

The Economy and Fed Policy: Follow the Demand

BY JOHN C. WILLIAMS

The primary reason unemployment remains high is a lack of demand. An aggregate demand shortfall is exactly the kind of problem monetary policy can address. Thus, we need powerful and continuing monetary stimulus to move toward maximum employment and price stability. The following is adapted from a presentation by the president and CEO of the Federal Reserve Bank of San Francisco to The Forecasters Club in New York, New York, on February 21, 2013.

It's great to be here with a group of people whose job—like mine—includes trying to predict the course of the economy. It goes without saying that forecasts are critical for the conduct of monetary policy, which works with a considerable lag. Decisions we make today have their peak economic effects one or two years down the road. So, policy needs to be based on where we think things will be, not where they are now. Of course, having good forecasts is only one part of effective policymaking. For monetary policy to succeed, we also need to understand the underlying factors behind those forecasts. For example, is the pace of recovery being hampered by inadequate aggregate supply, or demand? Should we expect the unemployment rate to return to historical levels, or do we need to adjust to a “new normal”? The appropriate stance of monetary policy hinges on these questions.

Today, I'll discuss some of the reasons the recovery has been so tepid, give my perspective on where we are now, and offer my outlook for the period ahead. In doing so, I'll dig a little deeper into the key developments shaping the recovery and their implications for monetary policy. Here's a spoiler alert: The main point I want to convey is that, although the events of the past six years have undeniably left their mark on the supply side of the economy, the primary reason unemployment remains high is a lack of demand.

Given the shortfall of demand, it's crucial that the Fed keep doing all it can to help the economy return to full employment. The Federal Reserve has taken pathbreaking steps in this respect, both in our actions *and* our words. Last year, we extended our unconventional asset purchases. As for our communications, we have publicly announced numerical thresholds for unemployment and inflation that will guide us in future policy decisions. In a nutshell, we're saying we don't expect to pull back monetary accommodation at least until the economy reaches specific milestones. This statement of intent clarifies our actions and increases the effectiveness of monetary policy.

Factors behind tepid recovery

With that introduction, let me review the state of the economy. Since the recovery began in mid-2009, output growth has been discouragingly slow, with real GDP growth averaging an anemic 2.1%. Indeed, on a per capita basis, real GDP is still 1.6% lower than it was five years ago, before the recession started.

The last time it took more than five years for per capita real GDP to regain its pre-recession level was after the downturn that followed the end of World War II.

Progress has been halting in the job market as well. The good news is that we've gained about 5½ million jobs from the low point reached three years ago. But, even so, over the past 12 months, we've been adding only about 170,000 jobs per month on average. With job growth so lackluster, the unemployment rate has edged down by less than half a percentage point over the past year. And, for the past five months, it's been stuck close to its current level of 7.9%.

So, why has the recovery been so tepid? What does this mean for the future? And, what does this tell us about the mix of supply and demand shocks holding back the economy? In answering the first question, it's important to recognize that a variety of factors are at work.

First, the economy still bears the scars of the housing bubble and crash. In addition to its direct depressing effect on home construction, the housing crash has been a powerful restraint on consumer spending (see Mian, Rao, and Sufi 2012). Families buried in debt accumulated during the housing boom are still trying to dig their way out. Homeowners without sufficient equity find themselves unable to refinance their mortgages or sell their homes. More generally, loans remain hard to get for many consumers and small businesses, despite significant improvements in overall credit conditions.

Second, austerity at various levels of government has reduced aggregate demand to an unusual extent during this recovery, and this has directly impinged on growth. In the short run, higher taxes and lower government spending mean less disposable income for consumers, smaller government payrolls, and less work for government contractors. Over the past few years, we saw this mostly at the state and local government levels, where spending was slashed and taxes were increased. But the federal budget has also been shifting toward greater austerity, with the payroll tax cut expiring at the start of this year and spending reductions under way. Further deep cutbacks are likely. Indeed, if the full sequestration cuts occur, they're likely to reduce growth this year by roughly $\frac{2}{3}$ percentage point (Congressional Budget Office 2013).

