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## After the First Rate Hike

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The Federal Reserve has started the process of raising interest rates, in line with ongoing improvement in U.S. economic conditions. The path for subsequent interest rate increases, however, is likely to be shallow compared with past tightening cycles. This reflects in part growing evidence that the new normal for interest rates is lower than in the past. The following is adapted from a presentation by the president and CEO of the Federal Reserve Bank of San Francisco to the California Bankers Association in Santa Barbara, California, on January 8.

Today I'd like to give my view of the economic outlook and discuss more extensively some of the issues that are probably on your mind: Interest rates, the path they're on, and what we can expect when we reach full economic health.

### The economic snapshot

The headline is that we've made the first rate hike. This was the right move because the economic outlook is good: We're now well into the seventh year of the expansion, we're very close to full employment, and the economy still has a good head of steam. Consumer spending continues to increase at a solid pace, auto sales have matched their highs of the early 2000s, and strong fundamentals point to continued strength going forward.

There are some upside risks, specifically an even stronger and faster rebound in housing. And there are, of course, some downside risks: the threat of slowdowns and spillovers from abroad or the dollar appreciating further.

### Employment

On the employment side, things are going very well. Job growth has averaged over 200,000 a month for most of the past two years, and the 12th District has been at the head of the pack, with seven of our nine states ranked in the top ten for job growth over the past 12 months. What's particularly heartening is that some of the states that were hardest hit by the housing bust and financial crisis are among them, in particular, California, Nevada, and Arizona.

Nationwide, based on data through November, we're on track to see about 2½ million jobs added in 2015, and we met one marker on the unemployment rate. Because unemployment will never be zero—in any healthy economy, there will be turnover, with people leaving jobs and new people entering the workforce—economists use something called the “natural rate” of unemployment. Broadly, it's the optimal rate in a fully functioning economy. I put the natural rate at 5%, and we've reached that threshold. I expect the unemployment rate to continue to edge down below the natural rate, to about 4.5%, by midyear or so.

Of course, the unemployment rate alone doesn't tell the whole story. There are other factors and measures that reflect the complexities of the American workforce and how people have fared in the aftermath of the recession.

Most discussed—and for many, the most worrisome—is the labor force participation rate, which is still significantly lower than it has been in the past. On the surface, this can appear alarming. But digging deeper it is, by and large, explicable and relatively benign.

As a reminder: The “labor force” is made up of people who are either employed or unemployed but actively looking for work. The labor force participation rate divides that group by the total working-age population—that is, everyone over the age of 16. It's a very basic ratio that's affected by myriad factors. In the '60s and '70s, for instance, women entered the workforce in greater numbers and the labor force participation rate shot up.

Since the start of the recession, the participation rate has come down substantially. Some people are concerned that this is indicative of a portion of society that was hit hard by the recession and sidelined in the recovery—people who want to work but have given up looking, either out of pessimism over the job market or fear that an extended time out of work has rendered them fundamentally unemployable.

But much of the decline in the labor force participation rate can be explained not by disheartened workers, but by demographic and social shifts (Fujita 2014).

First is the aging of the population. The baby boomers are entering retirement and people are living longer. Remember, the participation rate counts *everyone* over 16, so my happily retired parents count as “out of the labor force,” even though, in their 80s, few people at that age would still be working. Second is that younger people aren't working as much as they used to. This is partly because many have extended their education or gone back to school, and fewer are working when they're there. Third is an increase in people deciding they'd rather have single-income families (Bureau of Labor Statistics 2007–14). For whatever reason, they've traded a second paycheck for spending more time at home, whether it's for child care, leisure, or simply that it's a better lifestyle fit. Each of these groups is made up of people who are not working, but doing so for personal or demographic reasons. As their numbers swell, it will, obviously, push the participation rate down.

