

September 2018

Fed Thoughts:

Stargazing in the Mountains

by Vincent Reinhart
Chief Economist & Macro Strategist

Federal Reserve (Fed) Chairman Jerome Powell devoted the bulk of his inaugural opening act at the Kansas City Fed's economic symposium in Jackson Hole to three features of the economy that, in the long run, are the "stars" by which "...policymakers should navigate."¹ However, following his habit of draining drama from any appearance, he said at the outset that "...there are risk factors abroad and at home that, in time, could demand a different policy response, but today I will step back from these." Nonetheless, observers could not help themselves from searching for some hint on current policy in the 23-page speech delivered by the Fed chair. Luckily for his readers, staff labelled the last section "The Current Situation" for those who wanted to cut straight to the chase.

The dovish sentiment plucked from this section was that "While inflation has recently moved up near 2 percent, we have seen no clear sign of an acceleration above 2 percent, and there does not seem to be an elevated risk of overheating." Context matters because the Fed chair was describing his expectation that the risks balance *along* "...the current path of gradually raising interest rates..." That is, Powell was defending the dots mapping out four quarter-point hikes in 2018.

This has been our outlook for some time, consistent with demand above the trend of potential output, despite which monetary and fiscal policies are providing ongoing stimulus, and inflation pressures mounting, albeit slowly. With inflation poised to overshoot the 2 percent goal, the Fed will have to move policy into restraint in 2019. Doing so first requires removing accommodation, which is the logic behind four hikes in 2018. Market participants

are not yet in sync with this forecast, as the probability of a target range for the federal funds rate of 2¼ to 2½ percent (consistent with a cumulative tightening of 1 percentage point) is about 70 percent as implied by interest rate futures. This marks a considerable ascent over the course of the year, but it is not a lock.

Probability of Four Quarter-Point Fed Moves in 2018 as Implied By Fed Funds Futures Prices



Source: CME Group, Fedwatch tool, accessed 9/3/18.

¹Available at <https://www.federalreserve.gov/newsevents/speech/powell20180824a.htm>.



Standish is a brand of BNY Mellon Asset Management North America Corporation.

A tightening at the upcoming meeting, though, seems treated as money in the bank. Futures prices apparently embed a 98 percent probability of the announcement of action at the conclusion of the Federal Open Market Committee (FOMC) meeting on September 26, which makes sense given that neither Powell's speech nor any other communication pushed back on the prevailing sentiment of an imminent move. Indeed, the FOMC put in its favorite placeholder signaling action in the August meeting minutes, agreeing that "...it would likely soon be appropriate to take another step in removing policy accommodation." If data run to plan and global financial markets do not get too ugly, expect market participants to be as sure in December about a looming move as they are this month.

And what about the longer run, as informed by Chairman Powell's view of the firmament 6,200 feet above sea level in Jackson Hole? In his remarks, he pointed to the three brightest "stars" in a dynamic representation of an economy.

First, an economy gravitates to full employment, or when the unemployment rate (u , sticking to the Chair's notation) equals its natural rate (u^*). Second, aggregate demand is just sufficient to achieve full employment when the real short-term interest rate (r) equals its natural rate (r^*). The terms u^* and r^* are values for central bankers to estimate, not influence, in that they are determined by the forces of productivity and thrift, fiscal and regulatory policies, and relationships with the rest of the world.

Real returns are put into current-money, or nominal, terms (i) by adding expected inflation (π), which is known as the Fisher equation, after Irving Fisher, a star of economics one century ago. In the long run, inflation homes in on the target of a central bank that is willing to do whatever it takes to get it there. Thus, the third orienting star is the central bank's target for inflation (π^*). The strongly defended definition of π^* among Fed officials is 2 percent, repeated every January in the mission statement of the FOMC.

To achieve this goal, the Fed's job is to settle the nominal funds rate at 2 percent above the natural real rate (as per the Fisher equation). The problem, however, is that the Honorable Mr. Powell and his colleagues are not sure about the value of the equilibrium real rate. A consolation is that r equals r^* when u equals u^* , but they are not sure about the natural rate of unemployment either.

This sets up two possibilities for policy design. First, the Fed could roll the oracle bones (or, in the Chair's words earlier this year, put all the data in the blender) and set a fixed equilibrium rate target, say r^T . This implies that they ultimately move the nominal interest rate to $r^T + 2$, their view of the equilibrium real rate plus their inflation goal. Here, Fed Chair Powell shares a problem with King Canute. Saying that the real short rate should be r^T in the long run (or that the tide should cease in 11th century England) does not make it so. In the natural order, the real rate equals its equilibrium r^* in the long run. What goes wrong depends on your view of monetary policy design, expectations formation and other economic dynamics. One possibility, say if the Fed's target for the long-run real rate were too low, is that the attempt to keep the nominal rate low ultimately stokes uncontrolled inflation. A more au courant view among academics is that the economy will settle into an equilibrium in which inflation will deviate from the Fed's goal by the exact difference between

the true and targeted equilibrium real rate, which is known as a neo-Fisherian result.² Either outcome should be avoided.

