SPEECH

Important Choices for the Federal Reserve in the Years Ahead

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It is a pleasure to have the opportunity to speak here today at Lehman College. In my remarks, I will focus on the economic outlook—both over the near and longer term—and I will discuss some of the important monetary policy issues that will be considered in the years ahead, after my tenure at the Federal Reserve Bank of New York is (sadly) over. As always, what I have to say reflects my own views and not necessarily those of the Federal Open Market Committee (FOMC) or the Federal Reserve System.[1]

The Economic Outlook

Over the near term, the economic outlook remains quite favorable. I anticipate that the economy will continue to grow at an above-trend pace in 2018 and 2019, which will put sufficient pressure on the nation's resources to push up inflation to the FOMC's longer-run 2 percent objective.

There are several reasons to be confident in this growth outlook: Monetary policy remains accommodative, financial conditions are still easy, and the global economy is in the midst of a synchronized expansion. Moreover, significant fiscal policy stimulus from tax cuts and increased federal spending will boost real household disposable income and corporate profits, which should support further gains in consumption and capital spending.

In this context, I would not take much signal from the slowdown in consumer spending in the first two months of this year. As I see it, this slowdown was mostly due to two transitory factors: a retrenchment following the spurt in activity from recovery efforts following Hurricanes Harvey, Irma, and Maria, and the delay in this year's tax refund payments to those receiving certain tax credits.[2]

Strong payroll employment gains also suggest that the slowdown in household spending will be temporary. Over the last three months, payroll gains have climbed to a monthly pace of 202,000 jobs, somewhat above 2017's monthly average of 182,000. Robust job gains coupled with moderate growth in labor compensation should ensure that household incomes will continue to rise at a solid rate, even before factoring in the impact of this year's reduction in personal income taxes.

With respect to inflation, most of the evidence is consistent with a slow movement toward the FOMC's 2 percent objective. On a year-over-year basis through February, the overall Personal Consumption Expenditures (PCE) price index and the core PCE price index—which excludes the more volatile food and energy components—have risen by 1.8 percent and 1.6 percent, respectively, from troughs of 1.4 percent and 1.3 percent last summer. Further gains appear likely at the end of this month, when the sharp decline in cellular telephone services prices that occurred a year ago drops out of the year-over-year calculations.

In the current environment, I see three important issues regarding the appropriate monetary policy stance:

1. How quickly to remove monetary policy accommodation—is a gradual path of removal still appropriate now that the unemployment rate is 4.1 percent?
2. How far to go in removing monetary policy accommodation—will monetary policy have to move to a somewhat restrictive setting in the years ahead?
3. How should the FOMC factor fiscal policy and trade policy developments into its monetary policy decisions?

I will take each of these in turn.

As I see it, a gradual path of interest rate increases remains appropriate. Even though the unemployment rate is low, inflation remains below our 2 percent objective. As long as that is true, the case for tightening policy more aggressively does not seem compelling. My conclusion is reinforced by the fact that we do not know with much precision how low the unemployment rate can go without prompting a significant rise in inflation. We do not directly observe the non-accelerating inflation rate of unemployment, or NAIRU. Rather, we only infer it from the response of wage compensation and price inflation as the labor market tightens.

Also, the U.S. labor market may have more slack than the 4.1 percent unemployment rate suggests. Over the past six months, the unemployment rate has remained steady despite robust payroll gains. As the labor market has improved, more people have been actively seeking employment. As a result, the labor force participation rate has flattened out despite the ongoing aging of the workforce population. Furthermore, because the U.S. labor force participation rate for prime age workers is low compared to many advanced economies, the labor market could conceivably improve even further before encountering significant resource constraints.

That said, the Federal Reserve should not overstay its welcome. It is important to get monetary policy back to a neutral setting before the labor market becomes so tight that wages and prices begin to rise at a pace inconsistent with the FOMC's 2 percent inflation objective. Our mandate from Congress is maximum sustainable employment and price stability—not simply a high level of employment at one point of the business cycle.

With respect to how far the FOMC should go in removing monetary policy accommodation, two major issues stand out. First, what represents a neutral monetary policy setting? Second, under what circumstances would it be appropriate to move beyond neutral to a restrictive setting?