This brings me to the question of whether there are a large number of people who will reenter the labor force and pull the participation rate back up. The “marginally attached” for instance, a group made up of people who are ready and able to work and who've searched for jobs in the past year but who aren't currently looking. The assumption would reasonably be that this group is poised to return to the labor force. However, there are reasons to doubt that we'll see much of a pickup in overall labor force participation. First off, the numbers of marginally attached people have come down a lot, falling by nearly 20% in the past year alone. In addition, my staff has found that, over the past few years, their reentry rate back into the labor force has actually fallen. When you combine this with the aging workforce, it looks unlikely that participation will rise. This is supported by other research from both within and outside the Fed System (see Krueger 2015 and Aaronson et al. 2014). Overall, the evidence suggests that, even with a quite strong economy, we aren't likely to see a significant number of people come back into the fold.

I know this has been a tough journey for a lot of people, and many are still struggling. But putting the recovery in perspective, we've come a very long way and we should be heartened by the progress. Since the dark days of late 2009, we've added over 13 million jobs, virtually all of them full-time.

Looking forward, I see a labor market that's growing ever stronger and will reach maximum employment on a broad set of measures very soon.

### **Five small words: Inflation is still too low**

The inflation side of the equation is the dark end of the street. For those of us who lived through the '70s and '80s, the idea that we need higher inflation may seem strange, but that's where we are right now. Inflation is like wine—a little bit is actually good for you. And right now our glass isn't full enough. The Fed's target rate is 2%, and inflation has been obstinately below that for 3½ years now. Over the past year, it's been only about ½%.

There are reasons for the low level of inflation, in particular the rise in the dollar and the fall in oil prices. Those effects should peter out, but they've had a downward influence on inflation at a time we've needed it to rise. Another special factor is that health-care prices have been rising much more slowly than we're used to, and that's pushing down the inflation rate as well. This is in part due to legislation that holds down payments to hospitals and other providers. These effects may prove to be transitory as well.

For formulating monetary policy and analyzing data, policymakers need to look at underlying trends. That's why I look at measures that remove the volatile components, like the trimmed mean rate (<http://www.dallasfed.org/research/pce/>) that the Dallas Fed came up with. By that measure, we're not as far from our goal as it first appears. The trimmed mean puts the underlying inflation rate for the past year at 1.7%—still below our 2% target, but not by much.

Looking ahead, as the effects of the dollar and oil prices ebb, and as the economy strengthens further, I see inflation moving back up and expect that we'll be at or near our 2% target by the end of next year.

### **It's time: Economic progress and the first rate hike**

With real progress on our goals, the conversation turned to normalizing policy. Before the first hike, that was the mystery dance: When are you raising rates? Now everyone wants to know when the second one is coming, and the third, and so on.

From my perspective, we've made remarkable progress and the economy is on the cusp of full health. The first step in bringing policy closer to normal was when we ended quantitative easing, or QE. The next was the first rise in rates, which was the right move for a few reasons.

First, Milton Friedman (1961) famously taught us that monetary policy has long and variable lags. Research shows it takes at least a year or two for it to have its full effect (Havranek and Rusnak 2013). So the decisions we make today must take aim at where we're going, not where we are. The economy is a moving target, and waiting to see the whites of inflation's eyes risked overshooting the mark.

Second, experience shows that an economy that runs too hot for too long can generate imbalances, ultimately leading to either excessive inflation or an economic correction and recession. In the 1960s and 1970s, it was runaway inflation. In the late 1990s, the expansion became increasingly fueled by euphoria

over the “new economy,” the dot-com bubble, and massive overinvestment in tech-related industries. And in the first half of the 2000s, irrational exuberance over housing sent prices spiraling far beyond fundamentals and led to massive overbuilding. Waiting too long to remove monetary accommodation hazards allowing these imbalances to grow, at great cost to our economy.

Finally, starting to raise rates allows a smoother, more gradual process of normalization. This gives us space to adjust our actions to any changes in economic conditions and avoid playing catch-up with little room for maneuver.

### **The great unknown: What should we expect from interest rates?**

In thinking about the future path of monetary policy, it’s important to keep in mind that the economy, for all its progress, still needs support from an accommodative stance. We don’t need the extraordinarily accommodative policy that has characterized the past several years, but the headwinds we’re facing—weakness abroad, for instance, and its impact on the dollar, or the continued slow recovery in housing construction—call for a continued push. Not with a bulldozer, but a steady nudge.

