The Federal Reserve is the primary economic policymaking institution tasked with insuring macroeconomic stability. How it came to have this role, and whether or not it bears too little or too much of the overall responsibility for this task are interesting questions in their own right, but this is no doubt at all that this is its role. Given this, it seems useful to provide an assessment of the appropriateness of Federal Reserve policies in the recent past and near future, as well as of lessons that should have been learned over the last decade of American economic experience. In my testimony today, I will make the following arguments:

-The U.S. economy remains far from fully recovered from the Great Recession (much further than would be thought by looking, for example, at the overall unemployment rate), and the barrier to a full recovery remains deficient aggregate demand for goods and services

-Fiscal policy in recent years has severely aggravated this aggregate demand shortfall, particularly compared with previous business cycles. Specifically, if government (federal, state and local) spending had followed the normal course seen in previous business cycle recoveries, it would be roughly 20 percent higher today, and the U.S. economy would have roughly 5 million more jobs (the majority of which would be private-sector jobs) than it currently has.

-This aggregate demand shortfall argues that the Fed should continue (or even expand) its asset purchases to keep interest rates low and to keep inflationary expectations anchored.

-This aggregate demand shortfall also argues that accelerating inflation is not a serious short or even medium-term risk
- There are several important lessons that can be taken from the Great Recession and its aftermath for monetary policymakers. Among these, the Fed should be far more vigilant in insuring that financial sector imbalances do not inflate to levels that can threaten the macroeconomy, and it should be far less confident that monetary policy tools can by themselves neutralize negative demand shocks stemming from burst asset bubbles.

- Lastly, as the Fed has been given the primary role for financial regulation in the post Dodd-Frank era, it should balance its necessary role as a lender of last resort and guarantor of systemic financial stability with vigorous efforts to insure that the problem of moral hazard in the behavior of large, complex financial institutions is addressed. Specifically, this means that adequate capital buffers for these institutions should be maintained, that new resolution authority for insolvent institutions passed in Dodd-Frank is used appropriately, and that it is financial system functions and not incumbent financial institutions, that the Fed intervenes to support during crises.

**The U.S. economy remains far from fully recovered from the Great Recession**

As of the middle of 2013, the U.S. economy remained far from fully recovered from the Great Recession. The “output gap” between actual GDP and potential GDP – how much could have been produced had unemployment and capacity utilization not been depressed due to insufficient aggregate demand – stood at 5.8 percent of potential GDP, or roughly $900 billion. This was, by far, the largest output gap remaining this far from either the previous business cycle peak or the trough of the recession, and the cumulative lost output since the beginning of the Great Recession is nearly double the amount lost during any other recession since the Great Depression (and will in coming years surely rise to more than double any other previous losses). Perhaps worst of all, this gap had barely budged in the previous two years – shrinking by only 0.5 percent of GDP since the beginning of 2011.

This stubbornly high output gap is mirrored by an agonizingly slow recovery in the employment to population ratio of those aged 25 to 54. This group of “prime-age” workers tends to have very strong labor force attachments during normal economic times. Yet this ratio
fell by 5.3 percentage points during the Great Recession, and as of June 2013 was essentially exactly where it was in four years earlier, when official recovery from the Great Recession began.

<Figure A here>

The stubbornly slow progress of recovery has consistently surprised policymakers. The figure below shows the projected course of recovery as forecast by successive iterations of the Congressional Budget Office’s (CBO) Budget and Economic Outlooks. As can be seen, the return to full economic potential has consistently been moved back in time in successive CBO releases.

<Figure B here>

However, the roots of this slow recovery are far from mysterious: the very large negative shock to aggregate demand provided by the bursting housing bubble (starting in 2007) has never been fully neutralized by policy measures to boost demand. Worse, the decades before the Great Recession convinced far too many policymakers that efforts to fight aggregate demand shortages could consist entirely of reductions in the short-term “policy” interest rates controlled by the Federal Reserve. However, these short-term rates have been set at essentially zero since the end of 2008, and yet the economy remains far below potential. This state of the world – economic weakness persisting even as short-term policy rates are at zero – has often been called a “liquidity trap”, or characteristic of an economy stuck “at the zero lower bound (ZLB) of interest rates”.

**Macroeconomic policy in a liquidity trap: monetary and fiscal**

Liquidity trap conditions argue for two primary responses. First, the Federal Reserve should undertake unconventional measures to force down interest rates besides the short-term policy rates they control directly. Second, fiscal policy stabilization should take center-stage. The first response has happened – the Fed has indeed begun buying longer-term assets directly
in an effort to keep these interest rates low. This has clearly been to the economy’s benefit. While it is very hard to make precise empirical estimates as to how much the Fed’s asset purchases have boosted the economy, it is important to note that essentially none of these estimates indicate that they have done anything but push the economy closer to full-employment. Further, some estimates of the asset purchase’s effect are non-trivial – with Chung et al. (2012) estimating that the purchases undertaken before November 2012 (ie, QEs 1 and 2) could have lowered the overall unemployment rate by well over a full percentage point. This represents more than a million Americans who found work because of the effect of these programs.¹

The second response (increased fiscal support) has, however, largely not happened. During the recessionary phase of the Great Recession, as job-losses reached a staggering 750,000 per month, passage of the American Recovery and Reinvestment Act (ARRA) did significantly boost growth in real federal government expenditures.

