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## **Exercising Caution in Normalizing Monetary Policy**

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**Charles L. Evans  
President and Chief Executive Officer  
Federal Reserve Bank of Chicago**

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FEDERAL RESERVE BANK OF CHICAGO

The views expressed today are my own and not necessarily  
Those of the Federal Reserve System or the FOMC.

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Good afternoon.

Thank you for inviting me to this year's Economic Growth, Monetary Policy and Structural Reform: Challenges Ahead for the U.S. and Europe conference.

Today, I would like to share my outlook for the U.S. economy and my assessment of appropriate monetary policy. Let me note that my comments reflect my own views and do not necessarily represent the views of my colleagues on the Federal Open Market Committee (FOMC) or within the Federal Reserve System.

To give you the punch line, I think the outlook for growth in economic activity and the labor market is good. However, inflation is too low, and I expect it will be so for some time. Based on this forecast, and the risks to the outlook, I think the FOMC should refrain from raising the federal funds rate (our traditional short-term interest rate policy tool) until there is much greater confidence that inflation one or two years ahead will be at our 2 percent target. I see no compelling reason for us to be in a hurry to tighten financial conditions until then.

Now, for the details.

### **Nearing Our Employment Goal**

Following years of false starts and tepid growth, economic activity advanced at a solid pace over the past two years. Real gross domestic product (GDP) increased at an average rate of about 2-1/2 percent over this time, and growth was quite rapid in the second half of 2014. True, growth stalled in the first quarter of this year, but this appears to reflect in some part transitory factors. The underlying fundamentals still look good. Although the current quarter might be more moderate, I expect it to pick up and average 2-1/2 to 3 percent range over the subsequent couple of years.

As output growth has improved, so has the labor market. The average monthly increase in payroll employment was about 260,000 per month in 2014 and early 2015. This is well above the average monthly gain of roughly 190,000 over the previous two years. Job growth was subdued in March, but recovered to a healthy 223,000 in April. In my estimation, with 2-1/2 to 3 percent output growth, average job gains should remain above the 200,000 mark for a while longer before gradually moving back down toward its longer-run trend.

Meanwhile, the unemployment rate has declined significantly. In each of the past four years, it has fallen by about 1 percentage point and now stands at 5.4 percent. This is

terrific progress, but it remains somewhat higher than what a normal, sustainable unemployment rate should be.

Four times a year, my colleagues and I are asked to submit forecasts of real GDP growth, the unemployment rate and inflation over the next three years and for the longer run.<sup>1</sup> Last March, most FOMC participants' estimates for the longer-run normal rate of unemployment fell in the range of 5.0 percent to 5.2 percent. Based in part on the extensive analysis done by my staff on demographic and other changes in the composition of the labor force, my current thinking is that the number is at the bottom of that range.<sup>2</sup> So, I think we are still about 1/2 of a percentage point above the longer-run normal rate of unemployment.

Furthermore, some other indicators suggest that there is more slack in labor markets than one would infer from the unemployment rate alone. For example, the number of people who are employed part time for economic reasons remains unusually high.<sup>3</sup> If the economy were closer to full employment, these individuals would have more opportunities to find full-time jobs. Moreover, wage growth has been much lower than one would expect if labor markets were closer to normal.

Even with these caveats, it's clear that economic activity and labor markets have improved significantly over the past two years. And monetary policy has been an important factor in helping the economy achieve this progress.

### **Missing Our Inflation Goal**

Things are different with inflation.

