



BANK FOR INTERNATIONAL SETTLEMENTS



BIS Working Papers

No 435

Is monetary policy overburdened?

by Athanasios Orphanides

Monetary and Economic Department

December 2013

JEL classification: E50, E52, E58

Keywords: Global financial crisis, monetary policy, real-time output gap, fiscal dominance, financial stability, central bank independence

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ISSN 1020-0959 (print)

ISBN 1682-7678 (online)

Foreword

The 12th BIS Annual Conference took place in Lucerne, Switzerland on 20–21 June 2013. The event brought together a distinguished group of central bank governors, leading academics and former public officials to exchange views on the conference theme of “Navigating the Great Recession: what role for monetary policy?”. The papers presented at the conference and the discussants’ comments are released as *BIS Working Papers* 434 to 437.

BIS Papers No 74 contains the opening address by Stephen Cecchetti (former Economic Adviser, BIS), a keynote address by Finn Kydland (University of California, Santa Barbara) and the contributions of the policy panel. The participants in the policy panel, chaired by Jaime Caruana (General Manager, BIS), were Zeti Akhtar Aziz (Bank Negara Malaysia), Thomas Jordan (Swiss National Bank) and Glenn Stevens (Reserve Bank of Australia).

Is monetary policy overburdened?

Athanasios Orphanides¹

Abstract

Following the experience of the global financial crisis, central banks have been asked to undertake unprecedented responsibilities. Governments and the public appear to have high expectations that monetary policy can provide solutions to problems that do not necessarily fit in the realm of traditional monetary policy. This paper examines three broad public policy goals that may overburden monetary policy: full employment, fiscal sustainability and financial stability. While central banks have a crucial position in public policy, the appropriate policy mix also involves other institutions, and overreliance on monetary policy to achieve these goals is bound to disappoint. Central bank policies that facilitate postponement of needed policy actions by governments may also have longer-term adverse consequences that could outweigh more immediate benefits. Overburdening monetary policy may eventually diminish and compromise the independence and credibility of the central bank, thereby reducing its effectiveness in maintaining price stability and contributing to crisis management.

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Keywords: Global financial crisis, monetary policy, real-time output gap, fiscal dominance, financial stability, central bank independence.

¹ This paper was presented at the 12th BIS Annual Conference, *Navigating the Great Recession: what role for monetary policy?*, Lucerne, 20–21 June 2013. I would like to thank Charlie Bean, Claudio Borio, Niall Ferguson, Kristin Forbes, Jeff Fuhrer, Greg Hess, Geoff Tootell and Simon van Norden for helpful suggestions and comments.

Correspondence: MIT Sloan School of Management, E62-481, 100 Main Street, Cambridge, MA 02142. Tel.: +1-617-324-4051. E-mail: athanasios.orphanides@mit.edu.

1. Introduction

Following the experience of the global financial crisis, central banks around the developed world have been called on to undertake unprecedented responsibilities. For their part, governments have high expectations that monetary policy can provide solutions to numerous problems. To some observers, monetary policy is the “only game in town”. Exceptionally low interest rates and unprecedented liquidity provision by major central banks for several years have eased the burden of adjustment following the crisis. But these policies do not come without potential costs. In a number of dimensions, monetary policy has become overburdened and is expected to achieve goals that do not necessarily fit in the realm of traditional monetary policy. Despite the crucial position central banks occupy in public policy, overreliance on monetary policy is bound to disappoint when the appropriate policy mix for successful resolution of challenges involves other public policies and institutions. Failing to appreciate the limits of what central banks can reliably do poses risks. Long-term adverse consequences could outweigh more immediate and more visible benefits. Careful intertemporal calculus is needed to assess the merits of continuing to overburden monetary policy.

This paper looks at three issues that contribute to the overburdening of monetary policy beyond what ought to be understood as its primary goal – to maintain price stability. The first of these public policy goals is the achievement of full employment and related nebulous concepts of real economic activity where outcomes over the past five years are deemed unsatisfactory in many economies. The second is the achievement of fiscal sustainability, facilitating the repair of public sector balance sheets over time. And the third is the continued preservation of financial stability, taking into account the weakened private sector balance sheets in many economies, and the need to strengthen banking sectors weakened by the crisis, worldwide. For each of these issues are discussed the apparent benefits and potential side effects of the unprecedented monetary policy that has been implemented over the past few years.

To assess whether monetary policy is overburdened requires an understanding of the primary task that monetary policy is entrusted to do. This is to achieve and maintain price stability over time. One metric for evaluating how significant the overburdening of monetary policy may become is framed in terms of the risk that current policies may threaten the central bank’s ability to deliver on future price stability. There can be little dispute that the authority that controls the supply of the medium of exchange in any economy can also control the general price level over time and should be responsible for price stability. And yet, over the past century, a period when monetary policy has been practised with a fiat currency, the record of central banks in achieving and maintaining price stability has been less than stellar. Episodes of deflation and inflation have been observed, undermining price stability and wreaking havoc on real economic performance in the process.

Before the crisis, a consensus had evolved on the main lessons from the previous experiences and on the basic features of what constitutes good monetary policy. Among major central banks, a convergence of practices had been broadly observed, and many of these features had been codified in the practice of inflation targeting (IT), a framework built to emphasise the primacy of price stability as a policy objective.

Placing price stability first helped central banks to depoliticise the monetary policy process and gain credibility as independent institutions, key elements that

allowed central banks to contribute towards greater overall stability and effective crisis management. The success central banks had achieved in anchoring inflation expectations is what enhanced their flexibility to respond promptly and aggressively in crisis situations. In 2008 and 2009, such aggressive action by central banks averted a collapse of Great Depression dimensions. This was feasible precisely because there were few questions about the credibility of the central banks in maintaining price stability. The crisis-handling episode highlighted the value of independent central banks focused on price stability.

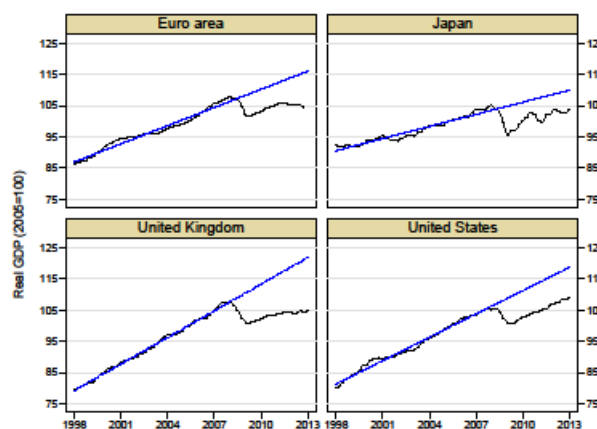
Ultimately, overburdening monetary policy may lead to the repoliticisation of central banking. As more responsibilities are allocated to the central bank, the incentives for political capture and misuse by governments increase. Overburdening monetary policy may eventually diminish and compromise the independence and credibility of a central bank, thereby reducing its effectiveness in maintaining price stability and contributing to crisis management.

2. Disappointing growth in the aftermath of the Great Moderation

A common thread that has raised expectations for monetary policy on a number of fronts can be identified with the disappointing growth following the first stages of the global financial crisis. In much of the developed world, economic activity seems anaemic compared with the growth prospects the citizens in our democracies had become accustomed to before the crisis. Figure 1 compares real GDP for the United States, the euro area, Japan and the United Kingdom to a trend fitted over a decade ending in Q4 2007. Six years after the turbulence of the summer of 2007, none of these economies has come even close to retracing the prosperous path suggested by the trend growth line prevailing before the crisis. Initial hopes of a V-shaped recovery were dashed long ago. More appropriate questions now seem to be how much lower the future trend of output should be expected to be and how many economies will join the “lost decade” or the “lost generation” club.

Real GDP and pre-crisis trend

Figure 1



Notes: Real GDP and linear trend fit over decade ending in Q4 2007.

Following the Great Moderation era, expectations regarding what monetary policy can achieve in terms of both price stability and economic stability were extremely high. As a result, averting a repetition of the Great Depression, which central banks managed to achieve with prompt and decisive monetary policy actions, was hardly considered sufficient success.

The lack of satisfactory growth in the aftermath of the global financial collapse has a number of implications. In the industrialised world as a whole, employment growth has been insufficient to keep unemployment to tolerable rates. In some economies, historically high unemployment rates among young adults raise the prospect of a lost generation in the making. Furthermore, government revenues have lagged behind pre-crisis long-term projections. Coupled with initial conditions of excessive government debt, lower growth has exposed a vulnerability to debt dynamics in a number of countries. In addition, private sector balance sheets have been weakened and banks remain more vulnerable to write-downs of legacy assets than they appeared to be during the boom years.

Under these conditions, propping up the economy, facilitating an easing of financing costs for governments, and easing the pain of balance sheet repair could be seen as added goals for monetary policy. The expectation that monetary policy can provide the solution is overburdening monetary policy.

3. Full employment

There is no question that full employment is a desirable public policy goal. In the aftermath of the crisis, and in part as a consequence of the disappointing growth in developed economies, unemployment rates are considered high in many parts of the world. The experience in the United States, the euro area, Japan and the United Kingdom is shown in Figure 2. In the United States, the unemployment rate briefly reached double digits and, although it is now falling, the Federal Reserve has acknowledged that it remains considerably above what it considers compatible with price stability over time. In Japan, the unemployment rate has receded from its crisis peaks but remains at levels twice as high as what would have been considered normal not too long ago. In the United Kingdom, little improvement has been evident since the peaks of the crisis. Finally, in the euro area, unemployment rates are not only unprecedented but in some member states are rising to Depression-era levels. In Spain and Greece, two of the member states hit hardest by the euro area crisis, unemployment rates exceed 25%, with the youth component exceeding 50%.

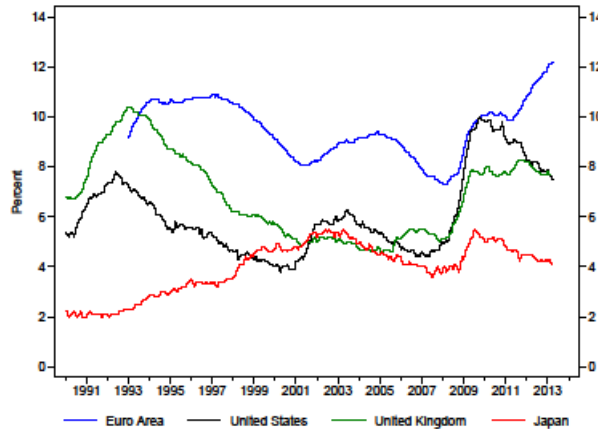
The high and, in some cases, increasing rates of unemployment clearly reflect a major policy failure. Does this make the unemployment rate an appropriate monetary policy target? Is full employment an appropriate monetary policy objective, on equal footing with price stability?

