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## Monetary Policy in Uncertain Times

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The Federal Reserve has taken bold steps this past year, both in the approaches to stimulate the economy and the way it talks about policy. The Fed's initiatives are working, and represent the best course 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 Semiconductor Materials and Equipment International (SEMI) 2013 Industry Strategy Symposium, in Half Moon Bay, California, on January 14, 2013.

I'm glad to be speaking at a SEMI event. Many of the nation's semiconductor companies are based in the 12th Federal Reserve District, and your industry contributes in a big way to the vitality of our region's economy. At the Federal Reserve Bank of San Francisco, we follow the information technology sector closely. In fact, we have our own monthly index of the tech sector's economic health, called the Tech Pulse Index (<http://www.frbsf.org/csip/pulse.php>), published on our website. It's one of the better gauges of the overall health of the sector. And I should add that I've greatly benefited from the contacts I've made with leaders of the semiconductor industry and other areas of the tech sector.

However, my subject today isn't the latest wonders to come out of Silicon Valley. Instead, I'll be talking about the uneven progress of the U.S. economy and my outlook for the period ahead. One key theme will be the critical role that uncertainty about the future has played in holding the economy back. That was demonstrated starkly in recent weeks by the political drama surrounding the fiscal cliff, a spectacle that sapped the confidence of consumers and businesses alike.

I'll also talk about what the Federal Reserve is doing to help our economy get back on track. The Fed has taken some bold steps this past year, both in the approaches we take to stimulating the economy *and* the way we talk about our policy. In particular, for the first time we publicly announced numerical thresholds for unemployment and inflation that will guide us in future policy decisions. In essence, we've made it clear that we do not intend to begin to remove monetary accommodation until the economy reaches specific milestones. These initiatives represent important changes in the way the Fed conducts monetary policy and communicates it to the public, although they're best understood as an evolution rather than a revolution in our approach. I'll do my best to explain what we've done and why we did it.

### **Economic recovery progressing slowly**

So then, where do things stand? The economy has been growing in fits and starts for the past 3½ years. Every time economic growth appears to be picking up steam, something happens that brings it back down again. Sometimes the barriers to growth are natural, like the tsunami of 2011, and the drought and Superstorm Sandy last year. Other times they are man-made, like the crisis in Europe and our own fiscal cliff drama. With a little luck and a big boost from the Fed's monetary stimulus, I expect the recovery to

gradually pick up steam. But there's a significant risk that growth will fall short of my expectations, especially if further political wrangling over the federal budget leads to prolonged confrontation and uncertainty.

These dynamics are clearly visible in the job market. We've come a long way since the depths of the recession. Payrolls have risen by nearly 5 million jobs from the low point reached about three years ago. This increase in jobs has helped bring the unemployment rate down by over two percentage points to 7.8%. Nonetheless, despite these important gains, we still have a long way to go to get back to an economy operating at its potential.

On the plus side, two sectors hit hard in the recession, autos and housing, have turned the corner, contributing to the recovery. Thanks to pent-up demand, fabulous rates on auto loans, and an improving labor market, motor vehicle sales have rebounded to a rate of roughly 15 million vehicles a year from their recession low of around 9 million.

The news on the housing front is also very encouraging. Fewer homes are going into foreclosure. And, with mortgage rates at rock bottom, home sales have picked up. The stepped-up sales activity and the limited inventory of homes have helped support prices. In 2012, home prices look to have risen for the first time since 2006. New housing construction is up significantly from the historic lows that followed the housing crash. Still, the pace of home construction is well below trend levels, and this sector has far to go to get back to full strength.

Despite significant progress in areas such as autos and housing, we're still not seeing the robust job gains needed to bring the economy quickly back to its potential. The gradual pace of recovery stems in large part from the lingering effects of the 2007–08 financial crisis. Many families are still snowed under by debt, leaving them unwilling or unable to spend (see Mian et al. 2012). After experiencing huge loan losses, many lenders have kept credit relatively tight for small businesses and consumers, despite some modest signs of easing.

But the direct hangover from the financial crisis is not the only reason for sluggish growth. Most banks and other financial institutions have largely returned to health, and many nonfinancial businesses have been piling up cash. Their balance sheets look exceptionally strong. For businesses that can get credit, interest rates have rarely, if ever, been lower. You would think this is a great time to expand your business. Yet, many businesspeople appear to be locked in a paralyzing state of anxiety. As one of my business contacts said recently, "They're just not willing to stick their necks out."

