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Special Commentary

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Two Thine Own Inflation Target Be True?
Fed Policy Review Part 1

Executive Summary
In the first of a series of reports examining how the Fed's framework and toolkit may evolve in the coming years, we look at potential changes to the Fed's current inflation target. After watching inflation average less than 2% over the past two decades, officials would like to see it run slightly higher in order to provide more space to cut real interest rates during future recessions. To facilitate 2% inflation on a more sustained basis, Fed officials are assessing the merits of average-inflation targeting or price-level targeting. With past misses on inflation no longer treated as "bygones," actual inflation and inflation expectations should run higher. As a result, nominal interest rates should be higher, the yield curve should steepen and the dollar should depreciate, all else equal.

Monetary Policy Review Underway at the Fed
By most measures, the current economic expansion in the United States, which is currently in its tenth year, is on solid footing. Nevertheless, officials at the Fed are starting to think about strategies to better achieve its dual mandates of price stability and maximum employment throughout the business cycle, and to combat future downturns.

Fed officials are starting to think about strategies to combat future downturns.

For example, Richard Clarida, the Vice Chairman of the Federal Reserve Board, discussed the Fed's ongoing review of its policy strategy and tools in a recent speech.[1] Clarida noted that the "neutral" interest rate (so-called r*) appears to have fallen in the United States over the past decade or so. In that regard, the mid-point of the Fed's target range for the fed funds rate is only 2.38% at present, and it appears that the Federal Open Market Committee (FOMC) may be nearing the end of its tightening cycle, if it has not been reached already. With only 200 bps or so of room to cut rates, would the Fed have enough traditional "ammunition" to combat the next recession?

The limited capacity to stimulate growth is unlikely to be an issue unique to the current business cycle. In this series of reports, we will look at some of the new strategies and policy tools that the Fed may employ in the future as well as the implications of some of those potential changes. Future reports will analyze negative interest rates, renewed asset purchases (*i.e.*, quantitative easing) and the Fed's output gap framework. We should stress that the strategy review at the Fed is ongoing, and that the FOMC has not yet made any changes to its monetary strategy or policy toolkit. But we think it is prudent to discuss some potential changes to the way the Fed may operate going forward so that readers are prepared for those changes if and when they occur.

The Fed has not yet made any changes to its strategy and policy toolkit.

[1] **See Clarida, Richard H. "The Federal Reserve's Review of Its Monetary and Policy Strategy, Tools, and Communication Practices." Presented at the 2019 U.S. Monetary Policy Forum, the Initiative on Global Markets at the University of Chicago Booth of Business, Feb. 22, 2019.**

This report is available on wellsfargo.com/economics and on Bloomberg WFRE.

Is the Fed's Current Inflation Target "Broken"?

The United States Congress has tasked the Fed with a mandate of promoting "stable prices," although Congress did not explicitly define the term. Congress also gave the Fed the goals of "full employment" and "moderate" long-term interest rates. In contrast, the government of New Zealand in 1989 gave its central bank a single mandate of an explicit inflation target (midpoint of a 1% to 3% target range), and governments in Canada and the United Kingdom gave their respective central banks similar inflation targets in the following decade. The Fed did not adopt an explicit inflation target of 2% until 2012.[2]

Broadly speaking, the proliferation of inflation targets for central banks at the end of the 20th century was for the most part a means for them to bring inflation *lower*. The pioneers of explicit inflation targeting, including governments in New Zealand, Canada and the United Kingdom, introduced inflation targeting during periods when inflation was high and authorities wanted to reduce it. An explicit target was thought to demonstrate a central bank's commitment to low inflation and improve its ability to do so by reining in inflation expectations. For the most part, central banks–the Federal Reserve included–were successful in their efforts to reduce inflation from the rates that prevailed throughout the 1990s and the early years of the current century.

Central banks may have been too successful in reducing inflation.

But some observers could reasonably argue that central banks have been *too* successful in reducing inflation. In the wake of the Great Recession, the risks to "stable prices" have generally been skewed toward mild deflation rather than unacceptably high inflation. For example, CPI inflation in Japan has averaged just 0.5% even though the Bank of Japan currently has a "price stability" target of 2%. The primary objective of the European Central Bank is "price stability," which it defines as an inflation rate that is "below, but close to, 2% over the medium term." Yet the core rate of CPI inflation, which is a good measure of underlying inflationary pressures in an economy, has not been "close to" 2% for a decade (Figure 1). In the United States, core PCE inflation has been running below the Fed's 2% target for almost the entirety of the current cycle and has averaged just 1.6% since the end of the Great Recession (Figure 2).