It is undeniable that monetary policy is one of the factors that may influence employment in the short run through its broader effects on aggregate demand. However, other policies should be seen as more important, both in the short run and, more importantly, in the long run. Consider, for instance, aspects of fiscal policy that can provide better incentives for job creation and investment. And consider structural and labour policies that can greatly enhance the flexibility and efficiency of labour markets. In the cases of Spain and Greece highlighted earlier, for example, the greatest tragedy of the current record high unemployment rates is not

primarily a reflection of inadequate aggregate demand but of the deeper failure to implement labour market reforms that ideally should have been made before the crisis. The failure to correct these sources of vulnerability before the crisis added rigidity to labour markets and magnified the impact of the crisis on the unemployment rate. Although monetary policy could help to alleviate the resulting pain by inducing somewhat faster growth in aggregate demand, it cannot solve the underlying problems.

Unemployment rate

Figure 2



One way to see this is by comparing Figures 1 and 2. The disappointing growth following the crisis, seen in Figure 1, has similar patterns in the four economies shown. And yet, the patterns of unemployment, including the long-term average of the unemployment rate but also its movement over the business cycle, differ greatly from one economy to another.

Central banks cannot ensure the sustainable creation of high-quality jobs. Central banks cannot generate sustainable growth and increase the level of potential GDP. These are important public policy concerns that should be seen as belonging squarely in the sphere of other policies for which governments are responsible.

During the Great Moderation, when monetary policy is considered to have been generally successful, this separation of responsibilities was usefully highlighted in the inflation targeting framework (IT), developed first at the Reserve Bank of New Zealand in the late 1980s.²

IT was practised by a large number of central banks over the past quarter century. It has been practised explicitly by a number of central banks describe themselves as inflation targeting central banks, but it has also been practised implicitly by other central banks, such as the Federal Reserve since 1979, the ECB since its creation, and the Bundesbank before the creation of the euro area. The

² Bernanke and Mishkin (1997) offer an early exposition of the merits of inflation targeting. The volume edited by Bernanke and Woodford (2005) offers an evaluation of the theory and evidence. The recent volume edited by Bordo and Orphanides (2013) highlights the evolution of central banks in this direction following the experience of the Great Inflation. King (2012), and Svensson (2013), offer recent policy perspectives on the practice of inflation targeting in the light of the crisis.

success can be summarised as ensuring a credible nominal anchor, whose importance has been demonstrated repeatedly through history.

IT has been impressive in helping central banks to achieve an environment of well anchored inflation expectations around the central banks' price stability objectives. This has been crucial for ensuring the credibility of central banks when exceptional measures had to be taken during the crisis.³

But what is IT and why has its practice, be it explicit or implicit, contributed to the success of monetary policy? Macroeconomic model-builders can design model economies where monetary policy can do well not only in achieving price stability but also in simultaneously achieving full employment. But this does not capture the essence of IT. Rather, IT regimes specify that monetary policy should have only price stability as its primary objective. Subject to achieving price stability, to the extent possible, policy can help in other dimensions but only to the extent that the primacy of price stability is not compromised in the medium term. This focus on a single objective is what has provided the clarity and simplicity that allows the monetary authority to be a credible defender of price stability in a symmetric manner, and it protects the central bank from doubts that it could be dragooned into the pursuit of other objectives. In this way, indirectly, monetary policy can also prove more effective in the attainment of other goals, for example in ensuring that employment is generally close to the economy's natural rate (see Orphanides and Williams (2005)).

Capturing this salient characteristic of IT practice in terms of a model has not been straightforward. It may be convenient to endow the central bank with a quadratic loss function with multiple objectives, including price stability, full employment, maximum output and financial stability. But this methodology fails to capture the salient characteristics of the framework. Actually, the multiple-goal way of thinking about policy and trade-offs seems to better describe the monetary policy regime that was in place in many economies before IT was adopted. As we know, that earlier era was associated with failure, a failure that IT was created to address.

The case of New Zealand, the pioneer of inflation targeting, is instructive. A decade after it was adopted in New Zealand, Don Brash, the Governor who first implemented the new approach explained the problem the Reserve Bank faced before IT.

He recalled that prior to the mid-1980s New Zealand had one of the worst inflation rates in the OECD, exceeding 10% per year for virtually a whole decade. He went on to ask why this was the case.

Wasn't low inflation *one* of the aims of the Bank? Apparently, this was the major problem. Price stability was merely *one* of multiple goals. Brash explained the multiple goal-oriented approach pursued by the Reserve Bank before adopting inflation targeting as follows: "The legislation under which we operated required us, in formulating our advice, to have regard for the inflation rate, employment, growth, motherhood, and a range of other good things" (Brash (1999), p 36). He then went on to explain how ditching the multiple-goal approach in favour of recognising the primacy of price stability helped New Zealand get out of that disastrous period.

³ Orphanides and Williams (2005) show how the well anchored inflation expectations resulting from IT practice contribute to greater stability.

The main distinguishing characteristic of inflation targeting is that it puts price stability first. It is not a multiple-goal targeting framework, notwithstanding the convenience of multiple-goal formulations for modelling purposes.

Central bank mandates written for IT, including those of central banks in the EU, are clear on the primacy of price stability. Thus, for the ECB: "The primary objective ... shall be to maintain price stability." The treaty goes on to recognise that other objectives that the central bank can help to attain follow: "Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Union ...". The hierarchical nature of the mandate is a distinguishing characteristic of inflation targeting. This is in variance to legal mandates written in earlier times, say from the 1950s to the 1970s, that were unduly influenced by the Great Depression and paid insufficient attention to the primacy of price stability over other desirable goals.

An example may be instructive to highlight both the differences in the legal mandates and how IT was implicitly practised successfully in the United States, even before IT was formally introduced in New Zealand. According to the Federal Reserve Act, the Federal Reserve should "promote effectively the goals of maximum employment and stable prices".

Literal interpretation of this language can be a recipe for trouble. Indeed the literal interpretation of this mandate describes well the experience of the United States, the failure to preserve price stability and the lack of economic stability during the 1970s. One might ask, how was policy practised in the United States during the Volcker-Greenspan era, from 1979 on, a period that was very successful in achieving price stability.

The answer is that, looking back, both Volcker and Greenspan effectively interpreted the legal mandate of the Fed as if it put price stability first. That is, the Fed was implicitly acting as an inflation targeting central bank.

Consider for example how Chairman Greenspan explained the success of policy in the post-1979 period. In an address in 2004 he explained this was achieved by: "maximizing the probabilities of achieving our goals of price stability and the maximum sustainable growth that we associate with *it*" (emphasis added). The key, in this interpretation, is that by focusing on price stability, the Federal Reserve could ensure that the real economy could grow along its maximum sustainable growth path that is associated with "*it*," that is with price stability, even though it need not be explicitly identified nor targeted by the central bank.

One may ask why take this roundabout path to help the economy achieve maximum employment over time? The answer is our lack of knowledge regarding the appropriate real targets, concepts such as the natural rate of employment and unemployment and potential or natural output. For example, as Chairman Greenspan noted back in 1994, "while the idea of a national 'threshold' at which short-term inflation rises or falls is statistically appealing, it is very difficult in practice to arrive at useful estimates that would identify such a natural rate." He went on to conclude: "In light of these uncertainties, I do not think that any one estimate of the natural rate is useful in the formulation of monetary policy."

More recently, the Federal Reserve has introduced explicit mention of the unemployment rate as a guide to its unconventional measures during the crisis. The December 2012 statement noted that the FOMC "currently anticipates that this exceptionally low range for the federal funds rate will be appropriate at least as long as the unemployment rate remains above 6-1/2 percent."

It has been suggested that this form of forward guidance may be helpful to provide additional policy accommodation in the light of the zero lower bound and concerns that the rate of inflation is too low. A prolonged period of accommodation may indeed be warranted to ensure that the inflation rate does not undershoot the inflation objective for a prolonged period. However, in the light of the symmetry of the inflation objective in the IT framework, such a prolonged period of accommodation would be expected if inflation were too low, even without any reference to the unemployment rate.

A pertinent paragraph from a speech Chairman Volcker made recently highlights the tensions of misinterpreting the recent changes in communication as getting the Fed away from its recognition of price stability as primary to the achievement of other objectives:

“I know that it is fashionable to talk about a ‘dual mandate’ – that policy should be directed toward the two objectives of price stability and full employment. Fashionable or not, I find that mandate both operationally confusing and ultimately illusory: ... The Federal Reserve, after all, has only one basic instrument so far as economic management is concerned – managing the supply of money liquidity. Asked to do too much – for instance ... to square continuously the hypothetical circles of stability, growth and full employment – it will inevitably fall short. If in the process of trying it loses sight of its basic responsibility for price stability, a matter which is within its range of influence, then those other goals will be beyond reach.” (Volcker (2013))

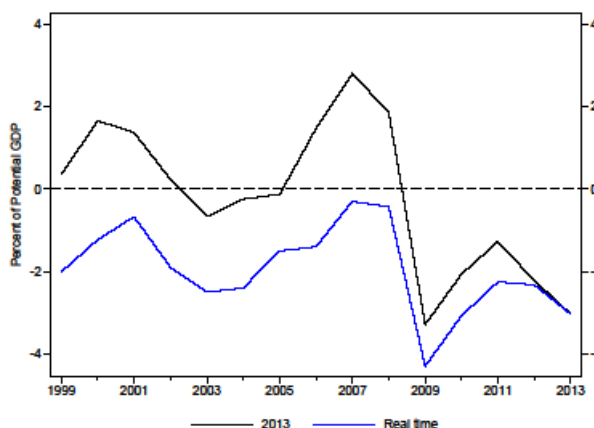
Chairman Volcker’s unease about the risk of reinterpretation of the mandate is noteworthy. It should also be noted, however, that the December FOMC statement said that the Fed considers its current stance appropriate as long as “longer-term inflation expectations continue to be well anchored”, a key feature of IT practice and suggestive that the FOMC is aware of the tension. It is thus unclear whether the introduction of an explicit reference to an unemployment rate in recent FOMC statements justifies concerns regarding a deviation from the successful interpretation of the Fed’s mandate during the Volcker-Greenspan era, although the tension this language created appears to be unhelpful.

