

Making Central Banks More Resistant to Political Pressures and Fads

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Over the first 100 years of Federal Reserve System history, the United States enjoyed both price stability and the absence of banking crises in only about a quarter of those years. Allan Meltzer's (2003, 2009, 2010) three volume history of the Fed (and the voluminous literature on Fed history published before and since)[1] document that two main influences explain persistent Fed failure: politicization of Fed decisions (especially to elicit Fed assistance in accomplishing short-term fiscal or electoral objectives of the Administration), and model misspecification (reflecting the limits of Fed knowledge about the economy). Worldwide, one can see similar connections between political pressures or model misspecification, and central banks' most egregious historical failures which produce inflation spikes and banking crises (see, for example, the cases documented in Calomiris and Haber 2014).

The worrying evidence is not only historical. There is ample evidence that central banks today are suffering acutely from the twin risks of politicization and modeling fads. With respect to modeling fads, the financial crisis made it very clear that models of the macroeconomy that omit monetary and financial variables – as the dominant DSGE models still do – do not provide a reliable guide to monetary policy. With respect to politicization, in Europe, the independence of the European Central Bank (ECB) has been deeply compromised by fiscal pressures that have produced bank distress and sovereign debt explosions. The ECB is the coordinator of bailouts for both sorts of entities and has abandoned its rules that were designed to insulate it from propping up insolvent banks and sovereigns (following Mr. Draghi's promise to do "whatever it takes"). In the United States, the Fed is more politicized today than it has been since the 1970s. One particularly disturbing piece of evidence was the new Fed Chair's recent press conference, where she referred to several unemployed individuals (two of which, to her embarrassment, turned out to be from a segment of the workforce that has an unusually hard-to-reduce unemployment rate, namely ex-convicts) to express her sympathy and her commitment to help them find work. This political theatre was especially strange because there was a much better way for Chairman Yellen to justify her view that monetary policy needed to be accommodative – namely, by focusing on the fact that the inflation rate was below the Fed's announced 2% target. Instead, she emphasized the high unemployment rate (and more broadly, other labor market indicators) to justify the need for accommodative monetary policy.

A sad consequence of Fed politicization has been the willingness of economists, inside and outside the Fed, to throw inflation targeting policy under the political bus. Inflation targeting – defined as a commitment to maintain policy consistent with a particular numerical long-run rate of inflation – was championed by almost all monetary economists by the 1990s, including then Professor Ben Bernanke, who authored a book on the subject. Inflation targeting is attractive for

several reasons. First, low and stable inflation is an important long-run contributor to high growth. Second, the central bank controls inflation (the value of its own liabilities) by varying their supply. Third, the public can observe whether the central bank is meeting its inflation target, and therefore, can hold its leadership accountable for lapses. Fourth, experience has shown – especially during the 1960s and 1970s – that when the Fed targets variables other than inflation, doing so can create substantial disruption through accelerating inflation and declining growth. For example, the Fed learned in the 1960s and 1970s that it cannot reliably tell whether the unemployment rate is above its structural minimum; if unemployment is structural, persisting in trying to reduce it with monetary policy promotes high inflation while producing no long-term effect on unemployment.

The sine qua non of a long-run inflation targeting policy is a credible response to inflation rates when they are above or below target. No credible inflation targeting policy can ignore – based on some modeling simulation used to justify projections about the future – actual inflation rates that persistently exceed or fall short of the target. Any central bank that is truly targeting long-run inflation must – at some sufficiently high level of medium-term inflation – begin to withdraw accommodation *no matter what the level of unemployment*; otherwise, the long-run inflation target has little meaning. If political pressures prevent the Fed from reacting to higher inflation with a withdrawal of accommodation, then the Fed's inflation target will cease to be credible. The potential consequences for financial markets, employment and growth of this loss of grounded inflation expectations could be dire.

The Fed's commitment to inflation targeting was short-lived and never really full-throated. It was first pronounced in January 2012, with caveats even then. By December 2012, the Fed had changed course and adopted an expression of willingness to deviate from its 2% inflation target for an undefined period of time in pursuit of a "6.5/2.5" policy which would explicitly tolerate medium term inflation of up to 2.5%, and perhaps higher under undefined future circumstances depending on unemployment. This "rule" was abandoned in 2014 in light of falling unemployment but a Fed perception that labor conditions were still too weak. This approach contains two obvious sources of risk for inflation: First, the Fed may be wrong about the degree of slack in the labor market. Second, the focus on labor market slack completely ignores the fact that inflation can occur even when there is substantial slack in the labor market (as the experience of the 1970s demonstrated).

