confuses these two kinds of growth. More importantly, nations or administrations rarely have consistent, explicit growth policies.

I’ve seen little evidence that strong independent central banks around the world have failed to use every tool they can find or to develop new ones when they need them. Certainly, the U.S. Federal Reserve responded strongly and innovatively to the Great Recession of 2008. But today’s problems of low interest rates, low rates of inflation, and low growth cannot be solved by monetary policy.

If the world’s developed economies are to move toward and stay near their full potential, they require fiscal and monetary policies that work mostly together. The United States has to regain the capacity even to have a fiscal policy that makes sense. Washington’s gridlock and dysfunction have meant that except in the most dire circumstances (fall 2008), the United States hasn’t actually had a fiscal policy for several years. Europe’s basic constitution doesn’t allow for a fiscal policy.

What seems to be a structural problem of low growth can’t really be addressed by macroeconomics and requires new policy—which I’ve called growth policy to distinguish it from standard macroeconomics. In the United States, our declining rate of business formation, decreasing economic dynamism, lower labor market participation, and growing economic concentration would all seem to point to the need for a different kind of policy. Economist Robert Gordon may well be right that we are in for a long low-growth era; but before resigning ourselves to that we might try policy actually focused on the problem.



*Monetary policy  
cannot do more.*

**HANNES ANDROSCH**  
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After years of stagnation, it is scarcely surprising that new methods and instruments should be sought to recapture the economic growth and prosperity we have, or at least had, become accustomed to. In the second half of the twentieth century, demand management, combined with post-war reconstruction, seemed to provide the panacea we aspired to. Its limitations became apparent when inflation emerged as a constraint.



Monetary restraint brought the inflation problem under control and, in the 1990s and early 2000s, seemed to manage the growth problem as well. Its limitations became apparent with the emergence of asset-market bubbles and our arrival at the zero lower bound for the nominal rate of interest. The economic and financial crises triggered a flurry of fiscal and monetary reactions: the only visible result is that the debt mountain, not Mount Everest, is now the highest mountain in the world.

Much attention has been focused on the crisis in Europe. Much is made of the fact that both the European Union and the eurozone are facing serious problems. Much is being made of the fact that the euro does not have supporting institutional arrangements similar to those supporting, say, the dollar. But anyone who maintains that the United States is in better shape than Europe is not looking very far below the surface.

There are problems in the eurozone, but they are political rather than financial, and have little to do with the currency. Nevertheless, at the outset, it was not fully appreciated that a common currency requires a minimum degree of fiscal union, political union, and economic policy coordination. These omissions need prompt attention. Better understood was that our economic prosperity is closely intertwined with the common market in Europe, and the single currency is justly regarded as an integral part of the latter. It is no easy task to coordinate the aspirations of so many heterogeneous nation states, each with its own aspirations, agenda and worries. Then, Europe's energy is dissipated on other crises, be it Brexit, or refugees, and so forth.

What Europe needs is an active economic and fiscal policy, one which addresses the problems of the future, and one which eschews short-term political expediencies. In particular, we need an active fiscal policy which avoids debt accumulation while redirecting expenditure towards education, research, and investment in youth and social infrastructure. This necessitates a reduction in current expenditure, painful and politically challenging to be sure, but this is the political nettle which has not been grasped for far too long. Ironically, it might be rewarded by an electorate which is becoming more economically literate and which understands, intuitively, that something must be done.

Can it be done? That is the challenge which was tackled by Chancellors Schröder in Germany and Persson in Sweden, thereby laying the foundation for the current prosperity of both these nations. Today, their countries acknowledge their contributions with gratitude. Fiscal consolidation and a radical redirection of public expenditure is the way forward, not more aimless pump priming.

And monetary policy? We are currently in the throes of what Keynesians used to describe as a "liquidity trap," except that now we know what form it can take. Most worrying is that the rate of interest, one of the most important

allocative and steering instruments in the entire economic system, is completely ineffectual. Interest rates must increase in spite of the implications for public budgets. Only in that way can our economic system allocate liquidity to investment endeavors which carry the best expected return. Monetary policy cannot do more and the quest for alternatives is likely to be futile.



