Fed's Clarida suggests slow removal of monetary stimulus consistent with new policy framework

On 16 November, Federal Reserve Vice Chair Richard Clarida conveyed his interpretation of the new strategic framework for monetary policy announced by the Federal Open Market Committee (FOMC) on 27 August. He provided the most detailed comments and interpretation of the new framework of any policymaker on the FOMC, indicating how he would translate that framework into decisions about monetary policy and clarifying — to an extent — some aspects of the framework that the FOMC left vague or unspecified. He provided a new, conceptual definition of "maximum employment"; clarified certain aspects of inflation measurement for ascertaining progress toward the inflation objective; described a benchmark rule he will consult for guidance on the pace at which the federal funds rate should be returned to a neutral setting once the conditions for interest-rate "lift-off" have been attained; and described how inflation expectations and average inflation will influence his thinking about the pace of interest-rate normalization. The benchmark rule described by the Vice Chair and his other comments reinforce our expectation that once the FOMC begins raising interest rates — which is likely to be several years into the future — it is likely to remove monetary accommodation gradually and proceed slowly toward a neutral policy setting.

Background

On 27 August the FOMC announced a new framework for monetary policy in an updated version of its *Statement on Longer-run Goals and Monetary Policy Strategy*. We described the new framework here and here. On 16 September, the FOMC took the first steps toward implementing the new framework. It announced that it would likely be appropriate to keep the target for the federal funds rate at its current setting of a range of 0% to ¼% (its "effective lower bound" or ELB) until three conditions had been met:

1. The economy had reached "maximum employment", which would be judged on a broad basis;
2. Inflation had reached 2%; and
3. Inflation was on track to rise moderately above 2% for some time.

FOMC statements of 27 August and 16 September and accompanying comments from Chair Powell left unspecified or vague some aspects of how the FOMC would implement its new monetary policy framework. The definition of "maximum employment" was not specified and issues related to the measurement of inflation and inflation expectations were not fully clarified. The period over which inflation would need to be 2% (i.e., 1 year, 2 years, etc.) to satisfy the second condition for lift-off was ambiguous.[1] With respect to the third condition, the terms "moderately above 2%" and "some time" were not further specified. According to its 16 September statement, the FOMC "expects to maintain an accommodative stance of monetary policy" until inflation has risen moderately above 2% for some time so that inflation averages 2% over time, with inflation expectations well anchored at 2%. Beyond this general principle, it did not indicate how it would determine the pace at which to return interest-rate policy to a neutral stance once it had begun to

1. The 27 August statement did assert 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." However, the 16 September FOMC statement did not assert that inflation had to be 2% *for one year* to satisfy the 2nd of the 3 conditions necessary for lift-off.

Contacts
Ken Matheny, ken.matheny@ihsmarkit.com
Chris Varvares, chris.varvares@ihsmarkit.com

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raise the federal funds rate target from the effective lower bound (ELB). Clarida's remarks go a long way toward filling this gap and clarifying how the new framework could be implemented with respect to setting the target for the federal funds rate.

Five key elements of the new inflation framework

According to Vice Chair Clarida, there are 6 key elements to the new monetary policy framework, of which 5 are centered on inflation and the Fed's price-stability mandate. The sixth element relates to the employment mandate.

I. Lift-off from the ELB will be delayed until PCE inflation has risen to 2% *on an annual basis*. In other words, inflation-averaging for purposes of establishing a pre-condition for interest-rate lift-off is that *inflation average 2% over a one-year period*.

II. Since inflation has run persistently below 2%, the FOMC will aim to have inflation rise moderately above 2% for some time *in the service of inflation averaging 2% over time and keeping longer-run inflation expectations well anchored at 2%*. The first portion repeats prior communication from the FOMC. The second (italicized) portion emphasizes that the size of the inflation overshoot will be guided by the intent to have inflation average 2%, but more fundamentally, to ensure that longer-run inflation expectations are anchored at 2%. Clarida emphasized that inflation projections from FOMC participants contained in the quarterly *Survey of Economic Projections*, alongside regular FOMC policy statements, can be used to communicate the FOMC's tolerance for deviations from 2% inflation.