The Fed's recent statements and actions constitute a serious threat to the credibility of the Fed's 2% commitment, and an effective practical abandonment of inflation targeting by any reasonable definition. Of course, Fed leaders still argue that a short- or medium-term neglect of a target does not mean that they have abandoned it in the long run. As Orphanides (2013, p. 10) correctly argues, it is possible that the Fed will adhere to its stated long-run goal of 2% inflation. Fed officials defending that proposition can point to some undefined future date when they or their successors will reduce inflation so that, on average, the long-run targeted rate of 2% will be satisfied. But such rhetoric is reminiscent of the cartoon character Wimpy who always promised payment "on Tuesday for a hamburger today." Central bankers that tolerate above target inflation over any significant period of time (i.e., many months) will be rightly viewed as deadbeats with respect to their promised long-run inflation target. Even if they end up meeting that goal, unless they credibly commit to meeting it they will fuel uncertainty in financial markets and the economy.

Fed policy makers today who favor short-term unemployment targeting surely are aware of the potential costs to the Fed's reputation, and the economy, that failing to hit their inflation target

would entail. They also must be aware of the extreme uncertainty regarding the true level of structural unemployment, which is reflected in the high proportion of long-term unemployed in the labor force, and the changes in the composition of the labor force. Indeed, the Fed's own minutes for the March 2014 meeting reveal a high level of internal uncertainty about structural employment.^[2] And analysts outside the Fed (for example, Levy 2014) do not share the Fed majority's view that there is substantial remaining slack in the labor market.^[3] In the presence of such uncertainty about structural unemployment, the Fed's vocal focus on current labor market conditions, vaguely defined, is a clear reflection of political pressures that are driving the Fed to demonstrate its commitment to boosting employment.

So far, short-term unemployment targeting has not forced the Fed to deviate from its long-term 2% inflation target because inflation remains below target. But political pressures to cut unemployment will not go away overnight; those pressures will continue after inflation rises above its target, thereby producing future inflation rates in excess of 2%. The reason that inflation has remain in check so far is that the massive increase in the Fed's balance sheet has coincided with an historically low money multiplier and very slow loan growth. But inevitably loan growth and the money multiplier will return to normal, and when they do, the Fed will have to act aggressively to prevent substantial inflation.

There are considerable political pressures, in addition to concerns about short-term unemployment, that are likely to further constrain Fed tightening as inflation rises. The Fed's balance sheet contains massive quantities of long-term Treasury bonds and mortgage-backed securities (MBS). Rising expectations of inflation alongside increases in real interest rates could produce a sharp rise in long-term interest rates (which the Fed does not control). The U.S. economy is now recovering, and bank lending has been growing rapidly in the first three months of 2014. Continuing high growth in loans and deposits will feed rising expectations of inflation (for evidence that such inflationary pressures are already building, see Ireland 2014). As interest rates rise, Fed open market sales of its long-term assets may be constrained by the Fed's desire to avoid recognizing capital losses on those assets. Such capital losses, in theory, should have no economic consequences for monetary policy, but Fed insolvency would have potentially important political consequences, as it would invite attacks by Fed critics about imprudent policies and their costs to taxpayers. Similar political constraints would make it difficult for the Fed to pay high interest rates on excess reserves as an alternative means for keeping the supplies of money and credit from growing. As Stella (2009) puts it, "the occurrence of losses or a significant drop in FRB profit might lead to an eventual curtailment of Fed operational independence." Many observers have been noting for some time (Stella 2009, Calomiris and Tallman 2010, Calomiris 2012, Feldstein 2014, Goodfriend 2014) that a rise in reserve requirements may be the only politically viable means of avoiding substantial inflation. Unfortunately, for a variety of reasons – including the politically motivated desire not to be seen as forcibly redirecting bank lending from the private sector to itself via higher required reserves – Fed policy makers have been very hesitant to consider such a policy.

In the United States today, the problem of model misspecification and politicization may compound one another. It is more convenient to put aside uncertainties about structural unemployment if a stated belief in low structural unemployment rates helps to justify a politically advantageous delay in exiting from accommodative policy.

