

**Testimony of
Josh Bivens, Ph.D.
Research Director, Economic Policy Institute
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The sound approach to monetary policy has been (and remains) targeting genuine full employment

I’d like to thank the committee, and particularly Chair Huizenga and ranking member Moore for their invitation to testify. My name is Josh Bivens and I am the research director of the Economic Policy Institute and a macroeconomist by training.

The Federal Reserve took extraordinary policy actions over the past decade aimed at boosting aggregate demand and spurring a faster and full recovery from the Great Recession. This hearing aims to assess the effectiveness of these actions. My testimony makes the following points:

- The extraordinary policy actions undertaken by the Federal Reserve did not come out of the blue; instead they were in response to an extraordinary economic and financial crisis.
- Since the recession’s end in June 2009, *fiscal* policy has been historically contractionary relative to other post-war recoveries. This fiscal drag, combined with the extraordinary damage left in the Great Recession’s wake, contributed strongly to the need for monetary policy to be historically expansionary.
- The recession was shorter and the recovery was more rapid because of the Fed’s actions. A healthier mix of fiscal and monetary policy should have seen expansionary fiscal policy take more of the lead in spurring full recovery, but that’s not under the Fed’s control. What they do control is the *direction* of monetary policy, and they have consistently got this direction right over the past decade.
- The Fed’s actions have not laid the ground for dangerously rapid inflation. Instead, they have been insufficiently strong to fully neutralize the ferocious *downward* pressure on wage and price growth in recent years. A Fed fully committed to 2 percent price inflation as a target (and not a hard ceiling) should commit to allowing inflation to run above 2 percent for a spell to correct the below-target inflation of recent years.
- There is no reason to think that there is great urgency for the Fed to begin the “exit strategy” from expansionary monetary policy. Most indicators of inflationary pressure remain weak, and there is ample evidence that an extended period of time where the economy is allowed to “run hot” could repair some of the damage to labor force participation and productivity growth incurred during the recession and slow recovery.
- There is no reason to fear that the “exit strategy” from expansionary monetary policy will prove dangerous or problematic when it begins. If one defines any short period of above -target

inflation as a catastrophe, then one can claim that the timing and execution of the exit strategy is extraordinarily fraught. But this is defining catastrophe down to an unreasonable degree.

- Going forward, sound monetary policy should continue to prioritize boosting demand-growth to achieve genuine full employment in the near-term. Even for the longer-term, sound monetary policy should include a larger Fed balance sheet, routine purchases of longer-term assets, and a wider mix of purchased assets besides just Treasury bonds and bills. If the experience of the last ten years has taught us anything, it should be that macroeconomic policymakers across-the-board (including the Fed) need more, not fewer, tools to fight recessions and spur demand-growth.

Macroeconomic and policy background to Fed actions

It is important to realize that the Fed's extraordinary actions in recent decades did not come out of the blue and were not taken on a whim - they were instead taken in response to extraordinary economic circumstances. The crash of the \$7 trillion housing bubble that began in 2007 eventually led to a larger negative shock to private-sector spending than the one that led to the Great Depression in the early 1930s. The Fed actually began attempting to cushion the coming blow of the 2008-09 Great Recession by lowering short-term interest rates in August 2007 and providing support to failing financial institutions early in 2008 – well before the blowup associated with the fall of Lehman Brothers.¹

This support led to the Fed expanding its balance sheet to provide direct lending via emergency facilities in order to restore financial market functioning following the banking crisis in fall 2008. This direct lending roughly doubled the size of the Fed's overall balance sheet (raising it from just below \$1 trillion to roughly \$2 trillion). By the spring of 2009, this direct lending through the emergency lending facilities had substantially declined as chaos in financial markets (exemplified by historically large spreads between Treasury interest rates and other assets' returns) had largely subsided. Without further action, the size of the Fed's balance sheet (and hence the liquidity being provided to the U.S. economy) would have shrunk quickly back down to pre-recession levels.

Largely driven by the desire to keep providing monetary support to a still-contracting economy, the first round of large-scale assets purchases (LSAPs, sometimes popularly known as quantitative easing, or *QE*) began when the Fed announced in March 2009 that it would commit to purchasing \$300 billion in Treasury securities, \$200 billion in agency debt, and \$1.25 trillion in mortgage-backed securities. The purchases were completed by the spring of 2010. This raised the question of what to do about maturing assets; if the Fed did not replace them as they matured, the balance sheet would decline by \$100 to \$200 billion annually as assets naturally reached maturity (a process sometimes known in the jargon as *rolloff*). To forestall this automatic shrinking of their balance sheet, the Fed announced in August 2010 that it would purchase Treasury securities to replace the maturing securities to keep the size of its balance sheet stable.