Third, many advanced economies have been weak, especially in Europe, where austerity measures have been widespread. This has eroded demand for our exports.

Finally, an important legacy of the crisis and the events that followed has been unusually high levels of uncertainty. The effect has been to sap confidence and undermine the willingness of consumers and businesses to spend and invest. Initially, that uncertainty reflected the brute force of the crisis and recession, which gave us all a sense of living in dangerous and uncharted territory. Since then, uncertainty has been fueled by the crisis in Europe, repeated clashes over tax and spending policy at home, and the sputtering progress of the recovery itself.

The economic effects of increased uncertainty are sizable. You might think that because uncertainty and confidence are psychological in nature, they would be hard for economists to pin down. In fact, researchers have made great strides in studying the determinants and economic effects of uncertainty (see, for example, Bloom 2009 and Baker, Bloom, and Davis 2013). In recent research, economists at the San Francisco Fed examined the effects of broad measures of uncertainty on the economy (Leduc and Liu 2012, 2013). They found that heightened uncertainty slows economic growth and raises

unemployment. Specifically, their estimates suggest that uncertainty boosted the unemployment rate by 1 to 2 percentage points since the start of the financial crisis in 2008.

Supply or demand?

These are four key factors holding back growth during the recovery. Let me now turn to the question of whether they primarily affect supply or demand. This is a critical issue for monetary policy. Indeed, in my own research with Athanasios Orphanides (Orphanides and Williams 2005, 2013), we found that the Fed had an overly optimistic assessment of the supply side of the economy during the latter part of the 1960s and the 1970s. Specifically, Fed policymakers believed that the sustainable level of unemployment was lower than it actually was. This misperception implied that the economy was performing under its potential, which contributed to policy decisions that led to sustained high inflation back then. We don't want to make that kind of mistake again.

So, is the problem today inadequate supply, or demand, or both? A useful way to think about this question is to compare the unemployment rate with the *natural rate of unemployment*. By the natural rate, I mean the unemployment rate that minimizes labor market imbalances and pressures—either upward or downward—on inflation. The *unemployment gap*—the difference between the unemployment rate and its natural rate—measures the degree to which labor demand is unequal to supply. Movements in the natural rate itself reflect changes in supply. Of course, we can't directly measure the natural rate of unemployment. Rather, we must estimate it. This topic has appropriately garnered a great deal of attention among economists at the Federal Reserve and elsewhere in recent years.

Extensive analysis of the labor market comes to a clear conclusion: Supply-side considerations explain only some of the rise in unemployment. Most of that rise is explained by a lack of labor demand. Let's look at this more closely. Prior to the recession, a typical estimate of the natural rate of unemployment was between 4¾ and 5% (see Williams 2013). The empirical evidence suggests that the recession and policy responses to it, such as extended unemployment insurance benefits, contributed to dislocations in the labor market. These have pushed the natural rate above its pre-recession level by about 1 percentage point (see Congressional Budget Office 2013 and Daly et al. 2012b). Consistent with these findings, my estimate of the current natural rate of unemployment is about 6%, roughly 2 percentage points below the current unemployment rate. This 6% figure is consistent with many other estimates, including the most recent median estimate of the Survey of Professional Forecasters (Federal Reserve Bank of Philadelphia 2012).

Fortunately, many of the influences that have elevated the natural rate of unemployment since the crisis and recession should fade over time. In fact, this process is already under way. The extended unemployment insurance programs have been scaled back and are affecting fewer and fewer people. Eventually these programs will be phased out. In addition, measures of mismatch between workers and available jobs are receding (Lazear and Spletzer 2012 and Şahin et al. 2012). And, at least so far, we are not seeing permanent scarring effects of long-term unemployment (Valletta 2013). I expect that, in coming years, the natural rate will return to a more historically typical level of about 5½%.

I should note that the fact that economists are busily studying, debating, and revising their assessments of the supply side of the economy is encouraging. It makes a repetition of the mistakes of the late 1960s and 1970s much less likely. In our research, Orphanides and I found that, if economists and

policymakers had similarly reevaluated their views back in the 1960s and 1970s, the stagflation of that period could have been avoided (Orphanides and Williams 2013).