For these reasons, a significant rise in inflation is quite possible in the United States – not immediately, but within the next one-to-five years. The loss of Fed credibility associated with that acceleration in inflation would not only produce a rise in inflation expectations, it would add

to inflation risk, with severe potential consequences for asset prices, employment and growth. In short, it would mark a return to that dreaded “70s feeling.”

If it happens, that potential outcome, like the prior failures of the Fed, would reflect the usual combination of politicized actions and poor thinking that have plagued the Fed throughout its history. Especially discouraging this time is the complicity of so many monetary economists outside of the Fed in that poor thinking. The record of the failures of the 1960s and 1970s and their costs – including the very high unemployment of the period 1979-1982, as Chairman Paul Volcker applied the monetary brakes to reduce inflation – is widely known. Yet few economists are calling the Fed to task for effectively abandoning its commitment to inflation targeting. Nor have they been critical of Fed policy actions that otherwise contradict established economic policy principles. Why haven’t economists been more critical? Before considering possible answers to that question, let me add a few details to explain why I believe that the Fed’s recent policies (not only its effective abandonment of inflation targeting) have been at odds with established principles of monetary policy.

Unprincipled Policy Is the New Normal

Consider the following examination questions for a PhD course in monetary economics that could have been given in, say, 2000. I contrast the answers that would have earned a passing grade in 2000 with those that the Fed, and apparently many economists today, seem to regard as correct.

“Assume that a central bank operating under an explicit long-run inflation target decided to also announce that it would hold the fed funds rate to zero for two years (a policy it labeled ‘forward guidance’). Also assume that policy makers defended this action by saying that, owing to the central bank’s credibility, their announcing an intent to maintain a zero fed funds rate would be very effective for shaping market expectations, which would magnify the expansionary effects of monetary policy. Evaluate this policy.”

Passing answer (2000): For this sort of forward guidance policy to have any effect on current market perceptions, market participants would have to believe that the central bank was willing to ignore its own inflation targeting commitment in the future. But a central bank that announces that it is willing to abandon its existing commitment is unlikely to enjoy much credibility in the market about its new guidance. This policy, therefore, is incoherent and likely will cause damage to the central bank’s reputation with little or no offsetting benefit in suppressing long-term interest rates.

Passing answer (2014): As long as the central banker maintains a very earnest expression, this might work.

“At the zero interest rate bound, what can a central bank do to increase the accommodativeness of monetary policy? To what extent would a specific commitment to growing the central bank’s holdings of assets be useful, and what sorts of assets should the central bank hold?”

Passing answer (2000): At the zero interest rate bound, a central bank can affect real interest rates by influencing inflation expectations. Announcing an increasing growth rate of the money supply, which it can execute through open market purchases, will cause inflation expectations to rise, and real interest rates to fall, and therefore, have expansionary consequences for the economy. (The failure to do this in Japan in the 1990s is widely regarded as a monetary policy

error.) Any type of asset purchase by the central bank would be useful for expanding the money supply. There is no need to abandon a “bills only” policy of buying Treasury bills to accomplish this growth in the money supply, so long as an adequate supply of bills is available in the market. Given that other asset purchases would entail fiscal as well as monetary policy actions by the central bank, a “pure” monetary policy is best accomplished through growth of bills, if the central bank’s mission is confined to monetary policy (as in a democracy such as the United States, where Congress and the Executive are responsible for making fiscal decisions, such as purchasing MBS or other assets issued by the private sector).^[4]

Passing answer (2014): At the zero interest rate bound, a central bank can affect real interest rates by influencing inflation expectations. Announcing an increasing growth rate of the money supply, which it can execute through open market purchases, will cause inflation expectations to rise, and real interest rates to fall, and therefore, have expansionary consequences for the economy. (The failure to do this in Japan in the 1990s is widely regarded as a monetary policy error.) Although the Fed generally uses a “bills only” policy to execute open market operations, there would be an added fiscal boost from buying MBS and Treasury bonds, which can be understood as a stimulative subsidy by the Fed to the market. Fed purchases of MBS and Treasury bonds reduce market risk premia (for both MBS default risk and Treasury term risk) by reducing the available supply of MBS and Treasury bonds in the market. This helps to cut interest rates for borrowers and is stimulative. Although there is no reason to deviate from “bills only” from the standpoint of monetary policy effectiveness narrowly defined, if Congress and the Executive are not willing to provide credit subsidies to the market, and if the central banker decides that they are wrong not to do so, then he or she is justified in combining fiscal and monetary policy expansion by targeting asset classes for purchase other than bills.

