

Presentation to the Sonoma County Economic Development Board  
Rohnert Park, California  
By John C. Williams, President and CEO, Federal Reserve Bank of San Francisco  
For delivery on June 28, 2013

### The Economic Recovery: Past, Present, and Future<sup>1</sup>

Thank you. Given the size of the Federal Reserve district that I represent, I often travel quite a ways to give speeches. So it's nice to be in a familiar place closer to home. Sonoma County is renowned for its natural beauty, and my family and I have visited often over the years. With all its natural charms, it's sometimes forgotten that the county also has a vibrant economy, led by agriculture and tourism. So I'm delighted to be with you.

My subject today is the nation's economy and the steps the Federal Reserve has taken to bolster the recovery. I'll start with a review of the state of the national economy. I'll then offer my forecast, which envisions economic growth moving into higher gear thanks to growing momentum in the private sector. And I'll close with a review of how the Fed is pursuing its congressionally mandated goals of maximum employment and price stability. I should stress that my remarks represent my own views and not necessarily those of others in the Federal Reserve System.

Our economy is well into a period of sustained growth. It's now been four years since the recession ended. Recessions are never pleasant, but this one was especially grim. Think back four years to June 2009. The housing market had collapsed. The unemployment rate stood at

---

<sup>1</sup> I want to thank Bharat Trehan and Sam Zuckerman for their assistance in preparing these remarks.

9.5 percent and was still rising. Consumers and businesses were deeply shaken. And the stock market had plunged nearly 40 percent.

Thankfully, we've come a long way since then. From a peak of 10 percent, the unemployment rate has dropped to 7.6 percent. Households and businesses have regained much of their lost confidence. And finally, the housing market is springing back to life.

Although things have improved quite a bit, the economy has not rebounded from this recession as fast as we hoped. Growth has proceeded in fits and starts, and the overall pace of recovery has been moderate at best. Let me put the recent recession and recovery in historical context. Figure 1 illustrates this in terms of gross domestic product, or GDP, which is the nation's total output of goods and services. The solid red line shows that real GDP per person, which is GDP adjusted for both inflation and population growth, had fallen a little over 5 percent by the second year of the recession, an extremely sharp drop by historical standards. Five years after the recession's onset, real GDP per person had still not returned to where it had been before the recession.

I can put this in perspective by comparing the recovery with data from recessions and recoveries in 17 advanced economies over the past century and a half. In the figure, the solid black line shows a projection based on this data of the average path real GDP per person takes in recessions and recoveries.<sup>2</sup> Ninety-five percent of the time, GDP lies within the shaded region shown in the figure. As you can see, the most recent U.S. recession was one of the worst. To a considerable extent, that was because we went through a financial crisis of historic proportions.

---

<sup>2</sup> Staff calculations based on model in Jordà, Schularick, and Taylor (2011).

Research has shown that, when a financial crisis hits, the accompanying downturn tends to be unusually harsh. So the sharp plunge in GDP during the first two years of the recession may not be that surprising.

The surprise, it turns out, is the strength of the subsequent recovery. Now you may not associate the word “strength” with this recovery. So let me explain. Figure 2 adds to Figure 1 a forecast of real GDP per person for the five years following the start of the recession. This forecast, shown as the dashed red line, is based on an economic model that aims to describe past recessions and recoveries based on a few key factors.<sup>3</sup> According to the model, the enormous boom in private-sector credit before the recession—when credit was cheap and easy to get—was a major reason why the recession ended up being so deep. The model also predicts that the economy should have been virtually stagnant in terms of real GDP per person through 2012. In other words, the recovery has actually been stronger than might be expected given the extent of the prior credit buildup.

So why has the economy done better than the model predicts after such a destructive financial crisis and credit collapse? One big reason is that economic policies put in place during and after the recession, including extraordinary measures taken by the Federal Reserve, lent critical support to the recovery. These policies pulled us out of the recession much faster and made the recovery stronger than would have happened otherwise. To be sure, the recovery has been weaker than we wanted. But the fact that we’ve made as much progress as we have is due to a great extent to these timely policy actions. Absent these actions, I fear that we could have experienced the stagnant economy the model predicts.

---

<sup>3</sup> Staff forecast based on Jordà, Schularick, and Taylor (forthcoming).

Recent data show this improvement is continuing. This is easiest to see in housing, which is now in a broad-based expansion after years of depressed activity. Across the country, sales of new and existing homes have risen substantially over the past year, and prices are up 10 to 15 percent. Homebuilders have responded by stepping up construction.

