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## **On Risk and Credibility in Monetary Policy**

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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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## Introduction and synopsis

Today, I'd like to discuss my outlook for the U.S. economy and my views on risk management and credibility in monetary policy. Of course, my comments reflect my own views and not necessarily those of the Federal Reserve System or the Federal Open Market Committee (FOMC).

Let me begin by laying out my main points.

- We made good progress toward our dual mandate goals in 2018. Growth was strong, the unemployment rate declined further, and inflation picked up. Looking ahead, the fundamentals for growth in the U.S. remain good. If the economy performs as I expect, in 2019 we should see growth close to trend and continued healthy labor markets. However, core inflation has retreated to relatively low levels over the past three months, elevating my concerns over the outlook for inflation.
- The outlook for the U.S. economy also faces many uncertainties and risks. Financial market developments of late last year and continued uncertainties regarding growth abroad and trade policy have cumulated to increase the downside risks to growth. Indeed, consumption and business fixed investment were quite soft in the first quarter, despite the healthy 3.2 percent growth in

overall activity. Moreover, there is the distinct risk that inflation expectations are too low and will be slow to recover to levels that are consistent with our symmetric 2 percent goal.

- Of course, there could be upside surprises. One would be the absence of any additional drag on activity from the shocks I just noted. This is certainly a weak positive. Another would be a resurgence of strong momentum in consumer and business spending. On the price front, pressures on productive resources could boost inflation more than I currently expect. Any of these various crosscurrents could pull the economy in a different direction than my baseline expectations. And while the risks from the downside scenarios do not seem as pronounced as they did a couple of months ago, I still feel they loom larger than those from the upside ones.
- In situations like today, when there is heightened uncertainty, best practices in risk management dictate taking a prudent approach to policy. As recent FOMC statements have noted, the Committee will be patient in assessing the implications of these crosscurrents for the economic outlook and will determine future adjustments to policy accordingly.<sup>1</sup> This type of wait-and-see approach to policy when faced with heightened uncertainty is not new. As I have discussed before, the FOMC has adopted it many times in the past, and it has served the U.S. economy well.

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<sup>1</sup> See, for example, Federal Open Market Committee (2019a).

- Risk management also is an important consideration in setting longer-term monetary policy frameworks and strategies. The FOMC currently is reviewing a number of such structural questions, ranging from the maturity structure of our balance sheet to ways for better achieving our inflation target. I will discuss how I see risk management and policy credibility factoring into these important decisions—particularly the symmetry of our inflation target.

## **Outlook**

Now I will provide a few more details. Let me start with the economic outlook. Twenty eighteen was a very strong year for the U.S. economy, with growth in gross domestic product (GDP) coming in at 3.0 percent. This is significantly above the economy's long-run potential growth rate, which my staff estimates to be a little below 2 percent. It is also significantly above both what growth had averaged over the previous eight years and what most forecasters—including me and members of this audience—were expecting at the beginning of last year.

Along with this growth, labor markets continued to strengthen last year, adding more than 2.6 million jobs. This vibrancy has continued, with job gains averaging 205,000 per month so far in 2019. This is significantly above trend payroll growth. And, at 3.6 percent, the unemployment rate in April was well below the 4.3 percent rate that is the median FOMC participant's current assessment of full employment.

What about inflation? After running under our 2 percent objective for almost a decade, core PCE inflation picked up to 2 percent in March 2018 and essentially remained there

for the rest of the year.<sup>2</sup> This was a very welcome change. However, since December, core consumer inflation has fallen and is now just a bit above 1-1/2 percent. Although some of this drop may be due to temporary special factors, we don't want to be too dismissive of this development. Underlying inflation trends may be mired below 2 percent; indeed, several measures of inflation expectations remain lower than they were during times when inflation was more consistently in line with our objective. We cannot declare victory yet on our inflation mandate. I will elaborate on the long-run implications of this later.

Looking ahead, supportive fundamentals lead me—and most other forecasters—to expect growth in 2019 to be in the neighborhood of potential. Importantly, unemployment is low and wage growth is healthy. The associated income growth and backing for consumer sentiment should generate healthy gains in household spending. Business spending should follow suit to satisfy household demand.

There were numerous concerns about this outlook last winter. The main reason is that a number of downside risks emerged late last year. On the international front, foreign growth in 2018 slowed from a stronger pace in 2017. And recent forecasts are for a further slowdown this year.<sup>3</sup> There also is a concern that events such as a disorderly Brexit could have important spillovers to U.S. financial markets. U.S. trade negotiations with China and other trading partners add another layer of uncertainty.