III. The FOMC expects that monetary policy will remain accommodative for some time after conditions to commence policy normalization have been met. This is consistent with the FOMC's 16 September statement. It is reflected in Clarida's description of how interest-rate policy will be calibrated once the committee is confident of meeting its inflation objective.

IV. Policy will aim over time to return inflation to 2%, but not below, after the temporary overshoot of inflation that is intended to support long-run inflation expectations of 2%. This is a key portion of Clarida's description of the policy framework implementation. In essence, he is committing to a policy stance intended to keep inflation at or above 2% not just during the overshoot period that follows interest-rate lift-off, but also in the subsequent period after the inflation overshoot (of 2%) has been sufficient to support long-run inflation expectations at 2%. In other words, "inflation averaging 2%" applies to making up for past misses below 2%, but it does not apply to offsetting the intentional "moderate overshoot". Without this clarification, the public might anticipate that the intermediate-horizon inflation target would cycle above and below 2% repeatedly, weakening the long-run inflation anchor, unsettling bond markets, and leading to confusion about the outlook for monetary policy in response to future developments.

V. Inflation averaging 2% over time is an "ex ante aspiration", not an ex post commitment. The FOMC will seek to have inflation average 2% over time, but it will not guarantee that outcome. This is an implicit acknowledgement that the employment mandate and other considerations might result in outcomes where inflation does not exactly average 2%.[2] It explicitly recognizes that inflation targeting is "flexible" and not formulaic, a point we have emphasized on several occasions.

An essential factor underpinning these 5 elements is the intent to support well-anchored long-run inflation expectations at 2% because the FOMC judges that to be consistent with the mandate for price stability assigned to it by Congress. The policy framework is intended to support inflation forecasts as priced into financial contracts consistent with 2% inflation expectations over the longer run, which will preserve some capacity for policy tools to be used to lower real interest rates when needed to provide monetary policy stimulus.

2. The fifth element creates flexibility for the FOMC to avoid time-inconsistency that could arise if it committed to ensuring, ex post, that inflation averaged 2% or reached any other fixed numerical benchmark.

Clarida described the inflation portion of the FOMC's policy framework as *temporary price-level targeting (TPLT) at the effective lower bound that reverts to flexible inflation targeting (FIT) once the conditions for lift-off have been reached*. His description echoes a framework described by former Fed Chair Ben Bernanke and co-authors, and other researchers.[3] In part to avoid the lengthy acronym TPLT+FIT, we will continue to refer to the new policy framework as "flexible averaging inflation targeting" (FAIT). We will employ "asymmetric flexible averaging inflation targeting" (A-FAIT) when it is important to emphasize asymmetric features of the framework.

Clarida's final (sixth) element of the new policy framework

The definition of "maximum employment" was not specified in the FOMC's strategy statement of 27 August. Clarida provided a conceptual definition:

VI. <u>Maximum employment is the highest level of employment that does not generate sustained pressures that put the price-stability mandate at risk</u>.

Clarida's definition of maximum employment differs subtly from traditional definitions of "full employment" as a level of employment consistent with the unemployment rate equal to the non-accelerating inflation rate of unemployment (NAIRU). The NAIRU is not observed directly. It is typically estimated as the (possibly time-varying) level of the unemployment rate consistent with no change in inflation once the impacts from temporary shocks to e.g., energy and nonenergy import prices, have shrunk to zero.

Both *full employment* and *maximum employment* correspond to healthy labor markets in the vicinity of what would be sustainable and consistent with low and stable inflation. While full employment is consistent with no change of inflation (subject to the caveats mentioned previously), maximum employment is consistent with getting to and remaining at the FOMC's inflation objective. Maximum employment could be above full employment if inflation was below 2% consistently or longer-run inflation expectations were below 2%. In either case, employment might be allowed to exceed its full-employment level for a time without causing inflation expectations to rise above 2%. Maximum employment might be above full employment if there is capacity for rising labor force participation in response to a period of strong labor markets. Increases in labor force participation could limit downward pressure on the unemployment rate and upward pressure on inflation even if employment were to continue to rise faster than long-run growth in the working-age population. Persistent restraint on inflation from declining trends in relative prices for energy and nonenergy imports, or from sustained accelerations in productivity, could allow maximum employment to exceed full employment. Of course, there could be conditions under which maximum employment would fall short of long-run full employment for a period of time, such as when the outlook for labor-force participation or productivity weakens or in the presence of sustained positive impulses to inflation from increases in energy prices or other exogenous events.

