For release on delivery
2:00 p.m. EST
November 16, 2020

The Federal Reserve's New Framework: Context and Consequences

Remarks by

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at

"The Economy and Monetary Policy," an event hosted by
the Hutchins Center on Fiscal and Monetary Policy at the Brookings Institution

Washington, D.C.
(via webcast)

November 16, 2020

On August 27, the Federal Open Market Committee (FOMC) unanimously approved a revised Statement on Longer-Run Goals and Monetary Policy Strategy that represents a robust evolution of its monetary policy framework.[1] The new framework has important implications for the way the FOMC going forward will conduct monetary policy in support of its efforts to achieve its dual-mandate goals in a world of low neutral policy rates and persistent global disinflationary pressures. At the September 16 FOMC meeting, the Committee made material changes to its forward guidance for the future path of the federal funds rate to bring the guidance into line with the new policy framework and, in so doing, provided transparent outcome-based guidance linked to the macroeconomic conditions that must prevail before the Committee expects to lift off from the effective lower bound (ELB). In my remarks today, I would like to look ahead and offer my individual perspective on the consequences of our new framework for the conduct of monetary policy over the business cycle, and I also want to provide some context that connects key elements of our new framework to the literature on optimal monetary policy subject to an ELB constraint that binds in economic downturns. Let me say at the outset that when I am not quoting directly from the consensus statement and the September FOMC statement, the views expressed are my own and do not necessarily express the views of other Federal Reserve Board members or FOMC participants.[2]

The plan of my talk is as follows. I will first highlight and discuss the five elements of the new framework that define how the Committee will seek to achieve its price-stability mandate over time and how, in September, it revised its forward guidance

[1] The statement is available on the Board's website at https://www.federalreserve.gov/monetarypolicy/review-of-monetary-policy-strategy-tools-and-communications-statement-on-longer-run-goals-monetary-policy-strategy.htm.

[2] I would like to thank Ellen Meade and Chiara Scotti for their assistance in preparing these remarks.

on the federal funds rate to bring the FOMC's policy communications into line with the new framework. I will then provide my perspective on how these key elements of the new framework and the related forward guidance connect to the literature on conducting optimal monetary policy at—and after lifting off from—the ELB. I will next discuss how the Committee's conception of its maximum-employment mandate, a sixth element of the new framework, has evolved since 2012, what this evolution implies for the conduct of monetary policy, and how I plan to factor in this information as I think about the appropriate path for setting the federal funds rate once the conditions for liftoff have been met. I will conclude with a brief recap of my thesis before joining David Wessel, Seth Carpenter, and Annette Vissing-Jørgensen in what I am sure will be an engaging virtual conversation.

The New Framework and Price Stability

In my remarks today, I will focus on six key elements of our new framework and the forward guidance provided by our September FOMC statement. Five of these elements define how the Committee will seek to achieve its price-stability mandate over time, while the sixth pertains to the Committee's conception of its maximum-employment mandate. Of course, the Committee's price-stability and maximum-employment mandates are generally complementary, and, indeed, this complementarity is recognized and respected in the forward-guidance language introduced in the September FOMC statement.[3] However, for ease of exposition, I will begin by focusing on the five

[3] The September 2020 FOMC statement says: "The Committee decided to keep the target range for the federal funds rate at 0 to 1/4 percent and expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time" (paragraph 4). The statement is available on the Board's website at https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm.

elements of the new framework that define how the Committee will seek to achieve over time its price-stability mandate, before discussing how maximum employment is defined in the new framework and what this definition implies for the conduct and communication of monetary policy under the new framework.

