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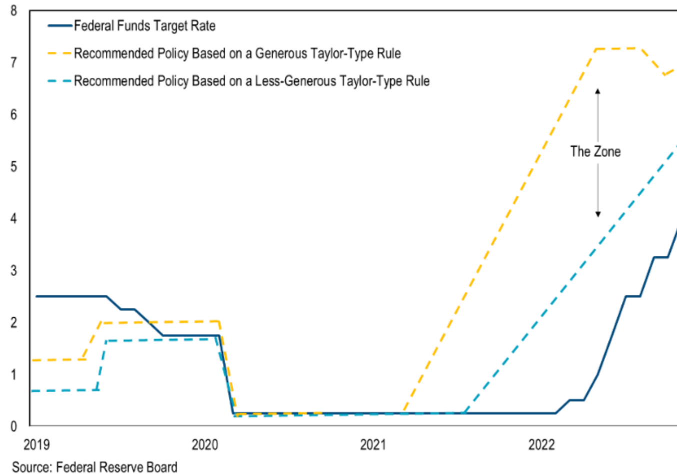
# Getting into the Zone: Who's Taylor, and Why is He Setting Rates?




The latest flurry of Federal Reserve (Fed) speak ahead of the final Federal Open Market Committee (FOMC) meeting of the year highlights a growing divide among officials regarding the appropriate pathway for policy. Some at the Fed remain optimistic the recent improvement in price pressures is a welcome indication that earlier policy initiatives are already having the intended effect. Others are not convinced a minimal reduction from peak levels is a clear-cut sign inflation will continue to retreat towards the Fed's desired 2% target range.

Given the still-too-high nature of inflation, Federal Reserve Chairman Jerome Powell – among others – has insisted that while the size of subsequent hikes may slow, policy will likely need to push higher than previously anticipated. But how much higher? At least one policy maker has quantified the terminal target range to be between 5%-7%.

## HIGHER, BUT HOW MUCH HIGHER IS "*HIGHER*?"

Speaking earlier this week at a Brookings Institution event in Washington, Powell was clear the central bank remains broadly committed to reinstating price stability, the "*bedrock*" of the economy. However, despite earlier policy initiatives, including four "*supersized*" rate hikes of 75 basis points (bps) each and taking the upper bound of the federal funds target range to 4%, inflation remains more than three times the Fed's desired level. Thus, Powell concluded, as he did during last month's press conference, the "*ultimate level of interest rates will be higher than previously expected*."

In the weeks since the November FOMC policy announcement, some policy officials have called for a more tempered or controlled pace of policy, while several others have emphasized that the pace of ascension is less important than the actual level of policy needed to quell inflation. Powell acknowledged there have been signs of improvement but indicated significant monetary policy tightening is still necessary for the Fed to meaningfully slow price pressures, including those that reflect rising domestic wages.

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"*Given our progress in tightening policy, the timing of that moderation is far less significant than the questions of how much further we will need to raise rates to control inflation, and the length of time it will be necessary to hold policy at a restrictive level*," Powell said.

*"It will take substantially more evidence to give comfort that inflation is actually declining...By any standard, inflation remains much too high... I will simply say that we have more ground to cover."*

Since March, the Fed has revised up its outlook for the terminal federal funds rate by roughly 200 bps from 2.8% to 4.6%, as well as its expectations for inflation by year end from 4.3% to 5.4%. And while Powell's latest comments appear to have solidified market expectations for a smaller 50 bps increase next month, with inflation stubbornly elevated – and well above the Fed's earlier expected year-end level and even further above the Committee's 2% target range – the Fed will likely revise expectations higher for both rates and inflation a fourth time in the final Summary of Economic Projections (SEP) release of 2022. Powell has said higher than previously expected, the question remains, exactly how much higher?

## BULLARD SETS THE "*ZONE*"

According to St. Louis Fed President James Bullard, the answer to "how high?" is "*significantly higher*." Speaking the week of November 13 at an event in Louisville, Kentucky, Bullard suggested that with earlier rate hikes clearly having "*only limited effects on observed inflation,*" rates are likely needed to move markedly higher in order to ensure a return to 2% inflation. Bullard explained that using more benign or "*dovish*" assumptions, a basic monetary policy rule would require rates to rise to at least around 5%. Meanwhile, assuming stricter or more "*hawkish*" assumptions, he continued, would potentially require rates to rise above 7%! In other words, the Fed will need to raise rates at least another 100bps to even breach the lower bound of the "*restrictive*" zone needed for policy to tame inflationary pressures.

