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## **Revisiting Risk Management in 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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## Introduction and synopsis

Today, I'd like to discuss my outlook for the U.S. economy and my views on risk management in monetary policy—both from a current perspective and from a longer-run one. 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 and is now near our 2 percent objective. Looking ahead, I note that the fundamentals for growth in the U.S. remain good. If the economy performs as I expect, in 2019 we should see growth falling, but still being close to trend; continued healthy labor markets; and inflation consistent with our 2 percent target.
- However, the U.S. economy faces many uncertainties and risks. In particular, financial market developments of late last year and continued uncertainties regarding growth abroad and trade policy have cumulated to increase the downside risks. Indeed, the recent data on U.S. economic activity generally have been softer than anticipated.

- Of course, there could be upside surprises. One would be the absence of any additional drag on activity from the shocks I just noted. Another would be a resurgence of 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. However, at the moment, the risks from the downside scenarios 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 the January and March FOMC statements 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'll discuss later, the FOMC has adopted it many times in the past, and it has served the U.S. economy well. Risk management also is important in setting longer-term monetary policy frameworks and strategies. The FOMC currently is reviewing such structural questions. I will also give an example of how I see risk management factoring into these important decisions facing the Fed.

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<sup>1</sup> See Federal Open Market Committee (2019c, 2019d).

## Outlook

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 3.1 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—were expecting at the beginning of last year.

Along with this growth, labor markets continued to strengthen. Last year more than 2.6 million jobs were created. The unemployment rate declined further and was 3.8 percent in February, well below the 4.3 percent rate that most FOMC participants currently associate with full employment. The most recent jobs report was soft, but it comes on the heels of some very strong readings the previous few months.

And after running under our 2 percent objective for almost a decade, inflation picked up and has been 2 percent since last March.<sup>2</sup> This is a very welcome change. I would note, however, that several measures of inflation expectations remain lower than they were during times when inflation was more consistently in line with our objective. So we cannot declare victory here just yet.

Looking back on 2018, I think the economy's performance was about as close to bliss as a central banker can imagine. We were pretty much living our goals.

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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).

As I look ahead, supportive fundamentals lead me—and most other forecasters—to expect growth in 2019 to come in close to 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.

That said, my outlook for growth today is somewhat less sanguine than it was last autumn. 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 and next.<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.

These issues generated quite a bit of volatility in financial markets beginning last October. Investors appear to be calmer today, and some financial indicators have improved noticeably. Still, on net, the market spasms have left us with effectively tighter overall financial conditions than we had last autumn, providing less support to real economic activity. Indeed, the latest data point to appreciably slower momentum so far this year in consumer spending, housing, and business investment.

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<sup>3</sup> Organisation for Economic Co-operation and Development (2019).

Another complication is that our picture of the economy is clouded by the fact that the prolonged government shutdown has delayed many key data releases. It is difficult to discern if these weak readings are a temporary pothole or a more sustained soft patch.

For some time now, most forecasters and I have been predicting slower growth in 2019, reflecting the combined effects of waning fiscal stimulus and removal of monetary policy accommodation. Factoring in the additional news, my current forecast is for growth to be around 1-3/4 to 2 percent this year. Last fall, I was projecting it would be about 2-1/4 percent. Now, the lower end of this range is actually in line with my view of the economy's long-run growth potential. So we're not looking at a bad number; still, the economy won't feel like it is doing very well compared with last year's very strong performance. In addition, I expect core inflation to remain consistent with our 2 percent objective in the near to medium term.

All told, the broad contours of my forecast of the economy are consistent with the median projections made by my colleagues on the FOMC, although I am looking for a bit softer activity this year.<sup>4</sup>

### **What about monetary policy?**

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

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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 (2019b).

- 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 3.8 percent 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 its potential and inflation builds 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, a rise to 2-1/4 to 2-1/2 percent is not a big concern to me at the moment. In contrast, if activity softens more than expected or if inflation and inflation expectations 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.

The Chair also noted that 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 our 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.

Economic theory gives us insight into 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

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



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.

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 tilt away from the baseline path to reduce the odds of a miss in the more costly direction. Theory also 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 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

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

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

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>

How did this risk-management strategy turn out? In the end, the economy weathered the situation well. Productivity accelerated sharply, and by early 1999 growth was on a

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

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

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 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.

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

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

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

hold until December 2016, when growth and inflation appeared to have regained momentum. And you know the rest of the story from there.

So 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 last week, the FOMC intends to end the normalization of the balance sheet later this year.<sup>13</sup> We also agreed that in the long run we should go back to holding primarily Treasury securities in our portfolio.

But the FOMC still has to decide on the maturity structure of that portfolio. During the crisis, when faced with the zero lower bound on the federal funds rate (ZLB), the FOMC

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

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

worked to lower long-term interest rates by purchasing long-term assets (known as quantitative easing, or QE) and through a maturity extension program (known as the MEP or “Operation Twist”). The MEP swapped short-term Treasuries for longer-term ones. The legacy of these programs is that the average duration of assets on the Fed’s balance sheet is currently about five and a half years.<sup>14</sup> Before the crisis, it was two and a half to three years.<sup>15</sup>

There are many issues to ponder when selecting the final structure of the balance sheet. 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 allow us to conduct a large maturity extension program that would 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 QE, you might find this configuration attractive.

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

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<sup>14</sup> Federal Reserve Bank of New York, Markets Group (2018, p. 26).

<sup>15</sup> Federal Reserve Bank of New York, Markets Group (2012, p. 17).

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. Quantitatively, would this effect on  $r^*$  be negligible? Or would adding the capacity to do a big maturity extension program 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.

This example illustrates how thinking through the implications of a seemingly simple policy question can reveal many important and complicated issues. This is true of a number of other balance sheet questions and other strategic monetary policy issues facing the Fed. It is incumbent on us to study these carefully, considering the possible pitfalls as well as the clear benefits. Only then should we make our policy decisions.

Commentators often bemoan the unintended consequences of a particular policy decision. Risk management tells us we should do all we can to think ahead of time about what those consequences might be. If the costs are large enough relative to the benefits, we should adjust policy accordingly. This does not mean we can render policy riskless. But it does mean we should manage the important risks as best as we can. This goes for both our near-term policymaking and our longer-term policy frameworks and strategies.

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