¹ Most of this policy and economic background is contained in Bivens (2015), found at: https://www.brookings.edu/wp-content/uploads/2016/06/Josh_Bivens_Inequality_FINAL.pdf

The second round of LSAPs (QE2) began in November 2010 with an announcement that the Fed would purchase an additional \$600 billion in Treasury securities (at a pace of roughly \$75 billion per month) by June 2011. It further committed to continuing to replace maturing securities with Treasury purchases. While the official end of the Great Recession had occurred in June 2009, more than a year before, the U.S. unemployment rate in November 2010 was *higher* than at the recession's trough (9.8 versus 9.5 percent). Employment had fallen by nearly 300,000 since the recession's trough and contracted in four of the five months before November 2010. In retrospect, a consistent round of job growth (which of course could be in part endogenous to the introduction of QE2) actually began in October 2010, but in real-time the recovery seemed to be stubbornly stalled.

The final round of LSAPs (QE3) began with an announcement in September 2012 that the Fed would purchase \$40 billion in market-backed securities (MBS) per month. This announcement had no end date and no ceiling on the total amount that would be purchased. In December of 2012, the Fed then announced that it would also begin purchasing \$45 billion in Treasury securities (in addition to the MBS purchases). In December 2013, the Fed announced that it would begin reducing the size of monthly purchases, and in February the pace of total purchases declined from \$85 billion to \$65 billion. The purchases ended in October 2014, with the Fed's balance sheet at roughly \$4.5 trillion.

When QE3 was announced, the unemployment rate stood at 7.8 percent after having declined a full percentage point in the previous year. Yet there were reasons to think this progress could slow. For one, about a third of the change in unemployment between November 2010 (the beginning of QE2) and September 2012 (QE3) was due to falling labor force participation rather than employment growth. Further, the "fiscal cliff" was clearly on the horizon. In January 2013 a number of fiscal stimulus measures were set to expire, and the long-scheduled expiration of tax cuts passed in 2001 and 2003 was set to occur. If all the different elements of the fiscal cliff had come to pass, there would have been a very large increase in fiscal drag in 2013, and the first half of that year would likely have seen negative output growth. It seems hard to believe that this worry was not a significant part of the Fed's decision making regarding QE3.

Finally, by September 2012, it was clear that the spending reductions forced into law by the Budget Control Act (BCA) were going to place severe downward pressure on demand growth in coming years. In fact, since the trough of the Great Recession in 2009, combined government spending has been slower in the ensuing recovery than in any other previous recovery. This fiscal austerity has happened even as the cumulative output gap (essentially a measure of the damage caused by the recession) was larger at the end of the Great Recession than at any other recession, and when conventional monetary policy was largely de-fanged. The notion that the Fed should reach for additional tools to boost economic growth in this context seems in retrospect very wise indeed.

Given this context, the rest of my testimony addresses a number of common questions asked about the Fed's strategies over the past decade, and about possible challenges they face going forward.

Did the Fed's unconventional strategies work?

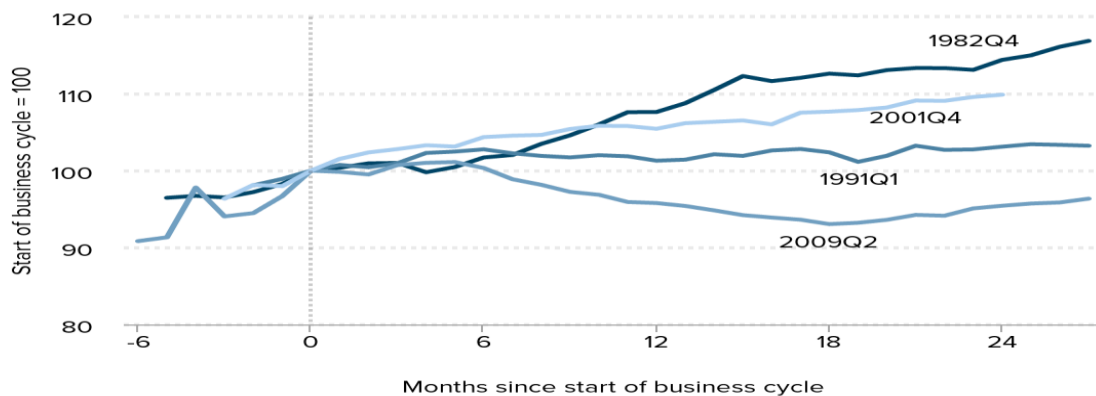
A key question is simply whether or not purchases of assets by the Fed worked to boost output and job-growth. The economic evidence is overwhelming that the Fed's actions went in the right direction, though there is substantial uncertainty as to just how effective they were.