The conclusion that the economy is suffering primarily from weak demand rather than a shortage of supply receives additional support when the factors weighing on recovery are analyzed. The finding of the research that I mentioned on the economic effects of uncertainty—that heightened uncertainty raises unemployment and depresses inflation—is evidence that uncertainty primarily acts as a barrier to demand, not supply. Other research supports that view. In recent work published by the San Francisco Fed, Mian and Sufi (2013) compare state-level employment performance during the recession and recovery with state-level survey data from the National Federation of Independent Business. The NFIB survey asks small business owners to identify the single most important problem they face. Answers include taxes, poor sales, labor costs, government regulation, insurance costs, et cetera. Mian and Sufi find that declines in state employment were highly correlated with the percentage of respondents in each state citing lack of demand as their most important business problem.

Economic outlook

So far, I've painted what might seem like a bleak picture, highlighting a slew of reasons—including fiscal austerity, the global slowdown, and uncertainty—why the recovery remains in check. Despite all this, I expect the economic expansion to gain momentum this year and over the next few years. In fact, I am cautiously hopeful that we could be at a point where the economy really starts to shake off its doldrums.

The improvement partly reflects the effects of Fed monetary policy, which has kept interest rates extraordinarily low across the board. The positive effects of monetary policy can be seen in two rate-sensitive sectors, autos and housing, that are now contributing to the recovery in big ways. Vehicle sales have rebounded to a rate of above 15 million vehicles a year from their recession low of around 9 million. Attractive auto loan rates have contributed to the strength in this sector.

Meanwhile, the housing market finally bottomed out about a year ago and has been on an upswing since, thanks in part to a drop in conventional mortgage rates to historically low levels. Homebuilding has risen significantly from the lows that followed the housing crash, though the pace of construction is still well below long-term trend levels. After subtracting a cumulative 3½ percentage points from real GDP from 2006 to 2010, real residential investment contributed a positive 0.3 percentage point to growth in 2012. It stands to make an even larger contribution in 2013. Importantly, a virtuous cycle appears to be setting in, with sales volumes growing, home prices increasing, and foreclosures coming down. This should help restore confidence in housing and lure buyers scared off by the events of the past decade back into the market.

After a disappointing 2012, my forecast calls for GDP growth to pick up to 2¾% this year and about 3¼% in 2014. Unfortunately, such growth won't be enough to push the unemployment rate down quickly. I expect the rate to stay at or above 7% at least through the end of 2014 and not drop below 6½% until the second half of 2015.

One reason I expect such a gradual decline in the unemployment rate is that I anticipate that some of those who have dropped out of the labor force in recent years will jump back in as jobs become more plentiful. Labor force participation plunged during the recession and recovery. Retirement of baby boomers and other demographic factors contributed to this drop. But much of it appears to have been

cyclical. Widespread job losses kept many people ordinarily in the labor force from looking for work (see Daly et al. 2012a). A cross-state comparison supports the view that the drop in participation included an important cyclical component. The states that saw the largest increases in unemployment during the recession generally experienced the largest declines in participation rates as well.

These dynamics are also important for inflation. I expect the unemployment rate will remain well above the natural rate for some time, and wage and other cost pressures will remain subdued. As a result, I anticipate that inflation as measured by the personal consumption expenditures price index will run at about a 1½% rate over the next few years, about the same as last year. This is below the Fed's 2% longer-run inflation target (Board of Governors 2012a).

Working toward Fed's goals

This brings me to monetary policy. The Fed's dual mandate from Congress is to pursue maximum employment and price stability. We are missing on both of these goals, with severe consequences for American households and businesses. Unemployment is far too high and inflation is too low. Sometimes our maximum employment and price stability goals can conflict. But that's not the situation today. Moreover, an aggregate demand shortfall is exactly the kind of problem monetary policy can—and should—address. We need powerful and continuing monetary accommodation to move toward our mandated goals.