This fiscal support broke the downward spiral and halted the economy’s free-fall by mid-2009, and even provided rates of growth sufficient to reliably push down measured unemployment by late 2010. However, the fiscal boost provided by ARRA was both temporary and left the economy well short of full-employment. Since the official end of the Great Recession (in June 2009), overall fiscal policy has been sharply contractionary when compared with historical averages, particularly once one factors in state and local expenditures. Figure C below shows real (inflation-adjusted) government spending (federal, state, and local) during recessions and subsequent recoveries.

<Figure C here>

The most striking comparison is with the recovery following the steep recession of the early 1980s. The output gap at the trough of the early 1980s recession was actually larger than that at the trough of the Great Recession, yet two years following the trough, 80 percent of the

output gap had been erased. Yet four years following the trough of the Great Recession, less than 20 percent of the output gap has been erased. Even more striking, the scope for monetary policy boosting recovery in the wake of the early 1980s recession was much larger—the federal funds rate was dropped by almost 10 percentage points following the onset of recession.

Given the similar size of output gaps at the trough of these recessions, and given as well that subsequent recovery was likely to be aided much more by monetary policy going forward from 1982, it seems axiomatic that a larger fiscal expansion was needed after the end of the Great Recession to spur full recovery. Yet real government spending four years into recovery is essentially 20 percent below what it would have been had it matched typical growth during recoveries. Had this degree of fiscal impulse been replicated in the current recovery, then roughly 90 percent today’s output gap would be closed.\(^2\)

This is an important lesson. Calls to address the jobs-crisis with a fiscal boost commensurate to the scale of the problem are often greeted by implicit claims that this would constitute a wild and historically unprecedented degree of public spending. It’s not so—we’ve had this amount of fiscal support for recoveries before, in the not-so-recent past. There is nothing either economically or historically “unrealistic” about the prospects of ending the jobs-crisis by ending austerity.

**Balancing monetary policy risks going forward**

Given that the economy remains severely demand-constrained, and given as well that the current trajectory of fiscal policy looks extremely contractionary, the clearest current risk facing monetary policymakers is that unemployment will remain elevated for a significantly long time.

This argues strongly that talk of “tapering”—reducing the pace of asset purchases under the quantitative easing programs—is premature. There is, in fact, strong reason to believe that an even greater break from conventional monetary policy interventions is needed (see, for

\(^2\) For more context on this comparison, see [http://www.epi.org/blog/years-recovery-austeritys-toll-3-million/](http://www.epi.org/blog/years-recovery-austeritys-toll-3-million/)
example, Romer (2013), who speaks of the need for a “regime-shift” in monetary policymaking).³

The persistent demand shortfall and contractionary fiscal policy stance also make clear that worries about incipient runaway inflation are severely misplaced. Measures of core inflation since the Great Recession began have actually declined (see Figure D below).

*Figure D here*

Further, there is little sign that financial market participants expect a rise in inflation anytime soon. The spread between ten-year inflation protected Treasury securities and traditional Treasuries indicates that inflation expectations remain low (and are just now recovering a bit after a long decline).

*Figure E here*

Finally, a key determinant of inflation is unit labor costs (see the ULC and core inflation relationship since 1959 in Figure F below). Unit labor costs have remained extraordinarily low since the recovery from the Great Recession began, rising, for example, by well under 2 percent in 2012.

*Figure F here*

In fact, in the non-financial corporate sector, if only unit labor costs mattered, prices would have declined since the recovery’s beginning. However, because profit margins have risen by 55 percent over that period (from 9.7 percent to 15 percent), prices for non-financial corporate sector output have risen even in the face of falling unit labor costs. A clear implication of this is that future increases in wages and economic activity will not necessarily

translate one-for-one into higher prices, as historically high profit margins can provide a buffer (as they traditionally have).

Lessons from the 2000s

Currently, all risks facing the economy point to excessive unemployment, not excess demand, high interest rates, or inflation. But this is, of course, not always the case. In 2006, for example, when unemployment reached 4.3 percent, driven in large part by an unsustainable bubble in housing markets, it would have been bad Federal Reserve policy indeed to undertake hundreds of billions of dollars of long-term asset purchases to lower long-term interest rates. And in fact, the Fed had by 2006 been steadily raising its policy interest rates.