Start with the much-less controversial case that *conventional* monetary policy has effects on output and employment. For example, there is no doubt at all that the Great Recession would have been worse, perhaps much worse, had the Fed kept interest rates at the 5.26 percent that characterized July 2007 – the last month before it was clear that a global financial crisis was in the making. There was, as far as I know, not a single economist arguing between July 2007 and June 2009 (the official end of the recession) that the Fed should not have lowered its conventional policy rate as the recession approached.

Figure 1 (from Bivens (2016))²

Fiscal austerity explains why recovery has been so long in coming

Change in per capita government spending over last four business cycles



Note: For total government spending, government consumption and investment expenditures deflated with the NIPA price deflator. Government transfer payments deflated with the price deflator for personal consumption expenditures. This figure includes state and local government spending.

Source: EPI analysis of data from Tables 1.1.4, 3.1, and 3.9.4 from the National Income and Product Accounts (NIPA) of the Bureau of Economic Analysis (BEA)

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There is a school of thought (to which I'm sympathetic) that argues that while the Fed has great power to rein in an overheating economy through interest rate increases it actually has far less power to spur spending in an economy that is deflating – the vivid metaphor often used to explain this asymmetry is “pushing on a string”. And there are reasons to think the Fed's conventional tools were especially ill-

² For Bivens (2016), see: <http://www.epi.org/publication/why-is-recovery-taking-so-long-and-who-is-to-blame/>

suited to the fallout of the most current recession. For example, increased housing activity is a key traditional channel through which interest rate cuts spur economic activity. Given the massive overbuilding and plummeting home prices resulting from the burst housing bubble, it was always very unlikely that increased activity in the housing sector – regardless of what the Fed was doing – was going to be a primary channel for pulling the U.S. economy out of recession.

However, noting this asymmetry in the Fed's power does not argue that interest rate loosening cannot work at all or is somehow the wrong thing to do. As households, for example, look to pay down debt in the wake of lost housing wealth, low interest rates can provide immediate space for them to do by lowering auto, credit card, and even some mortgage loans (and often can afford the possibility of refinancing). And in the past, monetary loosening has clearly been a key ingredient in spurring rapid economic recovery, even from severe recessions. Romer (1992), for example, finds that expansionary monetary policy was a key ingredient in helping the U.S. economy escape from the Great Depression in the 1930s.

More recently in U.S. history, an examination of the very sharp (though thankfully very brief) recession of 1981-1982 also provides clear evidence of the efficacy of expansionary monetary policy. The unemployment rate in December 1982 actually peaked at 10.8% - higher than at any point in the Great Recession. Yet 12 months later payroll employment was back to its pre-recession level. What contributed to this extraordinarily rapid recovery in jobs and unemployment? The simplest answer is very rapid output growth – GDP grew in the 2 years following the trough in 1982 at an annual average rate of 6.7% - in the 6 quarters since the trough of the most recent recession growth rates have averaged well under half this pace. This rapid output growth, in turn, was driven in part by an extraordinary degree of monetary easing – the policy rate controlled by the Fed fell nearly *10 percentage points* between the business cycle peak of 1981 and the recession's trough of November 1982. The Fed continued cutting rates for the next 6 months following this trough – and by November 1983 payroll employment had completely recovered its pre-recession level.

Large-scale asset purchases, in particular

Because the Fed reached the limit of reductions in the federal funds rate halfway through the Great Recession, and because the economy remained deeply damaged, they searched for other ways to boost output and employment. A key thing to note about conventional monetary policy interventions is that while they directly affect only very short-term interest rates, through arbitrage and imperfect substitutability, cuts in short-term rates eventually put downward pressure on long-term rates. But because long-term rates are generally higher than short-term rates, this means that when short-term rates are at zero, there is still room for long-term rates to fall.

This leads to the idea that the Fed can directly push down longer-term rates by buying longer-maturity assets. This is all that quantitative easing really is - using money creation to purchase long-term, not just short-term, assets. To think that QE somehow failed to work, one must either claim that conventional monetary policy does not work, or, that somehow buying long-term assets directly has no effect on their prices and returns. Neither is true.

