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## **On Risk Management 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**

Thank you for the invitation to speak to you this morning. It's good to get out of Chicago and into the heartland. Yesterday, I met with business people from the area and heard their insights into the economy. Later this morning, I will be touring the Jump Simulation facilities to learn about their efforts to transform health care. This promises to be very interesting.

Today, I want to discuss my outlook for the economy and the appropriate stance for monetary policy. In doing so, I will touch on some constraints on what monetary policy can achieve and the importance of risk-management considerations in formulating policy. After my formal remarks, I'm looking forward to answering your questions and, importantly, to hearing your perspectives on the economy. However, before continuing, let me remind you that my comments reflect my own views and not necessarily those of the Federal Reserve System or the Federal Open Market Committee (FOMC).

## **The Fed's dual mandate**

To set the stage, Congress has charged the Fed with adjusting financial conditions in order to promote 1) maximum sustainable employment and 2) stable prices for the goods and services we all purchase. These two goals are known collectively as our “dual mandate.” They are coequal, and if a conflict arises between the two, policy takes a balanced approach to achieving them both over time.

To judge how well we are performing on our mission, we need to be more specific about these objectives.<sup>1</sup> First, consider employment. The maximum sustainable level of employment is largely determined by demographics, worker skills, and other such factors that are independent of monetary policy. These factors may change over time and may not be directly measurable. As a result, the FOMC cannot specify a specific goal for maximum employment. Instead, we rely on a range of indicators to gauge the overall health of the labor market. One important indicator is the unemployment rate. And one way of measuring performance on our employment mandate is to compare the unemployment rate to the rate that we would expect to see over the longer run in the absence of

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<sup>1</sup>For more on the Federal Reserve's dual mandate, see our dual mandate webpage, <https://www.chicagofed.org/research/dual-mandate/dual-mandate>.

economic disruptions. Currently, FOMC participants' estimates of that long-run rate are in the neighborhood of 4.2 percent.<sup>2</sup>

In contrast to full employment, over the long run, the inflation rate is primarily determined by monetary policy. Therefore, the Committee has the ability to specify a numerical goal for the inflation element of our dual mandate. We've declared it's 2 percent, as measured by the annual change in the Price Index for Personal Consumption Expenditures (PCE). Furthermore, the Committee views this target as being "symmetric," meaning it would be concerned if inflation were running persistently above or below 2 percent. So this is the yardstick to use when gauging our performance in meeting our inflation objective.

### **The outlook**

With these policy goals in mind, let me now turn to the economic outlook.

Over the past year and a half, the U.S. economy has expanded at a solid 2-1/2 percent annual rate on average. One feature over this time has been generally strong consumer expenditures. This performance should carry forward in the near term given the support of good fundamentals—namely, healthy household

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<sup>2</sup> See Federal Open Market Committee (2019).

balance sheets; elevated consumer confidence; and, most notably, a vibrant labor market.

At 3-1/2 percent, the unemployment rate is at a 50-year low and obviously below the 4.2 percent benchmark I mentioned earlier. As labor markets have tightened, wage growth—which had been anemic for many years—finally picked up last year and has generally maintained a solid pace so far in 2019.

Importantly, in the past, prosperity has often eluded those at the bottom of the income distribution. In today's vibrant labor markets, many who had been left behind are gaining a welcome foothold into the job market—some for the first time. Some are benefiting from increased on-the-job training or other programs employers have instituted to meet their workforce needs in a tight market. Recent research provides evidence that the strong economy has improved the labor market outcomes for disadvantaged groups during this expansion, including boosting real wage growth for less educated workers to rates near those of their college-educated peers.<sup>3</sup>

In contrast to the consumer sector and the labor market, the business sector has seen some unfavorable changes. After posting robust gains in 2017 and much of

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<sup>3</sup>See Petrosky-Nadeau and Valletta (2019), Aaronson et al. (2019), and Aaronson, Hu, and Rajan (2019).

2018, business fixed investment has lost considerable momentum.

Manufacturing output has declined, and business sentiment has faltered.