In normal times, monetary policy relies on changes in our short-term interest rate benchmark, the federal funds rate. But we pushed that rate close to zero late in 2008. Since then, to provide additional support to the economy, we've put in place a series of unconventional stimulus measures. We've relied on two primary tools. The first is forward policy guidance, that is, public communications aimed at guiding expectations about the future path of the federal funds rate. The second is large-scale asset purchases, which also go by the name quantitative easing. As I'll explain, both of these tools stimulate the economy by lowering longer-term interest rates.

Our forward guidance appears in the official statements released after each meeting of the Federal Open Market Committee. It's interesting to trace the recent evolution of these statements. Beginning in August 2011, we specified the length of time we expected to keep the federal funds rate exceptionally low. Initially, we said we expected the rate to stay exceptionally low “at least through mid-2013.” By late 2012, that period had stretched to “mid-2015.”

Then, at our December 2012 meeting, we shifted gears. Instead of identifying a calendar date for beginning to raise the federal funds rate, we laid out economic guideposts for our decisions. We said we expected to keep the rate exceptionally low at least as long as, one, “the unemployment rate remains above 6½%”; two, “inflation between one and two years ahead is projected to be no more than a half percentage point above the Committee's 2% longer-run goal”; and three, longer-term inflation expectations remain in check (Board of Governors 2012b).

Forward guidance works by influencing the public's expected path of short-term interest rates. Expectations of low yields on short-term assets for a prolonged period make investors more willing to purchase and hold longer-term securities. That, of course, increases their prices and reduces their yields. To give you a sense of the impact of this tool, the unexpected extension of our forward guidance in August 2011 lowered yields on longer-term Treasury securities by about 0.2 percentage point (Swanson

and Williams 2013). That's comparable to a cut in the funds rate of $\frac{3}{4}$ to 1 percentage point (see Chung et al. 2012 and Gürkaynak, Sack, and Swanson 2005). When we cut the funds rate that much, financial markets sit up and take notice.

Forward guidance works best when the intention to hold interest rates low is both clear and credible (see, for example, Reifschneider and Williams 2000; Eggertsson and Woodford 2003, 2006; Reifschneider and Roberts 2006; and Williams 2006). In this regard, our evolution from calendar-based guidance to readily observable economic guideposts, such as the unemployment rate, makes this tool more effective.

Our new way of communicating our expectations continues our long-standing effort to make the Fed a more open and transparent institution. Since the early 1990s, we've steadily increased the quantity and clarity of information we provide the public about monetary policy. The current language cuts to the chase by spelling out the economic conditions we'll be looking for before we start to raise rates. Moreover, with the calendar approach, we had to shift expected dates as our economic projections changed. Most importantly, the new language acts as an automatic stabilizer, allowing financial markets to react to new information in a way that reinforces monetary policy. For example, as economic developments alter the projection for unemployment, projections will also change for the federal funds liftoff date. Market interest rates will adjust accordingly, helping us accomplish our monetary policy goals.

Admittedly, this guidance focuses attention on the unemployment rate. But, the unemployment rate is only one measure of the health of the economy, and it's vital that we don't view it in isolation. Instead, we should consider it in the context of other measures of the job market's health. The Fed's unemployment-rate threshold can best be understood as a key signal that will help us determine how well we're moving toward maximum employment. But when we consider when to start raising the federal funds rate, we'll examine the full range of information about the labor market and broader economic conditions.

Asset purchases are another unconventional policy tool. Since 2008, we've purchased more than \$3.2 trillion in longer-term Treasury and mortgage-backed securities (Swanson and Williams 2013). We've done this through three distinct programs, nicknamed QE1, QE2, and QE3, and a related program, Operation Twist.

Asset purchases work by increasing demand for longer-term Treasury and mortgage-related securities. Our purchases bid up Treasury and mortgage security prices and push down their yields. What's more, lower Treasury and mortgage yields spill over into other markets and help make general financial conditions more favorable for economic growth (see Williams 2011, 2012).

Lower interest rates produced by forward guidance and asset purchases are providing a much-needed boost to the economy. Lower financing costs encourage businesses to expand and consumers to buy homes, autos, and other durable goods. At our January FOMC meeting, we announced we will continue buying longer-term Treasury and mortgage-backed securities at a pace of \$85 billion per month (Board of Governors 2013). Critically, we indicated we will continue these purchases until the outlook for the job market improves substantially, in the context of stable prices. I anticipate that purchases of mortgage-

backed securities and longer-term Treasury securities will be needed well into the second half of this year.