The housing rebound is a powerful tonic for the economy. Homebuyers often want new carpeting, drapes, furniture, and appliances. Meanwhile, rising home prices allow more people to refinance mortgages at lower rates, giving them hundreds or thousands of extra dollars to spend each year. What's more, rising home prices make people feel wealthier, giving them confidence to reach for their wallets. And homes are not the only assets going up in value. Stock prices have risen considerably over the past year, adding significantly to household wealth. Rising wealth makes consumers more willing to spend. My staff estimates that the increase in wealth registered just in the first quarter of this year will raise consumer spending by roughly \$90 billion.

This higher wealth has offset the effects of the increase in taxes at the beginning of the year, allowing consumer spending to grow at a healthy pace. That seems likely to continue. Two major surveys show consumer sentiment in recent months has been higher than at any time over the past five years and that people are more upbeat about prospects for economic growth and jobs.<sup>4</sup>

One factor weighing on the recovery has been household and business uncertainty about the economy and economic policy. Some signs suggest that this too is dissipating. Economists

---

<sup>4</sup> The Thomson Reuters/University of Michigan Surveys of Consumers (2013) and the Conference Board Consumer Confidence Survey (2013).

have created an index that measures uncertainty about economic policy by tracking the content of newspaper articles.<sup>5</sup> By early June, this uncertainty index had fallen to levels not seen since late 2007. Meanwhile, my business contacts confirm that uncertainty appears to have eased this year, in part because the decibel level of congressional wrangling over taxes and spending has dropped.

Of course, not every sector of the economy is robust, which is what you would expect when overall growth is only moderate. Business investment has been expanding only modestly and recent data on orders for capital equipment suggest that investment growth will continue to be tepid for a while. Overall though, the private economy has been expanding quite reasonably. The thing that's holding the recovery back is the public sector. Government budgets have turned into a significant drag on growth.

During the recession and early in the recovery, the federal government threw a critical lifeline to the economy. Congress and the White House boosted spending substantially and cut taxes for households and businesses, which partly offset the collapse of the private economy. The \$800 billion stimulus package passed in 2009 was a huge help.<sup>6</sup> But this has turned on its head. That stimulus has wound down. And, at the beginning of 2013, tax rates rose for upper-income households and the Social Security payroll tax cut ended. More recently, the sequestration process has forced major cuts in federal spending.

By contrast, fiscal policy at the state and local government level has been a drag on the economy since the beginning of the recession. Unlike Uncle Sam, state and local governments

---

<sup>5</sup> See Baker, Bloom, and Davis (2013).

<sup>6</sup> See Lucking and Wilson (2012).

typically must balance their budgets each year. As revenues plunged, they cut spending and employment deeply and, in some cases, raised taxes. Thankfully, that painful process may be drawing to a close. Recent data show state and local government revenue is climbing again, something we're certainly happy to see in California. Still, expenditures and employment remain well below pre-recession levels.

Here is a way to appreciate how big the swing in the role of government has been: In the two years beginning in the fourth quarter of 2007, spending at all levels of government, adjusted for inflation, increased more than 6½ percent, while private-sector spending fell nearly 6 percent. But, since the end of 2009, government spending has fallen nearly 7½ percent and private spending has risen more than 10½ percent. Employment data paint a similar picture. Since the end of 2009, governments have shed more than 600,000 jobs. At the same time, private employers outside the farm sector have added 6.9 million jobs. Clearly, government austerity is one factor holding back economic growth.

In the job market, private-sector hiring has actually picked up. Over the past six months, nonfarm private payrolls have grown by just under 200,000 jobs per month compared with an average of about 160,000 in the previous six months. The unemployment rate has fallen six-tenths of a percentage point over the past 12 months.

What about the future? San Francisco Fed researchers have identified indicators that provide information about how the labor market is likely to fare over the next six months. These include data you may be familiar with, such as initial unemployment claims, and less well-

known data, such as the percentage of people who say in surveys that it's hard to find a job.

These indicators suggest that the labor market will continue to strengthen.

Here then is my forecast. I expect the unemployment rate to fall to roughly  $7\frac{1}{4}$  percent at the end of this year and drop to about  $6\frac{3}{4}$  percent by the end of 2014. Economic growth is likely to be sluggish in the current and next quarter, reflecting federal spending and employment cuts related to sequestration. It should pick up later in the year. For 2013 as a whole, I see inflation-adjusted GDP growing about  $2\frac{1}{4}$  percent and picking up to around  $3\frac{1}{4}$  percent in 2014.