Some of this softness is a consequence of weaker foreign demand for U.S. products, as growth in a number of advanced and emerging economies has slowed over the past year and a half.<sup>4</sup> Furthermore, higher tariffs, the ebb and flow of trade tensions, heightened geopolitical risks, and concerns over an even more pronounced and prolonged slowdown abroad have introduced a good deal of uncertainty into business decision-making.<sup>5</sup>

A natural reaction to this uncertainty is to pull back on expansion plans. An increasing number of my business contacts—particularly those in manufacturing or ones with a large international footprint—are telling me about delayed or canceled investment projects, and a few have mentioned downsizing workforce plans. And, of course, tariffs and other possible trade disruptions pose a threat to supply chains and business relationships, prompting some firms to reevaluate these elements of their business models.

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<sup>4</sup>For instance, since late 2018, the International Monetary Fund has reduced its forecast of world growth over the next three years by as much as one-half of a percentage point. See International Monetary Fund (2018, 2019).

<sup>5</sup>Indeed, uncertainty indexes based on keyword searches of news accounts—such as the economic policy uncertainty (EPU) index by Baker, Bloom, and Davis (2016) and the trade policy uncertainty (TPU) index by Caldara et al. (2019)—at times reached historically high levels over the past year.

Putting together all of these developments, I expect the U.S. economy to grow a touch above 2 percent this year, as continued strength in consumer spending offsets weakness in business outlays and net exports. Growth is clearly slowing: In 2018, economic activity expanded 2-1/2 percent, and the year before it rose 2-3/4 percent. But 2 percent is not far from my staff's estimate of the economy's long-run potential growth rate, which is between 1-3/4 and 2 percent. So my outlook has the economy chugging along at or a bit above its long-run trend. Looking beyond this year, I expect growth to continue to run roughly in line with potential. In this environment, I anticipate the unemployment rate to remain close to its current low level for some time—and thus below that long-run benchmark of 4.2 percent.

What about inflation—the other half of our dual mandate? Well, inflation had been running below our symmetric 2 percent objective throughout most of the recovery. Then, in 2018, inflation rose back to 2 percent. But this improvement proved to be relatively short-lived, as core PCE inflation subsequently slipped to 1-1/2 percent in early 2019, and only recently has recovered to 1.8 percent.<sup>6</sup> In another unwelcome development, by some measures inflation expectations—

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<sup>6</sup> While our inflation objective is stated in terms of overall inflation according to the Price Index for Personal Consumption Expenditures (PCE), core inflation—which strips out the volatile food and energy sectors—is a better gauge of sustained inflationary pressures and where inflation is headed in the future.

which are a key determinant of actual inflation—have slipped further this year and today are at uncomfortably low levels.

My forecast looks for inflation to move up slowly and then modestly overshoot our 2 percent target a couple years down the road. Now, I have been forecasting this inflation path for some time. The same is true of the outlook for growth I just mentioned. However, I now think that achieving these outcomes will require more accommodative monetary policy than I did in the past—indeed, more accommodation than I thought necessary just this last December. This change reflects what I like to refer to as an outcome-based approach to monetary policy. This approach entails adjusting the stance of policy not according to some simple static rule, but in whatever way is necessary to achieve our mandated goals on a timely basis while effectively managing the various risks to the outlook.

So what has happened since last December? Well, as I just discussed, some data on economic activity came in weaker, downside risks multiplied, and inflation and inflation expectations retreated. Consequently, I now think a more accommodative stance is needed to support a roughly similar growth outlook and, importantly, to support moving inflation and inflation expectations up with greater assurance to achieve our symmetric 2 percent goal sustainably and within a reasonable time. So, I think the two 25-basis-point cuts the Fed made this year in the target range for the federal funds rate—which is our primary policy tool—were quite appropriate.



I think policy probably is in a good place right now. All told, the growth outlook is good, and we have policy accommodation in place to support rising inflation.

That said, there is some risk that the economy will have more difficulty navigating all the uncertainties out there or that unexpected downside shocks might hit. So there is an argument for more accommodation now to provide some further risk-management buffer against these potential events. I am keeping an open mind to these arguments, which I'm sure we will discuss fully at our meeting later this month. Of course, we obviously would act aggressively if actually faced with an imminent downturn.