Unfortunately, we do not also observe the neutral real (i.e., adjusted for inflation) short-term interest rate, or r*. There is a wide range of estimates at any time, and they evolve as the economic environment changes. For example, all else equal, continued buoyant financial conditions amid recent and anticipated future rate hikes imply that r* may be higher than previously estimated. A shift to a more stimulative fiscal policy could also imply a somewhat higher r*, at least temporarily.

One's view of the neutral rate may also be influenced by one's assessment of the longer-term economic environment. For example, if we are in a period of "secular stagnation"—characterized by chronic excess global savings and aging populations—then one would expect r* to remain persistently low.[3] But, if we are in a world of abating headwinds as we recover from the financial crisis, then one would expect r* to rise over time. This lack of clarity about the environment increases the degree of uncertainty about the level of r*.

Despite all these uncertainties, one still has to have a viewpoint. In the current circumstances, I would judge that r* over the medium term is likely to be somewhere around 1 percent. Although that is higher than the estimates from some models, I have nudged up my estimate because financial conditions are still easy and fiscal policy will likely be quite stimulative in 2018 and 2019.[4]

If the neutral real interest rate is around 1 percent, there is still some distance to go before monetary policy actually gets tight. At the FOMC's 2 percent inflation objective, my estimate of r* implies that the federal funds rate would need to rise to around 3 percent for monetary policy to be considered neutral. Of course, as the factors that influence r* change, my estimate of r* will also move around over time.

Whether monetary policy will need to move to a restrictive setting depends crucially on how low the unemployment rate can go without inflation climbing meaningfully above 2 percent. Although the jury is still out on this question, last month's Summary of Economic Projections, or SEP, is instructive.[5] Most FOMC participants

—including me—have the unemployment rate moving considerably below their estimate of NAIRU by 2020, with inflation climbing slightly above 2 percent and the federal funds rate moving above their estimates of its likely long-run value. Thus, the March SEP implies that most FOMC participants expect that monetary policy will need to become slightly restrictive in the years ahead.

Recent fiscal and trade policy developments are likely to increase the uncertainty around the distance to a neutral monetary policy stance and the possibility that the FOMC will have to move to a restrictive stance. The shift in fiscal policy toward stimulus is somewhat challenging because of its timing—it is unusual to move fiscal policy sharply in a stimulative direction at a mature stage of a business cycle—and because the shift puts the nation's fiscal path on an unsustainable trajectory. According to the projections released earlier this month from the Congressional Budget Office, or CBO, the federal budget deficit is anticipated to exceed 4½ percent of GDP in 2019, well above the level that would be needed to keep the federal debt-to-GDP ratio from rising.[6] Moreover, the CBO expects that the pressures on the budget will be substantial over the next decade, with deficit projections ranging between 4½ and 5½ percent of GDP throughout the period. Debt service costs will move sharply upward in coming years as federal debt continues to grow and interest rates likely increase further. Additionally, entitlement spending is likely to increase sharply as members of the baby boom generation continue to retire—myself included.[7]

The shift toward a more aggressive U.S. posture on trade also likely increases uncertainty. On the one hand, such a posture could lead to revised trade agreements that provide the United States with greater access to foreign markets and better protection of intellectual property. This would tend to raise U.S. productivity and real GDP growth. On the other hand, tougher bargaining could lead to retaliation and higher trade barriers, here and abroad. In contrast to the first scenario, this outcome would be quite negative—leading to higher inflation, lower productivity, and slower potential GDP growth.[8] Over time, how U.S. trade policy evolves will have important implications for the performance of the U.S. economy—and, by extension, for U.S. monetary policy. By increasing uncertainty around the economic outlook, these shifts in fiscal and trade policy could make it more difficult for the FOMC to achieve its dual mandate objectives in the years ahead.