The euro area offers another example of the risks that would have been associated with the targeting of imperfectly measured real variables. Figure 3 presents some estimates of the output gap for the euro area, as produced by the IMF. This is the difference between the notional concept of potential output and actual output. In theory, if potential output could be measured accurately, the output gap could be a useful policy target. The output gap should be about zero, on average, and should help policymakers identify periods of overheating, when it would be positive, and periods of underutilisation, when it would be negative. In the chart these periods of positive and negative output gaps can be clearly identified for the history of the euro area, as seen from the estimates prepared this spring. But in real time, the estimates did not provide the correct signals. Since 1999, the real-time estimates of the output gap produced by the IMF in the spring of each year have been negative. Almost half the time, the sign of the real-time estimate of the gap was wrong, when evaluated from today’s perspective. It should be stressed that this is not a problem specific to this particular example using IMF estimates. The problem is endemic to traditional methods of defining full employment and normal output in real time (Orphanides and van Norden (2002)). Perhaps the inclusion of broader conceptual definitions, such as the financial cycle examined in Borio,

Disyatat and Juselius (2013), may improve reliability going forward, but I remain doubtful.

Real-time vs retrospective output gap estimates

Figure 3



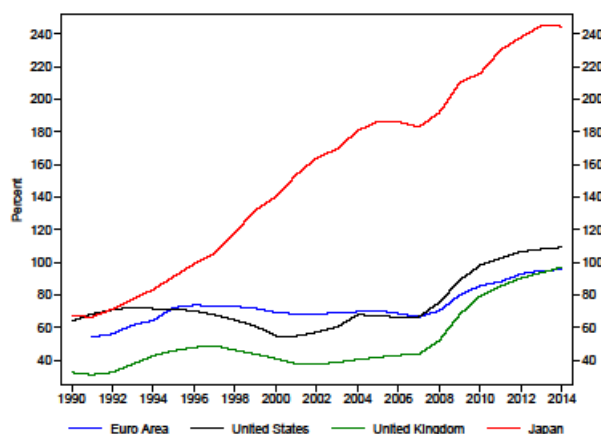
Notes: The series shows the historical output gap estimates from the April 2013 IMF *World Economic Outlook* (WEO). The real-time series shows, in each year, the output gap estimate from the April IMF WEO of that year.

A summary conclusion to draw, based on the available evidence and historical experience, including the success of explicit or implicit IT practice, should be that monetary policy contributes best to the desirable public policy objective of full employment by focusing on price stability. Overburdening the central bank by requiring explicit targeting of a real variable such as employment or output would likely do more harm than good.

4. Fiscal sustainability: The threat of fiscal dominance

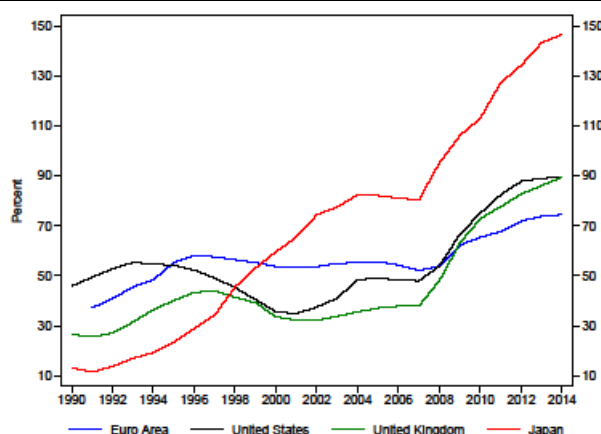
A second area where the risk of overburdening monetary policy is evident regards fiscal sustainability. The challenge can be seen in Figures 4 and 5, which show the evolution of gross and net debt-to-GDP ratios, respectively, for the United States, the euro area, Japan and the United Kingdom. Not seen in these figures is an additional related and well known problem, that concerning unfunded implicit liabilities for future ageing-related expenditures (pensions and healthcare).

The enormous challenge faced by Japan is clearly evident and puts in perspective the talk about unsustainability in the other three economies. That said, in the aftermath of the crisis, fiscal challenges are present in all four economies. Although the problem is known, governments have yet to adjust the spending path in a manner consistent with their taxing power and long-term growth prospects. Lack of political consensus, in various forms, complicates the adoption of sensible long-term plans that could ensure simultaneously long-term fiscal sustainability and short-term support for economic growth. Sound fiscal policy is not the responsibility of central banks. However, in the history of central banking there are numerous examples where governments used central banks to finance their spending, invariably leading to a debasement of the currency. Monetary policy can powerfully facilitate the repair of public sector balance sheets over time in a number of ways. The temptation to overburden monetary policy is great, as is the risk of eventual fiscal dominance.



Notes: Gross debt as a percentage of GDP, data and forecasts from April 2013 IMF WEO.

The crisis has led central banks around the world to flatten risk-free yield curves and massively expand the supply of liquidity. Short-term nominal interest rates are effectively zero in all four economies. The level of liquidity per unit of nominal GDP (the Marshallian K of the monetary base) is at historic highs. This is a feature of unconventional monetary policy at the zero bound and as such might not necessarily raise alarms. However, at the zero bound, monetary and fiscal policies become blurred. High-powered money and risk-free short-term government debt become indistinguishable. When viewed in conjunction with the unresolved fiscal challenges facing the governments, concerns about the fiscal implications of the current and future stance of monetary policy are difficult to avoid.



Notes: Net debt as a percentage of GDP, data and forecasts from April 2013 IMF WEO.

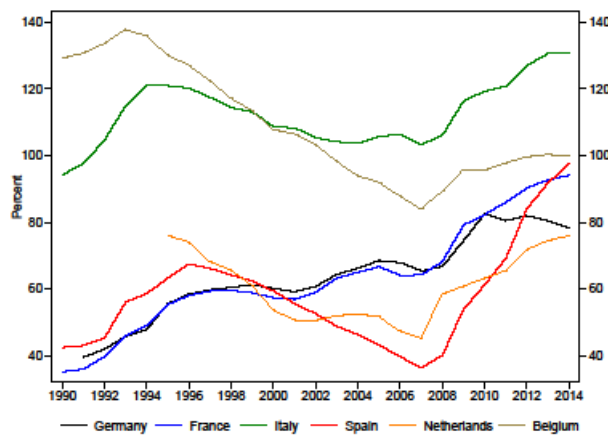
There is a way to implement unconventional monetary policy and enlarge the central bank balance sheet with a smaller risk of inviting fiscal dominance. The expansion could be engineered through the purchase of foreign assets instead of through the purchase of domestic government bonds (or their acceptance for long-term repo operations). The Swiss National Bank offers an example.

Monetary policy can facilitate the financing of government debt in a number of ways. Low interest rates directly benefit all borrowers with access to cheap credit, including governments. The large purchases of government debt associated with quantitative easing provide another almost-as-direct benefit to governments, and one that is not available to private borrowers. The greatest risk for monetisation of the debt may be associated with the inflationary consequences of a delayed withdrawal of the exceptional monetary accommodation now in place. Such a delay may not be intentional on the part of the central bank. Nonetheless, the resulting upward price level adjustment that would follow a delay in withdrawing policy accommodation is as real if unintentional as if intentional. Accepting the risk of overshooting the desired price level path may be a necessary by-product of the massive unconventional monetary policy necessary to help the economy recover. But the situation creates the temptation for governments to attempt to capture the monetary policy process, as monetising the debt may prove politically much easier than the alternatives as a means of restoring fiscal sustainability.

Even absent these concerns, the availability of cheap credit may have significant adverse effects on the incentives for political authorities to correct fiscal problems. When the central bank provides all the financing a government needs at near zero cost, it is easier to postpone dealing with a problem rather than risk the short-term political cost that would be associated with any solution. The risk of facilitating this postponement, of course, is that the fiscal problem only gets bigger when not tackled in a timely fashion.

Gross debt in the euro area

Figure 6



Notes: Gross debt as a percentage of GDP, data and forecasts from April 2013 IMF WEO.

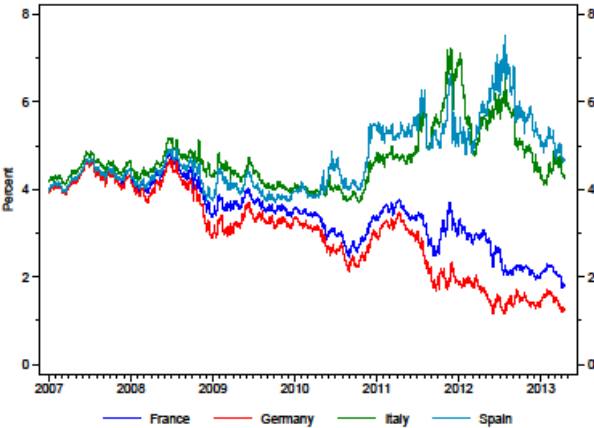
The euro area presents additional special challenges. The travails of the euro area are sometimes referred to as a sovereign debt crisis. Figure 6 shows the path of gross debt to GDP for the six largest euro area member states, representing collectively about 90% of the euro area economy. The figure shows that the deterioration is forecast to persist, except in Germany. But it also shows that the historical debt paths for Spain and Italy, both of which have been under significant pressure in terms of their financing costs in the past three years, compare very favourably with those of Japan, where the government can refinance at near-zero cost and with those of Belgium in an earlier period, before the euro area existed. Spain also compared favourably during the crisis to the United Kingdom, part of the

European Union but outside the euro area, suggesting that a deeper problem exists with the functioning of the euro area.