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<sup>2</sup> The FOMC's symmetric target is measured by the annual change in the Price Index for Personal Consumption Expenditures (PCE). Core inflation—which strips out the volatile food and energy sectors—cuts through the statistical noise and is a better gauge of sustained inflationary pressures and where inflation is headed in the future.

<sup>3</sup> See, for example, Organisation for Economic Co-operation and Development (2019) and International Monetary Fund (2019).

These issues generated quite a bit of volatility in financial markets beginning last October. However, investors appear to be calmer today, and most financial indicators have improved noticeably. Consumer spending, housing, and business investment all were soft in the first quarter, as much of the outsized growth in GDP was due to inventories and net exports. But monthly indicators picked up as we moved through the quarter, suggesting firmer consumption and capital expenditures going forward. So, overall, the risks to growth appear less pronounced than they did in the winter.

For some time now, most forecasters and I have been predicting slower growth for 2019 as a whole, reflecting the combined effects of waning fiscal stimulus and removal of monetary policy accommodation. Factoring in the latest news, my current forecast is for growth to be around 2 to 2-1/4 percent this year. Now, this is actually a bit above my view of the economy's long-run growth potential, which is 1.8 percent. So we're not looking at bad numbers; still, the economy won't feel like it is doing very well compared with last year's very strong performance. In addition, with appropriate monetary policy, I expect core inflation to recover to levels consistent with our 2 percent objective over the medium term. But, as I just noted, I am uneasy about the inflation outlook.

All told, my forecast of the economy is generally consistent with the median projections made by my colleagues on the FOMC, which were released following our March meeting.<sup>4</sup>

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<sup>4</sup> Four times a year the FOMC releases its Summary of Economic Projections, which presents FOMC participants' forecasts of key economic variables over the next three years and for the longer run. Participants also provide their assessments of the appropriate monetary policy that supports those forecasts. See Federal Open Market Committee (2019c).

## What about monetary policy?

The FOMC must always weigh crosscurrents and uncertainties. And today there are many.

- Are the developments I just described consistent with growth simply moderating from a strong 2018 to a rate closer to the economy's sustainable potential—as in my baseline forecast? Or are they signaling a more substantial slowdown?
- What about inflation? What is keeping it so low despite low unemployment? And will these factors continue to influence pricing dynamics?
- As for policy, is the federal funds rate close enough to neutral to support our goals? Or is policy exerting a different impetus to activity than we currently think?

Given the uncertainty over the answers to these questions, the FOMC has decided to pause and take time to assess the economic environment to see how these various issues play out. If growth runs close to or somewhat above its potential and inflation turns around with strong upward momentum, then some further rate increases may be appropriate over time to ensure that the economy settles in on its long-run sustainable growth path and that inflation runs symmetrically about our 2 percent target. In this scenario, the path for rates will depend crucially on any signals of an acceleration in core inflation. Frankly, though, given how muted inflationary pressures appear today, core PCE inflation rising to 2-1/4 to 2-1/2 percent is not a big concern to me at the moment. It seems unlikely, especially on a sustained basis. In contrast, if activity softens more than expected or if inflation and inflation expectations continue to run too low, then policy may have to be left on hold—or perhaps even loosened—to provide the

appropriate accommodation to obtain our objectives. As we often say, policy will be data dependent.

### **Managing near-term risks**

In explaining the pause in policy at his January press conference, Chair Powell noted that given the uncertainties we face today, commonsense risk management suggests a patient, wait-and-see approach regarding future policy changes.<sup>5</sup> FOMC communications since January have reinforced this sentiment.

Such a risk-management approach has served policymakers well in the past. But what do we mean by risk management? How does the current situation compare with what we have done in the past?

The Fed sets monetary policy seeking to achieve the dual mandate of maximum employment and symmetric 2 percent inflation, with both goals being equally important. A key baseline for thinking about policy is the path for the federal funds rate that is most likely to align future output and inflation with these policy goals.

But the world is an uncertain place. Unforeseen events will cause even the most carefully constructed forecast to go astray. Risk management entails thinking about what could go wrong with the forecast and then judging if policy should be adjusted from the baseline one way or the other in light of alternative scenarios. In other words, at times, we may want to adjust policy as insurance against bad outcomes.