Longer-term Monetary Policy Issues

Over the longer term, the FOMC will also need to address a number of other important issues. These include: 1) Determining the appropriate long-term implementation framework for U.S. monetary policy, and 2) deciding whether the strategic framework underlying monetary policy decisions needs to be adjusted to mitigate the risks associated with getting pinned at the effective lower bound for short-term interest rates.[9]

For the first issue, I see two options: return to the "corridor"-type system that was in place prior to the financial crisis, or remain with the framework that has been in place since the crisis—namely, a "floor" system. In a corridor system, reserves in the banking system are scarce, and the federal funds rate is set by adjusting the supply of reserves through open market operations to balance demand and supply at the FOMC's target range. In contrast, in a floor system, reserves are abundant, so that the interest rate the Federal Reserve pays on excess reserves, or IOER, is the primary tool used to control the federal funds rate.

In my view, the case for retaining the current floor system is very compelling for a number of reasons. First, it is operationally much less complex than a corridor system. In the current regime, the setting of IOER is largely sufficient to maintain the federal funds rate within the FOMC's target range, as we have seen over the past few years.[10] In contrast, a corridor system requires forecasting the many exogenous factors that affect the amount of bank reserves outstanding, and then engaging in open market operations on a near daily basis to keep reserves at a level consistent with the FOMC's target range.[11] This task would likely be more difficult now because of greater fluctuation in these exogenous factors relative to when the corridor regime was last in place.

Second, a corridor system constrains the Federal Reserve's ability to provide the types of lender-of-last-resort backstops that can help support financial stability. Prior to gaining the authority to pay interest on reserves in the fall of 2008, Federal Reserve officials—myself included—were faced with a question: if the take-down on a proposed liquidity facility were large, how would we be able to drain the added reserves on a timely basis to maintain control of the federal funds rate? This was not just a theoretical issue during the financial crisis. The initial auctions of the Term Auction Facility, or TAF, were kept relatively small, in part, because of concerns that larger programs would make it more difficult for the manager of the System Open Market Account (me, in that particular case) to drain sufficient reserves to offset the TAF reserve additions. Similarly, the Term Securities Lending Facility (TSLF)—which involved the swap of Treasury collateral from the Federal Reserve against lower-quality collateral held by primary dealers—was introduced in large part because collateral swaps, unlike cash loans, did not affect the amount of reserves in the banking system. My overall point is that broad-based, open-ended lender-of-last-resort facilities are more difficult to accommodate in a corridor system because of the need to drain any reserve additions to keep the federal funds rate close to the FOMC's target.

I see this as an important shortcoming of the pre-crisis corridor regime that does not get sufficient attention. Having the ability to introduce broad and credible lender-of-last-resort backstops—well secured by pledged collateral—can be critical when confidence falters and financial stability is at risk. Private sector participants are more likely to continue to engage with their counterparties—and to borrow and lend—when they know a central bank backstop will be available if economic and financial conditions deteriorate. A corridor regime could cause the Federal Reserve to delay or avoid providing such backstops, which could increase financial stability risks by causing lenders and borrowers to disengage with one another earlier.[12]

Although the FOMC has not made a final decision about a future framework for implementing monetary policy, meeting minutes confirm that participants recognize the advantages of a floor system. As the November 2016 FOMC minutes note: "Meeting participants commented on the advantages of using an approach to policy implementation in which active management of the supply of reserves would not be required....[S]uch an approach was seen as likely to be relatively simple and efficient to administer, relatively straightforward to communicate, and effective in enabling interest rate control across a wide range of circumstances."[13]

The second major issue facing the FOMC is whether to change its strategic framework to mitigate the risk of a return to the effective lower bound for interest rates. Once the federal funds rate is close to zero, the FOMC is constrained in its ability to lower short-term interest rates further, and the other available policy options to provide monetary policy stimulus may be less effective. If the FOMC were unable to provide sufficient stimulus, the economy could have difficulty recovering. In turn, inflation and inflation expectations could fall—and thus raise real interest rates—effectively tightening monetary policy and making the task of generating a sustainable recovery even more difficult.

Some have argued that a desirable way to reduce this risk would be to raise the FOMC's inflation objective from 2 percent to perhaps 3 or 4 percent. Their reasoning is that if the inflation objective were somewhat higher, nominal interest rates at the later stages of the business cycle would also tend to be higher, which would provide greater scope for the FOMC to cut short-term interest rates to stimulate the economy, if necessary.