Given their importance to both the output and employment impacts as well as to distributional outcomes, we present estimates of the LSAP effects on interest rates and asset prices below in Table 1. The key indicator in each of these is the effect of LSAPs on long-term Treasury yields, since the estimates for other asset prices tend to be derived from historic estimating relationships between these yields and other financial markets. These Treasury estimates are a key issue in judging the robustness of assessments about LSAPs effects on stabilization; assessments of what LSAPs have done for asset markets hinge largely on what they were estimated to have done to Treasury yields.

Though an oversimplification of the impact of LSAPs, for our purposes here we estimate that the combined LSAPs reduced long-term Treasury yields by an average of 100 basis points since their introduction in March 2009. Much of the empirical research on the financial market effects of LSAPs uses event studies to track changes in Treasury yields following successive announcements or implementations of LSAP programs (see for example, Gagnon et al. (2011) and Krishnamurthy and Vissing-Jorgensen (2011)). This means that the effects of LSAPs are not uniform over time; the effects tend to spike upon announcement and then fade over time. Further, the impact of LSAPs hinges crucially on the overall state of financial markets at times of announcement and implementation, with LSAPs thought to be particularly effective in changing interest rates during periods of keen financial market distress. As financial markets stabilized over the 2009–2014 period, it is possible that larger asset purchases were needed to provide the same downward pressure on interest rates.

Table 1 (from Bivens (2015))³

Table 4: Financial Market Effects of LSAPs		
Financial yield or price	Assumed LSAP effect	General range in survey literature
10-year Treasury interest rates	100 bps	38-150 basis points for QE1. More mixed results for QE2 and very little direct estimates of QE3 extant.
10-year MBS	150 bps	Gagnon et al. (2011) and Krishnamurthy and Vissing-Jorgensen (2011) find larger impacts on non-Treasury rates. Rough ratios from their papers applied to Treasury rate above.
10-year bond prices	9-14 percent	Given starting interest rate of 3 percent on 10-year bond, then assuming 100-150 basis point decline.
Equity prices	5 percent	Range from < 3 percent in Dobbs et al. (2013) to 8.5 percent in Engen (2014).
Home prices	7 percent	Constructed from existing literature on elasticity of home prices to long-term rates. Also in line with Dobbs et al. (2014) finding.

The empirical research on the impacts of LSAPs on long-term Treasury yields is generally consistent. Most studies find a significant non-zero effect of LSAPs, most agree clearly on the direction of LSAP’s effects (i.e., they reduced long-term Treasury rates) and the estimates for the first round of purchases (QE1) are quite large—tending to fall in the 30 to 150 basis point range following initial announcement.

³ See https://www.brookings.edu/wp-content/uploads/2016/06/Josh_Bivens_Inequality_FINAL.pdf

Undertaken during times of less financial market distress and including only purchases of Treasuries (as opposed to mortgage-back securities), QE2 had smaller estimated effects than QE1. This strongly suggests that the market stabilization effects of LSAPs are a key channel through which they boost bond prices and reduce yields. This supports the assumption that non-Treasury yields fell more than one-for-one with Treasury yields due to LSAPs.

Even with relatively weak estimated effects of QE2, our estimates of LSAPs' effects on long-term interest rates over the entire period since March 2009 may not be too optimistic. For one, QE3 was weighted more heavily towards MBS than QE2, so perhaps this could boost its effectiveness. Further, QE3 was open-ended: no total value of purchases was specified by the Fed. This total limit on purchases was identified by some as a potential weakness in earlier rounds of LSAPs. Finally, Engen et al. (2015) estimate that the macroeconomic impact of the combined LSAPs has only reached its peak in recent years. This does not guarantee that their impact on long-term interest rates peak in the same year, but it does suggest that the large estimated effects of QE1 likely did not fade completely away as successive rounds of LSAPs were undertaken.

Just to give a sense of the potential of this quantitative easing for spurring purchasing power in the U.S. economy, analysts at JPMorgan Chase have estimated that if all mortgage holders guaranteed by the federal government (through Fannie Mae and Freddie Mac) had been able to refinance when 30-year rates dropped to nearly 4%, this could have added an economic stimulus of more than \$50 billion per year to the economy. Further, since this stimulus would be effectively permanent (the lower mortgage payments would be faced for the life of each holder's mortgage after refinance), the extra economic output it would have likely spurred would have been very large.

Is now (or very soon) the time for the Fed to begin its "exit strategy"? What should that exit strategy look like? Are there reasons to worry that it will threaten the ongoing economic recovery?

