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CENTER FOR MONETARY AND FINANCIAL ALTERNATIVES

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Abstract

Half way through her term as Fed chair, Janet Yellen presided over the Fed's controversial decision to start raising interest rates—a decision many viewed then, and many more view now, as premature. Was that decision consistent with Yellen's supposed commitment to full employment? Or was she instead a hawk in dove's clothing, whose monetary overtightening kept millions out of work for no good reason? I argue that neither view is correct. Instead, the roots of the Fed's untimely rate hike, and Yellen's part in it, lay in her and other Fed officials' ill-conceived plans for "normalizing" monetary policy.

Keywords: Janet Yellen, Federal Reserve, Policy Normalization, Phillips Curve, Unemployment.

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When President-Elect Biden tapped Janet Yellen to be his Treasury Secretary, one particular question about her was bound take center stage: was she dovish enough to satisfy Biden's left-leaning constituents? That question was raised in part because Yellen has frequently voiced concerns about the extent of the federal debt—a stance that especially troubles (mostly left-leaning) fans of Modern Monetary Theory. But it was also inspired by Yellen's record at the Fed, where she served as chair from January 2014 until February 2018, as the U.S. economy struggled to get back to full employment, without ever quite getting there.

What especially troubled some—and not merely those who couldn't care less about deficits or inflation—is the fact that, about half-way through her tenure, when there was still plenty of slack in the labor market, Yellen presided over the Fed's controversial decision to start raising interest rates—a decision many viewed then, and many more view now, as premature.

Was Yellen's policy consistent with her supposed commitment to full employment? Or was she instead a hawk in dove's clothing, whose monetary overtightening kept millions out of work for no good reason? Was she worried about inflation that never materialized? Was she merely trying to spare us yet another asset boom-and-bust? Or was there some other reason why she led the Fed through a series of rate hikes that appear, in retrospect at least, to have been uncalled for?

The truth is that unusual circumstances, rather than any change of heart, led Yellen to encourage the FOMC to overtighten after she became Fed chair. It wasn't that her "loss function" had, in Fedspeak, become hawkishly rather than dovishly "asymmetric." Instead, the roots of the untimely rate hikes she oversaw lay in her and other Fed officials' ill-conceived plans for "normalizing" monetary policy.

Dovish Beginnings

No one doubts that Yellen was a dove during her earlier years at the Fed. (She served on Greenspan's Federal Reserve Board from August 1994 until February 1997, was President of the San Francisco Fed from mid-2004 until April 2010, and then served on the Board again, this time as Vice-Chair, until she replaced Bernanke.) During the Greenspan years, she openly challenged the Maestro's single-minded faith in the virtues of price stability. On one occasion—it was a July 1996, FOMC meeting—he seemed downright exasperated by her. The exchange, with minor elisions, went as follows:

> GREENSPAN: If we are going to get anywhere, we can't have people literally talking at cross purposes. Janet, you did not even accept the premise…that we should seek price stability as a goal. If we are going to get anywhere, the question I have to ask first is whether you agree…that price stability is a goal we should seek.
>
> YELLEN: The Federal Reserve Act directs us to aim for both maximum employment and price stability. To the extent that there is no tradeoff at low inflation rates…then price stability, literally zero inflation, is good and we should go for it. To the extent that there is a tradeoff, we have to weigh what to do, and I think I am pointing to the possibility of a tradeoff as we go to very low inflation rates.
>
> GREENSPAN: So, you are discussing the issue of the transition, not the ultimate goal?
>
> YELLEN: No, I am discussing the issue of the ultimate objective. If we have to pay a permanent price at zero measured inflation in the form of permanently less employment and higher unemployment, I do not read the Federal Reserve Act as unambiguously telling us that we should choose price stability and forego maximum employment. (H/T: Sam Bell.)

Too Much Too Soon?

Yet many believe that, as Fed Chair, Yellen went conservative, and that this led her to encourage the FOMC to prematurely raise the Fed's interest rate target above its (near) zero lower bound, where Bernanke first put it back in December 2008. Parsing Yellen's remarks at a June 2014 press conference, Tim Duy concluded that she "was showing her hawkish side." The subhead of a September 14th, 2014 *Wall Street Journal* article on Yellen's Fed leadership in turn declared that Yellen's "Actions in Her First Six Months

Confound View of Her as Strong Advocate of Easy Money." Nine months later, the consensus view seemed to be that Yellen had definitely gone hawkish. "For the past seven years," Ylan Mui wrote in the [June 16, 2015 *Washington Post*],

> Federal Reserve Chair Janet Yellen was one of the staunchest advocates of prolonging the central bank's aggressive support for the American economy. Now she is building a case for bringing the era of easy money to an end despite increasingly vocal calls for delay.