While recognizing that there is a legitimate effective lower bound risk, I do not support the option of raising the inflation objective, for three reasons. First, I doubt that a higher inflation target would be viewed as consistent with the Federal Reserve's Congressional mandate to pursue price stability. Our employment and inflation mandates have been established by Congress, not by the Federal Reserve.

Second, the risks of being pinned at the effective lower bound for interest rates may be overstated. Only once in the postwar period have we reached the zero lower bound. Upending several decades of effort to anchor inflation expectations around 2 percent might be too high a price to pay to reduce the effective lower bound risk by what might prove to be a small amount. In this vein, it is important to recognize that the FOMC now has a more credible set of tools available to use at the effective lower bound than it did in 2008, when those tools were largely unproven. Forward guidance about the path of short-term interest rates and quantitative easing have been effective in providing monetary policy stimulus in the post-crisis period. Because this is now more broadly appreciated, households and businesses should be more confident that the Federal Reserve has sufficient tools available at the effective lower bound to generate a sustainable economic recovery. This greater confidence, in turn, should help keep inflation expectations from declining—which should also mitigate the risks associated with hitting the lower bound.

Third, there are arguably better ways of reducing risks associated with the effective lower bound than a higher inflation objective. In particular, Congress could increase the size and scope of the automatic fiscal stabilizers that support economic activity and income during economic downturns. For example, Congress could enact legislation in which employment payroll taxes would be automatically reduced when the unemployment rate rose above a particular threshold. With such stabilizers in place, households and businesses would anticipate additional income support in the face of a cyclical downturn. This approach would be more powerful than discretionary fiscal actions that carry a greater degree of uncertainty.

Another option to help better anchor inflation expectations around the current objective would be to move to a price-level targeting, or PLT, regime. Under the current inflation targeting regime, the FOMC follows a "bygones are bygones" policy: Misses of the inflation objective on one side are not deliberately offset by subsequent misses on the other. Therefore, when inflation runs persistently below the objective, policymakers do not strive to push inflation above the objective in the future. Under these conditions, the risk is that inflation expectations will become unanchored to the downside. In contrast, under a price-level targeting regime, the FOMC would commit to make up any shortfalls below its 2 percent objective by allowing inflation to climb above the objective for the time necessary to eliminate the shortfall. This commitment to offsetting the period of below-target inflation with a period of above-target inflation would, presumably, help keep inflation expectations from becoming unanchored to the downside.

However, a symmetric PLT regime—in which misses have to be made up on both sides of the inflation objective—has an important shortcoming. Compensating for inflation overshoots by deliberately keeping inflation below the FOMC's 2 percent objective would increase the risk of getting pinned at the effective lower bound for interest rates.

As a consequence, some—including former Chairman Ben Bernanke—have proposed adopting an asymmetric PLT regime. In such a system, misses below the objective would be offset by misses above only when the effective lower bound was binding. Under normal circumstances, misses above the objective would not be offset. Rather, they would be treated as "bygones," as is currently the case.[14]

However, I suspect that establishing a modified PLT regime would present some challenges. First, for such a modified PLT to be effective in anchoring inflation expectations, households and businesses would have to understand how the regime would work, and view the Federal Reserve's commitment as credible. One can imagine that such credibility might be hard to sustain during a long spell of inflation misses to the downside. Second, while such a regime might be attractive in broad brush form, the devil lies in the details. If inflation undershot for a few years, what would the desired overshoot path look like? How high would the FOMC permit inflation to go above its objective, and for how long? What would happen if the Fed failed to fully offset past downside misses and cumulative undershoots became sizable?

My view is that we should further study how PLT frameworks might work in practice.[15] But, it is possible that a simpler approach of committing to keeping the average inflation rate around 2 percent over the medium term might be just as appealing. It might be sufficient to better anchor inflation expectations while avoiding the communication challenges and complexity of an asymmetric PLT regime.