*Only structural measures will increase investment and boost job creation.*

**EWALD NOWOTNY**  
*Governor, Oesterreichische Nationalbank*

Since the beginning of the financial and economic crisis in 2007–2008, central banks all over the world have proven creative in finding new tools to handle exceptional circumstances. After having reduced their policy rates close to their effective lower bounds, central banks provided additional monetary policy accommodation using a variety of tools. The Eurosystem, for example, has offered central bank liquidity with maturities of up to four years and stands ready to meet commercial banks' demand in full. Another avenue many central banks have pursued has been reducing term premia and risk premia of assets they have been purchasing on a large scale. To compensate for various disruptions in the transmission mechanisms, central banks have been buying mortgage-backed securities, government bonds, corporate bonds, and more.

These new strategies have extended central banks' toolboxes. Once an instrument proves effective, it is very likely to remain in our toolboxes. If new crises emerge that call for monetary policy action, I am sure central banks around the world will not only come back to field-tested instruments, but also find new ways to provide accommodation. People never run out of ideas, not even in monetary policy.

The crucial questions for central bankers, however, are first, what will the new equilibrium look like after the crisis? And second, what is the right policy mix to get there?

In the euro area, we have only very recently regained the aggregate pre-crisis GDP level. Nevertheless, the aggregate growth path still falls short of its pre-crisis ideal.

Economists disagree on the question of what the equilibrium growth path will look like. Should we get accustomed to lower GDP growth rates in the future? If the potential output growth rate is lower than before the crisis, it is possible that the euro area economy may already be growing at a rate close to its potential growth rate. Consequently, the output gap is likely to be smaller and the effect on inflation will be very different from a situation in which the potential output growth rate is unchanged compared to its pre-crisis path. Anticipating what the new equilibrium may look like is crucial for policymakers.

The second question is the right policy mix. Again, this seems especially relevant for the euro area. If the new equilibrium growth path is the same as before the crisis, monetary policy can be helpful in bringing the economy back to its original trend. However, if the new equilibrium growth path is below the pre-crisis level, and if the euro area is already growing at a pace close to potential, monetary policy will not have the power to lift GDP growth above its new trend without violating the target of price stability. Other policy areas are better equipped to boost economic growth. Their focus should be on actions raising productivity and improving the business environment, including the provision of adequate public infrastructure. Only structural measures will increase investment and boost job creation and therefore the growth path in the long run.



*Consider Japan's powerful model of creative regulatory and fiscal policy.*

**ANDREW DEWIT**  
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**J**apan offers a warning on the limits of monetary policy, but perhaps also a powerful model of creative regulatory and fiscal policy.

As to monetary policy, the Japanese seem to have reached the bottom of the toolkit. Since the late 1990s, they have tried zero interest rates, quantitative easing, and then negative interest rates. The Bank of Japan is an aggressive buyer of outstanding government bonds (JGBs) and equities. Observers warn that in a few years the

Bank of Japan may own half of all JGBs and much of the Japanese stock market.

Meanwhile, Japan's economy has grown at an average of less than 1 percent per year since 1991, slipping to 0.6 percent during the three years of Abenomics and its three arrows. Encouraging inflation has also met with abject failure. On November 1, shortly after the Bank of Japan confidently declared it would exceed its 2 percent inflation target, it pushed back the target for reaching that goal. That was its fourth retreat.

Japan's poor performance on GDP and inflation targets reinforces the perception that Abenomics' fiscal and regulatory arrows have gone nowhere. But Japan is developing a robust model of disaster resilience, essential in an archipelago faced with a multiplicity of geological, geopolitical, climate, and other hazards. In fact, Japan is the global leader on disaster risk reduction, one reason the past three decades of United Nations disaster-resilience frameworks are named after Japanese locales. Under Abenomics, Japanese "National Resilience" pragmatists have skillfully used the imperative of preparing for disasters to shape fiscal policy, encourage regulatory change, and foster broad collaboration among government agencies, the private sector, and civil society.