Since the Fed's asset buying began there has been much talk about the potential challenges of the "exit strategy" - a return to a more-normal Fed policy stance and balance sheet,, both in terms of size and maturity structure. But concerns about such an exit strategy are still premature - the Fed should not be quickly raising rates (indeed, in my view should not be raising rates at all) over the next couple of years.

As 2017 begins, the Fed has raised rates twice in two years, and many policymakers have declared that a more rapid pace of rate increases should begin. The claim is that the economy has reached full employment, and that any further acceleration of spending by households, businesses and governments (or *aggregate demand*) should be met by Fed rate increases to keep it from sparking inflation in wages and prices. This reasoning is presumably what lay behind the Fed decisions to raise rates at the end of 2015 and 2016.

But this reasoning is clearly premature. There is no evidence in the data that the U.S. economy is at genuine full employment. The headline unemployment rate remains significantly higher than it reached in 1999 and 2000, when we saw 4.1 percent unemployment and lower for a full two years without

accelerating inflation. The share of adults between the ages of 25 and 54 with a job hasn't even recovered to pre Great Recession levels, which were in turn far below the peaks reached in the late 1990s. And, most importantly, no durable and significant acceleration of wage growth to healthy levels has happened yet. Wage-growth in a healthy economy that is consistent with the Fed's 2 percent price inflation target should be at least 3.5 percent - and a few years of wage growth above 3.5 percent is needed to claw back ground lost during the recession and slow recovery. The most recent month's data on annual wage growth shows nominal wages rising at 2.8 percent. This is an improvement relative to most of the post-recession period, but still well below target. Wage growth below 3.5 percent puts no durable upward pressure on the Fed's inflation target.⁴ This means that there is no reason to believe that aggregate demand is growing too fast rather than not fast enough, and hence no reason to believe the Fed needs to begin aiming to moderate the pace of economic growth.

Once it is appropriate to begin making monetary policy less expansionary, there are a number of questions for the Fed to address. First, should they begin this process by raising short-term rates or shrinking their balance sheet? Second, if the former, how should they raise short-term rates with such a large saturation of excess reserves? Third, is there any compelling reason for them to hasten the sale of long-duration assets on their balance sheets. Finally, is there any compelling reason for the Fed to return to the pre-crisis size of their balance sheet?

First, should the begin raising short-term rates or shrinking the size of their balance sheet first?

The Fed has expressed a preference for not shrinking the size of its balance sheet until short-term rates were well above zero. The essential argument for this is that once balance sheet shrinkage begins, the process should be as predictable as possible to ensure market stability. Further, given that even a totally-predictable process of balance sheet shrinkage could have not perfectly predictable effects on financial markets, it should begin after there is ample room for conventional expansionary monetary policy (short-term interest rate cuts) to provide support for the economy during the process.⁵

This argument seems sound. There is no evidence that the Fed's larger balance sheet is doing any harm to the large economy, so holding off on shrinking it until there is every indication that conventional policy can provide support for any unanticipated negative shock stemming from balance sheet reductions is a wise policy.

Second, if the Fed decides to raise short-term rates first, how should they do this with such a large saturation of excess reserves

The potential difficulty with raising rates with a large balance sheet is that very large changes in reserves at the Fed might be necessary to induce small changes in the federal funds rate in the current environment. This could reduce the predictability of fed funds rate changes and make hitting the Fed's target rates more difficult than during times when the level of reserves held at the Fed were low.

⁴ For the explanation of this nominal wage target, see Bivens (2014): <http://www.cbpp.org/research/full-employment/a-vital-dashboard-indicator-for-monetary-policy-nominal-wage-targets>

⁵ Bernanke (2017) provides a typically lucid explanation of this view: <https://www.brookings.edu/blog/ben-bernanke/2017/01/26/shrinking-the-feds-balance-sheet/>

However, there seems to be good evidence that varying the rate of interest paid on excess reserves will let the Fed be precise in their targeting of the Federal funds rate, even with a large balance sheet, so this worry about the mechanics of open-market operations seems like it can be put mostly to rest.

The criticism that raising interest rates paid on excess reserves is implicitly a subsidy to banks is, however, fair enough. This argues strongly that post-crisis promises made by policymakers (both fiscal and monetary) that they would seek to ensure a “fair and substantial contribution from finance” for the public aid to the sector during the crisis needs to be honored. There are many ways to do this (with my own personal preference being a financial transactions tax).⁶

Further, raising the federal funds rate even with a large balance sheet could likely be done relatively easily by raising required reserve ratios as well as by increasing the interest paid on reserves. Required reserves admittedly would be not as precise a tool, and prospects for some temporary over- or under-shooting of the federal funds rate around the announced target could happen. I’m sympathetic to Fed desires to not have these temporary deviations lead to media speculation that they had “lost control” of the Fed funds rate, but I think in economic terms such deviations would be small, temporary and mostly meaningless.