Five features of the new framework and September FOMC statement define how the Committee will seek to achieve its price-stability mandate over time:

1. The Committee expects to delay liftoff from the ELB until PCE (personal consumption expenditures) inflation has risen to 2 percent on an annual basis and other complementary conditions, consistent with achieving this goal on a sustained basis and to be discussed later, are met.[4]
2. With inflation having run persistently below 2 percent, the Committee will aim to achieve inflation moderately above 2 percent for some time in the service of having inflation average 2 percent over time and keeping longer-term inflation expectations well anchored at the 2 percent longer-run goal.[5]
3. The Committee expects that appropriate monetary policy will remain accommodative for some time after the conditions to commence policy normalization have been met.[6]

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[4] The Statement on Longer-Run Goals and Monetary Policy Strategy articulates the inflation objective: "The Committee reaffirms its judgment that inflation at the rate of 2 percent, as measured by the annual change in the price index for personal consumption expenditures, is most consistent over the longer run with the Federal Reserve's statutory mandate" (paragraph 4). The September 2020 FOMC statement indicates the conditions for liftoff (see note 3).

[5] The September 2020 FOMC statement reads: "With inflation running persistently below this longer-run goal, the Committee will aim to achieve inflation moderately above 2 percent for some time so that inflation averages 2 percent over time and longer-term inflation expectations remain well anchored at 2 percent" (paragraph 4). A similar sentence appears in the Statement on Longer-Run Goals and Monetary Policy Strategy.

[6] The September 2020 FOMC statement reads: "The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. With inflation running persistently below this longer-run goal, the Committee will aim to achieve inflation moderately above 2 percent for some time so that inflation averages 2 percent over time and longer-term inflation expectations remain well anchored at

4. Policy will aim over time to return inflation to its longer-run goal, which remains 2 percent, but not below, once the conditions to commence policy normalization have been met.[7]
5. Inflation that averages 2 percent over time represents an ex ante aspiration of the FOMC, but not a time-inconsistent ex post commitment.[8]

I believe that a useful way to summarize the framework defined by these five features is *temporary price-level targeting (TPLT, at the ELB) that reverts to flexible inflation targeting (once the conditions for liftoff have been reached).* Just such a framework has been analyzed by Bernanke, Kiley, and Roberts (2019) and Bernanke (2020), who in turn build on earlier work by Evans (2012) and Reifschneider and Williams (2000), among others.[9] Each of the five elements of the new framework highlighted previously is consequential. I now discuss each in turn and provide some context for how I understand them to relate to the monetary economics literature on TPLT.

First element

A policy that delays liftoff from the ELB until a threshold for average inflation has been reached is one element of a TPLT strategy. In our September FOMC statement, we communicated that, along with other complementary conditions, inflation must have

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2 percent. The Committee expects to maintain an accommodative stance of monetary policy until these outcomes are achieved" (paragraph 4).

[7] The Statement on Longer-Run Goals and Monetary Policy Strategy articulates the inflation objective (see note 4).

[8] The Statement on Longer-Run Goals and Monetary Policy Strategy says: "In order to anchor longer-term inflation expectations at this level, the Committee seeks to achieve inflation that averages 2 percent over time, and therefore judges that, following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time" (paragraph 4).

[9] See also Eggertsson and Woodford (2003) and Hebden and López-Salido (2018).

risen to 2 percent before we expect to lift off from the ELB. This condition refers to inflation on an annual basis. TPLT with such a one-year memory has been studied using stochastic simulations of the Fed's FRB/US model by Bernanke, Kiley, and Roberts (2019).

Second element

An alternative version of TPLT would commit the central bank to delay liftoff until inflation has averaged 2 percent over a longer period—say, three years (Bernanke, Kiley, and Roberts (2019) study the case of TPLT with a three-year memory as well as the case of TPLT with a one-year memory) or perhaps an even longer period that commences when the policy rate hits the ELB itself (as in Bernanke's (2017a) original TPLT proposal). In these versions of TPLT, inflation would likely have to moderately exceed 2 percent for some time before the condition for liftoff is met. For example, if TPLT with a three-year memory were chosen and inflation in three consecutive years equaled 1.9 percent, 2 percent, and 2.1 percent, then liftoff would not occur until inflation hit 2.1 percent for one year. Note, however, that TPLT with a longer memory *does not* define ex ante the amount by which inflation must exceed 2 percent before liftoff is considered, nor does it specify for how long inflation exceeds 2 percent before liftoff is considered. For example, under TPLT with a three-year memory, if inflation instead equaled 1.8 percent, 2 percent, and 2.2 percent for three consecutive years, then liftoff ex post could not occur until inflation hit 2.2 percent for one year. But if, instead, inflation equaled 1.8 percent, 2.1 percent, and 2.1 percent, then inflation would exceed 2 percent for two years before liftoff were contemplated. In the case of the Federal Reserve, the FOMC chose a one-year memory for the inflation threshold that must be met before