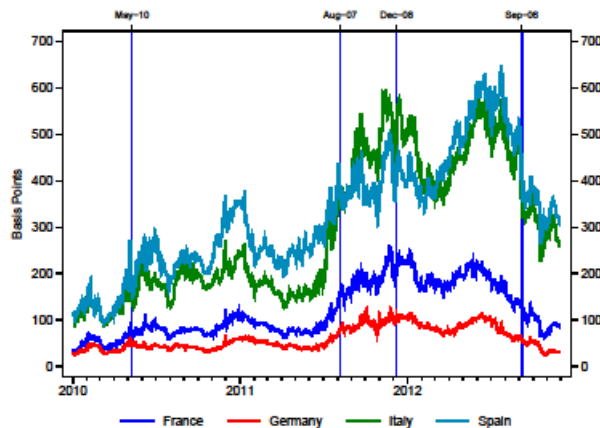
One of the most critical consequences of the euro area crisis is the divergence in the cost of government debt financing. Figure 7 shows the evolution of 10-year government bond yields for the four largest member states. Without getting into a detailed discussion on the causes of the euro area crisis, we can easily understand the risks for the ECB in the light of the pressures facing some member states in the euro area. The Treaty prohibits monetary financing and prevents the central bank from serving as a lender of last resort to individual governments in the euro area. It is well understood that the resolution of the euro area crisis is in the hands of the governments of the member states. But what if market tensions appear to threaten the euro area construction and governments need more time to implement solutions? The ECB may be the only institution that has the power to prevent a collapse. In various instances during the crisis, the ECB engaged in purchases of the debt of selected member states through its Securities Market Programme (SMP) or provided liquidity to the banking system that could be used for such purchases. Since last year, through the creation of the Outright Monetary Transactions (OMT) programme, it has created a framework for additional, potentially unlimited purchases of government debt, subject to conditionality that would result from intergovernmental negotiations. ECB monetary policy decisions of this nature can have a soothing effect on markets with immediate visible effects. This can be seen in Figure 8, where the four vertical lines correspond to the announcements regarding the SMP (10 May 2010 and 7 August 2011), the three-year Long-Term Refinancing Operation (LTRO) (8 December 2011) and the OMT (6 September 2012). The ECB has the capacity to buy more time for the governments by intervening when the threat of immediate collapse becomes too high. However, these monetary policy actions may inadvertently encourage governments to postpone resolving the crisis (Orphanides (2013)). Unavoidably, the ECB finds itself in the middle of a political crisis with a highly uncertain outcome.

Ten-year government bond yields in the euro area

Figure 7



In the short run, the temptation to see the central bank step in and solve sovereign debt sustainability problems can be great. Overburdening monetary policy by expecting that it will facilitate restoring fiscal sustainability and controlling tensions in sovereign markets is a clear case where current monetary policy has significant and potentially unpleasant intertemporal political economy implications.



Notes: Vertical lines denote ECB policy announcements on the SMP, LTRO and OMT.

5. Financial stability

The third area with the potential for overburdening monetary policy concerns the role of monetary policy in maintaining financial stability. Two sides with somewhat different considerations are of interest – the preventive phase, aiming to avert crises, and the repair phase, following a crisis. What can and what should monetary policy do when financial imbalances appear and asset price misalignments are suspected? That is, what is the role of a central bank in reducing the likelihood of a crisis? And what is the role of monetary policy during the adjustment phase after a crisis erupts?

Regarding crisis prevention, the global financial crisis has reaffirmed that ensuring price stability is not sufficient to avoid major financial crises and maintain financial stability. Most of the time, price stability and financial stability may be thought of as reinforcing each other and no general trade-off exists between them. Avoiding large deviations from price stability, such as high and volatile inflation or deflation, contributes to financial stability. However, too narrow a focus on price stability over short horizons may prove counterproductive for maintaining financial stability. Greater short-term stability in prices may raise the risks of an asset boom or bust down the road, leading to instability.

Under these circumstances, the pertinent trade-off may be viewed as one regarding a comparison of the risks to price stability over shorter horizons against tail risks at longer horizons. For example, persistently high credit growth may be observed together with price stability. If the high credit growth is suspected of contributing to the build-up of an imbalance, as was observed in real estate markets in some countries before the crisis, and if somewhat tighter monetary policy could effectively contain this imbalance, then tighter monetary policy could be considered appropriate even if it leads to a short-run rate of inflation somewhat below the central bank's ideal. Tighter monetary policy under these circumstances may reduce the probability of an overheated market crashing, which might be followed by an economic slump and the risk of deflation at a longer horizon. Under such

circumstances, accepting a somewhat lower inflation rate in the short run should be seen as worthwhile to balance the risks to price stability over time. This could be interpreted as an example of the “leaning against the wind” strategy (Borio and White (2003)). The appeal of this approach, however, depends sensitively on the ability of central banks to detect the incipient imbalances and the effectiveness of monetary policy to counteract them. Regarding detection, assessing fair values for asset prices may be as hard as measuring natural rates in real time, although recent analysis on the “financial cycle” suggests some potential for progress (Borio (2013)). Regarding the effectiveness of monetary policy, considerable uncertainty remains. With respect to the housing boom observed in the United States before the crisis, for example, Greenspan (2010) argues that increases in the federal funds rate would have been insufficient to contain the imbalance, as mortgage rates were only loosely related to the stance of monetary policy during the period.

If adjusting the stance of monetary policy is not very effective, however, other tools should be considered. Ideally, the central bank should have access to macroprudential levers for containing the build-up of imbalances and so preventing the risk of a potential financial disturbance. In this regard, the global development of institutions involving central banks with the power to implement macroprudential measures is promising, although it may take decades to assess the effectiveness of such measures in practice. Regarding banks, the overall risks of future crises can be reduced by tightening regulatory requirements so as to demand more and higher-quality capital than was suggested by the Basel II framework, and by reducing the scope for banks to use risk-weighting to evade stronger capital buffers. These microprudential measures could lead to considerably stronger capital positions, and it has been argued that the cost of moving in that direction may be small (Admati and Hellwig (2013)). In the light of the promise of micro- and macroprudential supervision measures, it remains unclear what additional role monetary policy should have in reducing the risk of financial crises, although the case for “leaning against the wind” is stronger than it appeared before the crisis (Bean et al (2010)).

A more direct risk, potentially threatening the credibility and independence of a central bank, is associated with financial stability considerations during the clean-up phase of a crisis. As we have observed during the current crisis, a massive monetary policy easing may be required to avert a collapse of Great Depression proportions. The associated provision of liquidity at near-zero interest rates has a number of characteristics that could cause unpleasant side effects for the central banks.

One such characteristic is associated with the role of the central bank as the lender of last resort. In the global crisis, central banks stepped into that role on an unprecedented scale. In addition, for some financial markets considered critical for stability, central banks acted as market-makers of last resort. The provision of liquidity can ease the burden of deleveraging in the aftermath of a crisis, and soften the blow the real economy might otherwise suffer.

Provision of emergency liquidity assistance can ease liquidity shortages even in conditions of severe stress. However, during a crisis, the valuation of the collateral pledged against the provided liquidity is harder to assess with precision and a shortfall in liquidity may become difficult to distinguish from an underlying solvency problem. If a solvency issue were to appear, the continued provision of liquidity for extended periods (and at very low interest rates in the aftermath of a crisis) could potentially mask a solvency problem.

Since solvency concerns have fiscal implications, providing liquidity during a crisis could risk the central bank acquiring a fiscal role with distributional effects that

it would ordinarily wish to avoid. In a systemic crisis, the robustness of the existing bank recapitalisation and resolution framework and its fiscal backstop can become critical considerations and constraining factors for the central bank. If the central bank assesses that a fiscal backstop is weak or insufficient and judges the economic consequences of one or multiple bank failures to be too severe, it may be indirectly forced to continue to support a bank by providing ample liquidity even after its solvency becomes doubtful. In the extreme, a politically captured central bank could succumb to government pressure for it to provide emergency liquidity assistance to an insolvent bank, effectively undertaking a fiscal operation by stealth and helping the government hide the problem from public view.

In effect, through its liquidity provision, the central bank may become the backstop to the financial system and may implicitly assume the fiscal risks associated with this role. In these circumstances, continued provision of liquidity at very low rates could nurse a sick bank until it becomes healthy. The central bank can facilitate the strengthening of the capital position of a weak bank through retained earnings. If macroeconomic conditions justify providing liquidity at very low rates for a sufficiently long period, a bank whose solvency was in doubt could strengthen its capital position sufficiently to be considered healthy again, thus avoiding the prospect of resolution.

An unpleasant side effect of such a sequence of events, however, is that it may subordinate the primary function of monetary policy to the financial stability concerns resulting from a weakened banking sector. If macroeconomic conditions require an increase in interest rates before the banking system is nursed back to health and the fiscal authorities are unwilling or unable to serve the role of a financial backstop, the central bank may be faced with a dilemma: Continue to keep interest rates low to avoid banking problems at the cost of higher inflation, or raise interest rates and accept the risk of one or multiple bank failures and their economic consequences.

Monetary policy always has some distributional and some fiscal consequences. Under ordinary circumstances these consequences may be relatively small and of secondary importance compared to the macroeconomic consequences of monetary policy actions on economic growth and aggregate price developments. In the absence of a well defined and sufficiently strong fiscal backstop, however, post-crisis clean-up could turn the provision of liquidity at very low rates into a mechanism for recapitalising banks. Without workable alternatives, this may create doubts about the willingness of the central bank to exit an environment of exceptionally accommodative monetary conditions when macroeconomic conditions would have warranted such a policy change. Such doubts could compromise the credibility of the central bank.

6. Conclusion

When other policies fail, when other policies are hard to implement, when other policies are politically challenging, it may be appealing to ask central banks to use monetary policy to achieve broader goals, to make up for the gaps in what other institutions and policies should do. The risk is that pursuing multiple objectives simultaneously brings the central bank back into the realm of politics. This can compromise its independence and cause it to lose sight of price stability.

The result of expecting too much of monetary policy, and demanding that monetary policy do more than focus on price stability first, is that it may lead to backsliding to earlier unhappy experiences. This would mean backsliding to the days when governments asked central banks to deliver “growth, motherhood, and a range of other good things” with the result that central banks failed even in the one task monetary policy can achieve – to preserve price stability.

Monetary policy is a poor substitute for other policies needed to restore economic balance around the world. Monetary policy is no substitute for structural and labour market policies needed for sustainable job creation and growth. It is no substitute for fiscal, pension and healthcare reforms that are needed to ensure fiscal sustainability over the long run. It is no substitute for stronger capital buffers in challenged banking systems nor for shortcomings in micro- and macroprudential supervision. And it is no substitute for the political and governance reforms that may be needed to restore the functioning of a monetary union facing an existential crisis.

The desire to push the envelope of what central banks can do and aim to design monetary policy frameworks that provide solutions to multiple problems and improve welfare is admirable. However, expectations must be managed to better reflect reality. The limits of our knowledge about how central banks can best contribute to society and the limits to what monetary policy can do must continue to be acknowledged and respected. Despite the impressive firepower in their balance sheets, magic bullets are not to be found in central bank arsenals.

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Comments on “Is monetary policy overburdened?” by Athanasios Orphanides

Charles Bean¹

Athanasios Orphanides asks “Is monetary policy overburdened?” His answer is yes. He will be pleased to know that so is mine. While there is much in the paper I agree with, there are nonetheless aspects of his argument where my perspective is somewhat different. In particular, he frequently identifies the singular mission of the central bank as maintaining price stability. I think this is too narrow a perspective, particularly in respect of financial stability. I shall come back to this at the end.