Third, is there any compelling reason for them to hasten the sale of long-duration assets on their balance sheets?

The case for the Fed only gradually allowing the natural “rolloff” of assets on its balance sheets as they mature (as opposed to affirmative sales of these) is strong. Such a natural rolloff provides much greater predictability for financial markets. The Fed actions since the crisis began greatly stabilized credit spreads on MBS relative to Treasuries - there is no reason to jeopardize this hard-won victory with any unnaturally rapid sell-off - particularly when inflationary pressures in the economy remain extraordinarily subdued.

Given that the the transmission of short-term rate shifts into shifts in long-term rates is the key channel through which the Fed attempts to stabilize macroeconomic conditions, it seems reasonable to keep direct targeting of long-term interest rates by the Fed as a routine tool in the Fed’s toolkit for managing demand-growth in the economy.

Finally, is there any compelling reason for the Fed to return to the pre-crisis size of their balance sheet?

Not particularly. It is important to note that even if the economy had been fully normal over the past decade that the Fed’s balance sheet should have expanded simply to stay constant as a share of overall GDP. And, much more importantly, the economy has not been normal. Instead, there has been a chronic excess demand in financial markets for safe, long-lived assets. A large Fed balance sheet satisfies this

⁶ For a reminder about how pervasive these post-crisis promises were, and an overview of possible instruments to make these promises real, see: <https://www.imf.org/external/np/g20/pdf/062710b.pdf>

demand. This demand has been boosted in part (likely small part) by regulatory changes nudging banks to have a higher share of safe assets in their overall portfolios. In this sense, a large Fed balance sheet is a useful complement to (usefully) stricter regulation in the financial sector. Further, a large balance sheet - particularly one that includes assets of various maturities - can improve the efficiency of monetary policy transmission by allowing the Fed to routinely work directly on the portion of the yield curve they most wish to target.

Have the Fed's actions over the past decade laid the ground for dangerous increases in inflation?

Contrary to much speculation, extraordinary Fed actions did not cause accelerating inflation, nor have they inevitably laid the groundwork for it⁷. This was not a surprise to those arguing that the Fed and fiscal policymakers should be attempting to boost aggregate demand growth. So long as demand-growth is running slower than growth in the economy's potential capacity, prospects for a sustained, significant rise in inflation are essentially nil.

The argument in favor of viewing Fed actions as clearly inflationary is rooted in a far too-simple view of the inflation process, often summarized in the words of Milton Friedman: inflation is always and everywhere a monetary phenomenon. From here, the rise in "base money" spurred by Fed actions during the Great Recession was viewed as the obvious monetary phenomenon that would spark inflation. Yet, as Willem Buitier has pointed out, inflation is essentially the price of money. Saying, then, that inflation is always and everywhere a monetary phenomenon is essentially as deep or illuminating as saying that "the price of bananas is always and everywhere a banana phenomenon".⁸

What's missing in the most simple monetarist views of potential inflation during the past ten years was recognition of the ferocious downward pressure on prices stemming from the enormous and prolonged gap between aggregate demand and productive capacity. This output gap trumped anything else in keeping inflation (of both wages and prices) tame.

Occasionally the claim is made that it was only the Fed's decision to begin paying interest on excess reserves that kept hypothesized inflation from emerging. The argument seems to be that these interest payments kept money bottled-up that otherwise would have flowed rapidly out of Fed reserves and into demand for goods and services. The Fed's interest payments on excess reserves were less than 50 basis points as recently as November 2016. It seems completely implausible that interest payments this low were all that stood in the way of significantly higher inflation.

Should the Fed buy assets besides Treasuries?

As noted above, the Fed's purchases of mortgage-backed securities (MBS), particularly during the first round of LSAPs, correlated strongly with a normalization of the MBS market. Restoring the health of mortgage financing was a key ingredient to providing monetary policy traction in aiding recovery. The

⁷ See <http://www.nytimes.com/2009/05/04/opinion/04meltzer.html> or <https://www.wsj.com/articles/SB10001424052702303939404579527750249153032> for examples of predicting inflation.