liftoff is considered, but it also indicated in September that the Committee expects to delay liftoff until inflation is "on track to moderately exceed 2 percent for some time." What "moderately" and "for some time" mean will depend on the initial conditions at liftoff (just as they do under versions of TPLT with a longer memory). Crucially, the Committee's judgment on the projected duration and magnitude of the deviation from the 2 percent inflation goal will, at the time of liftoff and every three months thereafter, be communicated in the quarterly Summary of Economic Projections (SEP) for inflation.[10] The SEP has served this purpose before. For example, in 2018, as the FOMC factored in an unexpected tailwind from a mid-cycle fiscal expansion and chose to maintain a gradual pace of normalization to return the federal funds rate to its projected neutral stance, the median participant at the September 2018 FOMC meeting projected that core PCE inflation would moderately exceed 2 percent for three years. The FOMC statement itself can, in the new regime, also be used as a platform to communicate the Committee's tolerance for deviations of inflation from the 2 percent longer-run goal, and, indeed, it has served this purpose in the past—for example, with the threshold-based guidance linked to inflation outcomes introduced in the FOMC statement in December 2012.[11]

[10] The most recent SEP, an addendum to the minutes of the September 2020 FOMC meeting, is available on the Board's website at https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm.

[11] The guidance from the December 2012 FOMC statement was the following: "To support continued progress toward maximum employment and price stability, the Committee expects that a highly accommodative stance of monetary policy will remain appropriate for a considerable time after the asset purchase program ends and the economic recovery strengthens. In particular, the Committee decided to keep the target range for the federal funds rate at 0 to 1/4 percent and currently anticipates that this exceptionally low range for the federal funds rate will be appropriate at least as long as the unemployment rate remains above 6-1/2 percent, inflation between one and two years ahead is projected to be no more than a half percentage point above the Committee's 2 percent longer-run goal, and longer-term inflation expectations continue to be well anchored" (paragraph 5). The statement is available on the Board's website at https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm.

Third element

In the TPLT framework studied by Bernanke, Kiley, and Roberts (2019), policy reverts to an inertial Taylor rule after liftoff, so policy remains accommodative for some time, which depends in their formulation on the degree of policy inertia in the reaction function. Our September FOMC statement also calls for policy to remain accommodative for some time after liftoff. Once the conditions to commence policy normalization have been met, the SEP "dot plot" will convey the median participant's projections over a three-year horizon not only for inflation, but also for the pace of liftoff as well as the ultimate destination for the policy rate. I will have more to say shortly about a relevant policy rule benchmark that I believe is consistent with the new framework.

Fourth element

The new framework is asymmetric. That is, as in Bernanke, Kiley, and Roberts (2019), the goal of monetary policy after lifting off from the ELB is to return inflation to its 2 percent longer-run goal, but not to push inflation below 2 percent. In other words, after liftoff from the ELB, monetary policy reverts to simple flexible inflation targeting (Bernanke, 2017b). In the Bernanke, Kiley, and Roberts (2019) study, flexible inflation targeting post-liftoff is implemented with an inertial Taylor rule that satisfies the Taylor principle (that is, the policy responds to the difference between actual inflation and the 2 percent target with a coefficient that exceeds unity). The policy is flexible in that the desired pace of return to 2 percent can reflect considerations other than the 2 percent longer-run goal for inflation that are relevant to the Committee's mandate. In the case of the Federal Reserve, we have highlighted that making sure that inflation expectations