“Assuming, as is the case in the United States, that a central bank issues no traded bonds of its own, and assuming (again, as in the United States) that the Treasury department decides on the maturity structure of all debt issues, which it can change at any time, is it likely that central bank decisions to purchase Treasury bonds rather than bills in its open market operations will have an effect on the term structure of Treasury bond yields in the market?”

Passing answer (2000): Presumably, the Treasury is determining the maturity mix of its outstanding debts in accordance with some view about the mix of maturities it is targeting in the portfolios of private market participants. Any action by the central bank that would buy bills and sell bonds, or vice versa, would cause a deviation from the Treasury’s perceived optimal maturity mix in the hands of private market participants, and therefore, one would expect the Treasury to offset the central bank’s policy, rendering it completely ineffective.

Passing answer (2014): Even though buying bonds and selling bills could be offset by the Treasury, it might be desirable for the central bank to coordinate with the Treasury so that the public sees a decline in bond yields coinciding with the central bank’s announced bond purchases, which would provide evidence that the central bankers care about the public. The Treasury’s willingness to coordinate with the central bank to assist its public relations campaign can be useful for extracting concessions from the central bank. This can be an example of beneficial policy coordination in the public interest.

These changes in answers are significant. They indicate that the Fed and many economists have little interest in articulating or defending policy principles during difficult political times (the only times when defending them really counts). Commitments to principles would have led economists to demand that the Fed voice a consistent commitment to inflation targeting.

Principled critics would have noted the uncertainties about structural unemployment in the wake of the crisis, and pointed to the danger of targeting labor market conditions based on unreliable Fed estimates of a low structural unemployment rate. At the zero interest rate bound, principled critics would have supported the use of quantitative easing (QE), when inflation was below target, but they also should have insisted on the Fed avoiding buying MBS in executing its QE operations.^[5] They would have criticized the Fed for usurping the roles of Congress and the Administration, which should control fiscal policies related to subsidizing MBS or influencing the term structure of Treasury interest rates. They would have noted that forward guidance was based on the faulty premise that one can gain credibility by breaking a promise. They would have pointed to the political risks that the Fed brought upon itself by filling its balance sheet with long-term Treasuries and MBS, and the future inflationary risks that those political risks entail.

Why has the economics profession (with some exceptions) not been making these arguments? It is hard to say. The most cynical answer is that economists adapt their views to improve their prospects of a prestigious government appointment (and the money that comes afterwards). That may be the right answer for describing the behavior of some, but I don't think it is a plausible explanation for the behavior of most.

Another possible explanation recognizes that academic discussions tend to follow cycles in which today's orthodoxy is tomorrow's heresy. This may result from competitive incentives to publish, which encourage "novel" ideas that contradict established thinking. Political speeches and heterodox speeches by central bankers, according to this view, inspire promising (even when somewhat crackpot) research papers.

Finally, academics may be eager to adapt to the political tide because they want to participate in current policy discussions. As events – especially crises – redefine the range of issues being discussed in public policy circles, and the range of opinions that policy makers and journalists define as interesting, academics that want to participate in those discussions must adapt their views, otherwise they will be unlikely to be able to engage with policy makers. Academics who want a seat at the policy table badly enough will conform to the agenda of issues set by politicians and central bankers, and will try to fit into the range of views being considered by politicians and central bankers. This is Steil's (2013) explanation for J.M. Keynes's frequent and dramatic shifts in his policy positions (e.g., regarding free trade). According to Steil, dramatic shifts in political events shaped the range of views that would be considered by policy makers. Keynes so valued a seat at the table that he accommodated his own views so that he was always viewed as relevant to the debates that were raging.

In any case, whatever the explanation for the failure of principled thinking about monetary policy in economics, one thing is clear: Those who were expecting that filling central banks' or multilateral institutions' leadership positions with trained economists would make central bank leadership less political, less prone to macroeconomic fads, more conducive to an adherence to inflation targeting, or more insistent on coherent economic theory, were sorely mistaken.^[6] What can be done to make central bankers less prone to intellectual fads, and less susceptible to political pressures?^[7]

Promoting Independence

The most obvious improvement to promote independence at the Fed would be to repeal the "dual mandate" imposed on the Fed in the 1970s and replace it with a single price-stability mandate, as Paul Volcker (2013), among many others, has publicly championed.^[8] The call for

a single price-stability mandate is often misunderstood as reflecting a callous lack of interest in unemployment, but the opposite is the case. In the long run there is no tradeoff between price stability and maximum employment; the best way to minimize unemployment in the long run is to pursue a policy that keeps inflation low and stable.