In this vein, I also would evaluate whether the inflation goal should be recast as a range of, perhaps, 1½ to 2½ percent, from the current 2 percent objective. A range might have several advantages over a point target. First, it might be viewed as more realistic given that measured inflation will always randomly fluctuate relative to its underlying trend. That is to say, even if the FOMC performs its job exceedingly well, very rarely will the inflation rate, as measured by the PCE price index, be precisely at 2 percent. Second, having a relatively narrow range would send a message that the FOMC is discriminating between two regimes—one in which inflation is within the range and concerns about inflation are low, versus another in which inflation is outside the range and concerns about inflation are more elevated.

Even so, I would not recommend shifting to such a range currently. I would only consider doing so once the FOMC has successfully and sustainably pushed inflation back to its 2 percent objective. Making such a change now might be viewed as "moving the goal posts," given the persistent shortfall of inflation in recent years relative to the objective. And, doing so now might imply a greater tolerance for missing inflation to the low side in an asymmetric way. That would not be desirable at a time when inflation expectations are, if anything, too low, rather than too high relative to the FOMC's objective.

To sum up, the economy is broadly in a good place and the short-term economic outlook remains favorable. On a personal level, I am pleased that I will be leaving my current position at a time when the FOMC is likely to be very close to its employment and inflation objectives—recognizing, of course, the terrible damage of the financial crisis and the long time it has taken to get here.

Uncertainty about trade policy and the fact that we are now on an unsustainable fiscal path, however, have raised the longer-term risks. With respect to monetary policy, there are a number of important choices the FOMC will need to make in the years ahead. I have outlined some of my preferences today: continuing with the current floor system for the implementation of monetary policy, and some of the steps that we could take to reduce the risk should interest rates return to the effective lower bound in the future.

Thank you for your kind attention. I would be happy to take a few questions.

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[1] Gerard Dages, Jonathan McCarthy, and Paolo Pesenti assisted in preparing these remarks.

[2] Specifically, the Earned Income Tax Credit and the Additional Child Tax Credit.

[3] See, for example, Lawrence Summers, U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound.

[4] See, for example, some estimates based on the frequently-cited Laubach and Williams model. See Thomas Laubach and John C. Williams (2003), "Measuring the Natural Rate of Interest," *Review of Economics and Statistics*, v. 85, iss. 4, pp. 1063-70; Thomas Laubach and John C. Williams (2016), "Measuring the Natural Rate of Interest Redux," *Business Economics*, v. 51, iss. 2, pp. 57-67; and Kathryn Holston, Thomas Laubach and John C. Williams (2017), "Measuring the Natural Rate of Interest: International Trends and Determinants," *Journal of International Economics*, Supplement 1, v. 108, pp. S59-75.

[5] See Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents under their individual assessments of projected appropriate monetary policy, March 2018.

[6] See Congressional Budget Office (2018), The Budget and Economic Outlook: 2018 to 2028, April 9, 2018.

[7] See also William C. Dudley, The Outlook for the U.S. Economy and Beyond, January 11, 2018.

[8] For a further discussion, see William C. Dudley, Making Globalization Work, March 1, 2018.

[9] The costs of holding cash make possible the use of (slightly) negative interest rates—employed by some countries outside the U.S. in recent years—as a result, the term "effective lower bound" is used here.

[10] Control of the federal funds rate has also been supported by the overnight reverse repurchase agreement facility, which accepts cash from an array of institutional investors at a rate 25 basis points below the interest rate paid on excess reserves.

[11] These exogenous factors include the U.S. Treasury's cash balance at the Federal Reserve, the foreign central bank repo pool, the overnight reverse repo facility, and currency outstanding.

[12] Because the amount of reserves in a floor system is greater than in a corridor system, this also can be helpful in easing frictions in terms of payment flows. With large reserve balances, banks have higher cash balances at the Fed. As a result, they are less likely to incur daylight overdrafts and, thus, they have less need to monitor, and, at times, delay outgoing payments.

[13] See Minutes of the Federal Open Market Committee, November 1–2, 2016.

[14] See Ben Bernanke, Monetary Policy in a New Era, Brookings Institution, October 2, 2017.

[15] Others have proposed adopting a nominal GDP targeting regime, which has its own strengths and weaknesses, but it is not considered here for the sake of brevity.