I'd like to say a few words about inflation. Our mandate from Congress calls on us to pursue both maximum employment and stable prices. High unemployment is certainly the biggest problem we're facing these days. But we must also pay close attention to inflation. History tells us that severe financial crises are often associated with deflation, that is, falling prices, which are very dangerous for the economy. We've managed to avoid deflation, not least because of the Fed's aggressive monetary policy. The policies we've followed have restored growth and generally kept inflation from falling too low. Similarly, the Fed's announcement of a 2 percent longer-run inflation target has helped keep public inflation expectations stable.

It's true that inflation has come in under our target recently and below what I was expecting. This partly reflects temporary factors, such as a decline in Medicare reimbursement prices forced by sequestration. Inflation will probably remain relatively low for a while, but should gradually rise toward our 2 percent target over the next few years as the economy continues to improve and unemployment comes down. I expect our preferred inflation measure

will gradually climb from less than 1½ percent in the second half of 2013 to roughly 1¾ percent in 2015.

Of course, economic progress could fall short of my forecast. One risk is that battles over the federal budget could make households and businesses more uncertain about the economy, crimping their spending. Europe represents another risk. Financial markets there have calmed considerably. But many European economies are still mired in recession and remain extremely fragile. If Europe's economies falter, that will affect us in the United States since countries there are a major market for American products.

Let me now turn to Federal Reserve policy. When the financial crisis hit in 2008, the Fed responded vigorously. In our role as lender of last resort, we took a number of unprecedented steps to shore up a financial system that was on the verge of collapse. When markets seized up and banks stopped lending to one another, we provided emergency financing. We intervened in several specialized markets, such as the corporate short-term borrowing market and the markets for consumer and small business loans, to make sure they kept functioning. Our policy committee, the Federal Open Market Committee, or FOMC, pushed our benchmark short-term interest rate close to zero. These measures brought the financial system back from the brink and may well have headed off a depression.

Still, at the end of 2008, the economy was shrinking at an alarming rate and hundreds of thousands of jobs were disappearing each month. More needed to be done. In essence, consumer and business demand for goods and services was evaporating. The Fed had pushed



short-term interest rates as low as they could go. To provide additional stimulus, we put in place unconventional programs designed to put downward pressure on longer-term rates.

Our unconventional programs have come in two forms. The first is known as forward guidance. Under forward guidance, the FOMC communicates to the public what Fed policy is likely to be in the future. Our forward guidance explicitly links future policy to the performance of the economy. Specifically, we've stated that the current exceptionally low level of the federal funds rate is likely to remain appropriate at least as long as, one, the unemployment rate remains above 6½ percent; two, inflation one to two years out is forecast to be no more than half a percentage point above the FOMC's 2 percent target; and, three, inflation expectations remain in check. And because financial market participants know that short-term interest rates will probably stay low for a long time, longer-term interest rates are likely to stay relatively low as well.

Our second type of unconventional program involves large-scale purchases of longer-term U.S. Treasury and mortgage-related securities. Under the current program, we are purchasing \$85 billion in securities each month. Our purchases increase demand for these securities, pushing up their prices and pushing down their yields. That in turn drives down other longer-term interest rates. We have said we will continue this program until the outlook for the labor market improves substantially in a context of price stability.

Our forward guidance and securities purchases have significantly reduced longer-term rates, and that benefits the economy greatly. For example, at the low point of the recession, the 30-year conventional mortgage was about 5½ percent. Buying a \$300,000 home with a 20

percent down payment required a monthly payment of around \$1,360. Today, despite the recent run-up in interest costs, mortgage rates are roughly 1 percentage point lower. The same size mortgage now carries a monthly payment of about \$1,220. That's an annual reduction of around \$1,700, which could be saved or spent. Alternatively, a homebuyer willing to pay \$1,360 per month could buy a house worth more than \$335,000, boosting demand for homes.

The housing market is by no means the only part of the economy benefiting from lower rates. Motor vehicle sales have been running at an annual rate of over 15 million this year, a huge jump from the recession low of just over 9 million. Output from the manufacturing sector fell nearly 20 percent in the recession. Today, thanks to sales of autos and other big-ticket items, the durable goods component of manufacturing is back to its pre-recession peak. By contrast, the nondurable goods component, which doesn't benefit as much from low interest rates, is still about 10 percent below its peak.