That December, Yellen had her way. For the first time in seven years, the Fed notched-up its rate target settings, including the interest rate it paid on bank reserves, which it raised from a quarter to one-half of one percent. By the end of her term, in February 2018, further increases had raised it by another percentage point; and by that year's end Jay Powell's Fed would raise it by another, to 2.5 percent.

As post-recession interest rate hikes go, this wasn't much. Yet for many the hikes were too much, and for good reasons. Although unemployment had halved from its 2010 peak of 10 percent, there was still plenty of evidence of labor-market slack, including an exceptionally low labor-force participation rate that many expected to see increase, as in fact happened, [especially for prime-age (24-54) workers] (figure 1).

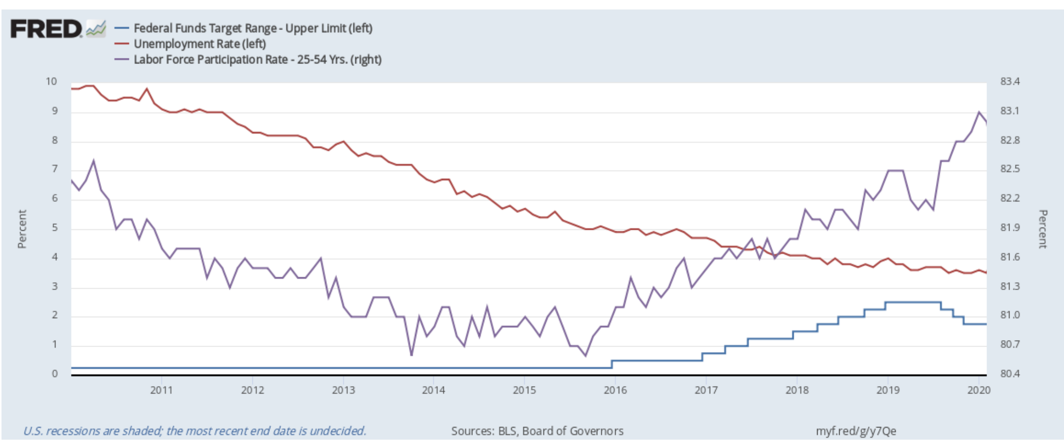


Figure 1: The Unemployment and Prime-Age Labor Force Participation Rates, and the Fed's Target Rate Range Upper Limit, January 2010-January 2020.

If the unemployment data didn't warrant rate hikes, the inflation data made such hikes seem downright perverse. Headline inflation—measured using either the CPI or the PCE ("Personal Consumption Expenditures") index—had been near zero throughout 2015. That was as low as they'd been since the 2008 meltdown, and two full percentage points below the Fed's target. Oil's sagging price was partly to blame for this. But "core" PCE inflation, which excluded both energy and food prices, had also been well below target.

Nor did it seem likely that inflation would pick up in the near future. Instead, the 5-year "breakeven inflation rate," based on the gap between the yield on ordinary 5-year bonds and that on their inflation-indexed counterparts, showed that savvy investors didn't expect it to be any higher 5 years hence (figure 2).

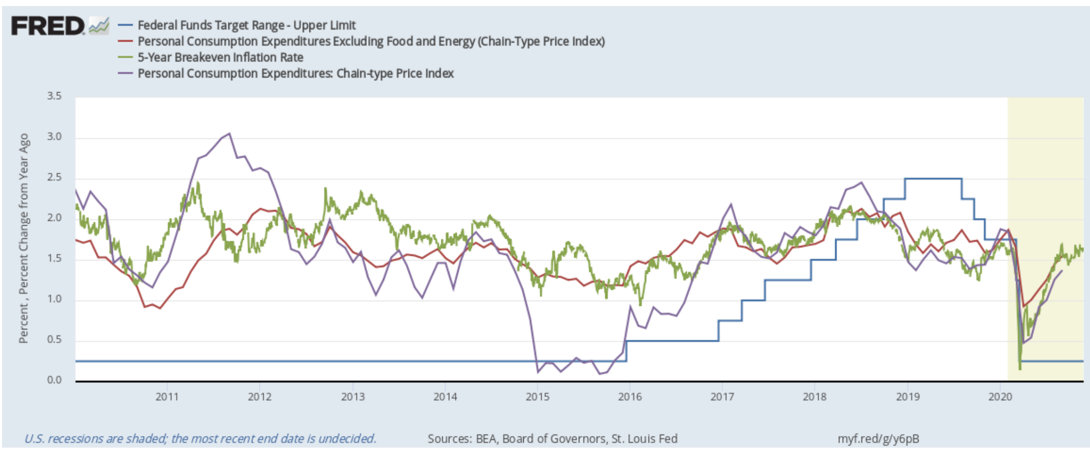


Figure 2: Headline and Core PCE inflation, the Five-Year Breakeven Inflation Rate, and the Fed's Target Range Upper Limit, January 2010-November 2020.