remain anchored at our 2 percent objective is just such a consideration. Speaking for myself, I follow closely the Fed staff's index of common inflation expectations (CIE) as a relevant indicator that this goal is being met.[12] Other things being equal, if at the time of liftoff the CIE index is below its pre-ELB level, then my desired pace of policy normalization post-liftoff to return inflation to 2 percent—as well as the projected pace of return to 2 percent inflation—would be somewhat slower than if the CIE index at the time of liftoff is equal to its pre-ELB level. Another factor I will consider in calibrating the pace of policy normalization post-liftoff is the average rate of PCE inflation since the new framework was adopted in August 2020—a time, as it happened, that the federal funds rate was constrained at the ELB. If average inflation since August 2020 turns out to be notably below 2 percent, then my desired pace of policy normalization post-liftoff—and the implied pace of return to 2 percent inflation—would, other things being equal, be somewhat slower than if average inflation since adoption was close to or equal to 2 percent. It is important to note, however, that the goal of the new framework is to keep inflation expectations well anchored at 2 percent, and, for this reason, I myself plan to focus more on indicators of inflation expectations themselves—especially survey-based measures—than I will on the calculation of an average rate of inflation over any particular window of time.

Fifth element

Our framework aims ex ante for inflation to average 2 percent over time, but it does not make a (time-inconsistent) commitment to achieve ex post inflation outcomes that average 2 percent under any and all circumstances and constellations of shocks. The

[12] See Ahn and Fulton (2020) for a discussion of the CIE index.

same is true for the TPLT regime studied in Bernanke, Kiley, and Roberts (2019) featuring TPLT with a one-year memory. In this regime, the only way in which average inflation enters the policy rule is through the timing of liftoff itself. Yet in stochastic simulations of the FRB/US model under TPLT with a one-year memory that reverts to flexible inflation targeting after liftoff, inflation does average very close to 2 percent in the stochastic simulations reported in their paper. The model of Mertens and Williams (2019) delivers a similar outcome: Even though the policy reaction function in their model does not incorporate an ex post makeup element, it delivers a long-run (unconditional) average rate of inflation equal to target by aiming for a moderate inflation overshoot away from the ELB that is calibrated to offset the inflation shortfall caused by the ELB.

It is important to note that, as our new consensus statement emphasizes, the Federal Reserve is committed to using *all* of our available tools—not just the federal funds rate and forward guidance, but also large-scale asset purchases—to achieve our dual-mandate goals. Since our March 2 FOMC meeting, the federal funds rate has been reduced by 150 basis points to its ELB and we have increased our Treasury and mortgage-backed securities holdings by a total of $3.3 trillion; we continue to add to these holdings at a pace of $120 billion per month.[*] These large-scale asset purchases are providing substantial support to the economic recovery by sustaining smooth market functioning and fostering accommodative financial conditions, thereby supporting the flow of credit to households and businesses. At our November FOMC meeting, we discussed our asset purchases and the critical role they are playing in supporting the economic recovery. Looking ahead, we will continue to monitor developments and

assess how our ongoing asset purchases can best support achieving our maximum-employment and price-stability objectives. In this regard, I note that the simulation results reported in Bernanke (2020) suggest that, in general, a monetary policy at the ELB that combines threshold forward guidance, such as I have discussed in these remarks, with large-scale asset purchases, such as we have had in place since March, is best equipped ex ante to achieve inflation outcomes that are consistent with price stability and well-anchored inflation expectations at the 2 percent objective.

The New Framework and Maximum Employment

An important evolution in our new framework is that the Committee now defines maximum employment as the highest level of employment that does not generate sustained pressures that put the price-stability mandate at risk.[13] As a practical matter, this definition means to me that, when the unemployment rate is elevated relative to my SEP projection of its long-run level and other indicators—such as the prime-age employment-to-population and labor force participation ratios—are depressed relative to recent business cycle peaks, monetary policy should, as before, continue to be calibrated to eliminate such employment shortfalls as long as doing so does not put the price-stability mandate at risk. Indeed, in our September FOMC statement, we indicated that we expect it will be appropriate to keep the federal funds rate in the current 0 to 25 basis point target range until inflation has reached 2 percent (on an annual basis) *and* labor