Of course, the economy's increased momentum has raised questions about when the Fed will cut back, and eventually end, its asset purchase program. So, is it time to act? My answer is that it's still too early. For one thing, we need to be sure that the economy can maintain its momentum in the face of ongoing fiscal contraction. And it is also prudent to wait a bit and make sure that inflation doesn't keep coming in below expectations, possibly signaling a more persistent decline in inflation.

My forecast assumes that federal fiscal retrenchment has largely temporary effects on economic growth and that inflation will resume its gradual rise toward 2 percent. Looking

ahead, if this forecast holds true, then at some point it will be appropriate to scale back our purchase program and eventually end it.

Following our meeting last week, Chairman Bernanke spelled out the FOMC's current thinking regarding potential adjustments to our asset purchases over the next year. He said that if the economy develops broadly as the FOMC expects, then it "would be appropriate to moderate the monthly pace of purchases later this year" and "to reduce the pace of purchases in measured steps through the first half of next year, ending purchases around midyear."<sup>7</sup> He noted that, if things evolve as expected, then when the program is ended, the unemployment rate would be around 7 percent, with solid growth supporting further improvement in the labor market.

I would like to emphasize three points regarding the potential timeline for adjusting our asset purchase program. First and foremost, any adjustments to our purchase program will depend on the new economic data that come in. In other words, we will modify our plans as appropriate if economic developments turn out differently than we currently expect.

Second, reducing or even ending our purchases does not mean the Fed will be tightening monetary policy. Not at all. The amount of stimulus our purchase program creates depends on the size of our securities holdings, not the amount we buy each month. Even if we start reducing our purchases later this year, our balance sheet will continue to grow, providing an increasing amount of stimulus. That is, as long as we are adding to our holdings of assets, we are adding monetary stimulus to the economy.

---

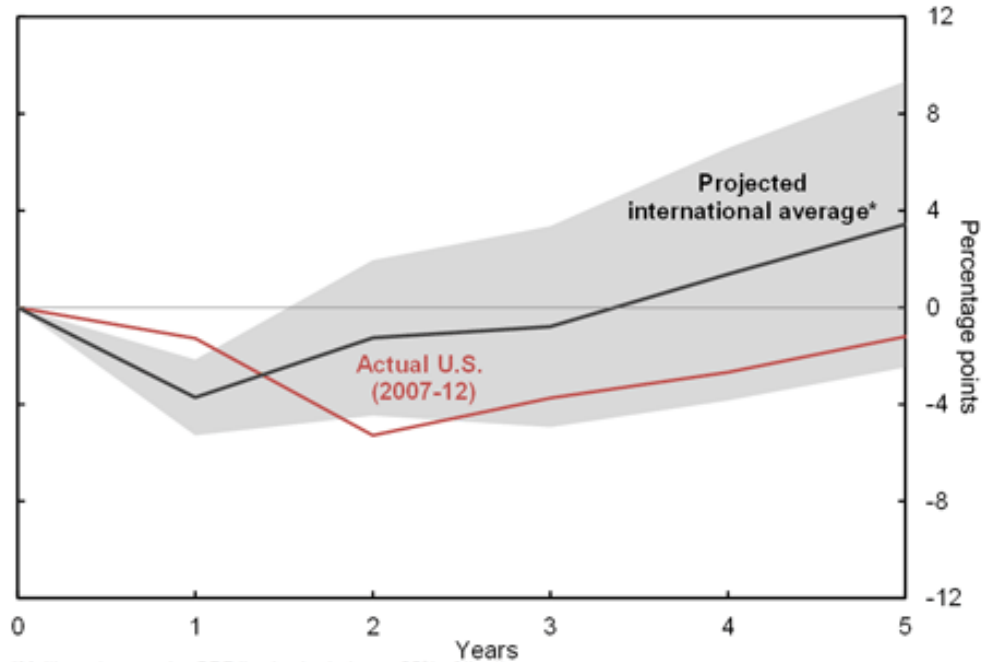
<sup>7</sup> Bernanke (2013).

Third, future adjustments to our asset purchases in no way alter or undermine our approach of maintaining the current very low federal funds rate at least as long as the unemployment rate is above 6½ percent and the other conditions regarding inflation and inflation expectations are met. Indeed, as the FOMC projections released last week show, a large majority of Committee participants don't expect the first increase in the federal funds rate to occur until 2015 or later. And the median projected value of the federal funds rate at the end of 2015 is only 1 percent.