Since 2012, the FOMC has set an explicit longer-run goal for inflation of 2 percent as measured by the year-over-year rate of change in the Price Index for Personal Consumption Expenditures (PCE).<sup>4</sup> Overall, inflation has been running well below this rate for quite some time, averaging about 1-1/2 percent for the past six years. Currently, core PCE inflation, which is a better indicator of underlying trends, was 1.3 percent over the past year.<sup>5</sup> Of course, there are other measures of inflation, such as the well-known Consumer Price Index (CPI).<sup>6</sup> CPI inflation runs 1/4 to 1/2 of a percentage point higher than PCE measure on average because of differences in the methodologies used to

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<sup>1</sup> See Federal Open Market Committee (2015a), which features the most recent results from the Summary of Economic Projections. The longer-run projections represent each participant's assessment of where the variables would be under appropriate policy and in the absence of any economic shocks. The full range of projections for the longer-run unemployment rate is currently 4.9 percent to 5.8 percent.

<sup>2</sup> See Aaronson et al. (2014, 2015) — recent research by Chicago Fed staff on labor force participation rates and the natural rate of unemployment.

<sup>3</sup> During the recession, the share of labor force employed part time for economic reasons increased sharply and the labor force participation rate declined significantly, creating large gaps with respect to their trend levels. Currently, these gaps are still sizable.

<sup>4</sup> This was first acknowledged in Federal Open Market Committee (2012). It remains in the most recent statement of our longer-run goals; see Federal Open Market Committee (2015b).

<sup>5</sup> Core PCE inflation strips out the volatile energy and food prices and thus provides a more accurate reading on underlying inflation trends than overall PCE inflation. I discuss this measure again later.

<sup>6</sup> The CPI differs from the PCE deflator in methodology and the basket of goods and services it tracks.

compute the indexes. So a 2 percent goal for PCE inflation equates to something closer to a 2-1/2 percent goal in terms of CPI inflation. By this measure, too, inflation is falling well short of our goal, as the CPI has averaged less than 2 percent since 2008.

Simply put, inflation is too low. Just as too-high inflation can impose significant costs on the economy, so can too-low inflation. When prices and, along with them, wages and incomes rise at a slower rate than anticipated, borrowers' fixed monthly loan obligations become more burdensome. These costs now have been accumulating for the past six-plus years that inflation has underrun the FOMC's 2 percent target that borrowers had relied upon. To meet these higher real costs, borrowers must cut back on other spending, reducing aggregate demand and ultimately weighing on economic activity. This is an important reason why we need to achieve our 2 percent inflation objective.

Looking ahead, I am anticipating inflation to rise at a pretty gradual pace, reaching our 2 percent objective only in 2018. That's a pretty slow increase. Furthermore, there is downside risk to my projection.

Some of this risk surrounds two factors that have held down inflation recently. First, there is the stronger dollar, which has reduced the prices of imported products we buy in the United States. Second, the dramatic decline in oil prices has lowered the costs of energy-related items and bolstered the real spending capacity of consumers and businesses.

If lower import and energy prices result in just a one-time drop in consumer prices, then they would not be an issue for monetary policymakers to worry about. But if the lower pricing gets embedded more persistently in the longer-run inflationary expectations of households and businesses, it would be even harder to get inflation back to its 2 percent target. This is not in my baseline forecast, but such a drop in inflation expectations is a downside risk that we need to be on the watch for.

I don't have to remind this audience that low inflation is a global phenomenon. In part, this reflects slower global growth and disinflationary pressures in most advanced economies. Of course, a global slowdown also presents some downside risk for growth in the United States as well.

### **An Appropriate Path for Monetary Policy**

What does this all mean for my assessment of appropriate monetary policy?

Along with projections for the key metrics of the economy that I mentioned earlier, each FOMC participant provides his or her assumption for the appropriate path of the federal funds rate that underlies their economic forecasts. In the latest projections, made last March, 15 of the 17 FOMC participants expected that it would be appropriate to raise rates sometime this year.

Looking further ahead, I note that the median path for the target fed funds rate is consistent with roughly a 25 basis point increase at every other FOMC meeting for the

next year and a half. This is a considerably slower, more gradual pace of rate increases than those implemented in 2004 through 2006, the last time the Fed normalized policy following an extended period of very low interest rates.

Financial market participants expect an even slower pace of rate hikes than FOMC participants do. The most recent reading on market expectations puts the target rate at the end of 2016 at around 1 percent — a full percentage point below the median FOMC forecast.