A two-part policy rule benchmark

Clarida described a two-part policy rule benchmark befitting his description of the monetary policy framework as embodying temporary price-level targeting at the effective lower bound with flexible inflation targeting away from the effective lower bound. The target for the federal funds rate will remain at the ELB until achieving the three conditions described previously: maximum employment, 2% inflation (for one year), and confidence that inflation is on track to rise moderately above 2% for some time. According to Clarida, a benchmark rule for the pace of normalization after lift-off is an inertial Taylor-type policy rule with a coefficient of zero on the unemployment gap, a coefficient of 1.5 on the difference of inflation from the long-run 2% target, and a neutral policy rate equal to Clarida's projection of long-run r* plus 2% inflation. With those settings, the post-lift-off policy rule benchmark consistent with Clarida's description is:

$$i_t^* = \rho * i_{t-1} + (1-\rho)*\left[0.5 + 2.0 + 1.5*\left(\pi_{t-4,t} - 2.0\right)\right]$$

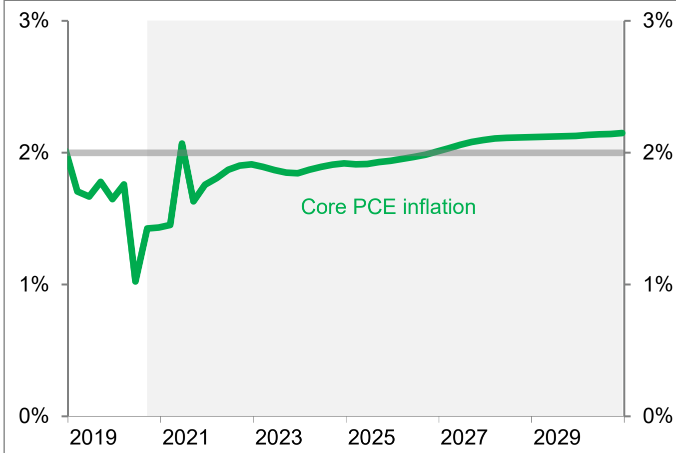
3. See Bernanke, Ben S., Michael T. Kiley, and John M. Roberts (2019). "Monetary Policy Strategies for a Low-Rate Environment," *AEA Papers and Proceedings*, vol. 109 (May), pp. 421–26. Other papers on this topic are listed in the bibliography attached to the text of Clarida's speech, which can be found at https://www.federalreserve.gov/newsevents/speech/files/clarida20201116a.pdf.

where i denotes the federal funds rate; inflation (denoted by π) is measured over the most recent four quarters; the long-run inflation target is 2%; and the real neutral policy rate is set at 0.5%, corresponding to the median estimate from FOMC participants.[4]

Clarida did not specify a value for the inertial term — the coefficient on the lagged federal funds rate, ρ. We anticipate the FOMC will lean toward a cautious approach to raising the target federal funds rate after lift-off has begun, suggesting a relatively high value somewhat below 1. In Clarida's view, the pace of normalization (and hence the parameter ρ) will depend on two considerations. First, he would adjust the pace of normalization in response to average inflation since adoption of the new policy framework in August 2020. If average inflation since August 2020 were notably below 2%, he would slow the pace of normalization, presumably corresponding to a value of ρ even closer to but still slightly less than 1. Second, he would slow the pace of normalization if inflation expectations were below 2%, also corresponding to a high value for ρ. In Clarida's view, the second of these two factors is more relevant because a key objective of the policy framework is to promote well-anchored inflation expectations at 2%. *Clarida plans to focus more on indicators of inflation expectations, especially survey-based measures, than on average inflation over "any particular window of time" as he assesses the appropriate pace of normalization.*[5] In short, Clarida does not specify the value of ρ, but his description and prior literature on policy rules with inertia hints at a value close to 1. For a base case, we will employ a value of 0.9, while also considering the sensitivity of the benchmark rule to alternative values.