As I emphasized at the start, I am convinced that our extraordinary policies during the recession and recovery, including our current asset purchase program, have been hugely beneficial for the economy. The good news is that the economy is on the mend. The time will come when we will no longer need to keep adding monetary stimulus. When that time comes, I am confident that we can make this change without jeopardizing the recovery, while working toward our goals of maximum employment and price stability. Thank you very much.

**Figure 1**  
**Recession and Recovery in Historical Context**

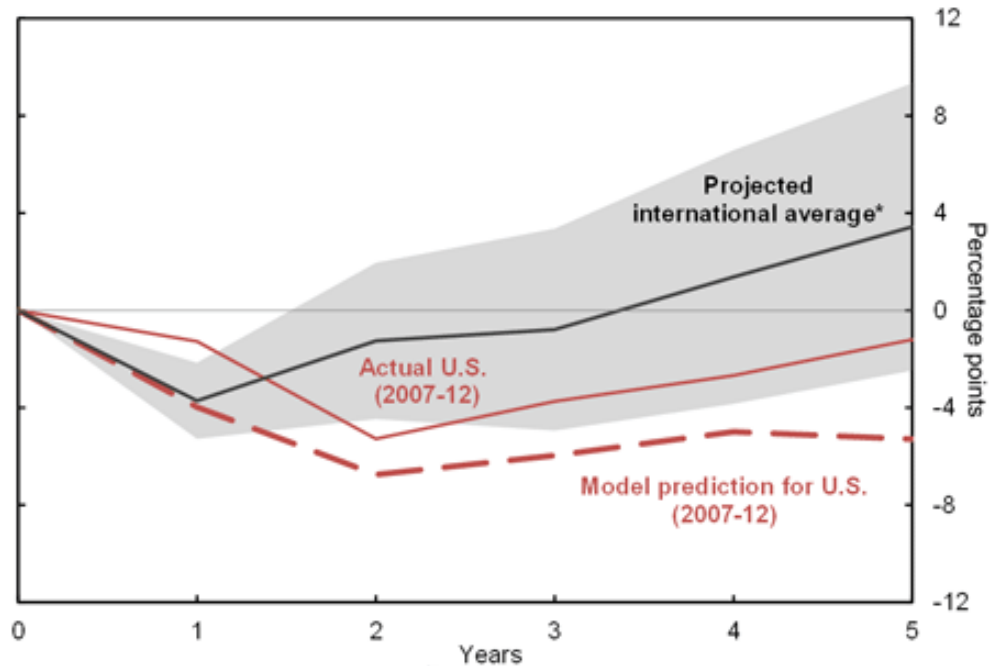
Cumulative change in real GDP per capita since start of the recession



\*Multicountry sample. GDP lies in shaded area 95% of the time.

**Figure 2**  
**Recession and Recovery in Historical Context**

Cumulative change in real GDP per capita since start of the recession



\*Multicountry sample. GDP lies in shaded area 95% of the time.

## References

- Baker, Scott R., Nicholas Bloom, and Steven J. Davis. 2013. “Measuring Economic Policy Uncertainty.” <http://www.policyuncertainty.com/papers.html>
- Bernanke, Ben S. 2013. “Transcript of Chairman Bernanke’s Press Conference, June 19, 2013.” Board of Governors of the Federal Reserve System. <http://www.federalreserve.gov/mediacenter/files/FOMCpresconf20130619.pdf>
- Conference Board. 2013. “Consumer Confidence Survey.” <http://www.conference-board.org/data/consumerconfidence.cfm>
- Jordà, Òscar, Moritz Schularick, and Alan M. Taylor. 2011. “Financial Crises, Credit Booms, and External Imbalances: 140 Years of Lessons.” *IMF Economic Review* 59(2), pp. 340–378. <http://www.palgrave-journals.com/imfer/journal/v59/n2/abs/imfer20118a.html>
- Jordà, Òscar, Moritz Schularick, and Alan M. Taylor. Forthcoming. “When Credit Bites Back.” *Journal of Money, Credit, and Banking*.
- Lucking, Brian, and Daniel Wilson. 2012. “U.S. Fiscal Policy: Headwind or Tailwind?” *FRBSF Economic Letter* 2012-20 (July 2). <http://www.frbsf.org/economic-research/publications/economic-letter/2012/july/us-fiscal-policy/>
- Thomson Reuters/University of Michigan. 2013. “Surveys of Consumers.” <http://www.sca.isr.umich.edu/>