The Fed successfully argues that, although its triple mandate is to stabilize inflation, interest rates and unemployment, stabilizing inflation is isomorphic with stabilizing interest rates – the Fed can only control the part of long-run interest rates related to expected inflation and inflation risk. The same argument applies to unemployment; in the long run, targeting inflation minimizes unemployment. The Fed does not have a legislative mandate to stabilize short-term unemployment at the expense of higher long-term unemployment. Therefore, committing to a true inflation targeting regime would be more consistent with the Fed's mandate than its current policy regime which uses the multiple mandate to justify its unpredictable, ad hoc discretionary policies.

A clearly stated goal of low and stable inflation also offers everyone the opportunity to measure the Fed's achievements, which ensures the accountability that is essential in a democracy. And a single price-stability mandate would insulate Fed officials from the ire of Congressional critics who use the dual mandate to criticize the Fed for not doing more to reduce *short-term* unemployment, which can undermine the Fed's commitment to long-term price stability. Having a clear monetary policy mandate, as Milton Friedman (1959) recognized long ago, will foster central bank independence (see also Meltzer 2014).

Just as important, to further independence, central banks should be removed from the implementation of financial regulations. The Fed's regulatory powers have grown dramatically since the 1980s, and especially in recent years, and it is not a coincidence that its independence has been reduced during that period. Regulatory power is a lightning rod for politicization which places central bankers at the center of highly contentious power struggles, often with disastrous consequences for both the economy and their independence. The Fed's role in bank merger approval is one obvious example (see Calomiris and Haber 2014, Chapters 7 and 8), and there are many other examples from Fed history. Similarly, giving the ECB partial supervisory authority and charging it with performing the politicized bank stress tests this year is unlikely to result either in an improvement of the ECB's independence or an honest stress test. Given the budgetary constraints for public recapitalization of banks, it is likely that the ECB will find the total amount of recapitalization needed to lie in a politically convenient range of under 100 billion euros, although some academic studies suggest that the true need for additional capital is likely to be somewhere between three and six times that amount (Acharya and Steffen 2014).

Removing central banks from a regulatory role would not in any way prevent them from examining banks and pursuing all the related supervisory functions that are necessary to a central bank's lending function. Examination powers and some limited continued shared supervisory authority should be preserved. But there is no reason for the central bank to determine merger policy, whether banks should be permitted to act as real estate brokers, or other matters unrelated to central banking. And allocating that decision making to the monetary authority does positive harm by putting the central bank in the line of fire with respect to highly charged political battles, which often results in inferior regulatory decisions and jeopardizes independent monetary policy.

Diversity as an Inoculation against Fads

One of the most important, but little noted, changes in the Fed over the past three decades has been the emergence of academics as Fed leaders. Prior to the 1970s, Fed leaders were often bankers, and almost never academics. Now, almost all Fed leaders are PhD economists with an academic background. People with life experiences like Paul Volcker or Alan Greenspan or Marriner Eccles are nowhere to be found. Greater diversity of life experiences of Fed leaders would make central bankers less susceptible to academic fads. Governments could require that at least some of their central bank leaders be people with significant financial markets experience.

To further build diverse thinking at the central bank, the power of the Chair should be limited. Fed Governors almost never dissent at FOMC meetings, partly because they are completely beholden to the Chair, who controls the budget and the staff of the Board. Governors have no staff of their own. All staff work for the Chair, and their access to Fed Board staff is dependent on the willingness of the Chair to permit Governors to interact with staff economists. To ensure that Governors have access to necessary information and can act independently in their voting, Governors should each have at least a few staff members under their direct control, and who are not beholden to the Chair, which would enable them to develop independent views.

Perhaps these reforms would help to solve another problem -- the short tenure of most Fed Governors. Governors are appointed for 12-year terms, but most leave after only a couple years. Another reform of the Fed that Congress should consider is requiring Governors to resign their other positions, including university professorships, as a condition for appointment, and also ask them to pledge that they expect to stay on as Governors for at least half of their appointed terms.