In my view, it likely will not be appropriate to begin raising the fed funds rate until sometime in early 2016. Economic activity appears to be on a solid, sustainable growth path, which, on its own, would support a rate hike soon. However, the weak first-quarter data do give me pause, and I would like to see confirmation that they are indeed a transitory aberration. Furthermore, and most important, inflation is low and is expected to remain low for some time.

A prudent risk-management and goal-oriented approach to monetary policy also prescribes waiting to increase the fed funds rate.<sup>7</sup> One risk we face is that we begin to raise rates only to learn that we have misjudged the strength of the economy. In order to rekindle growth and boost inflation, we would have to cut rates back to zero and possibly resort to unconventional, second-best policy tools. It could take some time, then, to get back out of the mess. In contrast, if we wait too long to raise rates, we face the opposite risk of inflation rising too quickly. Here, though, we could likely keep inflation in check with moderate increases in interest rates. Furthermore, there aren't any serious costs of modestly overshooting our inflation target — particularly considering how long inflation has been below our target. It simply would be a natural manifestation of the Federal Reserve's symmetric inflation target.

This risk-management approach is essential in the presence of substantial uncertainty about the equilibrium real rate of interest, which is also often referred to as the neutral or natural interest rate. Often associated with the Swedish economist Knut Wicksell, this is the inflation-adjusted interest rate that equates demand to supply when the economy operates at full employment of labor and productive capital and inflation is at its long-run target. One can gauge the stance of monetary policy by comparing the level of actual interest rate to this equilibrium rate. When the actual inflation-adjusted federal funds rate is below the equilibrium rate, policy is accommodative, and we would expect inflation pressures to build. When the actual federal funds rate is higher than the equilibrium rate, policy is restrictive, and there is downward pressure on inflation. The bigger the gap is between the actual and equilibrium rates, the greater are these pressures.

When the economy is below its productive capacity, the Wicksellian rate is low. For instance, during the financial crisis, the equilibrium real interest rate was very low — indeed quite negative — reflecting the dearth of spending opportunities that looked

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<sup>7</sup> I have made the case for patience in earlier speeches. See, for example, Evans (2014).

attractive to households, businesses and the financial sector, all of which needed to rebuild scarred balance sheets. Unless actual real rates were reduced, financial conditions would have been extraordinarily restrictive. To try to drive actual interest rates toward the unusually low equilibrium rate, monetary policy had to be as accommodative as possible — however, the zero lower bound (ZLB) on interest rates prevented us from actually getting there.

Over time, as fundamentals have improved and the economy has worked through the scars from the financial crisis, the equilibrium real rate has risen. And it should continue to rise as the healing process continues. The key question is this: Has the Wicksellian rate risen enough so that our currently low federal funds rate is now finally providing too much policy accommodation?

I think the answer is no.

If the equilibrium real interest rate were observable, the job of central bankers would be much easier. But, it is not. There is a great deal of uncertainty over the current equilibrium real rate. It could be lower or higher than the level needed to justify a rate hike. However, there are a number of simple observations that suggest the equilibrium rate is still low enough — that is, the fundamentals of the economy have not improved enough — that the current level of the federal funds rate is not overly accommodative. As I noted before, resource slack still remains. There is no meaningful upward momentum in inflation. And instead of investing, businesses are sitting on piles of cash or distributing it to stockholders: This is a sign that they think the real rate of return on prospective investment projects is quite low.

Indeed, one could argue that we currently do not have enough policy accommodation in place. As I mentioned earlier, my forecast does not see inflation rising to our 2 percent target until 2018 — for me, that's too far down the road given how long we have underrun our target. If policy truly were highly accommodative, we'd be getting to our inflation target sooner. Furthermore, I think policy should be sufficiently accommodative so that the probability that PCE inflation is at least 2 percent within two years is greater than a 50-50 coin flip.