Figure 1

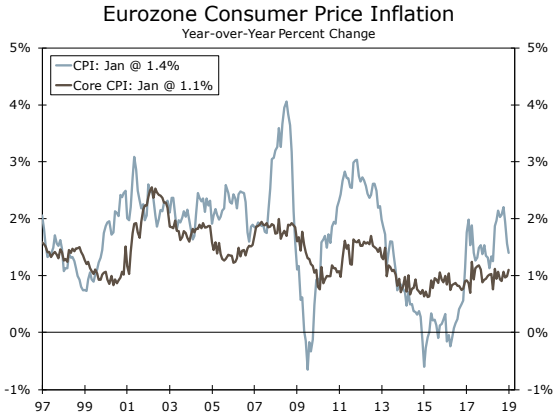
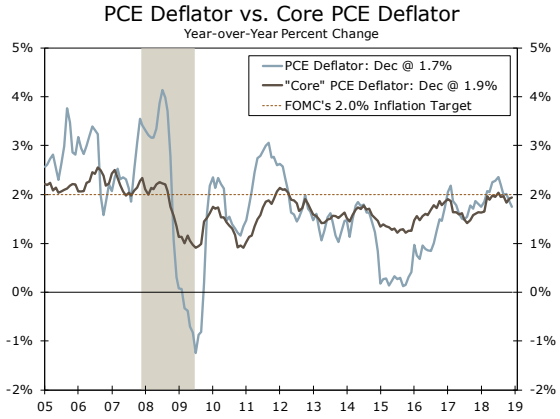


Figure 2



Source: IHS Markit, U.S. Department of Commerce and Wells Fargo Securities

Low inflation can make it difficult for a central bank to cut real interest rates.

An extended undershoot of a central bank's inflation target can lead to depressed inflationary expectations that can make it difficult for the central bank to raise the realized inflation rate. The practical issue of depressed inflationary expectations and abnormally low inflation is that it limits the central bank's ability to reduce real interest rates to stimulate economic activity during a downturn. A central bank can run out of conventional "ammunition" when its policy rate nears the effective lower bound (ELB) near 0%. Consequently, the Fed's policy review is intended to identify ways to strengthen its credibility in generating 2% inflation over the business cycle and give the

[2] **The Federal Reserve adopted this explicit inflation target on its own accord. Congress did not give the Fed the specific number.**

FOMC more recession-fighting capability when future downturns arrive. We now turn to four potential changes that the Fed could make to its inflation target.

Leading Contenders: Average-Inflation Rate and Price-Level Targeting

The Fed has let inflation bygones be bygones.

Traditionally the Fed (and almost all other central banks) has taken a forward-looking approach to inflation. Past misses on inflation, whether to the upside or downside, are not considered when setting policy. In other words, the Fed lets bygones be bygones. However, average-inflation rate targeting and price-level targeting (PLT) would challenge that convention.

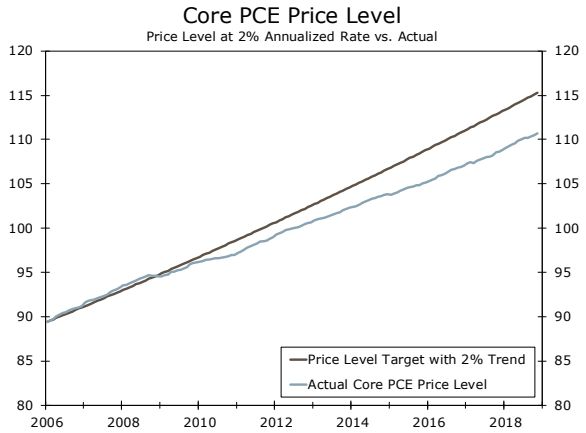
Average-inflation targeting involves an explicit aim for inflation to average a given rate over time. For example, if the Fed adopted this framework with its current 2% target, it would aim for 2% inflation on average over the medium or longer term. If inflation were to undershoot for a given period of time, then overshoots would be tolerated with the specific aim of raising the mean rate of inflation over a multiyear period. With the explicit aim for inflation to average a given rate over time, inflation expectations and realized inflation should be higher, consequently reducing the time monetary policy is constrained by the ELB.[3]