This view of a gradual reduction in monetary accommodation is seen in the Federal Open Market Committee’s own projections of interest rates. The median projection of FOMC participants from our December meeting indicates four hikes being appropriate in 2016 and 2017. This path is generally consistent with forecasts from the private sector, such as the Blue Chip survey. That’s about half the pace of the last tightening cycle, 2004–06. Of course, it’s not a black-and-white world, so actual decisions will depend on real-time economic developments as well as any changes in the outlook. But if my aim is true and things evolve as expected, the path will look more like an airplane’s gentle ascension than a rocket shooting straight up: At that pace it will take nearly three years before the funds rate reaches a stable level. But even then, our cruising altitude, as it were, likely won’t be as high as in the past.

As we make our way back to normal, we should consider what “normal” will look like for interest rates. After the financial crisis and the global recession that followed, short-term interest rates around the world were pushed close to the zero mark—in some cases, less than zero—in an effort by central banks to revive their economies. But in that time, we may have seen a longer-run shift in the level of interest rates themselves. What can we expect from interest rates once the global economy is fully healed? Are expectations that a post-recession world will return to the exact size and shape of the go-go years that led up to it? Or is the future unlikely to repeat the past?

The evidence is building that the new normal for interest rates is quite a bit lower than anyone in this room is accustomed to (Laubach and Williams 2015 and Williams 2015).

Economists view this via the concept of the “neutral” funds rate—that is, the federal funds rate that balances monetary policy so that it’s neither accommodative nor contractionary. Hence the “neutral.” I find it useful to focus on the longer-run value of the neutral rate, called  $r^*$  (r-star). R-star is essentially what inflation-adjusted interest rates will be once the economy’s back to full strength; we can align the funds rate with it, but we can’t control its underlying level. I think of it as a benchmark we can expect once we’ve recovered from the recession in all aspects, not just in the United States, but in Europe and other mature economies as they come back to full health.

Global supply and demand has made real interest rates very low and they appear poised to stay that way (Council of Economic Advisers 2015 and International Monetary Fund 2014). The particulars are myriad and fairly wonky aspects of the supply and demand of funds and the resulting global savings glut, but the basics are familiar to the banking world. These include emerging market economies' desire to have large reserves of safe assets to help protect them in the event of an economic crisis, slower trend global growth, and shifting demographics. There are other factors as well, on both the supply and demand sides, but the upshot is, the indication from global economic trends is that interest rates are going to stay lower than we've come to expect in the past.

That doesn't mean they'll be zero, but compared with the pre-recession "normal" funds rate of, say, between 4 and 4.5%, we may now see the underlying r-star guiding us towards a fed funds rate of around 3–3½% instead. In fact, some estimates, including those based on my own research with Thomas Laubach, indicate it could even be below 3%.

So banks may see it as something of a poisoned rose: The Fed has started the process of raising interest rates, but the path to normal will be gradual and rates are likely to be low by historical standards. Along the way, QE, both in the United States and abroad, has also put downward pressure on long-term interest rates, which will, in turn, help flatten the yield curve as well (Williams 2014 and Engen, Laubach, and Reifschneider 2015).

That brings me to the related question of the plans for the Fed's over \$4 trillion balance sheet. We have made clear in our communication—and let me reiterate—that we still have a ways to go before we start to unwind it. For the time being, we're maintaining its size through reinvestment, so that the first steps in removing monetary accommodation occur slowly and gradually, via the funds rate only. This will continue until normalization of the funds rate is well under way. After that, our plan is to shrink the balance sheet "organically," if you will, through the maturation of the assets. It's likely going to take at least six years to get the balance sheet back to normal, which is in keeping with the overall approach to removing accommodation gradually (Carpenter et al. 2015).

## Conclusion

Ultimately, economic forces like r-star are going to affect the way monetary policy is conducted. The other end of the telescope shows an environment that will be, in the medium term, different from what bankers and everyone else are used to.

Which means that, all in all, things are looking good. It's been a tough climb back up after the economic fall, but we've made tremendous progress and we're getting ever closer to our goals.

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