Japanese government spending (initial budget plus supplementary budgets) for fiscal year 2016 on national resilience appears likely to total ¥4.34 trillion (U.S. \$41.5 billion). The fiscal request for the fiscal year 2017 initial budget is ¥4.46 trillion (U.S. \$42.8 billion), an 18.5 percent increase over the fiscal year 2016 initial budget. And fiscal year 2017 is likely to see substantial supplementary budgets. Coordinating this investment has also led to regulatory reform as central agencies work together across administrative boundaries.

The impressive budget increases reflect the fact that Toshihiro Nikai, the main proponent of national resilience, was appointed Liberal Democratic Party secretary general on August 3, 2016. The role of secretary general is the second most powerful position in the Japanese government. And Nikai is committed to leveraging Japan's expertise on disaster resilience, using it to promote accelerated external engagement and expanded exports.

Important in our era of fractious politics and distrust in institutions, the Japanese public appears on board. The September 2016 release of Japan's annual and authoritative "Environmental Consciousness Survey" showed that 77.8 percent support using public funds to build resilience in the face of climate change. That result was the strongest level of consensus for anything related to energy and the environment.

Japan's program of national resilience might hold useful lessons for other countries. Many seem to be testing the limits of monetary policy and looking for more constructive and equitable alternatives.



*There are no  
new miracle tools  
to fight downturns.*

**DAVID M. JONES**

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**R**egarding the issue of whether central bankers can employ new miracle tools to deal with future downturns, my contention is that there are no new miracle tools to fight future downturns. Moreover, the U.S. monetary authorities, as well as other major central banks, have been asked to do too much and are now facing diminishing returns.

Of course, we must give credit where credit is due in the heroic Fed effort to pull the U.S. financial markets and economy back from the abyss created by the Great Credit Crisis and ensuing Great Recession. Under the innovative leadership of former Fed Chair Ben Bernanke, once conventional monetary policy ammunition ran out, Fed policymakers turned to unconventional policy tools, including large-scale asset purchases (quantitative easing), a maturity extension program applied to Fed securities holdings in which short-term securities are sold and long-term securities are bought in equal amounts, and forward guidance. The primary aim of the Fed's unconventional quantitative easing actions, as well as that of the maturity extension program, was to artificially depress long-term interest rates, thereby stimulating the interest rate-sensitive components of aggregate demand. But as the yield curve has flattened, with long-term interest rates declining to historical lows, bank interest rate margins have been squeezed, depressing bank profits and providing a disincentive for lending to households and businesses. At the same time, investors finding extremely low interest rate debt unattractive are induced to reach for higher returns on equities and other riskier assets, creating conditions for a stock market bubble.

Another unconventional monetary policy weapon that presumably can be used again in future downturns is forward guidance. The Bernanke Fed used forward guidance or "open mouth operations" to influence investor interest rate expectations by talking more explicitly than usual about the future course of monetary policy, or, more precisely, the

future trajectory of the federal funds rate target. Beginning in March 2009, for example, Fed officials stated that economic conditions are likely to warrant exceptionally low levels of the federal funds rate "for an extended period." In contrast with the Fed's unconventional tool of quantitative easing, forward guidance has no impact on the Fed's balance sheet (asset holdings) or bank reserves.

Although quantitative easing, the maturity extension program, and forward guidance can conceivably be used in future downturns, I believe there are limits regarding downward adjustments in official central bank benchmark interest rates. Specifically, there is less positive territory between the "new normal" level of the nominal federal funds rate, which is considerably below historical levels, and its zero lower bound. Moreover, I question the effectiveness of the descent into the black hole of negative interest rates. So far five central banks (not including the Fed) have established negative deposit rates. But it stands financial logic on its head for banks to pay the central bank for holding their deposits (reserve balances), not to mention that it is a drain on bank profits. More disturbingly, negative interest rates have spread to the money and capital markets, with \$13 trillion in negative yield debt outstanding. Negative interest rates pose a fatal threat to virtually all savings vehicles (including bank and nonbank financial intermediaries, insurance companies, and pension funds) that rely on a positive, relatively predictable, and safe return on their fixed-income investments.