Under a strategy of average-inflation targeting, the Fed could choose the length of the "lookback" period, or the number of years in which inflation's prior performance was factored into policy decisions. That would limit the potential for inflation expectations to become unglued. Policymakers would continue to emphasize "price stability" in terms of the rate of inflation, making it only a moderate departure from the current single-target framework. Implicitly the FOMC already has moved toward average-inflation targeting through its recent emphasis on the "symmetric" nature of the 2% target. [4]

The makeup period under price-level targeting could be quite long.

A more radical—but similar—approach, in our view, would be price-level targeting (PLT). With PLT the Fed would attempt to keep the *level* of prices rising at a steady rate. Similar to average-inflation targeting, there would also be a "makeup" period for times when policy was constrained by the ELB. Yet with PLT, the makeup period could be quite long. For example, if the FOMC set the price level in 2006 to be consistent with 2% trend inflation, the FOMC would still be waiting to raise interest rates (Figure 3).

Figure 3



Source: U.S. Department of Commerce and Wells Fargo Securities

The built-in makeup period would be a form of forward guidance, because the FOMC would be committing to keeping monetary policy accommodative until the price level (as opposed to the inflation rate) returned to target. Because inflation would need to rise measurably to return the

[3] Mertens, Thomas and John C. Williams. "Monetary Policy Frameworks and the Effective Lower Bound on Interest Rates." ***Federal Reserve Bank of New York Staff Reports,*** **no. 877. January 2019.**
[4] Since March 2017, the FOMC has described its inflation goal as "symmetric" in post-meeting statements.

price level to target, inflation expectations would be higher, especially in periods of low inflation.[5] In short, monetary policy should be constrained by the ELB less frequently.[6]

A downside to PLT is its potential to lead to monetary tightening if prices rise faster than the Fed's desired path due to temporary factors like a spike in gasoline prices. This potential disadvantage to PLT is why some central bankers tend to favor it only temporarily.[7] Once the price level catches up to its targeted path, the Fed would revert back to its current 2% inflation target. If history is a useful guide, the FOMC likely would "look through" temporary deviations of the inflation rate from target that were caused by significant changes in energy prices.

Yet even on a temporary basis, PLT has some disadvantages. First, communicating such a regime shift to the public is not likely to be easy. After a prolonged undershoot of the price level, it may take an extended period of high inflation to bring prices up to the desired level. If not well understood, temporary PLT would not stimulate the economy during downturns, and it also risks a marked unmooring of inflation expectations during the makeup period. Financial imbalances may also accumulate during this "lower for longer" period.[8] But the explicit price level goal could inhibit the FOMC's flexibility to address such imbalances if more targeted macro prudential policies are deemed inadequate. Because Congress has tasked the Fed with managing multiple priorities, the Fed has historically shied away from adopting explicit policy rules (such as the Taylor Rule) so as not to be constrained in its flexibility.

Other Approaches: Raise the Inflation Target or Use an Inflation Range

We do not expect the Fed to raise its current inflation target of 2%.

A more straightforward solution for generating more room to reduce real rates would be for the FOMC to raise its current 2% inflation target. A higher inflation target would signal the central bank's willingness to tolerate greater inflation, thereby lifting inflation expectations and, presumably, realized inflation. However, the Fed has all but ruled out a shift to a higher inflation target in its recent communications. While it would be a relatively simple change to the framework, it could de-anchor inflation expectations and lead to political concerns around the impact of higher inflation on the public. Thus, we see this as a low probability option for the Fed moving forward.

Switching to a target *range* for inflation may be more feasible. Boston Fed President Eric Rosengren and former New York Fed President William Dudley have previously advocated for specifying a range of acceptable inflation outcomes, say from 1.5-3.0% or a bit narrower at 1.5-2.5%.[9] The upper end of the range would give the FOMC greater flexibility in remaining accommodative after periods at the ELB. Alternatively, the lower end of the range would give the FOMC cover to tighten policy for financial stability reasons.