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<sup>5</sup> Powell (2019).

Economic theory provides guidance for when risk management makes sense. One example is when policy losses are asymmetric. That is, when we find ourselves in a situation where the costs of output or inflation falling on one side of its expected path outweigh the costs of falling on the other side. Another example is when the range of possible shocks that could move the economy from its modal path is skewed.

Uncertainties or asymmetries in how policy tools affect the economy can also enter the picture.

Monetary theory tells us that the appropriate policy response to these situations depends on the details. In some cases, heightened uncertainty dictates moving cautiously—a result known as the Brainard principle.<sup>6</sup> In other cases, policy should move away from the baseline path to reduce the odds of a miss in the more costly direction. At other times, decision theory points to situations where the best policy response is to move aggressively to preempt the potential damage that could come from a particularly adverse event.

Of course, the prescriptions from economic theory don't always translate cleanly into real-world policymaking. But it's safe to say that in some form or other, risk management has often influenced the FOMC's decisions.

Back in 2015, I worked on a research project with three of my Federal Reserve Bank of Chicago colleagues in which we studied the minutes of FOMC meetings for clear references to risk management.<sup>7</sup> We looked for instances when the minutes

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<sup>6</sup> Brainard (1967).

<sup>7</sup> Evans et al. (2015).

commented explicitly about adjustments to the policy path due to uncertainty over the outlook or as insurance against particular risks. We found such references in about one-third of the 128 FOMC meetings between 1993 and 2008. I would note, too, that not all of these resulted in policy being more accommodative than it otherwise would have been; about one-quarter of the occurrences seemed to be associated with tighter policy.

Let me give you a couple of examples.

One is the 1997–98 period. Through much of 1997, the FOMC’s policy directive maintained a bias indicating that it was more likely to raise rates to battle inflationary pressures than it was to lower them. However, that fall, with the Asian financial crisis still unfolding, the Committee changed to a symmetric directive. While many members thought the next move was likely a tightening, to quote the December 1997 minutes, “most members agreed that the need for such a policy adjustment did not appear to be imminent, and that prevailing near-term uncertainties warranted a cautious wait-and-see policy posture.”<sup>8</sup> Sound familiar?

Later, in the autumn of 1998, the fallout on domestic financial conditions from the Russian default led to a downgrading of the economic outlook and an aggressive 75 basis point easing in the funds rate over a two-month period. When making the first of those cuts, the FOMC noted that easing would “provide added insurance against the risk of a further worsening in financial conditions and a related curtailment in the availability of credit to many borrowers.”<sup>9</sup>

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<sup>8</sup> Federal Open Market Committee (1998b).

<sup>9</sup> Federal Open Market Committee (1998a).

How did this risk-management strategy turn out? In the end, the economy weathered the situation well. Then, productivity accelerated sharply, and by early 1999 growth was on a firm footing. Subsequently, the FOMC raised rates by a cumulative 175 basis points by May of 2000.

The second example is more recent. In December 2015, after nearly seven years with the federal funds rate at its effective lower bound, the economic recovery had progressed enough for the Fed to make its first rate hike. At that time, the median forecast in our Summary of Economic Projections envisioned four 25 basis point rate increases in 2016—with expectations generally for one hike each quarter.<sup>10</sup>

However, early in 2016 concerns about global growth and a related tightening in financial conditions posed downside risks to the forecast. Furthermore, as noted in the March 2016 minutes, the FOMC was well aware of an important policy asymmetry.<sup>11</sup> Namely, with rates close to their effective lower bound, there was little that conventional policy could do to offset a material weakening in the outlook. But the Fed could easily raise rates if the economy unexpectedly overheated. In many participants' views, this policy asymmetry made it prudent to wait for additional confirmation that the recovery was on track before reducing accommodation further. Note that this is exactly how economic theory tells us policymakers should respond when faced with this asymmetric policy uncertainty.

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<sup>10</sup> Federal Open Market Committee (2015).

<sup>11</sup> Federal Open Market Committee (2016).

In the end, in response to these shocks plus others later in the year, 2016 growth did come in weaker than FOMC participants had expected in late 2015. Policy remained on hold until December 2016, when growth and inflation appeared to have regained momentum. And you know the rest of the story from there.