Changing FOMC voting rules so that all Federal Reserve Bank Presidents vote at every meeting would promote diversity by giving more power and voice to the research staffs of the Reserve Banks. The 12 Federal Reserve Banks should also be freed from the budgetary control of the Fed Chair, who limits the size and scope of their research activities. For example, the Federal Reserve System could establish a committee comprised of representatives of all the Federal Reserve Banks and the Board of Governors, and perhaps even some outsiders, to consider the budgets of each Bank and each Governor's staff.

It would further promote diversity of thinking if Federal Reserve Banks were prohibited from appointing Reserve Bank Presidents from within. Bringing in outsiders to lead the Banks would mitigate monolithic and insular thinking that can occur in closed environments.

Conclusion

Intellectual fads and counterproductive short-term political pressures have been responsible for the poor performance of central banks around the world for centuries and there is little hope of constructing a central bank that is free of either threat. Indeed, no central bank mechanism design can plausibly protect against the problem of "fiscal dominance": and this risk is significant in the United States, Europe, and Japan today. If government runs an unsustainable long-run fiscal policy (one that would result in an explosive path for the debt-to-GDP ratio under the assumption that monetary policy follows a given inflation target), then sooner or later the central bank will end up abandoning its target.

The realistic goal of monetary policy institutional design should be to establish clear objectives for central banks and hold them accountable for achieving them. It is possible to construct a better policy making environment in which central banks are insulated from short-term political influence (such as pressure to fund fiscal needs or popular discontent over unemployment) and less susceptible to fads. Such an environment should ensure greater diversity of life experience in central bank leadership and a process that gives voice to dissent as its main inoculations against intellectual fads. To promote independence, focusing monetary policy on the single objective of long-term price stability is essential, and fully compatible with minimizing long-term unemployment. Removing central banks from the financial regulatory and supervisory process will also bolster their independence. None of this will be accomplished easily, not least because government officials typically have little interest in promoting central bank independence.

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[1] See, for example, Calomiris and Wheelock (1998), Meltzer (2012, 2014), Calomiris (2013a, 2013b) and Humpage (2014).

[2] "While there was general agreement that slack remains in the labor market, participants expressed a range of views regarding the amount of slack and how well the unemployment rate performs as a summary indicator of labor market conditions. Several participants pointed to a number of factors – including the low labor force participation rate and the still-high rates of longer-duration unemployment and of workers employed part time for economic reasons – as suggesting that there might be considerably more labor market slack than indicated by the unemployment rate alone. A couple of other participants, however, saw reasons to believe that slack was more limited, viewing the decline in the participation rate as primarily reflecting demographic trends with little role for cyclical factors and observing that broader measures of unemployment had registered declines in the past year..."

[3] Levy (2014) disputes Chairman Yellen's view that the proportion of part-time workers in the labor force is an indicator of substantial slack. The ratio "is now below its year-end 1993 level just months before the Fed began its aggressive rate hikes....Moreover, how much further would this ratio have fallen if it had not been for the incentive ObamaCare provides to businesses to hire part-time rather than full-time workers? Or the impact of the aging workforce that prefer part-time work for economic reasons? These and other noncyclical factors likely are contributing significantly to the number of part-time workers."

[4] For more details on the need to limit central banks to monetary rather than fiscal policy, see Goodfriend (2011a, 2012). However, Goodfriend (2011b) points out that the purchase of Treasury bonds in QE operations may be desirable on the grounds that bonds are less liquid than bills, and therefore, provide more of an incremental effect per dollar of QE purchase on total liquidity than do the purchase of bills. That is so, but so long as a sufficient supply of bills exists, they can still be used to accomplish QE objectives, and relying on bills to do so avoids central bank incursions into fiscal policy.

[5] Some principled critics (e.g., Marvin Goodfriend) argue for including Treasury bonds (but not MBS) on the list of suitable securities to be purchased in QE operations, as discussed above. In my view, even that policy is not necessary or desirable, so long as an adequate supply of treasury bills exists in the market.

[6] For a review of how far the economics profession has gone in the direction of faddish thinking about monetary policy, see Bayoumi et al. (2014).

[7] There is a massive literature on these topics the review of which is beyond the scope of this paper. One particularly thought-provoking example is Belongia (2009).

[8] “I know that it is fashionable to talk about a “dual mandate” ...Fashionable or not, I find that mandate both operationally confusing and ultimately illusory...Asked to do too much...[the Fed] 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.” See also the lengthy discussion of this point in Orphanides (2013).