Athanasios focuses on three factors contributing to the overburdening of monetary policy, namely concerns about: growth and unemployment; fiscal sustainability; and financial stability. Starting with the first, Athanasios accepts that there is a short-run trade-off between activity and inflation, but argues that attempts to exploit it to achieve higher growth and lower unemployment for a while may simply end up compromising the central bank’s ability to achieve low and stable inflation over the longer run.

Inflation targeting, as actually practised by the Bank of England and other inflation targeting central banks, recognises this by aiming to achieve the target level of inflation in the medium term, but accepting temporary deviations from target (especially in face of cost shocks) in order to avoid excessive output volatility. This closely resembles the optimal policy in analyses of monetary policy in simple New Keynesian macroeconomic models, such as those of Lars Svensson and Mike Woodford.

Such “flexible” inflation targeting appeared to have been amazingly successful during the period of the Great Moderation: inflation was low and stable, while output growth was unusually steady. That in turned raised the expectations of politicians and the public as to what could be expected from monetary policy. To a degree, we were victims of our own success.

As a result of the financial crisis and the associated recession, matters have now gone to the other extreme, with a substantial, though uncertain, margin of spare capacity still persisting in the affected economies. Demand is likely to remain subdued for some time to come, reflecting in part the drawn-out nature of the process of balance sheet repair. In addition, the limited room for fiscal action means that monetary policy is often seen as the only show in town. But that is at a time when the combination of untried unconventional policies of uncertain effectiveness is coupled with weaker policy pass-through on account of impaired bank balance sheets and excessive private debts. So there is something of a gulf between expectations and what is achievable.

Now analyses of optimal monetary policy (under discretion) suggest that the inflation gap should be proportional to the output gap, so that inflation should be above the target when there is spare capacity and vice versa. Given the persistent

¹ Deputy Governor for Monetary Policy, Bank of England.

spare capacity at the present time therefore, a central bank should be willing to accept a correspondingly persistent overshoot of its target – at least providing that it does not threaten the credibility of the regime.

Athanasios suggests that central banks should ignore society's output objective and focus just on hitting the inflation target, leaving it to structural reforms to generate lower unemployment. While I agree that, in the long run, monetary policy is powerless to affect things such as the average growth rate or the average rate of unemployment, I don't think central banks can simply say that it is therefore all someone else's problem. If we do, then we risk losing democratic legitimacy and having our power to set monetary policy circumscribed. But we should explain the limitations of monetary policy and argue the case for other actions too.

Let me now turn to monetary policy and fiscal sustainability, where Athanasios presents two arguments. First, he suggests that the large-scale bond purchases by some central banks mean that the corresponding governments will be loath to see monetary policy normalised. Of course, this is not a particular feature of bond purchases; it would equally be true if policy rates are unusually low. And there is no doubt that tensions with governments will be heightened as central banks move towards the exit – a sort of "weak fiscal dominance". But do we really think that central banks shouldn't have supported recovery in this way because of worries about the pressures they might come under during the exit phase? Again, I think that would risk central banks losing their democratic legitimacy.

Athanasios does suggest that a solution is to buy foreign, rather than domestic, bonds, citing Switzerland as an example. But the action of the Swiss National Bank was justifiable only because the Swiss franc was subject to extreme upward pressure and the SNB had few domestic bonds to buy. But in most cases, buying foreign bonds would be seen as a blatant attempt to depreciate the exchange rate, shifting the burden of adjustment abroad. Such a beggar-my-neighbour policy would be totally unacceptable to trading partners and risks protectionism.

Athanasios's second argument is that undertaking monetary support reduces the incentives for the fiscal authorities to take the necessary, though difficult, actions. This is a real issue, illustrated several times during the euro area crisis: each time the European Central Bank steps in with a major initiative, governments slow down on taking the necessary fiscal and structural measures. But surely the right response cannot be to keep policy tight just to discipline governments. Isn't it better to build in the right incentives in other ways, such as the conditionality in the ECB's Outright Monetary Transactions facility?

There is, though, another fiscal aspect that Athanasios doesn't discuss, and that is the prominent role in some jurisdictions of the central bank as a "fiscal policeman". Central banks certainly have a legitimate concern in ensuring debt sustainability and avoiding fiscal dominance. But when a central bank opines on the detailed structure of government spending and taxes, it is moving into political territory, and may thereby risk losing public support. In some countries, the central bank may be the only body with the credibility to play such a role. But in my view, it is one that it should take on only reluctantly.

Finally, let me turn to monetary policy and financial stability. Here Athanasios sometimes seems to make a category error in equating the mission of central banks with that of achieving price stability. To my mind, that ignores the centrality of maintaining financial stability. Central bank money is the ultimate settlement asset, and acting as a lender of last resort to illiquid but solvent financial institutions is

surely *the* defining role of a central bank. Setting monetary policy does not need to be in the central bank's hands, but being the lender of last resort does.

But in any case, the real issue is not whether the central bank is responsible for maintaining financial stability as well as price stability, but rather how they are managed and interrelations between them. I take the view that monetary policy is ill-suited to be the primary instrument for preventing the build-up of financial imbalances – the collateral cost to the real economy is usually too great. Instead, supervisory and macroprudential policies should be the first and second lines of defence. But macroprudential policies are relatively untried, and there will also be times when the financial imbalances are building outside the boundary of the regulated sector. In that case, it may be necessary to direct monetary policy in part to the financial stability objective, accepting the short-term consequences for activity and inflation.

In the new framework at the Bank of England, we manage the monetary policy/financial stability nexus by having two committees with overlapping membership: the Monetary Policy Committee targets price stability and, subject to that, supports the government's policies for growth and employment; and the Financial Policy Committee targets financial stability and, subject to that, also supports the government's policies for growth and employment. Moreover, each is enjoined to have regard to the actions of the other.

Finally, Athanasios frets about potential losses to the central bank's balance sheet as a result of liquidity support actions. Here the solution seems straightforward. Central banks should lend only to institutions that are solvent and viable, against collateral they can risk-manage by taking a suitably prudent haircut. If they go beyond that and take credit risk onto the consolidated public sector balance sheet to any significant degree, then that should only be with explicit consent of the fiscal authorities and under an indemnity. It surely has to be for democratically elected politicians to commit public funds, not the central bank.

Comment on Orphanides Athanasios, "Is monetary policy overburdened?"

Niall Ferguson

Introduction

By the time of last year's International Monetary Fund meeting in Tokyo, it had become commonplace to refer to central banks as "the only game in town". Events on the eve of this conference, when the utterances of the Chairman of the Board of Governors of the Federal Reserve once again caused major financial market movements, tended to support that claim. (By comparison, markets largely ignored the wrangle over US fiscal policy that produced the quite contractionary sequester.) Athanasios's important paper considers the risks of overburdening monetary policy beyond its primary goal, which the author argues should be to preserve and defend price stability. In particular, three different policy goals have been implicitly or explicitly added to central bank mandates during the crisis:

- (i) The achievement of full employment and associated indicators of real economic activity;
- (ii) The achievement of fiscal sustainability, facilitating the repair of public sector balance sheets over time; and
- (iii) Continued preservation of financial stability, especially facilitating the repair of bank balance sheets.

The author argues that the addition of these objectives represents a regrettable return to the period before the fashion for inflation targeting (IT), which he traces back to Don Brash's time as Governor of Reserve Bank of New Zealand, beginning in 1988. Not only did many central banks (eg the ECB) formally follow the New Zealand example of an explicit and dominant IT. Even those, like the Fed, which had a dual or multiple mandate, also implicitly began targeting inflation. Abandoning the primacy of IT is a mistake, the author argues. First, it was precisely the success of IT that, by "anchoring inflation expectations" and building central banks' credibility, "enhanced their flexibility to respond promptly and aggressively" when a Great Depression loomed in 2008–09. Second, asking central banks to deliver full employment reduces the pressure on politicians and other government agencies to enact fiscal policy or structural reform. Third, relying on real economy measures such as the output gap is difficult in practice because of the unreliability of real-time estimates.

The author details the dilemmas created by the abandonment of IT in the crisis. First, "at the zero bound, monetary and fiscal policy become blurred", so that decisions about monetary policy are very difficult to separate from the challenges of debt management. In effect, quantitative easing lowers government borrowing costs. That could become addictive for finance ministries. Even an institution like the ECB, which is not allowed to finance governments directly, has been drawn into giving them indirect support for the sake of averting a disintegration of the euro zone as a monetary union. Second, concerns about financial stability may

undermine the primacy of IT. The new emphasis among policymakers and regulators on macroprudential policy creates dilemmas for a bank committed to IT. Should it lean into the wind when asset price inflation is much higher than consumer price inflation? Should it provide liquidity to insolvent institutions for the sake of avoiding a chain reaction of bank failures? The author concludes that we should re-assert the simple verities of IT and resist the temptation to go back to the days when governments asked central banks to deliver “growth, motherhood, and a range of other good things”.

The paper is a rich one and its conclusion is seductive. To a historian, however, the narrative seems overly stylised. The ascendancy of inflation targeting was a more complex process than the author implies. In particular, it is by no means clear that the Fed genuinely was targeting only or even primarily inflation after 1987. Moreover, we cannot separate the rise of IT from the rise of CBI – central bank independence. Again, in historical perspective, CBI has always been contingent on the requirements of the state. It should not in the least surprise us if we see central banks ceasing to be “the only game in town” and reverting to their original historical role as helpmeets for government finance. This process has in fact already begun, and seems likely to continue.

The rise and fall of gold

Central banks are relatively young institutions. Most began life with quite different functions from the ones we associate with central banking today. The first truly public bank, the Amsterdam Exchange Bank (*Wisselbank*), was set up in 1609 to resolve the practical problems created for merchants by the circulation of multiple currencies in the United Provinces. In essence, it offered chequeing accounts as a public service.¹ The Swedish Riksbank, founded in 1656, engaged in lending as well as facilitating commercial payments. It pioneered fractional reserve banking. The Bank of England was set up in 1694 primarily to assist the government with war finance (by converting a portion of the government’s debt into bank equity); in return, the Bank received distinctive privileges (being allowed to operate on a joint stock basis and to issue banknotes).