⁸ For the full context of his comments, see Buitier (2006): <http://willembuitier.com/globinf.pdf>

same lesson should hold in the future if either MBS or other particular asset markets seem to be impaired. Claims that the Fed should never purchase anything but Treasuries because to do so means they are engaging in something that has distributional consequences and hence by definition not monetary policy (critics sometimes call non-Treasury purchases “credit allocation policy”) are specious. Even the most conventional monetary policy is not distributionally neutral - neither is any other macroeconomic stabilization policy. Limiting the Fed’s ability to meet its dual mandate by making arbitrary distinctions between what is and what is not monetary policy serves no useful purpose, and makes little economic sense.

Indeed, the more sensible move is for policymakers to give the Fed more, not fewer, tools to meet its dual mandate. This would help in both effectiveness and public understanding of Fed actions. For example, Fed actions during the early stages of the financial crisis are often interpreted (incorrectly) as proving that the Fed only used its powers to help banks and financial institutions. A corollary claim is that the Fed should create money to boost the purchasing power of households or state and local governments directly. These are potentially good ideas in theory, but the Fed today lacks either the capability or the legal authority to do this.⁹ Providing new institutions and mandates to allow the Fed to make more direct interventions to lift the purchasing power of households and state and local governments directly should be considered seriously in coming years. But the Fed today cannot be criticized for not having done what it could not do in past years.

One way to insure broad political understanding of the Fed’s role in trying to spur recovery, however, could be done with small changes to the Fed’s legal authority. For example, the Fed could be given the authority to hold longer-duration state and local bonds that it currently can. As we noted previously, the Fed’s actions during the crisis were in part an attempt to induce state and local governments to borrow and spend more to help counteract the downturn in aggregate demand. In a sense, the Fed policy worked: interest rates were very low for very long, so optimizing state and local governments should indeed have financed long-lived investment projects during this time. Buying state and local bonds directly would not likely have been a game-changer in economic terms when it came to inducing state and local governments to borrow and spend more; the interest rate effects of buying these bonds directly rather than driving their yields down indirectly by buying up close assets would have been small. And yet the public would likely have understood direct purchases of state and local bonds by the Fed much more clearly as a powerful economic policymaking institution endeavoring to help Main Street directly rather than running monetary expansion through the financial sector.

Did the Fed’s low interest rate policy induce fiscal policymakers to act irresponsibly?

The claim is sometimes made that the Fed’s efforts to keep interest rates low induced irresponsible fiscal behavior by governments by making the cost of taking on debt low. This claim is false - as noted before in **Figure 1**, government spending growth has been historically slow since the Fed began LSAPs in March 2009. Further, the fiscally responsible thing to do during this period would have been taking on

⁹ For ideas on how to do this, see Blyth and Lonergan (2014): <https://www.foreignaffairs.com/articles/united-states/2014-08-11/print-less-transfer-more>

more debt to finance job-creating investments. In a sense, the Fed did indeed try to induce more government spending with low-interest rates, and this was exactly the appropriate macroeconomic policy stance. The shame is that their inducement was not taken up by governments.

Did the Fed's expansionary monetary policy stance hurt small savers?

In general, no. Almost by definition, someone who is poor cannot be hurt much by low interest rates. If someone has \$10,000 in savings, and gets near zero interest instead of the 2–3 percent they may have received in a more normal time, the loss comes to \$200–\$300 a year.

That's not trivial, but if the cost of low rates is that relatively few people lose \$200–\$300 a year in interest payments, while the benefits of low rates are that millions more low- and moderate-income people get jobs and tens of millions more get pay raises, then maintaining low rates would still be very good policy.

People with more savings (e.g., \$50,000 or \$100,000) would have more to lose, but it is difficult to call these people "poor." Also, the overwhelming majority of people with more than \$50,000 or \$100,000 in money market funds or other short-term accounts also has money in the stock market and/or hold long-term bonds. The prices of these assets have soared in recent years, making their holders much wealthier. Given this, we shouldn't be too worried if people holding them didn't make much on their savings accounts.

Finally, low interest rates keep inflation rates from falling even lower than they would otherwise, which is a boon to net borrowers. Unexpected declines in inflation boost the real (inflation-adjusted) burden of debt, leading to a redistribution from borrowers to lenders. By keeping inflation from falling even further, the Fed's loose monetary policy clearly helps net borrowers.

Did the Fed's expansionary monetary policy cause the rise in income inequality?