### **Uncertainty holding back recovery**

What's going on? The terrifying financial crisis followed by a bumpy recovery, the crisis and recession in Europe, the budget mess in the United States, questions about taxes and health-care reform—these and other factors have combined to undermine the confidence of Americans and make them suspicious about the durability of the economic recovery. Indeed, an index of policy uncertainty developed by academic economists (<http://www.policyuncertainty.com/results.html>) recently soared to the highest level recorded in over 25 years. In a pattern reminiscent of the debt ceiling debate in the summer of 2011, the recent rise in uncertainty has been accompanied by a sharp drop-off in business and consumer confidence.

There's pretty strong evidence that the rise in uncertainty is a significant factor holding back the pace of recovery now. At the San Francisco Fed, researchers have looked closely at how uncertainty affects the economy (Leduc and Liu 2012a, b). They found that, when uncertainty rises, capital spending and full-time employment fall, but part-time employment goes up. Evidently, businesses hesitate to expand in ways that would be costly to reverse if conditions sour. Instead of hiring full-time workers, they increase the hours of their existing workers and take on part-time workers to meet production and sales needs. More generally, research shows that heightened uncertainty slows economic growth, raises unemployment, and reduces inflationary pressures.

This pattern has held over the past three decades, but the effects have been particularly notable in recent years. For example, capital spending has downshifted noticeably since early last year. In particular, business spending on information technology, which had been a source of strength early in the recovery, fell back last year, driven by a sharp drop in spending on hardware. The job market also shows the effects of uncertainty. During much of the past year, an unusually large share of job growth involved part-time workers who wanted full-time positions.

I spoke earlier about some of the sources of uncertainty. Of course, the one that was uppermost in everybody's mind was the fiscal cliff. This refers to the massive federal tax hikes and spending cuts that were scheduled to take effect automatically at the beginning of 2013. In terms of potential economic impact, the cliff amounted to a triple whammy. The spending cuts and tax increases represented a crippling dose of austerity for an economy that was already struggling. Higher taxes and lower government spending would have meant less disposable income for consumers, smaller government payrolls, and less work for government contractors. In addition, the political clash stoked uncertainty and held down growth by frightening businesses and consumers.

Fortunately, the impasse over the tax aspects of the fiscal cliff was resolved, and most of the scheduled spending cuts were halted, at least temporarily. Still, the federal budget had already become more austere in the past few years as stimulus measures passed during the recession wound down and spending cuts were enacted. That's weighed on growth and forced the private sector to shoulder more of the burden of powering the recovery. Despite the latest agreement, we are in for greater federal fiscal austerity this year. For example, the end to the two-percentage-point cut in the payroll tax means less money in paychecks. What's more, it's unclear how much the fiscal cliff accord will relieve uncertainty. We've already moved to the next round of the budget battle as spending issues and the federal debt limit come to the fore. In other words, we still have plenty of drama on these issues to rattle the public for some time to come.

As far as my outlook is concerned, I expect the economic expansion to gain momentum over the next few years. When final numbers come in, I expect growth in real gross domestic product—the nation's total output of goods and services—to register about 1¾% in 2012. My forecast calls for GDP growth to rise to about 2½% this year and a little under 3½% in 2014. That pace is sufficient to bring the unemployment rate down gradually over the next few years. Specifically, I anticipate that the unemployment rate will stay at or above 7% at least through the end of 2014. And I expect inflation to remain somewhat below the Fed's 2% target for the next few years as labor costs and import prices remain subdued. My forecast takes into account both the fiscal cliff agreement and the various stimulus measures the Fed has put in place.

## The Fed's goals for employment and price stability

What about monetary policy then? There's no question that slow growth, high unemployment, and significant uncertainty are challenges for monetary policy. Let's look at the goals set for us by Congress. First, there's maximum employment. Economists think of maximum employment as the lowest unemployment rate that can be sustained without inflation picking up. When unemployment falls below the maximum-employment level, workers are in stronger bargaining positions and wage pressures tend to build up, potentially feeding inflation. It's not easy to pinpoint the noninflationary unemployment rate. The number moves around depending on structural factors, such as whether workers have skills that match available jobs (see Daly et al. 2012, Lazear and Spletzer 2012, and Williams 2012b). Economists generally estimate that the noninflationary level of unemployment today is between 5 and 6% (Board of Governors 2012a). The current 7.8% unemployment rate is clearly well above that.

Price stability is the Fed's second mandated goal. Fed policymakers have specified that a 2% inflation rate is most consistent with our maximum-employment and price-stability mandates (Board of Governors 2012b). But our primary inflation measure averaged only about 1½% over the 12 months ending in November, noticeably below this target. And I expect inflation to run about 1½% this year as well.