Turning to the expected policy path further ahead, I'd note that in September the median FOMC participant saw no additional change in the target range for the federal funds rate through the end of 2020 and one 25-basis-point increase in each of 2021 and 2022. My own assessment is pretty much in line with this median outlook.<sup>7</sup>

### **Limits to what monetary policy can accomplish**

As I've just described, over the course of this year I have adjusted my policy path in a way I see as most likely to yield economic outcomes consistent with our dual

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<sup>7</sup>See Federal Open Market Committee (2019).

mandate objectives. However, beyond such adjustments, we need to acknowledge that there is a limit to what monetary policy alone can accomplish.

My outlook recognizes that the economy faces a number of important challenges today—difficult trade negotiations over important long-term disagreements, slowing foreign growth, and uncertainty weighing on domestic demand. These are the types of problems that monetary policy is able to address to some degree, as more accommodative financial conditions can provide an offsetting boost to weakening aggregate demand. Furthermore, inflation is below target; and as theory tells us so forcefully, in the end, it's the monetary actions of central banks that determine the inflation rate.

That said, there are limits to what monetary policy can accomplish. An important reason is constraints on our capacity to cut policy rates in the event of a serious downturn. Notably, these constraints arise largely because we also face longer-term structural issues that monetary policy has little impact on, but nonetheless have important implications for central banks. Altogether, these factors point to an environment of lower trend growth and lower interest rates that is likely to persist for years. My colleagues and I have spoken in depth about these issues, so I will be brief in explaining them today.

An economy's long-run growth rate is constrained by its productive capacity—it's a speed limit of sorts; you can exceed it for brief periods, but not forever. That

capacity depends on the economy's available labor resources and on the productivity of that labor. Unfortunately, shifting demographics in the U.S. and most other advanced economies are lowering the growth in labor input: Populations are aging, and the U.S. labor force participation rate has been on a downtrend for nearly 20 years.

Along with slower labor force growth, we have also experienced slower growth in labor productivity. Improvements in labor quality—that is, gains in education and worker experience—are no longer adding much to productivity. Business investment has been relatively soft during this expansion, so that capital used by the workforce has increased only modestly. Likewise, despite widespread gains in technology, we've seen only modest growth in something economists call total factor productivity, which reflects how well we put various inputs together to produce output.

Of course, this doesn't mean that important innovations aren't happening. I'm sure my tour here later today will reveal some promising advances in health care that are being developed locally.

Yet today, when my research staff does the arithmetic, they put the underlying annual trend pace of growth in labor hours at one-half percent and that for labor productivity at 1-1/4 percent. This puts the long-run sustainable growth rate for the economy as a whole at about 1-3/4 percent. By comparison, potential growth

averaged roughly around 3 percent in the 20 years before the global financial crisis.

Today's uncertain and hostile trade climate may weigh further on this number. This is because trade fosters cross-border competition among businesses, which in turn leads to productivity enhancement and innovation. Conversely, insulation from international market forces typically reduces a business enterprise's motivation to innovate, as it faces less competition. So trend growth could be even lower than the estimate I just cited.<sup>8</sup>

These long-term trends have enormous implications for standards of living. But there is little monetary policy can do about them; it can't affect demographics and at best has a second- or third-order impact on productivity trends. Other kinds of policies can address some of these factors, such as by ensuring a well-educated workforce, but these are the responsibility of other branches of government.

That said, these trends influence the monetary policymaking environment a great deal. Economic theory tells us that as the potential growth rate of the economy declines, so does the equilibrium level of real interest rates; this is the rate consistent with full employment of the economy's productive resources and is

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<sup>8</sup> Furthermore, if there were an increase in restrictions on legal immigration and related actions on undocumented immigration, then the growth in trend labor hours would be weaker.

often referred to as real  $r^*$ . To get to the federal funds rate that is neither contractionary nor expansionary—the so-called equilibrium federal funds rate—you need to add our 2 percent inflation target to real  $r^*$ . Today, the median estimate of my colleagues on the FOMC for that rate is 2-1/2 percent. That is significantly below the median participant's evaluation of over 4 percent just a few years ago.<sup>9</sup> It is also below the 5 percent or so rate in the early 2000s, as estimated by some models.<sup>10</sup>

Simply put, a lower equilibrium rate means a smaller capacity for monetary policy to counteract negative shocks to the economy. In the past, policymakers were able to provide 500 basis points of accommodation on average during an easing cycle. Today, if circumstances demand it, there is far less room to cut the federal funds rate before it reaches the neighborhood of zero—what we refer to as the effective lower bound on rates, or ELB. The FOMC would then be forced to turn to less effective tools to provide the necessary accommodation, making it more difficult to achieve our mandated policy goals. The calculus is even more challenging if we fail to meet our 2 percent inflation objective, as nominal interest

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<sup>9</sup> Federal Open Market Committee (2012).