Finally, there was the dollar's remarkable appreciation: its "fastest rise in 40 years," as [one headline] put it. The Euro's value plunged from almost $1.40 in May 2014 to just $1.21 at year's end; just over three months later it would only be worth a dollar and six cents. Nor was the Euro's decline temporary: instead, the greater part of it has persisted to this day. The dollar also appreciated considerably, if not quite so dramatically, against most other major currencies between 2014 and 2016 (figure 3).

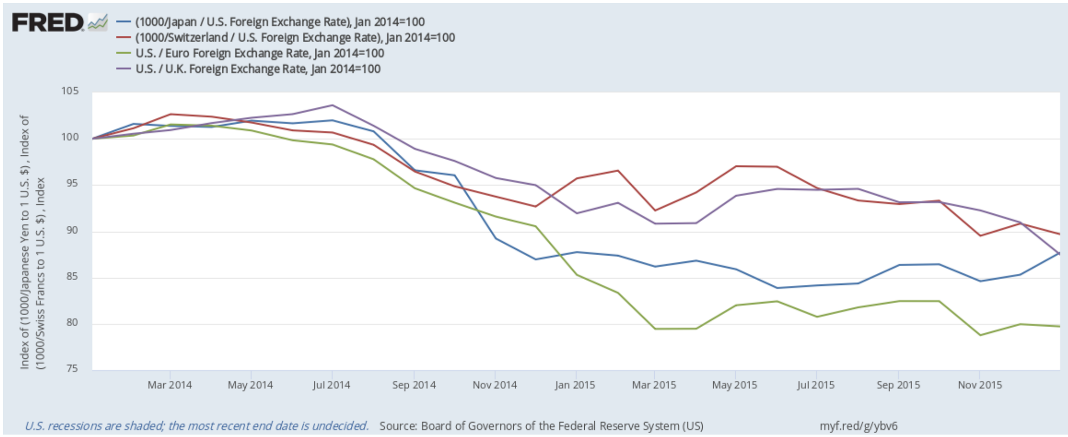


Figure 3: The Value of the Yen, Swiss Franc, Euro, and Pound Sterling Relative to that of the U.S. Dollar, 2014-2015.

In a December 1, 2015 speech, Governor Lael Brainard explained how the dollar's appreciation came about, and why it bode badly for the Fed's planned rate increases:

> The broad-based reduction in interest rates in the rest of the world, by increasing demand for U.S. assets, puts upward pressure on the dollar, which in turn implies downward pressure on the U.S. neutral [policy] rate. One way to think about the spillover from abroad is how much adjustment in the federal funds rate might be necessary to insulate domestic employment from an appreciation in the dollar that is expected to persist. Let's take the roughly 15 percent real appreciation of the dollar that we have seen since June 2014. According to the Board's FRB/US model, it would require lowering the path of the federal funds rate by roughly 1 percentage point over the medium term to insulate domestic employment from the 15 percent stronger exchange rate in inflation adjusted terms. In the neighborhood of the zero lower bound, this shift down implies a delay in the date of liftoff and a shallower path for the federal funds rate over several years.

What Brainard did not say is that the Fed's "talking up of interest rate hikes" itself contributed to the dollars' rapid appreciation, thereby increasing many countries' debt burdens.

In short, even a died-in-the-wool inflation hawk, or at least one committed to the Fed's official definition of "stable prices," would have been hard-pressed to make a date-driven case for monetary tightening.

The Phillips Curve Theory

The Fed's decision to raise rates despite conditions prevailing that December becomes all the more puzzling in view of Fed officials' frequent insistence earlier that year that any rate increases would be data-driven. During a May 22nd speech, for example, Yellen declared that the Fed's rate decisions would

> be determined by incoming data and what that reveals about the economy. We have no intention of embarking on a preset course of increases in the federal funds rate after the initial increase. Rather, we will adjust monetary policy in response to developments in economic activity and inflation as they occur.

One explanation for the Fed's precipitous move blames it on Yellen's belief in the "Phillips Curve"—a purported relationship between an economy's unemployment and inflation rate according to which inflation was bound to accelerate as the economy approached full employment. Anyone who subscribed to this view might have regarded that December's low unemployment rate as sufficient proof of the need to start tightening, notwithstanding what the inflation data themselves suggested.