Some analysts have argued that our policy initiatives have increased the risk of an undesirable rise in inflation. I want to assure you that in no way have we relaxed our commitment to our price stability mandate. We constantly monitor inflation trends and inflation expectations. And we will not hesitate to act if necessary. In this regard, I want to emphasize that we remain committed to our 2% inflation target. The 2½% inflation threshold in our forward guidance is not a weakening of that commitment.

As I noted earlier, both the employment and the inflation signals are flashing the same message, and that is that strong monetary stimulus is essential. I am convinced we are charting the best course to lead us toward maximum employment and price stability.

John C. Williams is president and chief executive officer of the Federal Reserve Bank of San Francisco.

References

- Baker, Scott R., Nicholas Bloom, and Steven J. Davis. 2013. "Measuring Economic Policy Uncertainty." January. <http://www.policyuncertainty.com/media/BakerBloomDavis.pdf>
- Bloom, Nicholas. 2009. "The Impact of Uncertainty Shocks." *Econometrica* 77(3, May), pp. 623–685.
- Board of Governors of the Federal Reserve System. 2012a. "Press Release." January 25. <http://www.federalreserve.gov/newsevents/press/monetary/20120125c.htm>
- Board of Governors of the Federal Reserve System. 2012b. "Press Release." December 12. <http://www.federalreserve.gov/newsevents/press/monetary/20121212a.htm>
- Board of Governors of the Federal Reserve System. 2013. "Press Release." January 30. <http://www.federalreserve.gov/newsevents/press/monetary/20130130a.htm>
- Chung, Hess, Jean-Philippe Laforte, David Reifschneider, and John C. Williams. 2012. "Have We Underestimated the Likelihood and Severity of Zero Lower Bound Events?" *Journal of Money, Credit, and Banking* 44(s1), pp. 47–82.
- Congressional Budget Office. 2013. "The Budget and Economic Outlook: Fiscal Years 2013 to 2023." February 5. <http://www.cbo.gov/publication/43907>
- Daly, Mary C., Early Elias, Bart Hobijn, and Òscar Jordà. 2012a. "Will the Jobless Rate Drop Take a Break?" *FRBSF Economic Letter* 2012-37 (December 17). <http://www.frbsf.org/publications/economics/letter/2012/el2012-37.html>
- Daly, Mary C., Bart Hobijn, Ayşegül Şahin, and Robert Valletta. 2012b. "A Search and Matching Approach to Labor Markets: Did the Natural Rate of Unemployment Rise?" *Journal of Economic Perspectives* 26(3, Summer), pp. 3–26. <http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.26.3.3>
- Eggertsson, Gauti, and Michael Woodford. 2003. "The Zero Bound on Interest Rates and Optimal Monetary Policy." *Brookings Papers on Economic Activity* 2003-1, pp. 139–211. http://www.brookings.edu/~media/Files/Programs/ES/BPEA/2003_1_bpea_papers/2003a_bpea_eggertsson.pdf
- Eggertsson, Gauti, and Michael Woodford. 2006. "Optimal Monetary and Fiscal Policy in a Liquidity Trap." In *NBER International Seminar on Macroeconomics 2004*, eds. R. Clarida, J. Frankel, F. Giavazzi, and K. West. Cambridge, MA: MIT Press. <http://www.nber.org/chapters/co076.pdf>
- Federal Reserve Bank of Philadelphia. 2012. "Survey of Professional Forecasters, Third Quarter 2012." August 10. <http://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/index.cfm>
- Gürkaynak, Refet S., Brian Sack, and Eric T. Swanson. 2005. "Do Actions Speak Louder Than Words? The Response of Asset Prices to Monetary Policy Actions and Statements." *International Journal of Central Banking* 1(1), pp. 55–93. <http://www.ijcb.org/journal/ijcb05q2a2.htm>