<sup>10</sup> See Federal Reserve Bank of New York, *Measuring the Natural Rate of Interest*, report, available online, <https://www.newyorkfed.org/research/policy/rstar>.

rates would settle out at an even lower level. That's why meeting our inflation objective is especially important.

### **Risk management in a low-growth environment**

Earlier, I mentioned risk management as one rationale for rate cuts in the current environment.<sup>11</sup> History has many other examples of the FOMC preemptively adjusting rates to mitigate risks.<sup>12</sup>

What does risk management actually mean? It 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 the alternative scenarios. This evaluation considers whether the costs from missing our dual mandate objectives are balanced across these alternatives. If not, we may want to adjust policy as insurance against bad outcomes.

Today, the low  $r^*$  environment makes risk management a very important consideration in charting the course for monetary policy. The practical limits it imposes on the capacity to cut the federal funds rate means that downside

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<sup>11</sup> See Powell (2019). The three reasons given were to mitigate the depressing effects of international developments on U.S. growth; to manage downside risks to the economy; and to support the return of inflation to our 2 percent symmetric target.

<sup>12</sup> See Evans et al. (2015) for an analysis of risk management in monetary policy. The authors found evidence of risk management in about one-third of the 128 FOMC meetings between 1993 and 2008. 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.

shocks that weaken growth or inflation could be more costly than upside surprises we could more easily react to by raising rates. To avoid becoming stranded at the effective lower bound, risk management calls for proactively cutting rates in response to increased downside risks. The extra accommodation provides a buffer for the economy to absorb the bad shocks should they occur. It also is useful in communicating to the public that we are aware of the risks and are unlikely to be caught off guard should they materialize.

Beyond the near-term risk factors I discussed earlier, the broader inflation outlook also poses an important risk-management consideration.

Think about setting policy to return inflation to our symmetric 2 percent goal on a sustainable basis. The risks here are not symmetric. With today's low inflation, if we apply too much accommodation, inflation will simply reach our target sooner. But if we fail to act strongly enough, we risk underlying inflation trends and inflation expectations becoming mired at low levels, making it all the more difficult to achieve our goal. This could occur, for example, if the public perceives that our 2 percent inflation goal is a ceiling, rather than the symmetric target that it is.

In my view, these differences mean we need to err on the side of providing aggressive enough accommodation to get inflation moving up with some momentum. After all, no one ever made a free throw without enough muscle behind it to first get the ball to the hoop. This kind of force could well result in

inflation modestly overrunning 2 percent for some time. But in the current situation, this would not be a policy error. Engineering a modest overshoot of our inflation objective better guarantees that we would actually meet our inflation target in the future. Any excessive overshooting could be controlled with modest rate hikes. Moreover, tolerating inflation as high as 2-1/2 percent does not entail much of a welfare loss—especially given the lengthy undershoot we've permitted. This is because for me, more generally, symmetry means paying attention to both past and prospective misses from our target to ensure that inflation averages 2 percent over the long haul.

## **Conclusion**

In sum, although our policy goals remain constant, our policy tactics must evolve to keep pace with economic developments. As I have for some time, I advocate following an outcome-based approach to monetary policy that aims to achieve our dual mandate goals on a timely basis while effectively managing various risks to the outlook. Over the past ten months—as the forces affecting the U.S. economy changed from tailwinds to headwinds and as we lost the inflation momentum we had seemed to build—this outcome-based approach has dictated a shift in my appropriate policy path. I see that the economy today is generally in good shape and that policy is close to the right place, but there are risks that require our diligent attention. Looking ahead, I will continue to advocate for using



our best tools to achieve our dual mandate goals in a timely manner. That is the best way to achieve the job Congress has given the Federal Reserve.

Thank you.

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