However, it is true that the Fed (and other policymakers) were too slow in recognizing the grave macroeconomic damage posed by the housing bubble. Part of this may have been a function of what has too often been described as the “mild” 2001 recession following the burst stock market bubble. This episode perhaps led to excess confidence on the part of macroeconomic policymakers that the negative demand shock from burst asset market bubbles could always be neutralized by loose monetary policy. But, employment growth following the 2001 recession was extraordinarily slow, and the unemployment rate and employment to population ratios reached at the peak of the late 1990s/early 2000s business cycle were never reached during the recovery and expansion of 2001 to 2007, even with the benefit of a long period of loose monetary policy and an extraordinarily large (if inefficient) fiscal impulse provided by the Bush-era tax cuts and spending increases.

Given that modest short-term policy rate increases were insufficient to stop the incipient housing bubble from inflating and rate declines were insufficient to inoculate against the negative demand shock when the bubble burst, it seems clear that the Federal Reserve should expand its tool-kit to find policy levers that keep asset bubbles from inflating to such damaging levels in the first place. While a range of policy tools have been identified by a number of researchers (including increased margin requirements for stock buying, asset-based reserve requirements, guidelines for mortgage issuance, and restrictions on destabilizing international capital flows), it is also important to note that the Federal Reserve has enormous
power even when just making public comments. If the Federal Reserve had issued reports and had governors make speeches that presented the huge evidence on overvaluation of home prices in the early 2000s, it is hard to imagine that the bubble could have inflated to the heights it did.

An instructive, if unfortunate, example of this “power of speech” could be seen in recent months as long-term interest rates rose following some perceived ambiguity about how long the current pace of asset purchases would continue. Even though no actual change in purchases happened, just the communication (or failure of communication, in this case) was able to move financial markets. Given this episode, it is hard indeed to imagine that an organized, sustained campaign of communication about the Fed’s professional diagnosis that a particular asset market was characterized by a speculative bubble would have been ignored by these same financial markets.

It should be reiterated that the stakes to failing to rein in bubbles in real-time now look potentially enormous. The cumulative output losses inflicted by the Great Recession and failure to fully recover since already total over 80% of one year’s GDP and look set to continue rising in coming years.

Lessons from 2008 and after

It became clear by the end of 2008 that large, complex financial institutions not only allowed financial sector imbalances to grow to dangerous levels, but that these same institutions suffered badly from a moral hazard problem, knowing that after the panic following the collapse of Lehman brothers that policymakers were extremely unlikely to allow them to fall into bankruptcy. This “too big to fail” problem is not just unfair, it is economically inefficient (among other things, too big to fail banks have a competitive advantage over competitors in raising funds, as creditors factor in the reduced likelihood that policymakers will allow them to go bankrupt).

One of the most promising (if still largely untested) changes made to American finance by the Dodd-Frank was improved resolution authority for financial regulators, including the Federal Reserve. The “living will” provisions of Dodd-Frank take away the excuse that insolvent
financial firms cannot be allowed to fail during financial crises. This is a key regulatory improvement.

The key lender of last resort role that the Federal Reserve needs to fulfill during financial crises – and which it clearly did fulfill in the Great Recession – remains vital. Advice to central bankers during crises has actually not improved much since the Bagehot Rule that the central bank should lend freely, at a penalty rate, on collateral that is valuable during non-crisis periods, but only to fundamentally solvent institutions. The ability of the Federal Reserve to backstop entire markets – like its backstop of the commercial paper market in November 2008 – indicates clearly that they can keep financial intermediation services intact without providing a blanket guarantee to all incumbent financial institutions.
Figure A
Ratio of actual to potential gross domestic product, and the employment-to-population ratio for prime-age workers, 2000-2012

Note: Prime-age workers are workers ages 25-54.
Source: Author’s analysis of Bureau of Economic Analysis National Income and Product Accounts (Table 1.1.6), Congressional Budget Office (2012) and Current Population Survey public data series
Figure B
CBO's projections for full economic recovery continue to be pushed back

Projected real GDP relative to projected potential GDP

Source: Author’s analysis of Congressional Budget Office data
Figure C
Real government expenditures in recessions and subsequent recoveries, 1948–2013

Note: The average of all previous recessions is the average of government expenditures for the six recessions and subsequent recoveries between 1948-1980. The early 1980’s recession begins in 1980Q1 and spans through 1982Q4 to cover the recession from 1980Q1-1980Q3 and the subsequent recession from 1981Q2 through 1982Q4. The start of the recovery begins in 1982 Q4.
Source: Author’s analysis of Bureau of Economic Analysis National Income and Product Accounts (Table 3.1)
Figure D
Measure of core inflation: personal consumption expenditures, 1989–2013

Note: Market-based PCE excludes food and energy.
Source: Author’s analysis of Federal Reserve Bank St. Louis (2013)
Figure E

Expected inflation from TIPS-spreads, 2010–2013

Source: Author’s analysis of Federal Reserve Bank Economic Database, Federal Reserve Bank St. Louis
Figure F
Unit labor costs and core inflation, 1959-2013

Note: Red points indicate the most recent quarters, 2012 Q3 through 2013 Q2.
Source: Bureau of Labor Statistics and Bureau of Economic Analysis