There is good reason that negative interest rates have not existed (except in theory) in the first five thousand years of human commerce (until now). It strains credulity to think that negative-yield sovereign debt requires the investor to pay a sovereign government for that sovereign government's use of the investors funds over the life of the sovereign debt instrument, assuming the investor holds it to maturity. In Denmark, negative rate mortgages mean that lenders pay borrowers to borrow the funds to buy a house, not the other way around.

Last, but not least, there is the possibility of helicopter money to be used in future downturns. Helicopter money can be defined as the permanent central bank accommodation of expansionary fiscal policy, with fiscal stimulus typically in the form of increased government spending and borrowing. In its latest monetary policy overhaul announced on September 21, 2016, the Bank of Japan comes close to helicopter money. Coming on top of the July 11, 2016, Japanese government announcement of a substantial \$265 billion in additional fiscal stimulus, the monetary policy overhaul scraps specific guidelines for the expansion of the Bank of Japan's monetary base through large-scale securities purchases, in favor of the open-ended expansion of its monetary base by means of additional securities purchases, as needed, until the Japanese monetary authorities exceed their 2 percent inflation target.



In sum, central banks need help in dealing with future downturns. This requires closer cooperation between monetary and fiscal authorities when all-out stimulus is required to give a boost to inadequate aggregate demand. Also, it must be recognized that some factors are beyond the reach of monetary policy as, for example, when business fixed investment is curtailed by uncertainty over the threat of higher taxes on capital and business, combined with smothering post-crisis over-regulation.



*Policymakers should focus on structural and fiscal policies.*

**GEORGE R. HOGUET**  
*Chief Investment Officer, Chesham Investments, LLC*

**E**ight years later, the trauma of the Great Recession and global financial crisis is still palpable. The highly eclectic policies pursued by global central banks succeeded in stabilizing the global financial system, but have not engineered a robust global recovery. Many factors (such as global aging) beyond central banks' control contribute to the continuing subdued level of global demand. With currently \$9.8 trillion in sovereign bonds with negative yields, the effectiveness of policy varies markedly by country. But in the United States, ultra-loose monetary policy has over time proven to be effective, with the economy near full employment and real median household income rising in 2015, the first time since 2007.

Relative to pre-crisis days, central banks are much more visible and controversial. Electorates have reduced

confidence in central banks' ability to foresee future financial crises, and market participants have less confidence in central bank economic and financial projections. The ability to manage expectations has been weakened. The issue has been compounded by the evident growing popular mistrust of liberal economic policies and of the ability of governments to engineer favorable economic outcomes.

What happens when the next global recession arrives? The initial conditions and options differ by country but, on balance, it is a mistake to think that countries lack monetary and fiscal "space." To begin with, central banks could expand the use of tools used in the Great Recession. Central bank balance sheets, which as a percent of GDP have on average quadrupled since 2007, could grow larger still. Central banks could expand the menu of assets eligible for purchase, or engineer even more negative interest rates.

The options open to the Federal Reserve include lowering rates, forward guidance, more quantitative easing, and negative interest rates. Market participants sometimes forget that the Fed from 1942 to 1951 placed a ceiling of 2.5 percent on the yield of the U.S. Treasury note. The targeting of medium- or longer-term rates is one option to consider. Another, *in extremis*, is the outright purchase by the Federal Reserve of newly issued Treasury debt to finance a fiscal stimulus. Medium-term initiatives could include increasing the inflation target and, as Ken Rogoff has suggested, the elimination of large-denomination currency to reduce currency hoarding.

The fiscal/monetary mix has been suboptimal in some countries in recent years, and monetary policy has been asked to carry too much of the burden. Policymakers should increasingly focus on structural policies (such as competition policy and expanding labor force participation rates) to expand potential output, and fiscal policies to address urgent global problems such as global warming and inadequate infrastructure. And they should do a better job in explaining to electorates the substantial benefits conferred by an open and expanding global trading and investment system and flexible markets. ♦