Gradually, the Bank of England developed other public functions, in return for the reaffirmation of its monopoly on note issue in 1826. Increasingly, the bank also came to play a pivotal role in interbank transactions. More and more of the “clearing” of sums owed by one bank to another went through the Bank of England’s offices in Threadneedle Street. With the final scrapping in 1833 of the usury laws that limited its discount rate (on commercial bills), the Bank was able fully to exploit its scale advantage as the biggest bank in the City. Increasingly, its discount rate was seen as the minimum short-term interest rate in the so-called money market (for short-term credit, mostly through the discounting of commercial bills). The question that remained unresolved for a further 40 years was what the relationship ought to be between the Bank’s reserves and its banknote circulation. In the 1840s, the position of the Governor, J Horsley Palmer, was that the reserve should essentially be regulated by the volume of discounting business, so long as

¹ S Quinn and W Roberds, “The big problem of large bills: The Bank of Amsterdam and the origins of central banking”, *Federal Reserve Bank of Atlanta Working Paper*, 2005-16, August 2005.

one third of it consisted of gold coin or bullion. The Prime Minister, Sir Robert Peel, was suspicious of this arrangement, believing that it ran the risk of excessive banknote creation and inflation. Peel's 1844 Act divided the Bank in two: a Banking Department, which would carry on the Bank's own commercial business, and a separate Issue Department, which was to be endowed with £14 million of securities and an unspecified amount of coin and bullion, which would fluctuate according to the balance of trade between Britain and the rest of the world. The so-called fiduciary note issue was not to exceed the sum of the securities and the gold. Repeated crises (in 1847, 1857 and 1866) made it clear that this was an excessively rigid straitjacket, however; in each case the Bank Act had to be temporarily suspended to avoid a complete collapse of liquidity. It was only after the last of these crises, which saw the spectacular run that wrecked the bank of Overend Gurney, that the editor of *The Economist*, Walter Bagehot, reformulated the Bank's proper role in a crisis as the "lender of last resort", to lend freely, albeit at a penalty rate, to combat liquidity crises.²

Although there was variation, most advanced economies essentially followed the British lead when it came to regulation through a monopolistic central bank, and concentration of deposit-taking in a relatively few large institutions. The Bank of France was established in 1800, the German Reichsbank in 1875, the Bank of Japan in 1882 and the Swiss National Bank in 1907. The Fed came later in 1913. Also following the British lead, most central banks committed themselves to the gold standard, so that monetary policy became a gold price targeting regime, meaning that central banks had to ensure the convertibility of banknotes into gold on demand.

How did this Anglocentric system work in practice? Bagehot understood that it was both complex and fragile. "In exact proportion to the power of this system," he observed, "is its delicacy – I should hardly say too much if I said its danger ... [E]ven at the last instant of prosperity, the whole structure is delicate. The peculiar essence of our financial system is an unprecedented trust between man and man; and when that trust is much weakened by hidden causes, a small accident may greatly hurt it, and a great accident for a moment may almost destroy it."³ In theory, Bagehot would have preferred a system in which each institution had to look to itself by maintaining a reserve against contingencies. But, in practice, the London market had evolved in such a way that there was only one ultimate reserve for the entire City and that was the Bank of England's: "the sole considerable unoccupied mass of cash in the country".⁴ As in our time, in other words, the central bank (and, behind it, the government that called it into being) constituted the last line of resistance in time of panic.

By reviewing half a century of financial crises, Bagehot brilliantly showed how the Bank of England's role as custodian of the nation's cash reserve was quite different from its role as defined by statute or, indeed, as understood by the men running it. In the 1825 panic, the Bank had done the right thing, but much too late in the day, and without knowing quite why it was the right thing. In each of the three panics that followed the passage of the Bank Charter Act of 1844 – a piece of legislation that was largely concerned with the Bank's note-issuing function – the

² W Bagehot, *Lombard Street: A Description of the Money Market*, London, 1873.

³ Ibid, pp 17, 160 ff.

⁴ Ibid, p 165.

Act had been suspended. There was, as in our time, uncertainty about which securities it would accept as collateral in a crisis. The Bank's governance structure was opaque. Its governor and directors were themselves not bankers.

Bagehot's remedies were clear-cut, though they are very often misinterpreted. The famous recommendation for a crisis was: "Very large loans at very high rates ... to prevent the greatest number of applications by persons who do not require it."⁵ But we tend to neglect the rest of what Bagehot said and, in particular, the emphasis he laid on discretion as opposed to set rules. In the first place, Bagehot stressed the importance of having Bank directors with considerable market experience and an advisory Court actuated by "a wise *apprehensiveness*".⁶ Secondly, Bagehot repeatedly stressed, as he put it, "the cardinal importance of [the Bank of England's] always retaining a great banking reserve". But he was emphatic that the size of the reserve should *not* be specified by some automatic rule, the way the banknote circulation was under the 1844 Bank Charter Act: "No certain or fixed proportion of its liabilities can in the present times be laid down as that which the Bank ought to keep in reserve." The ideal central bank would target nothing more precise than an "apprehension minimum", which "no abstract argument, and no mathematical computation will teach to us":

And we cannot expect that they should [he went on]. Credit is an opinion generated by circumstances and varying with those circumstances. The state of credit ... can only be known by trial and inquiry. And in the same way, nothing can tell us what amount of 'reserve' will create a diffused confidence; on such a subject there is no way of arriving at a just conclusion except by incessantly watching the public mind, and seeing at each juncture how it is affected.⁷

Nor should there be predictability in the Bank's discount rate, the rate at which it lent against good-quality commercial paper. The rule "that the Bank of England should look to the market rate and make its own rate conform to that ... was ... always erroneous", according to Bagehot. The "first duty" of the Bank was to use the discount rate to "protect the ultimate cash of the country".⁸ This too of course implied a discretionary power, since the desirable size of the reserve was not specified by any rule.

It is important to remember that this entire system was contingent on peace. With the outbreak of the First World War in 1914 – just as had happened in the period of the French Revolutionary and Napoleonic Wars – gold convertibility was suspended in nearly all the combatant countries and central banks were, to varying degrees, reduced to being mere vehicles for financing governments. As is well known, the result was high post-war inflation, in a few cases even hyperinflation. Although it helped to tame inflation, the restoration of the gold standard system in the 1920s was ultimately a failure, as Eichengreen and others have shown, because – partly for political reasons – central banks were no longer able to play (or even

⁵ Ibid, p 58 ff, 199.

⁶ Ibid, p 235.

⁷ Ibid, p 325.

⁸ Ibid, p 321.

pretend to play) by the “rules of the game”.⁹ The gold standard system between 1929 and 1931 acted as a transmission mechanism for depression.

Lessons of the Great Depression

The failure of the inter-war monetary system taught us two valuable lessons. The first is that flexible exchange rates are obligatory if a country wishes to pursue an independent monetary policy (targeting, implicitly or explicitly, full employment) and at the same time to enjoy the benefits of free capital movement. The second is that monetary policy may need to be even more accommodative than Bagehot’s rules implied in the event of a really big banking crisis.

As is well known, Friedman and Schwartz argued that it was the Federal Reserve System that bore the primary responsibility for turning the crisis of 1929 into a Great Depression.¹⁰ They did not blame the Fed for the US stock market bubble itself, arguing that with Benjamin Strong at the Federal Reserve Bank of New York, a reasonable balance had been struck between the international obligation of the United States to maintain the restored gold standard, and its domestic obligation to maintain price stability. By “sterilising” the large gold inflows to the United States (preventing them from generating monetary expansion), the Fed may indeed have prevented the bubble from growing even larger. The New York Fed also responded effectively to the October 1929 panic by conducting large-scale (and unauthorised) open market operations to inject liquidity into the market. However, after Strong’s death in October 1928, the Federal Reserve Board in Washington came to dominate monetary policy, with disastrous results. First, too little was done to counteract the credit contraction caused by banking failures.¹¹ Second, under the pre-1914 system, before the Fed had been created, a crisis of this sort would have triggered a restriction of convertibility of bank deposits into gold. The Fed made matters worse by reducing the amount of credit outstanding (December 1930–April 1931). This forced more and more banks to sell assets in a frantic dash for liquidity, driving down bond prices and worsening the general position.¹² Third, when Britain abandoned the gold standard in September 1931, precipitating a rush by foreign banks to convert dollar holdings into gold, the Fed raised its rediscount rate in two steps to 3.5%. This halted the external drain, but drove yet more US banks over the edge: between August 1931 and January 1932, 1,860 banks failed with deposits of \$1.45 billion.¹³ Yet the Fed was in no danger of running out of gold.¹⁴ Fourth, only in April 1932, as a result of massive political pressure, did the Fed attempt large-scale open market purchases – the first step it had taken to counter the liquidity crisis. Even this did not suffice to avert a final wave of bank failures in the last quarter of

⁹ B Eichengreen, *Golden Fetters: The Gold Standard and the Great Depression, 1919–1939*, Oxford University Press, 1992.

¹⁰ See M Friedman and A Schwartz, *A Monetary History of the United States, 1867–1960*, Princeton, 1963, pp 299–419.

¹¹ *Ibid*, pp 309 ff.

¹² *Ibid*, p 315.

¹³ *Ibid*, p 317.

¹⁴ *Ibid*, p 396.

1932, which precipitated the first state “bank holidays” (temporary state-wide closures of all banks).¹⁵ Fifth, when rumours that the new Roosevelt administration would devalue the dollar led to a renewed domestic and foreign flight from dollars into gold, the Fed once again raised the discount rate, setting the scene for the nationwide bank holiday proclaimed by Roosevelt on 6 March 1933, two days after his inauguration – a holiday from which 2,000 out of 5,000 banks never returned.¹⁶

The Fed’s failure to avert a total of around 10,000 bank failures was crucial not just because of the shock to consumers whose deposits were lost or to shareholders whose equity was lost, but because of the broader effect on the money supply and the supply of credit. Between 1929 and 1933, the public succeeded in increasing its cash holdings by 31%; commercial bank reserves were scarcely altered (indeed, surviving banks built up excess reserves); but commercial bank deposits decreased by 37% and loans by 47%. The absolute numbers reveal the lethal dynamic of the “great contraction”. An increase of cash in public hands of \$1.2 billion was achieved at the cost of a decline in bank deposits of \$15.6 billion and a decline in bank loans of \$19.6 billion, equivalent to 19% of 1929 GDP.¹⁷

Of all the lessons we have learned from the Great Depression, this remains the most important: that inflexible monetary policy in the wake of a sharp decline in asset prices can turn a correction into a recession and a recession into a depression. According to Friedman and Schwartz, the Fed should have aggressively sought to inject liquidity into the banking system from 1929 onwards, using open market operations on a large scale, and expanding rather than contracting lending through the discount window. They also suggest that less attention should have been paid to gold outflows. These and other insights from his own research have clearly played a major part in guiding the conduct of the current Chairman of the Federal Reserve System during the recent crisis.¹⁸ It is worth adding that Friedman himself never saw an inflation target as desirable. His view was that the Fed had failed because it magnified rather than counteracted an acute monetary contraction. Implicitly, a monetary target would have been preferable to whatever it was the Fed thought it was doing.