[13] The Statement on Longer-Run Goals and Monetary Policy Strategy articulates this concept with the following: "The maximum level of employment is a broad-based and inclusive goal that is not directly measurable and changes over time owing largely to nonmonetary factors that affect the structure and dynamics of the labor market. Consequently, it would not be appropriate to specify a fixed goal for employment; rather, the Committee's policy decisions must be informed by assessments of the shortfalls of employment from its maximum level, recognizing that such assessments are necessarily uncertain and subject to revision. The Committee considers a wide range of indicators in making these assessments" (paragraph 3).

market conditions have reached levels consistent with the Committee's assessment of maximum employment. In our new framework, when in a business cycle expansion labor market indicators return to a range that, in the Committee's judgment, is broadly consistent with its maximum-employment mandate, it will be data on inflation itself that policy will react to, but going forward, policy will not tighten solely because the unemployment rate has fallen below any particular econometric estimate of its long-run natural level. This guidance has an important implication for the Taylor-type policy reaction function I will consult. In particular, I will continue—as I have done since joining the Fed—to consult policy rules that respect the Taylor principle as a benchmark for calibrating the pace and destination of policy rate normalization once, after the inflation and employment thresholds have been reached, the process of policy normalization commences. Consistent with our new framework, the relevant policy rule benchmark I will consult after the conditions for liftoff have been met is an inertial Taylor-type rule with a coefficient of zero on the unemployment gap, a coefficient of 1.5 on the gap between core PCE inflation and the 2 percent longer-run goal, and a neutral real policy rate equal to my SEP projection of long-run r*. As discussed earlier, the degree of inertia in the benchmark rule I consult will depend on initial conditions at the time of liftoff, especially the reading of the staff's CIE index relative to its February 2020 level. Such a reference rule, which becomes relevant once the conditions for policy normalization have been met, is similar to the forward-looking Taylor-type rule for optimal monetary policy derived in Clarida, Galí, and Gertler (1999). The stability properties of Taylor-type rules in dynamic stochastic general equilibrium models have been studied by Bullard and Mitra (2002) and Galí (2008), among others, and they show

that for the standard Taylor coefficient of 1.5 on the inflation gap and a coefficient of zero on the unemployment gap, the rational expectations equilibrium is unique for standard parametrizations.

One dimension along which our new framework may appear to differ from the threshold forward-guidance proposals advocated by some others is that our September FOMC guidance explicitly requires that, at the time of liftoff, in addition to inflation reaching 2 percent (on an annual basis), labor market conditions must have also reached levels consistent with the Committee's assessments of maximum employment, and I offered earlier the metrics on some of the labor market indicators I will follow to make that assessment. However, any difference between our September FOMC guidance and similar threshold guidance policies that depend only on realized inflation is, I believe, more apparent than real. The reason is that proponents of inflation-based threshold guidance typically acknowledge that liftoff following an ELB episode should be conditioned on the judgment that inflation has sustainably reached the target before liftoff is contemplated (Bernanke, 2017b), and such an assessment of sustainability in most circumstances would, I believe, be informed by an assessment of labor market conditions (Reifschneider and Wilcox, 2020). The Committee confronted just this situation in the first half of 2012, when core PCE inflation reached 2 percent at a time when the unemployment rate remained elevated at 8.2 percent, well above the top of the range of FOMC estimates of its longer-run normal level. The Committee at that time wisely, in my judgment, chose not to lift off in 2012, and I would hope—and, under our September rate guidance, expect—a future Committee would reach the same judgment under similar circumstances.

Concluding Remarks

In closing, I think of our new flexible average inflation-targeting framework as a combination of TPLT at the ELB with flexible inflation targeting, to which TPLT reverts once the conditions to commence policy normalization articulated in our September 2020 FOMC statement have been met. In this sense, our new framework indeed represents an *evolution, not a revolution.* The Committee is committed to using all available tools, including threshold-based forward guidance as well as large-scale asset purchases, to achieve the price-stability and maximum-employment goals specified in our new consensus statement. Thank you very much, and I now look forward to my virtual conversation with Annette, David, and Seth.

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[*] The speech has been updated to clarify that the Committee began to reduce the target range for the federal funds rate at its March 2 meeting; the change in securities holdings has been updated accordingly.