Another way to state this is that the odds should favor modestly overshooting our 2 percent target sometime in the medium term. This is not a radical idea; let me expand on this point.

A symmetric 2 percent inflation target means that over long periods of time, we should expect that inflation will average 2 percent. At the point when one is confident that inflation will be at our 2 percent objective, the probability that inflation will run above 2 percent ought to equal the probability that it will run below 2 percent. So given that we are starting below target and that we have been so for six years, it makes sense to favor some overshooting in order to have sufficient confidence that we actually will achieve our objective in a reasonable amount of time. This is a defining characteristic of a symmetric inflation objective.

What is the worry if we spend ten years from 2009 through 2018 with inflation below 2 percent? Well, if we do, the public would likely infer that 2 percent is not a symmetric target but rather the upper end of our inflation tolerance. In that case, over the long run, the public would see the odds of inflation falling below 2 percent well exceeding the odds of it running above 2 percent. There could be serious policy costs from this outcome. Importantly, addressing adverse economic shocks could become problematic. Let me describe the economic mechanism in a bit more detail.

Suppose we hit bad times, the economy contracts and inflation softens well below 2 percent — such as we've seen over the past six years. Here, it would be appropriate for the Fed to provide ample monetary accommodation. If the public doubts our resolve to bring low inflation back up to target, it will expect inflation to run below 2 percent for a long time. Also, if markets don't believe we will set policy to aggressively boost inflation, the expected future path for the nominal federal funds rate will be higher than it otherwise would be. Of course, expectations of lower inflation and higher future short-term nominal interest rates are both going to translate directly into higher current longer-maturity real interest rates; these, in turn, are the relevant costs of capital consideration for housing, most business capital spending projects and many asset prices. So by failing to embrace a symmetric inflation target, we've made monetary policy less accommodative — hardly the outcome we need if we find ourselves in tough economic times.

Sometimes in public forums, I hear the comment, "Well, 1 percent inflation is good for consumers and savers. If borrowing costs are too high, just cut the nominal funds rate more to offset these effects." The problem is you can only cut the fed funds rate to zero. If inflation were 1 percent, nominal interest rates would likely be very low as well, so you just wouldn't have that much room to provide a great deal of accommodation if you really needed to do so.

One factor that influenced the FOMC's decision to select an inflation target of 2 percent was research that showed a low likelihood of hitting the zero lower bound on the federal funds rate under this 2 percent target.<sup>8</sup> And simulations showed that if we did hit the bound, our time there would be fairly short-lived. But this research was based on a symmetric 2 percent inflation objective. Symmetry is crucial. At our inflation objective, we need the probability that inflation is above 2 percent to be the same as the probability it will be below 2 percent. Without symmetry and, hence, with an inflation objective effectively below 2 percent, the odds of hitting the ZLB would be greater and the time spent there would be longer. Our experience of the past six years illustrates how undesirable such an outcome would be.

For me, the way to avoid a loss of credibility about our symmetric target is to make sure we have enough accommodation in place to achieve our 2 percent objective in a timely manner. Today, this policy would mean leaving the fed funds rate at zero until I was more confident that the equilibrium real rate is well north of the actual rate and that the

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<sup>8</sup> For instance, see Coenen, Orphanides and Wieland (2004) and Reifschneider and Williams (2000).

equilibrium rate was rising smartly. And to establish adequate upward momentum in inflation, I think it likely also would be appropriate to increase the fed funds rate target only gradually for a while after the first rate hike.

Of course, there are also substantial uncertainties over the inflation outlook. Inflation is notoriously hard to forecast. Indeed, logically, because the equilibrium real interest rate has a strong bearing on the inflation outlook, the uncertainty over it that I mentioned earlier goes hand in hand with the uncertainty in inflation forecasting. We can't be confident that inflation is headed back up to 2 percent unless we are also confident that our policy setting relative to the equilibrium real rate path is accommodative enough to return inflation to target.