The subordination of central banks

The depression and another world war led to the subordination of central banks almost everywhere to governments. Given the mess they had made of the Twenties and Thirties, it was a fate most of them deserved. The extreme case was in the Soviet Union, where credit was entirely centralised within the framework of the Five Year Plans. In Germany, the Reichsbank under Schacht imposed an array of controls on the financial system, only to find itself in turn subjugated by Hitler, who responded to Schacht’s warnings about the inflationary effects of rearmament by

¹⁵ Ibid, p 325.

¹⁶ Ibid, p 328.

¹⁷ US Department of Commerce Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970*, Washington DC, 1975, p 1019.

¹⁸ See, eg B Bernanke, “The macroeconomics of the Great Depression: a comparative approach”, *NBER Working Paper*, no 4814, August 1994.

sacking him. But the erosion of central bank power happened in democracies too: even before the Second World War, the Danish, New Zealand and Canadian central banks had all been nationalised. The Federal Reserve System was effectively subordinated to the Treasury under the New Deal.¹⁹ This arrangement persisted until 1951. By the end of the Second World War, even the Bank of England was so manifestly the money-printing wing of the Treasury that nationalisation was imposed.²⁰ Today it is still the case that most central banks are state-owned.

The logic of nationalisation was that the private ownership of central banks was incompatible with their macroeconomic responsibility, which in practice meant maintaining low interest rates while fiscal policy did the serious Keynesian work of achieving the ideal level of demand. In the words of the Radcliffe Committee report (1959), "Monetary policy ... cannot be envisaged as a form of economic strategy that pursues its own objectives. It is a part of a country's economic policy as a whole and must be planned as such."²¹ In practice – and this was especially true in Britain – it was the struggle to maintain successive dollar pegs under the Bretton Woods system that really dominated monetary policy. The Bank of England no longer relied on changing the discount rate; it now had a wide range of credit controls at its disposal. Successive Chancellors tinkered with these in an almost impossible attempt to maintain full employment without weakening sterling.²² In the United States, by contrast, the Federal Reserve retained considerable freedom to engineer economic contractions in order to reduce inflation (or "lean against the wind"): it did so on six occasions between 1947 and 1979, with substantial and enduring real effects.²³ This was what William McChesney Martin – Governor of the Federal Reserve from 1951 until 1970 – meant by "tak[ing] away the punch bowl just when the party is getting going".

Two events exposed the inflationary dangers of central bank impotence: the Vietnam War, which, along with the "Great Society" welfare programme, pushed American deficits up (though not by as much as is often asserted);²⁴ and the oil crises triggered by the Yom Kippur War of 1973 and the Iranian Revolution of 1979. The collapse of the Bretton Woods system – because of European refusals to revalue against the dollar – removed the external check on monetary expansion. To proponents of the "political business cycle" theory, there was nothing now to prevent politicians manipulating monetary policy so as to secure re-election – except the rapidly worsening trade-off between inflation and employment as popular expectations adjusted and the "non-accelerating inflation rate of unemployment" rose.

¹⁹ M Bordo and A Schwartz, "Monetary policy regimes and economic performance: the historical record", *NBER Working Paper*, no 6201, September 1997, p 45.

²⁰ F Capie, C Goodhart and N Schnadt, "The development of central banking", in F Capie, C Goodhart, S Fischer and N Schnadt (eds), *The Future of Central Banking: The Tercentenary Symposium of the Bank of England*, Cambridge, 1994, pp 22 ff.

²¹ *Ibid*, p 54.

²² *Ibid*, pp 25 ff.

²³ D Romer and C Romer, "Does monetary policy matter? A new test in the spirit of Friedman and Schwartz", *NBER Working Paper*, no 2966, 1989.

²⁴ P Masson and M Mussa, "Long-term tendencies in budget deficits and debt", in Federal Reserve Bank of Kansas City, *Budget Deficits and Debt: Issues and Options*, Kansas, 1995, pp 5–55.

How far the high inflation of the 1970s was directly responsible for low growth remains a matter for debate. Some economists maintain that reducing inflation to zero would promote growth, since inflation creates a bias in favour of consumption over saving;²⁵ others that pushing the unemployment rate below the “nairu” has only mild inflationary effects.²⁶ But even if it is true that inflation is only detrimental to growth at rates of more than 40% – and may even be helpful at lower rates²⁷ – there were other obvious reasons for checking the acceleration in inflation in the 1970s, not least the questionable legitimacy of income and wealth redistribution by this means.²⁸

Rules versus discretion

There were in fact three intellectual responses to the “stagflationary” crisis. The first was that central banks should now make price stability their paramount, if not sole, objective. The second was that they should do this by targeting the growth of the money supply. The third was that they should be made more independent from governmental pressure.

Never have the rules of the game changed as rapidly as they did in the 1970s, as various central banks experimented with a plethora of monetary targets (from M0 to M3 in Britain and non-borrowed reserves in the United States).²⁹ In itself, “monetarism” was a compromised revolution almost from the outset, as the economic theorists disapproved of the bankers’ reliance on the old interest rate tool (they wanted the monetary base to be directly controlled to achieve the target for the monetary aggregate). In any case, the liberalisation of the financial system that accompanied the new policy (especially in Britain) had the perverse effect of changing the very monetary aggregates that were being targeted. Almost as soon as they had abandoned one system of fixed exchange rates, European politicians began to devise a new system for themselves; even the British and Americans acknowledged by the mid-1980s that exchange rates could not simply be left to their own very volatile devices. The real significance of monetarism was as part of the broader regime change symbolised politically by the elections of Margaret Thatcher and Ronald Reagan and the accession to power of Helmut Kohl in Germany. The monetary shocks inflicted in 1979–82 as nominal interest rates rose sharply broke the upward spiral of inflationary expectations only in partnership with other fiscal and structural reforms such as the reduction of trade union power to ratchet up wages.

²⁵ M Feldstein, “The costs and benefits of going from low inflation to price stability”, *NBER Working Paper*, no 5469, 1997.

²⁶ R Solow and J Taylor, *Inflation, Unemployment and Monetary Policy: The Alvin Hansen Symposium on Public Policy*, Cambridge, Mass., 1999.

²⁷ M Bruno and W Easterly, “Inflation crises and long-run growth”, *NBER Working Paper*, no 5209, August 1995, especially pp 4–6, 20–2; M Sarel, “Non-linear effects of inflation on economic growth”, *IMF Working Paper*, no 95/56, 1995.

²⁸ C Briault, “The costs of inflation”, *Bank of England Quarterly Bulletin*, February 1995, pp 33–45.

²⁹ M Bordo and A Schwartz, “Monetary policy regimes and economic performance: the historical record”, *NBER Working Paper*, no 6201, September 1997, p 56.

This practical success compensated for theoretical failure. However, behind the scenes, “rules” were quietly dropped in favour of “discretion” – by which was meant a reliance on a multiplicity of rules, not all of them explicit or consistent with one another. The nemesis of this incoherence was most painful in Britain, where monetary targeting was abandoned by Nigel Lawson in favour of “shadowing” the deutschmark, and ultimately joining the Exchange Rate Mechanism at the very moment when German reunification was driving the German currency upwards.³⁰ Only in the aftermath of sterling’s ignominious exit from the Exchange Rate Mechanism in 1992 did the Bank of England follow the example of the Reserve Bank of New Zealand in targeting neither money nor the exchange rate but inflation itself. In the course of the 1990s, this approach was adopted by more than 50 other central banks – although not by the Federal Reserve, which still formally pursued its dual statutory goals of maximum employment and stable prices using open market operations and with reference to an eclectic mixture of variables.³¹

The 1990s, it is said, ushered in “the age of the central bankers”.³² Thanks to the proliferation of new nations, there were more central banks than ever: from just 18 in 1900 and 59 in 1950, their number had risen to 161 by 1990 and 172 by 1999. Over 90% of all members of the United Nations now have their own central banks.³³ Great power was and is frequently attributed to the elite handful of these institutions. Before Economic and Monetary Union, the Bundesbank was portrayed as “the Bank that rules Europe”.³⁴ In the United States, first Paul Volcker and then Alan Greenspan were so successful in enhancing the power and prestige of the chairmanship of the Federal Reserve Board that the latter came to be seen as more economically powerful than the President. The fact that inflation had been discernibly lower in countries with independent central banks³⁵ persuaded many theorists, bankers and politicians that a separation of economic powers was the key to price stability (if not to higher growth).³⁶ This was, as so often in the history of economic policy, an old idea in a new guise. In the 1930s, the Bank of England’s roving monetary expert Otto Niemeyer (Keynes’s arch rival since their Cambridge days) had spelt out the principle in a report presented to the New Zealand House of Representatives in 1931:

³⁰ S Millard, “An examination of the monetary transmission mechanism in the United Kingdom”, *Bank of England Working Paper*, (n.d.).

³¹ *The Economist*, 25 September 1999.

³² See, eg E Luttwak, *Turbo-Capitalism: Winners and Losers in the Global Economy*, London, 1998, pp 191–6.

³³ F Capie, C Goodhart and N Schnadt, “The development of central banking”, in F Capie, C Goodhart, S Fischer and N Schnadt (eds), *The Future of Central Banking: The Tercentenary Symposium of the Bank of England*, Cambridge, 1994, p 6; M King, “Challenges for monetary policy: new and old”, paper presented at the Federal Reserve Bank of Kansas City’s Conference on Issues in Monetary Policy, Jackson Hole, Wyoming, 27–29 August 1999, p 1.

³⁴ D Marsh, *The Bundesbank: The Bank that Rules Europe*, London, 1992.

³⁵ Independence is defined by Capie et al, (see footnote reference 33 above) p 50 as “the right to change the key operational instrument without consultation or challenge from government”.

³⁶ See, eg A Cukierman, P Kalaitzidakis, L Summers and S Webb, “Central bank independence, growth, investment and real interest rates”, *Carnegie-Rochester Conference Series on Public Policy*, no 39, 1993, pp 95–140; A Alesina and L Summers, “Central bank independence and macroeconomic performance: some comparative evidence”, *Journal of Money, Credit and Banking*, vol 25, no 2, May 1993, pp 151–62.