- Lazear, Edward P., and James R. Spletzer. 2012. "The United States Labor Market: Status Quo or a New Normal?" Presented at "The Changing Policy Landscape," 2012 Federal Reserve Bank of Kansas City Economic Policy Symposium, Jackson Hole, WY. <http://www.kansascityfed.org/publicat/sympos/2012/el-js.pdf>
- Leduc, Sylvain, and Zheng Liu. 2012. "Uncertainty, Unemployment, and Inflation." *FRBSF Economic Letter* 2012-28 (September 17). <http://www.frbsf.org/publications/economics/letter/2012/el2012-28.html>
- Leduc, Sylvain, and Zheng Liu. 2013. "Uncertainty Shocks Are Aggregate Demand Shocks." Federal Reserve Bank of San Francisco Working Paper 2012-10 (January). <http://www.frbsf.org/publications/economics/papers/2012/wp12-10bk.pdf>
- Mian, Atif, Kamallesh Rao, and Amir Sufi. 2012. "Household Balance Sheets, Consumption, and the Economic Slump." Working paper, Princeton University and University of Chicago. <http://dx.doi.org/10.2139/ssrn.1961211>
- Mian, Atif, and Amir Sufi. 2013. "Aggregate Demand and State-Level Employment." *FRBSF Economic Letter* 2013-04 (February 11). <http://www.frbsf.org/publications/economics/letter/2013/el2013-04.html>
- Orphanides, Athanasios, and John C. Williams. 2005. "The Decline of Activist Monetary Policy: Natural Rate Misperceptions, Learning, and Expectations." *Journal of Economic Dynamics and Control* 29(11, November), pp. 1,927–1,950.
- Orphanides, Athanasios, and John C. Williams. 2013. "Monetary Policy Mistakes and the Evolution of Inflation Expectations." Forthcoming in *The Great Inflation*, eds. Michael D. Bordo and Athanasios Orphanides. Chicago: University of Chicago Press.
- Reifschneider, David, and John Roberts. 2006. "Expectations Formation and the Effectiveness of Strategies for Limiting the Consequences of the Zero Bound." *Journal of the Japanese and International Economies* 20(3, September), pp. 314–337.
- Reifschneider, David, and John C. Williams. 2000. "Three Lessons for Monetary Policy in a Low-Inflation Era." *Journal of Money, Credit, and Banking* 32(4, November), pp. 936–966.
- Şahin, Ayşegül, Joseph Song, Giorgio Topa, and Giovanni L. Violante. 2012. "Mismatch Unemployment." NBER Working Paper 18265 (revised September). Available at <http://www.newyorkfed.org/research/economists/sahin/papers.html>
- Swanson, Eric T., and John C. Williams. 2013. "Measuring the Effect of the Zero Lower Bound on Medium- and Longer-Term Interest Rates." Federal Reserve Bank of San Francisco Working Paper 2012-02 (January). <http://www.frbsf.org/publications/economics/papers/2012/wp12-02bk.pdf>
- Valletta, Rob. 2013. "Long-term Unemployment: What Do We Know?" *FRBSF Economic Letter* 2013-03 (February 4). <http://www.frbsf.org/publications/economics/letter/2013/el2013-03.html>
- Williams, John C. 2006. "Monetary Policy in a Low Inflation Economy with Learning." In *Monetary Policy in an Environment of Low Inflation*, proceedings of the Bank of Korea International Conference. Seoul: Bank of Korea.
- Williams, John C. 2011. "Unconventional Monetary Policy: Lessons from the Past Three Years." *FRBSF Economic Letter* 2011-31 (October 3). <http://www.frbsf.org/publications/economics/letter/2011/el2011-31.html>
- Williams, John C. 2012. "The Federal Reserve's Unconventional Policies." *FRBSF Economic Letter* 2012-34 (November 13). <http://www.frbsf.org/publications/economics/letter/2012/el2012-34.html>
- Williams, John C. 2013. "Update of 'What Is the New Normal Unemployment Rate?'" February 16 update to *FRBSF Economic Letter* 2011-05. <http://www.frbsf.org/publications/economics/letter/2011/el2011-05-update.pdf>