Of course, the forecast and equilibrium rate uncertainty also means we can't fine-tune the future path for inflation. Naturally, any policy that gets the probability of hitting 2 percent in a timely fashion high enough is going to be boosting the probability that inflation will spend some time moderately above 2 percent as well. But as I argued earlier, I don't see this as costly. Indeed, considering how long inflation has been below target, adopting a policy that allows the possibility of such an overshoot actually seems necessary to support the credibility of our symmetric target.

### **Markers of Progress**

Going forward, I will be looking for several important markers to assess if the equilibrium real rate has risen to the point that we're likely to achieve our policy goals in a timely fashion. Only then will I be confident enough to support the start of the policy normalization process.

First, it goes without saying that we need to see continued improvements in labor markets and solid GDP growth. Even though we have made great strides, the economy has not yet returned to full employment, and we must be confident that growth will be adequate to get there.

Second, we should feel quite confident that inflation is going to reach our goal of 2 percent on a sustainable basis within a year or two. Of course, given the lags in how monetary policy influences the economy, this means the first rate hike will occur based on a forecast. There are a lot of elements in play, and we have to be humble about our ability to forecast inflation. This means we need an array of evidence to be confident that inflation will rise.

All else being equal, a tighter labor market has historically been associated with higher inflation, and so further improvements relative to our employment mandate should also be consistent with a forecast that achieves our inflation mandate.<sup>9</sup>

Another simple but powerful signal will be if we start seeing a pickup in the year-over-year rate of change in the price index for PCE inflation excluding food and energy. This

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<sup>9</sup> For more details on the Federal Reserve's dual mandate, see <https://www.chicagofed.org/publications/speeches/our-dual-mandate>.



index may be about the single best predictor of where total inflation will be a year from now. So I would feel more confident about my inflation outlook if core PCE inflation began to rise in a sustainable fashion.

I would also want to see stronger growth in wages and other forms of labor compensation. Wage growth has been very weak for quite some time, averaging only 2 to 2-1/2 percent per year for the past five years. Usually, productivity growth of 1 to 2 percent annually and 2 percent inflation would produce wage growth in the range of 3 to 4 percent per year. Wage and compensation growth closer to this range is an important sign not just of diminished labor market slack, but also of cost increases more consistent with an economy running closer to a 2 percent inflation rate. Of course, a lot of factors — some of which we don't have a good handle on right now — go into wage determination, and in the past, rising inflation has tended to precede rising wages. Nonetheless, faster wage growth would be good corroborating evidence that inflation was on its way up.

Another signal that would make me more confident relates to measures of inflation expectations, which are an important determinant of actual inflation. To reach our 2 percent inflation target, the public and financial markets need to expect that inflation will run at 2 percent over the medium term. Of particular concern on this score is the fact that the compensation that financial market participants require for taking on inflation risk has moved down considerably over the past year. There are a few reasons why inflation compensation could be low. Benign technical financial market considerations are one possibility. However, it could be that people are expecting inflation to be low. Alternatively, the cost to investors of higher inflation might have fallen or the cost of low inflation might have risen. Neither depressed inflation expectations nor higher costs of low inflation bode well for the outlook. So I also would feel more confident about the inflation outlook if either inflation compensation picked back up to previous levels or we had more evidence that the drop in compensation was due to benign technical factors.

### **Current Circumstances Call for Caution**

In summary, I think we should be cautious in the timing of the first rate-hike and our pace of policy normalization thereafter. My current view is that my economic outlook and my assessment of the balance of risks will evolve in such a way that I likely will not feel confident enough to begin to raise rates until early next year. But there is no prescribed timeline that must be adhered to — and no pre-set script to follow — other than that we should let economic conditions and risks to the outlook be our guides. Given uncomfortably low inflation and uncertainties about the economic environment, I see significant risks, but few benefits, to increasing interest rates prematurely.

Let's be confident that we will achieve both dual mandate goals within a reasonable period of time before taking actions that could undermine the very progress we seek.

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