By the way, other policy rules do not improve on the neo-Fisherian result as long as they embed a fixed and wrong view of r^* . The typical Taylor rule, if it included an unchanging and too low estimate of the equilibrium real rate, counsels keeping the nominal funds rate below $r^T + 2$ in response to inflation running below goal, implying inflation runs even further below goal in the long run than the case without responsiveness.³

The second, and more relevant, possibility is that the assessment of the equilibrium real rate of policymakers evolves with circumstances. We have seen this process at work in the precipitous drop in the implied estimates of the equilibrium real interest rate in successions of Summaries of Economic Projections (SEP). The FOMC's inflation goal has remained at 2 percent since it started presenting participants' assessments of the appropriate nominal federal funds rate in January 2012, implying that any change in expected nominal interest rates reflects movement in real rates. In any event, the lowest long-run dot back then is higher than the highest dot in the latest release (June 2018). Over most of that period, the real short rate was at very low levels, but the unemployment rate was high. Fed officials read deficient demand ($u > u^*$) as evidence that monetary policy remained insufficiently accommodative, or that the actual real rate was above its equilibrium rate ($r > r^*$). If so, the equilibrium rate must have fallen to a very low level.⁴

More lately, as demand seems to exceed potential output even as the policy rate increases, the long-run dots are shifting up. Expect more upward drift to come, with the next installment coming with the September SEP.

Powell plans to keep raising the nominal funds rate until contemporaneous economic behavior and revisions to the outlook suggest that the real rate is in the neighborhood of its equilibrium. Powell's hope is that this determination can be made more sharply the closer the economy gets to its longer-run equilibrium. Powell's problem is that these equilibrium concepts are not fixed points in the firmament. They are closer to the Ancient Greek notion of planets as "wandering stars."

This is tailor-made for mistakes, but those are not a feature of the central tendency of our forecast. A cautious Fed tightens two more times this year and three more times in 2019. With the nominal funds rate expected to rest in a range of 3 to 3¼ percent next fall, Chair Powell can relay that the renormalization of monetary policy is nearly complete at the next Jackson Hole symposium.

²"Mathiness" helps. The Fisher equation holds that the nominal differs from the real interest rate by expected inflation: $\pi = i - r$. As a definition, it applies everywhere, including in the long run, when the real rate is at its equilibrium level. That is, $\pi = (r^T + 2) - r^*$, or inflation differs from the goal of 2 percent by the amount $r^T - r^*$. Too low (high) an assessment of the equilibrium real rate implies falling short of (exceeding) the inflation goal.

³More "mathiness." Suppose that the Fed was right about its assessment of the natural rate of unemployment but wrong about the real rate, at r^T versus r^* . (This would be the case if they correctly assessed aggregate supply but were off on aggregate demand.) By the original variant of the Taylor rule, officials would set the target nominal rate in the long run at $r^T + 2 + \frac{1}{2}(\pi - 2)$, or what they think is the right nominal interest rate in the long run and a penalty associated with not having inflation at goal. The Fed can set that nominal rate, but equilibrium requires that the split of the nominal rate be $r^* + \pi$. Those two representations of the nominal interest rate will equally only when $\pi = 2 + 2(r^T - r^*)$. That is, policy responsiveness to the miss in inflation magnifies the consequences of being wrong about the equilibrium real rate.

⁴This logic is made systematic in in the estimates of the equilibrium real rate from Thomas Laubach and John Williams. The latest installment of their long-running research effort shows r^* only now rebounding from negative territory. See Laubach, Thomas, and John C. Williams. "Measuring the natural rate of interest redux." *Business Economics* 51.2 (2016): 57-67.



www.standish.com • info@standish.com

This commentary is provided for general information only and should not be construed as investment advice or a recommendation. You should consult with your advisor to determine whether any particular investment strategy is appropriate. These views are current as of the date of this communication and are subject to change as economic and market conditions dictate. Though these views may be informed by information from publicly available sources that we believe to be accurate, we can make no representation as to the accuracy of such sources nor the completeness of such information. Please contact BNY Mellon Asset Management North America Corporation for current information about our views of the economy and the markets. Portfolio composition is subject to change, and past performance is no indication of future performance.

BNY Mellon is one of the world's leading asset management organizations, encompassing BNY Mellon's affiliated investment management firms, wealth management services and global distribution companies. BNY Mellon is the corporate brand for The Bank of New York Mellon Corporation. BNY Mellon Asset Management North America is a registered investment adviser and BNY Mellon subsidiary.

Effective on January 31, 2018, The Boston Company Asset Management, LLC (TBCAM) and Standish Mellon Asset Management Company LLC (Standish) merged into Mellon Capital Management Corporation (Mellon Capital), which immediately changed its name to BNY Mellon Asset Management North America Corporation. Standish is a brand of BNY Mellon Asset Management North America Corporation.