It would be instructive to apply the benchmark rule to FOMC projections covering the period after interest-rate lift-off to gain insight into the possible trajectory of the federal funds rate consistent with Clarida's benchmark rule. Unfortunately, the Survey of Economic Projections, which compiles forecasts from FOMC participants, extends only to 2023, which is prior to when most participants expect lift-off to occur. We can, however, apply the benchmark rule to our forecast, which presumes that lift-off will occur in 2026.

Inflation forecast (IHS Markit)
4-quarter % changes



Source: IHS Markit, Bureau of Economic Analysis © 2021 IHS Markit

The second of the nearby charts displays a projection from the benchmark rule in which the latter is primed with our forecast for core PCE inflation (shown in the first chart) and jumping off from our assumption that the first hike in the target for the federal funds rate will occur in 2026. We set the inertial parameter at 0.9 and employ a long-run nominal neutral rate of 2.5% that corresponds to the median estimate from FOMC participants.[6] As implied by our forecast and as depicted in the second chart, average inflation at the time of lift-off is 2% and it continues to rise to slightly above 2% because inflation is projected to rise moderately above 2% beginning in 2027. We assume long-run inflation expectations are 2%.

The benchmark rule implies that normalization (toward the FOMCs median estimate of the long-run *nominal* interest rate of 2.5%) will proceed slowly, developing over a period of four to five years.[7] This is consistent with guidance from the FOMC that monetary policy will remain accommodative for some time

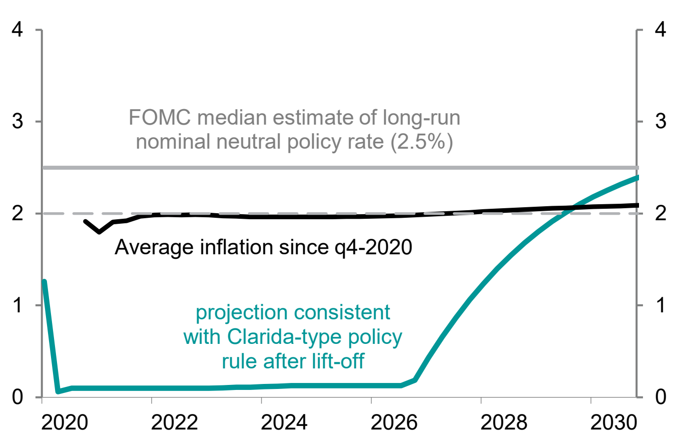
4. Most FOMC members estimate that long-run r* is between 0.25% and 0.75% with a median estimate of 0.5%.

5. Clarida will use an index of "common inflation expectations" (CIE) produced by Federal Reserve staff to assess in inflation expectations relative to its pre-ELB level. The CIE index seeks to identify changes in a common factor tied to long-run inflation expectations suggested by several survey-based measures and breakeven inflation implied by yields on nominal and inflation-protected Treasury securities. See Ahn, Hie Joo, and Chad Fulton (2020). "Index of Common Inflation Expectations," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, September 02, 2020, https://doi.org/10.17016/2380-7172.2551.

6. This is slightly lower than our forecast assumption of a long-run nominal neutral rate of 2.63%.

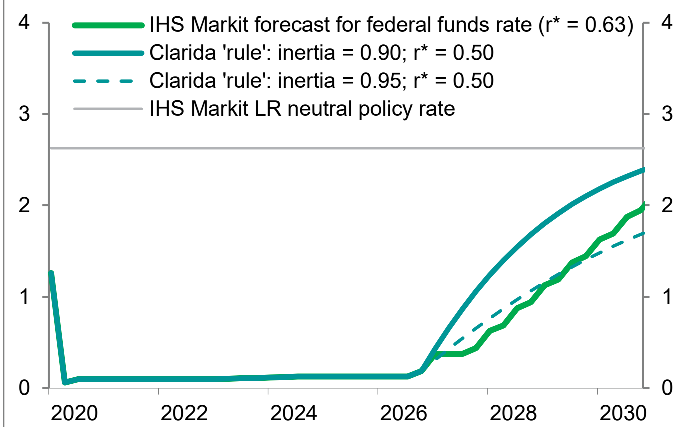
7. In the projection for the fourth quarter of 2030, the prescribed level of the federal funds rate is 2.38%. The projected level first reaches 2.50% in third quarter of 2031 (not shown).