The bank must be entirely free from both the actual fact and the fear of political interference. If that cannot be secured, its existence will do more harm than good, for, while a Central Bank must serve the Community, it cannot carry out its difficult technical functions and hope to form a connecting-link with other Central Banks of the world if it is subject to political pressures or influences other than economic.³⁷

The rediscovery of this argument led to greater autonomy for a rising proportion of the world's central banks. Within a week of coming to power in 1997, the Labour government of Tony Blair unexpectedly granted the Bank of England "operational independence", meaning freedom to set interest rates so as to achieve a publicly announced inflation target.³⁸

Nevertheless, the ultimate power of the executive and legislature over the central bank should never be lost sight of: even the most independent central bank in the world will ultimately have to yield to the wishes of the government in a national emergency. This does not necessarily have to be a war, as the Bundesbank discovered to its discomfort in 1990, when Chancellor Helmut Kohl overruled President Karl-Otto Pöhl on the terms of German monetary reunification. According to Posen, central banks have only gained more independence because the political will to achieve lower inflation has grown; there is no evidence that they achieve lower inflation at a lower cost in terms of growth and employment than banks which are not independent.³⁹

More importantly, the dramatic expansion and evolution of financial markets since the 1980s significantly reduced the leverage central banks could exert over private sector credit, as Benjamin Friedman pointed out. True, the central bank was still the monopoly supplier (or withdrawer) of bank reserves, so relatively small changes in its policy could still influence the financial system as a whole. But innovations in the payments system – electronic money and smart cards – and the growth of non-bank credit – so-called shadow banking – implied a decline in the importance of traditional bank reserves and centralised national clearing systems.⁴⁰ At the same time, the growth of securitisation further weakened the link between the central bank's reserve system and the credit system as a whole. For all these reasons, Friedman could characterise the modern central bank of the (near) future as "an army with only a signal corps",⁴¹ anticipating the later vogue for "forward guidance".

³⁷ G Wood, "Central bank independence: historical evidence and the recent British experience", paper presented at the Conference on Central Bank Independence: The Economic Foundations, Stockholm University, December 1999, pp 10 ff.

³⁸ For a critique of this reform, see D Gowland, "Banking on change: independence, regulation and the Bank of England", *Politeia*, Policy Series, no 6, 1997.

³⁹ A Posen, "Why central bank independence does not cause low inflation: there is no institutional fix", in R O'Brien (ed), *Finance and the International Economy*, vol VII, Oxford, 1993, pp 4–65.

⁴⁰ M King, "Challenges for monetary policy: new and old", paper presented at the Federal Reserve Bank of Kansas City's Conference on Issues in Monetary Policy, Jackson Hole, Wyoming, 27–29 August 1999, pp 29 ff.

⁴¹ B Friedman, "The future of monetary policy: the central bank as an army with only a signal corps", paper presented at the Conference on Social Science and the Future, Oxford, July 1999.

The era of the Greenspan put

Inflation targeting was *not* the only targeting the Greenspan Fed engaged in. On Black Monday – 19 October 1987 – the Dow Jones index fell by a terrifying 23%. From peak to trough that month, the fall was of nearly one third, a loss in the value of American stocks of close to a trillion dollars.⁴² Yet there was no Great Depression of the 1990s, despite the forebodings of Lord Rees-Mogg and others.⁴³ There was not even a recession in 1988 (only a modest one four years later, in 1991). Within little more than a year of Black Monday, the Dow was back to where it had been before the crash. For this, some credit must unquestionably be given to Greenspan, who had taken over from Volcker just two months before. Greenspan's response to Black Monday crash was swift and effective. His terse statement on 20 October, affirming the Fed's "readiness to serve as a source of liquidity to support the economic and financial system", sent a signal to the markets, and particularly the New York banks: if things got really bad, he stood ready to bail them out.⁴⁴ Aggressively buying government bonds in the open market, the Fed injected badly needed cash into the system, pushing down the cost of borrowing from the Fed by nearly 2% in the space of 16 days.

Having contained a panic once, the dilemma that lurked in the back of Greenspan's mind thereafter was whether or not to act pre-emptively the next time – to prevent the panic altogether. This dilemma came to the fore as a classic stock market bubble took shape in the mid-1990s. The justification for investor exuberance was the explosion of innovation by the technology and software industry as personal computers met the Internet. But an accommodative monetary policy also played a role. From a peak of 6% in June 1995, the Federal funds target rate was reduced to 5.25% (January 1996–February 1997). It was raised to 5.5% in March 1997, but then cut in steps between September and November 1998 down to 4.75%; and it remained at that level until May 1999, by which time the Dow had passed the 10,000 mark. Rates were not raised until June 1999.

Why did the Fed allow euphoria to run loose in the 1990s? Greenspan himself had felt constrained to warn about "irrational exuberance" on the stock market as early as 5 December 1996, shortly after the Dow had risen above 6,000. Yet the quarter point rate increase of March 1997 was scarcely sufficient to dispel that exuberance. Partly, he and his colleagues seem to have underestimated the momentum of the technology bubble. As early as December 1995, with the Dow just past the 5,000 mark, members of the FOMC speculated that the market might be approaching its peak.⁴⁵ Partly, it was because Greenspan believed the Fed should not worry about asset price inflation, only consumer price inflation; and this was being reduced by a major improvement in productivity due precisely to the tech

⁴² See N Brady, J Cotting, R Kirby, J Opel and H Stein, *Report of the Presidential Task Force on Market Mechanisms, submitted to the President of the United States, the Secretary of the Treasury and the Chairman of the Federal Reserve Board*, Washington DC, January 1988.

⁴³ J Dale Davidson and W Rees-Mogg, *The Great Reckoning: How the World Will Change in the Depression of the 1990's*, London, 1991.

⁴⁴ For Greenspan's own version of events, see A Greenspan, *The Age of Turbulence: Adventures in a New World*, New York, 2007, pp 100–10.

⁴⁵ *Ibid*, p 166.

boom.⁴⁶ Partly, as so often happens in stock market bubbles, it was because international pressures (in this case, the crisis precipitated by the Russian debt default of August 1998) required contrary action.⁴⁷ Partly, it was because Greenspan and his colleagues no longer accepted that the Fed's job was to remove the punchbowl from the party.⁴⁸ In short, they had acquired a new and imprecise target for asset prices, which financial markets interpreted as "the Greenspan put".

In 2004, two years before his appointment as Greenspan's successor, Ben Bernanke gave a lecture entitled "The Great Moderation". In it he argued that the decline in macroeconomic volatility since the 1980s could be attributed in part to "improved monetary policy", which had (among other things) stabilised public expectations of inflation.⁴⁹ This now seems a highly questionable hypothesis. It could instead be argued that errors of monetary policy, based on the implicit asset price "put", contributed to the Great Recession of 2007–09. Between January 2001 and June 2003, Greenspan cut the Fed funds rate from 6.5% to 1% in response to the bursting of the dotcom bubble, the 9/11 terrorist attacks and a probably exaggerated fear of deflation. There then followed a three year period in which rates crept upwards in quarter-point steps until they reached a maximum of 5.25% in June 2006. It was during this period that US house price inflation accelerated from 7% per annum (in March 2002) to 17% (in August 2004). It stayed above 15% until January 2006.

Various explanations can be offered for what Greenspan himself referred to as the "conundrum" that long-term interest rates (and hence mortgage rates) did not respond as he had expected to the increases in the Fed funds rate. Clearly an important factor was the policy of Asian exporters and petroleum exporters of pegging their exchange rates to the dollar and thereby accumulating hundreds of billions of dollars in reserves. This was what Ben Bernanke called the global "savings glut".⁵⁰ But the savings glut was not the sole explanation. Equally important was the fact that both Greenspan and his successor had been persuaded by the argument – advanced by a number of papers presented at the 1999 Jackson Hole conference – that central banks had no business pre-emptively pricking asset bubbles.⁵¹ After 1999 this argument hardened into a dogma that the business of the Fed was to focus on "core consumer price inflation", excluding the costs of housing and energy, and to pay minimal attention to asset prices – other than to prop them up if they suddenly declined.

⁴⁶ Ibid, p 167.

⁴⁷ Ibid, pp 190–5.

⁴⁸ Ibid, pp 200 ff.

⁴⁹ B Bernanke, "Remarks at the meetings of the Eastern Economic Association, Washington, DC", 20 February 2004.

⁵⁰ B Bernanke, "The global saving glut and the U.S. current account deficit", Homer Jones Lecture, St Louis, Missouri, 15 April 2005.

⁵¹ See, eg B Bernanke and M Gertler, "Monetary policy and asset price volatility", paper presented at the Federal Reserve Bank of Kansas City conference on "New challenges for monetary policy", Jackson Hole, Wyoming, August 1999.

Not the only game in town

It is therefore not terribly good history to regard the period from the late 1980s to 2007 as the golden age of inflation targeting. It would be more accurate to see it as a period of disinflation in which monetarism was applied very imperfectly. Inflation targets were adopted by some central banks, but the most important in the world – the Fed – officially retained a dual mandate and in practice operated a multiple mandate. After 1987, the Fed saw itself as the guardian of financial stability in the sense of averting steep falls in stock market indices. By the late 1990s this had evolved into a doctrine that preventing asset price bubbles was not the Fed's business. This doctrine played an important part in causing the financial crisis, since it led the Fed to ignore the increasing danger signs in the housing market and instead to congratulate itself on having achieved a great moderation in inflation and growth.

Today central banks appear – and may even believe themselves – to be “the only game in town”. But this is an illusion. Imperceptibly, they have been reverting to the role they last played in the 1940s, as vehicles for financing government deficits at artificially low interest rates. In Japan, the subordination of the Bank of Japan to the government is already a fact: in effect, Governor Kuroda has been appointed to implement Prime Minister Abe's reflationary policy. It remains to be seen how far he will succeed in meeting his 2% cent inflation target. But no one should have any illusions about who is now in charge of Japanese monetary policy. In the United Kingdom, a foreigner has been hired as the new Governor of the Bank of England by a Chancellor who openly professes the view that loose monetary policy can and must compensate for necessary fiscal tightening. We shall soon see who is really in charge in Threadneedle Street. In the United States, the President appeared to announce the departure of Chairman Bernanke in an interview on Charlie Rose's television chat show. In Germany, we see continuing efforts by the Bundesbank and the Constitutional Court to limit the power of the European Central Bank to engage in Outright Monetary Transactions.

The issue is not whether or not inflation targets are to be joined by additional targets. The issue is whether or not the era of central bank independence is coming to an end. If it is, we shall look back on the idea of central banks as the only game in town as hubris comparable with the idea of a great moderation – to be followed equally quickly by nemesis.