Highly unlikely. It is difficult to see any significant role for quantitative easing (QE) in increasing income inequality. Inequality was rising for most of the period between 1980 and 2007. And inequality increased sharply immediately following the Great Recession, as profits rose at the expense of wages due to the weak labor market. All of this massive upward redistribution of income preceded any quantitative easing by the Fed. Quantitative easing undoubtedly had some impact in raising stock prices, but stock prices would have almost certainly bounced back from their recession lows whether or not we had QE. Further, any additional job growth that resulted from QE is far more of a benefit to low- and middle-income people than any QE-related boost to stock prices is to the wealthy.¹⁰

Do banks and Wall Street benefit from LSAPs and the Fed's low interest rate policy

No they do not. Banks benefit from paying lower interest rates to their lenders, but they also are getting less money in interest from their borrowers. In fact, margins between the interest rates at which they

¹⁰ For a detailed look at the potential effect of the Fed's actions on inequality, see Bivens (2015): https://www.brookings.edu/wp-content/uploads/2016/06/Josh_Bivens_Inequality_FINAL.pdf

lend and borrow tend to fall during long periods of low interest rates. This has recently been the case with 30-year mortgage rates, which fell below 4.0 percent for the first time in more than 50 years.

The banks' biggest concern is that more job growth will lead to upward pressure on wages and prices. They fear that the resulting inflation would erode the value of loans, helping borrowers but hurting lenders. For this reason, banks have tended to favor higher interest rates and excessive vigilance against any uptick in inflation.

Finally, it's worth noting that quantitative easing was *explicitly* aimed at reducing the spread between short- and long-term interest rates, directly eating into banks' profits.

Could strengthening the Fed's full-employment mandate impinge on the Fed's independence? Not in historical context. The Fed was created by Congress and gets its guidance from Congress. Under the law, the Fed is supposed to pursue a policy that promotes maximum employment and price stability. Congress decided that these goals should be the basis for policy when it enacted the Humphrey-Hawkins Full Employment Act of 1978. The concern is that the Fed has placed more emphasis on the price stability portion of its mandate than Congress had intended when it passed the law. The purpose of the Full Employment Federal Reserve Act is to emphasize the need for the Fed to give more weight to the full employment part of its mandate. Passing this law would be no more of an interference with the Fed's independence than passing the 1978 law.

Don't low interest rates fuel speculation?

Not necessarily. Low interest rates are more conducive to speculation than high interest rates, but there is no direct relationship between low interest rates and asset bubbles. The U.S. had very low interest rates in the '40s, '50s, and into the '60s without experiencing any major asset bubbles. The 1990s stock bubble grew in a period of normal interest rates. The housing bubble of the last decade did not stop growing even as the federal funds rate crossed 4.0 percent in 2005.

While there are some markets that may be seeing bubbles, for example the housing market in San Francisco and the market for some tech stocks, it is not clear that low interest rates are a major factor. Furthermore, denying millions of people jobs and tens of millions of workers pay raises by deliberately slowing the economy with high interest rates would be a very high price to pay to bring down the price of a few overvalued social media companies.

It's important to note that the Fed has other tools that it can aim at incipient bubbles or excessive leverage. The Fed can raise margin requirements for stock purchases if the excesses are in equities, it can raise loan-to-value ratios for home mortgages if the excesses are in residential housing markets, and it can simply highlight excesses in various markets in its public comments. The Fed has other tools to target bubbles. Slowing down the entire economy by raising interest rates is not the solution.¹¹

¹¹ For a more fleshed-out argument about why the Fed should reach for tools besides interest rate increases to deflate potential asset market bubbles, see Baker and Bivens (2016): <http://www.epi.org/publication/the-wrong-tool-for-the-right-job-the-fed-shouldnt-raise-interest-rates-to-manage-asset-bubbles/>

Conclusion

The Federal Reserve deserves great credit for the policy actions they have taken over the past decade. They acted earlier, more aggressively, and with a more sustained focus than other policymakers - particularly fiscal policymakers. Without their action the recession would have been longer and the recovery slower. The primary danger going forward is that they will decide to make monetary policy notably less expansionary even as no evidence of inflationary pressures building up in the economy has emerged. The Fed's job should be to aggressively plumb the limits of maximum employment, and they should begin shifting to a less-expansionary monetary policy stance only when actual evidence of mounting inflationary pressures emerges. In short, the sound monetary policy stance for the past decade has been to target faster growth in aggregate demand and insure idle economic resources are put to use. This should be their target today as well. The U.S. economy has improved markedly since the trough of the Great Recession, and is not that far from genuine full employment, but the Fed should not shift to a more contractionary policy stance until we've achieved durable full employment.