The risk-management posture the FOMC is taking today is not unusual. It has served us well in similar situations in the past. Whether this leads to further rate hikes later this year or not will depend on how the current uncertainties are resolved. But even then, in some form or another, risk management will be a key element of our decision-making. To quote former Chair Greenspan, “The conduct of monetary policy in the United States has come to involve, at its core, crucial elements of risk management.”<sup>12</sup>

### **Longer-term risks and the composition of the balance sheet**

Dealing with uncertainty and managing risk can come in many forms. But it always entails studying the problem from many angles and thinking about what could go wrong. This is true not just for immediate policy questions, but also when we consider longer-term strategic issues.

One such strategic issue the FOMC faces today concerns the size and composition of our balance sheet in the long run. As we announced in March, the FOMC intends to end the normalization of the balance in September.<sup>13</sup> We also agreed that in the long run we should go back to holding primarily Treasury securities in our portfolio.

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<sup>12</sup> Greenspan (2004).

<sup>13</sup> Federal Open Market Committee (2019b).

But the FOMC still has to decide on the maturity structure of that portfolio. Today, the Fed holds more longer-term assets than it did prior to the crisis. During the crisis, when faced with the zero lower bound (ZLB) on the federal funds rate, the FOMC worked to lower long-term interest rates by purchasing long-term assets and by swapping short-term Treasuries for longer-term ones.<sup>14</sup> The legacy of these actions is that the average duration of assets on the Fed's balance sheet is currently about five and a half years.<sup>15</sup> Before the crisis, it was two and a half to three years.<sup>16</sup>

There are many issues to ponder when selecting the final maturity structure of our portfolio. The Fed could return to the pre-crisis framework and hold securities roughly aligned with the maturity composition of Treasuries outstanding. This is sometimes referred to as holding a neutral balance sheet. Or, as some have suggested, we could move to holding an even shorter-duration portfolio than before the crisis. So we must ask what additional benefits or costs may come with the latter alternative.

Well, if bad economic circumstances caused us to return the fed funds rate to the ZLB, a shorter duration of assets would have the benefit of allowing us to conduct a large maturity extension program (MEP) to provide additional accommodation without increasing the size of our balance sheet. So if you were concerned about expanding the size of the balance sheet through asset purchases, you might find this configuration attractive.

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<sup>14</sup> The strategy of purchasing long-term assets is sometimes referred to as quantitative easing, or QE.

<sup>15</sup> Federal Reserve Bank of New York, Markets Group (2019, p. 32).

<sup>16</sup> Federal Reserve Bank of New York, Markets Group (2012, p. 17).

But is this a choice free of so-called unintended consequences? Here is one issue to consider. Think about the neutral federal funds rate, at which policy is neither accommodative nor restrictive. This is one definition of the famous  $r^*$ . One factor determining  $r^*$  is the level of long-term interest rates. All else being equal, the Fed holding shorter-maturity assets would mean more long-duration Treasury bonds in the hands of the public, higher duration risk for market participants, and higher long-term Treasury rates. In other words, on its own, a shorter-maturity Fed portfolio would generate somewhat more restrictive financial conditions and headwinds for the economy. This means the equilibrium fed funds rate associated with a shorter-maturity portfolio would have to be lower to offset the higher long-term interest rates. In turn, a lower  $r^*$  means higher odds of hitting the zero lower bound; that is, we would have less scope to cut rates before reaching the ZLB.

Now we have to ask about the magnitudes of these effects. Quantitatively, would this effect on  $r^*$  be negligible? Or would adding the future capacity to swap short-term assets for longer-term ones to fight the ZLB actually lower  $r^*$  sufficiently to induce meaningfully higher odds of hitting the ZLB in the first place? And if it did, would it matter? Would the extra MEP ammunition be enough to offset the reduced capacity to lower rates?

Moreover, in this world with higher odds of hitting the ZLB, we could, paradoxically, end up using active balance sheet policies—the MEP—more frequently because we chose a balance sheet composition aimed at limiting the use of quantitative easing! Would this paradox pose any problems for the Fed?

Clearly, much work is needed to decide on the portfolio duration that will best help the Fed meet our dual mandate objectives. I am open-minded on this question. But managing the risks in this decision is of paramount importance in today's world, where  $r^*$  is significantly lower than before to start with and the ZLB is too close for comfort.

### **The risk of failing to meet our symmetric inflation target**

Let me finish by discussing the need to manage another longer-run strategic risk related to the zero lower bound. This is the risk generated by failing to meet the symmetry feature of our 2 percent inflation target.