Similar to average-inflation targeting, the FOMC's emphasis on the "symmetric" nature of its target could also be considered a step toward an inflation range. Yet the adoption of specific range would give more clarity on the degree to which an under-shoot or an over-shoot would be tolerated by the FOMC before triggering a policy change. While we acknowledge the potential merits of this framework, Fed policymakers have seemingly not been as keen on adopting an inflation range in recent communications. It could resurface as an option if policymakers do not choose to adopt average-inflation rate targeting or PLT, but for now we see it as a relatively unlikely option.

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[5] Mertens and Williams, 2019.
[6] Bernanke, Ben S., Michael T. Kiley, and John M. Roberts. "Monetary Policy Strategies for a Low-Rate Environment." Finance and Economics Discussion Series 2019-009. Washington, Board of Governors of the Federal Reserve System.
[7] See for example, Bernanke, Ben S. "Temporary Price-Level Targeting: An Alternative Framework for Monetary Policy." The Hutchins Center for Fiscal and Monetary Policy, Oct. 12, 2017, or Clarida (2019).
[8] Brainard, Lael. "Rethinking Monetary Policy in a New Normal." Presented at the conference on Rethinking Macroeconomic Policy, Peterson Institute of International Economics, Oct. 12-13, 2017.
[9] Rosengren, Eric S. "Considering Alternative Monetary Policy Frameworks: An Inflation Range With an Adjustable Inflation Target." Presented at the Money, Models & Digital Innovation Conference, Global Interdependence Center, Jan. 12, 2018.
Dudley, William C. "Important Choices for the Federal Reserve in the Years Ahead." Remarks at Lehman College, Apr. 18, 2018.

Implications for Financial Markets

All of the options discussed above, with the possible exception of an inflation range, should lead to higher inflation expectations and, consequently, higher realized rates of inflation. Although these potential changes to the Fed's inflation-targeting framework should not have any effects on real variables such as the economy's long-run potential growth rate and the "natural" unemployment rate, they could have implications for nominal variables.

Higher inflation expectations could lead to a higher and steeper yield curve.

For starters, higher inflation expectations should lead to higher bond yields, everything else equal. Consequently, the "neutral" fed funds rate should be higher on a nominal basis, although the "neutral" rate on a real basis (so-called r*) should remain largely unaffected. Furthermore, higher inflation expectations could lead to a steeper yield curve, everything else equal. It is also possible that higher inflation leads to a more active Treasury Inflation Protected Securities (TIPS) market, although that is not a given since some analysis suggests that while higher, inflation would be less variable.[10]

Changing the inflation target could also have implications for the value of the U.S. dollar. If the policy change leads to higher inflation expectations and realized rates of inflation in the United States, that should lead to a weaker greenback all else equal. Meanwhile, the dollar could also face headwinds to the extent that U.S. rates are lower for longer in the next cycle as the Fed tries to stoke higher inflation.

Conclusion

In terms of likelihood, we give a slight edge to average-inflation targeting.

Of the four potential changes to the Fed's current 2% inflation target framework, we view average-inflation targeting and price level targeting as the leading contenders. Both regimes look to generate inflation more closely in line with the Fed's goal and suggest policy would be constrained by the ELB less frequently. However, we give a slight edge to average-inflation targeting since it continues to focus on the inflation rate, rather than the price level, and therefore could be viewed as a less radical policy shift and easier to communicate. In fact, the FOMC has already implicitly moved toward an average-inflation target by more frequently describing its 2% target as "symmetric."

An inflation range may also be relatively easy to communicate, but may not be successful in driving inflation expectations higher since sub-2% would still be tolerated. A higher inflation target is very unlikely given the political pushback it would receive as well as the fact that inflation would likely be higher all the time, not just during makeup periods.

Importantly, the successful transition to any of the proposed frameworks depends on the Fed credibly communicating the change. If businesses and households do not fully understand the changes, or do not believe the policy is credible, inflation may continue to come in lower than target. If that is the case, policy would still likely be encumbered by the effective lower bound on a more regular basis, which would cause the FOMC to stay "lower for longer" and potentially spur financial imbalances. In light of these challenges, the FOMC may need to do more than alter its inflation framework to mitigate the next downturn. In our next reports, we look at some of the tools the FOMC could possibly employ to better achieve its policy goals, beginning with negative rates.

[10] **Bernanke et al. 2019**

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