Here it is in a nutshell: The Fed is missing on both of its goals, especially the maximum-employment mandate. And there are risks that the economy will slow further. The implications are clear. The Fed must do what it can to help the economy improve.

Our main tool for stimulating the economy is to lower the federal funds rate, our benchmark short-term interest rate. We pushed that rate down close to zero in 2008, so there's not a lot more that can be done on that front. Since then, to provide additional support to the economy, we've adopted a series of unconventional stimulus measures. For example, since 2008, we've purchased more than \$2 trillion in longer-term Treasury and mortgage-backed securities. You may have heard the financial press call these purchases QE1, 2, and 3, with the QE standing for quantitative easing. We also carried out a related program, nicknamed Operation Twist, in which we trimmed our holdings of short-term Treasury securities and built our holdings of long-term Treasuries.

The purpose of these programs is to lower longer-term interest rates. They work through one of the most basic principles of economics: the law of supply and demand. Our purchases create huge demand for longer-term Treasuries and mortgage-backed securities. We all know what happens when demand goes up. Prices also rise, and that's exactly what's taken place with those securities. As their prices have climbed, their yields have come down. The result is that longer-term interest rates have fallen across the board, producing financial conditions more favorable for economic growth (see Williams 2011, 2012a). Lower interest rates have made it cheaper for consumers to buy homes and cars, and for businesses to finance new projects. For example, conventional 30-year mortgage rates have dropped to historically low levels, which helped bring the housing market back to life last year.

At our policy meeting last month, we decided to continue adding to our economic stimulus with the goal of speeding progress towards our maximum-employment and price-stability goals. First, we announced we will keep buying mortgage-backed securities at the rate of \$40 billion per month, a program started back in September. Second, following the expiration of Operation Twist at the end of 2012, we

announced that we will continue to buy \$45 billion in longer-term Treasury securities each month (Board of Governors 2012c, d).

Critically, we indicated that we will continue these purchases until the outlook for the job market improves substantially, in the context of stable prices. In other words, instead of setting an expiration date for these purchases as we have in the past, we'll be looking for convincing signs of ongoing improvement in the labor market and a range of other economic indicators before we stop this program.

I anticipate that continued purchases of mortgage-backed securities and longer-term Treasury securities will be needed well into the second half of 2013. Of course, my forecast for the economy may be wrong, and we'll adjust our plans as appropriate. Moreover, we'll watch the effects of these programs closely to make sure the benefits to the economy exceed the costs.

### **The evolution of Fed communications**

At last month's meeting, the Fed also adopted a new way of telling the public about the direction our policy is likely to take in the future. Specifically, we said we expect to keep our benchmark short-term interest 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 2012d).

This form of policy guidance represents a major improvement from previous forward-looking Fed statements in which we said we expected to keep our benchmark exceptionally low through a specific date. For example, in October we said we expected low rates "at least through mid-2015." Now our guidance about future policy is expressed in terms of economic conditions such as unemployment and inflation. This means that the public's expectations of future monetary policy actions will naturally adjust as the economic outlook evolves, without people needing to wait for the Fed to signal a change. Importantly, such language makes it plain that we will keep rates low as long as needed to promote recovery and move toward our goals of maximum employment and price stability.

The new way of communicating our expectations is a logical extension of 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. That's why I view this move as more of an evolution than a revolution in Fed communications.

While this form of guidance makes our policies more transparent and predictable, it does carry some risks. After all, it's impossible to express all the information that goes into monetary policymaking in terms of a few thresholds. In particular, this guidance shines a bright spotlight on the unemployment rate. This is appropriate, because high unemployment is our biggest problem right now. But the unemployment rate is not the only measure of the health of the job market. It's best to view this unemployment-rate threshold as a guidepost that helps us determine how well we're moving toward maximum employment. In the final analysis, we'll consider all kinds of information about economic conditions to help us decide whether we've made enough progress to start raising interest rates.

As far as inflation is concerned, keep in mind that our target remains 2% on average. Sometimes inflation will go a bit above and sometimes a bit below that level. Setting an inflation threshold at 2½% is in no way a slackening of our commitment to price stability or a departure from our 2% longer-run inflation target. Instead, the inflation threshold gives us maneuvering room to right the economy while simultaneously making it clear we will tighten policy if inflation starts to edge up too much. Finally, we're also determined to keep a lid on inflation expectations. We will not allow hard-won confidence in the Fed's commitment to price stability to melt away.

None of the measures I've described are cure-alls. By themselves, they won't turn a tortoise recovery into a hare. But our policies are working, as the newfound vigor in the auto and housing markets demonstrates. I am convinced we are charting the best course to get us to maximum employment and price stability.

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