Interest rate policy benchmark based on Clarida (2020)
%, quarterly average



Source: IHS Markit © 2021 IHS Markit

Interest rate policy benchmark based on Clarida (2020)
%, quarterly average



Source: IHS Markit © 2021 IHS Markit

even after achieving the conditions it established for lift-off.

The third chart compares the path of the federal funds rate in our forecast with projections from two different versions of the benchmark rule. The solid blue line is identical to the projection shown in the second chart. The dashed blue line is a projection with more inertia — the parameter ρ is set to a higher value of 0.95. When the inertia parameter is 0.9, the benchmark rule would call for a faster return to a neutral policy setting than we currently assume. More inertia would slow the return to a neutral policy setting, resulting in a trajectory for the federal funds rate similar to our forecast for the first few years following lift-off.[8]

We expect that the FOMC will adopt a dovish approach to removing accommodation once it begins the process of raising the target for the federal funds rate. This would be intended to reinforce a moderate inflation overshoot, promote average inflation of 2%, and prevent inflation expectations from falling below 2%. Slow removal of accommodation will promote strong labor markets and help the FOMC meet its maximum employment objective.

The FOMC could adopt a less cautious approach to removing accommodation if inflation rises too high, exceeding the FOMC's goal of a "moderate" overshoot of 2%, especially if there are indications that inflation expectations will rise above a range consistent with the 2% longer-run objective. In such scenarios, the federal funds rate could rise more quickly and to a higher level than shown, implying additional upward pressure on bond yields.

Summary

Federal Reserve Vice Chair Richard Clarida deepened our understanding of how the FOMC is likely to implement its new monetary policy framework, especially when the time comes to consider removing monetary accommodation through increases in the target for the federal funds rate. He provided a conceptual definition of maximum employment and further information about how progress toward achieving average inflation of 2% would be assessed. He highlighted the roles of average inflation and inflation expectations in influencing the pace at which monetary accommodation would be narrowed after lift-off. A benchmark rule described by Clarida reinforces our expectation that the FOMC will proceed cautiously with rate hikes after achieving the conditions for lift-off, suggesting return to a neutral setting for the federal funds rate is likely to occur over a period of several years barring unforeseen shocks.

8. We anticipate the target for the federal funds rate will reach our assumption for a neutral setting, corresponding to a target range of 2½% to 2¾%, some 6 years after lift-off. In the first of the two projections of the benchmark rule, the funds rate reaches neutral in about 4½ years; in the second projection neutral is reached in 10 years, but the projection rises to within 1/8 percentage point of neutral in approximately 8 years.

Contacts

Joel Prakken
VP & Co-Head US Economics
joel.prakken@ihsmarkit.com

Chris Varvares
VP & Co-Head US Economics
chris.varvares@ihsmarkit.com

Ben Herzon
Executive Director
ben.herzon@ihsmarkit.com

Ken Matheny
Executive Director
ken.matheny@ihsmarkit.com

Patrick Newport
Executive Director
patrick.newport@ihsmarkit.com

James Bohnaker
Director
james.bohnaker@ihsmarkit.com

Kathleen Navin
Director
kathleen.navin@ihsmarkit.com

David Deull
Associate Director
david.deull@ihsmarkit.com

Michael Konidaris
Associate Director
michael.konidaris@ihsmarkit.com

Mike Montgomery
Associate Director
mike.montgomery@ihsmarkit.com

Juan Turcios
Principal Economist
juan.turcios@ihsmarkit.com

Gordon Greer III
Senior Economist
gordon.greer@ihsmarkit.com

Lawrence Nelson
Senior Economist
lawrence.nelson@ihsmarkit.com

Akshat Goel
Economist
akshat.goel@ihsmarkit.com

William Magee
Economist
william.magee@ihsmarkit.com

IHS Markit Customer Care

CustomerCare@ihsmarkit.com
Americas: +1 800 IHS CARE (+1 800 447 2273)
Europe, Middle East, and Africa: +44 (0) 1344 328 300
Asia and the Pacific Rim: +604 291 3600

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