*"Thus far, the change in the monetary policy stance appears to have had only limited effects on observed inflation," Bullard said. "To attain a sufficiently restrictive level, the policy rate will need to be increased further."*

*"In the past I have said 4.75%-5%...Based on this analysis today, I would say 5%-5.25%. That's a minimum level. According to this analysis that would at least get us in the zone."*

## WHO'S TAYLOR AND WHY IS HE SETTING RATES?

The basic monetary policy rule Bullard is referring to is what economists call the Taylor Rule proposed in the early 1990s by American economist John B. Taylor. The rule equation is defined as $r = p + 0.5y + 0.5(p - 2) + 2$, where r is the minimal federal funds rate, p is the rate of inflation and y is the percent deviation between current real GDP and

## GLOSSARY

CBO – Congressional Budget Office

GDP – Gross Domestic Product

FOMC – Federal Open Market Committee

PCE – Personal Consumption Expenditures

SEP – Summary of Economic Projections

YoY – Year over Year

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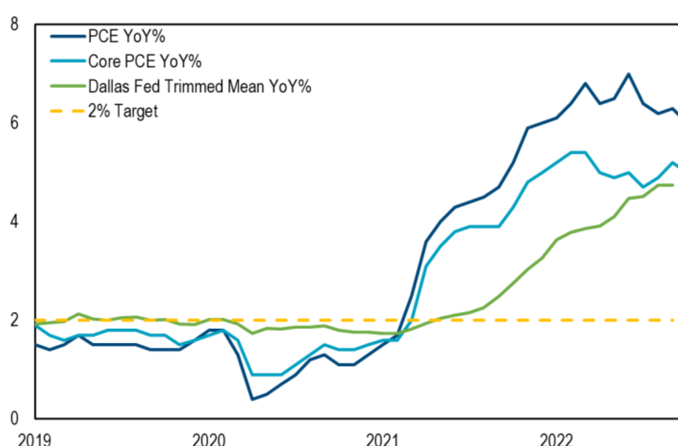
the long-term linear trend in GDP, and provides guidance to help central banks set short-term interest rates in accordance with their dual mandate of stable prices and full employment.

The Taylor Rule suggests that monetary policy should be directed by two factors. The first is the gap between realized inflation and the desired or targeted level of inflation, and second is the gap between realized and targeted GDP. Overshoots of inflation or the growth targets increase the proposed level of policy, while shortfalls lower it. While seemingly straightforward on the surface, complications arise when economists make assumptions regarding the inputs pulled into the equation.

Using generous or more dovish assumptions, a Taylor-type policy rule gives a minimum recommended value for the desired policy level given today's economic conditions, while less generous assumptions would presumably give the upper-bound of the desirable target range for the policy rate. Thus, the recommended "*zone*" for policy as Bullard calls it, is the space between the lower and upper bounds.

While economists debate the value of "*r*" in the formula, which designates the long run or equilibrium real rate of interest, as well as how to measure the output gap either by applying Okun's Law  or using the CBO estimate of potential GDP, the analysis becomes particularly complex when it comes to measuring inflation. The Taylor Rule makes inflation the single most important factor in setting rates. The Personal Consumption Expenditures Index (PCE), for example, the Fed's preferred measure of inflation, jumped 6.0% in October, leaving a difference of 400 bps from the Fed's desired target. Such a sizable gap would imply the need for materially more action from the Fed to a more restrictive level of policy in order to bring down price pressures.

The headline PCE, however, includes the cost of volatile food and energy components. Thus, many economists propose using the core PCE, which excludes both of those unruly categories. Others propose using the Dallas Fed trimmed-mean PCE inflation measure, which "*trims*" a certain section or proportion of the most extreme observations of monthly prices.



Source: Bureau of Economic Analysis/Dallas Fed/Haver Analytics

| Inflation Measure | Current Reading | Implied Inflation Gap |
|---|---|---|
| PCE YoY% | 6.0% | 4.0% |
| Core PCE YoY% | 5.0% | 3.0% |
| Dallas Fed Trimmed Mean YoY% | 4.7% | 2.7% |

Both of these alternative measures of inflation are

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currently lower than the headline PCE reading by roughly 120 bps resulting in a differential of "*just*" 280 bps on average relative to the Fed's inflation target. While such a spread would still suggest the need for additional policy action from here, this is a markedly smaller gap compared to that implied by the headline PCE, and by extension, a need for relatively fewer and/or smaller future rate hikes. Therefore, depending on the gauge of price pressures used in the calculation, there is a significant variance to the assessed inflation gap and by extension, the ultimate level of policy needed to combat elevated prices.

## APPROPRIATE POLICY

According to the latest policy statement, a "*sufficiently restrictive*" level of policy is required to reinstate the Committee's desired condition of stable prices. While many are hopeful of a Fed pivot sooner than later leading to smaller hikes and a more shallow terminal rate given the recent improvements in inflation from peak readings, many others at the Fed are not yet convinced policy has moved into the proper range even under the most generous or optimistic assumptions.

The desired policy "*zone*" may shift or decline as the economy continues to evolve, particularly should inflation begin to slow markedly heading into 2023. The inflation risk, however, remains to the upside with price pressures still stubbornly elevated despite monetary policy officials predicting a meaningful pullback in prices for the better part of the past two years. Thus, while Bullard's calculation appears reasonable on the lower bound, even at 7%, the upper bound may be understating the high needed for rates, given the potential for more hawkish assumptions.

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