It is always important for a central bank to achieve its inflation target. We are all aware of the costs of major misses on the upside. But there are important costs to downside misses as well. I am concerned about this today because over the past ten years actual inflation has consistently underrun our target. And these misses appear to have caused inflation expectations to fall below levels consistent with our 2 percent goal. A low neutral real interest rate combined with low inflation expectations means nominal interest rates are low. This increases the odds of a negative shock driving policy rates to the ZLB, where we can no longer use traditional monetary policy tools to battle low growth and disinflationary pressures.

Next month the Chicago Fed is hosting a conference on monetary policy strategy, communications, and potential alternative frameworks.<sup>17</sup> One objective motivating this review is to examine alternative monetary policy strategies that could generate better

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<sup>17</sup> Further information about this event is available online, <https://www.federalreserve.gov/conferences/conference-monetary-policy-strategy-tools-communications-20190605.htm>.

macroeconomic outcomes in a world in which the zero lower bound remains a more obstinate risk. This review promises to be very interesting and important. We are going to learn a lot.

But we already know that, theoretically, several of the alternative monetary policies under consideration—particularly price-level targeting and inflation averaging—can deliver very good macroeconomic outcomes in the presence of the zero lower bound. We also know that these theoretical results rely crucially on the public believing the monetary authority can deliver periods of above-target inflation following episodes at the ZLB—and that it will follow through on doing so.

Now suppose during periods away from the ZLB, inflation often underruns 2 percent, and policymakers react with brutal force to any forces looking to push it above target. Inflation then would never be viewed as a symmetric goal. Instead, it would look like a ceiling the central bank never wants to breach. This presents a serious problem. Suppose the public views our objective as a ceiling. Then it also won't believe our commitment to any policy aimed at producing above-target inflation to extricate the economy from the ZLB. Actions speak louder than words; without credibility these alternative policies are likely to fail.

And what is true in theory has important counterparts in practice. Think of the most effective tools used in the aftermath of the Great Financial Crisis. These were the pledges and follow-throughs by central banks to purchase assets and maintain low or even negative nominal interest rates indefinitely until the outlooks for employment and inflation improved consistently toward their goals. Staying with these tools through long

and difficult periods—even when there was plenty of criticism by outside commentators—helped deliver better economic outcomes. In turn, the credibility of these tools was enhanced by their success, making them more likely to work again if they are needed in the future.

To succeed, perseverance is crucial. Indeed, the experience of the Bank of Japan (BOJ) presents a counterexample. In the early 2000s, the BOJ initiated aggressive expansionary monetary policies. But they pulled back on them before growth and inflation recovered. This may have damaged the credibility of their commitment to follow through on policies undertaken a decade later to fight similar problems, substantially inhibiting the effectiveness of those policies.

Goal-oriented monetary policy is the key. Establishing a credible commitment to achieving goals is crucial for success.

So what about today in the U.S.? While policy has been successful in achieving our maximum employment mandate, it has been less successful with regard to our inflation objective. As I just noted, for most of the recovery, inflation has run stubbornly below our target, and inflation expectations today appear much lower than during earlier periods when inflation was running more symmetrically around 2 percent.

To fix this problem, I think the Fed must be willing to embrace inflation modestly above 2 percent as often as 50 percent of the time. Indeed, I would communicate mild comfort with core inflation rates of 2-1/2 percent, as long as there is no obvious upward momentum and the path back toward 2 percent can be well managed. Importantly, we should follow these words with actions and implement policies consistent with these communications.

Establishing this credibility today during benign times will not only achieve our current inflation goal, but also help us in the future. With trend output growth less than 2 percent, low neutral real interest rates, and a low inflation objective, the day will come when the Fed's Chair will need to do something nonstandard to provide adequate monetary accommodation. This is true regardless of the strategic policy framework. The Chair will need to marshal all the credibility that Mario Draghi attempted in 2012 when he pledged the European Central Bank would do "whatever it takes to preserve the euro. And believe me, it will be enough."<sup>18</sup> If we have not established the credibility of symmetry in our inflation target today, how can we expect any new approach to be credible?

The review of our policy framework will involve many complicated strategic issues. It is incumbent upon us to study these carefully, considering the possible pitfalls as well as the clear benefits. Only then should we decide on the best framework that will help us achieve our congressionally mandated goals.

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<sup>18</sup> Draghi (2012).

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