Writing in *Politico* a few months after the liftoff, David Beckworth observed that the Fed had been "getting ahead of the U.S. recovery with its rate hike talk" long before that event, and that both this overtightening and the Fed's subsequent failure to reverse course as conditions deteriorated reflected the FOMCs "continued belief in the Phillips Curve." The Fed, he explained,

> sees the ongoing decline in the U.S. unemployment rate as indicating [sic] a rise in inflation is just around the corner. [Fed officials] do not want to be caught off guard with inflation and therefore are unwilling to ease.

Beckworth added that such fears were misplaced, because "the relationship between inflation and labor market slack is not constant," making it unwise to lean heavily on Phillips-Curve reasoning "when the stakes are so high."

The trouble with this Phillips Curve story is that evidence against conventional Phillips Curve thinking, meaning thinking informed by standard measures of unemployment, had been mounting for many months prior to the December rate hike, and that Yellen, for one, was perfectly aware of it. During a May 22nd speech, while noting that "the labor market is approaching its full strength," Yellen observed that

> we are not there yet. The unemployment rate has come down close to levels that many economists believe is sustainable in the long run without generating inflation. But the unemployment rate today probably does not fully capture the extent of slack in the labor market.

In a September 24, 2015 speech, Yellen went still further, saying that "significant uncertainty attaches to Phillips curve predictions, and the validity of forecasts from this model must be continuously evaluated in response to incoming data." Finally, in a speech made just two weeks before the rate liftoff, Yellen said that "we cannot yet, in my judgment, declare that the labor market has reached full employment." To anyone who reasoned in Phillips Curve terms, that could only have meant that, despite the low unemployment numbers, inflation wasn't in the offing, so that a rate increase wouldn't be warranted.

If it's doubtful that Yellen herself was thinking in those terms when she voted for the liftoff, it's still less likely that many other FOMC members did so. William Dudley, Daniel Tarullo, and Charles Evans, were all considered more dovish, and less influenced by Phillips-Curve thinking, than Yellen herself. Yet they also voted for the hike. So did Lael Brainard who, though she wasn't considered especially dovish at the time, spoke emphatically against naive Phillips-Curve thinking that October. Although Phillips Curve reasoning is more likely to have informed other, more neutral or Hawkish FOMC members' support for the December hike, it also can't explain why all save Jeff Lacker opposed a rate hike in October, when the unemployment then was just as low as it would be in December. Something other than Phillips Curve thinking must have persuaded them to vote differently.

Lags and All That

Some other possible reasons for the Fed's December move were suggested by Yellen in a speech she gave at the San Francisco Fed not long after the FOMC's March 2015 meeting. Although she offered the customary "all-important proviso that policy is never predetermined but is always data dependent," Yellen also sounded some new notes by declaring that

> we need to keep in mind the well-established fact that the full effects of monetary policy are felt only after long lags. This means that policymakers cannot wait until they have achieved their objectives to begin adjusting policy. I would not consider it prudent to postpone the onset of normalization until we have reached, or are on the verge of reaching, our inflation objective. Doing so would create too great a risk of significantly overshooting *both* our objectives of maximum sustainable employment and 2 percent inflation, potentially undermining economic growth and employment if the FOMC is subsequently forced to tighten policy markedly or abruptly. In addition, holding rates too low for too long could encourage inappropriate risk-taking by investors, potentially undermining the stability of financial markets.

Yellen's concerns here can be interpreted in at least two ways. One is that she was merely recognizing the mundane truth that the data on which policy should depend includes both current macroeconomic statistics and estimates of their likely future course. The other is that she was laying the groundwork for a liftoff that was then already in the cards, but which might prove hard to justify by referring actual conditions. The first interpretation is more charitable. Alas, the second is more consistent with what actually took place.

Of course, the presence of policy lags itself says nothing at all about whether rates need to be changed, let alone in what direction. It merely means that central bankers should look beyond current circumstances in making rate decisions. If a belief that macroeconomic conditions will improve supports further tightening, the opposite belief supports further loosening.

In fact, the Fed's forecasts did not become more upbeat between March and December 2015. And although in her March speech Yellen said that theFOMC would have to "be reasonably confident at the time of the first rate increase that inflation will move up over time to our 2 percent objective," the December 17th liftoff actually coincided with 5- and 10-year breakeven inflation rates well below two percent.

Nor would post-liftoff data vindicate the Fed's move. As the Board of Governors reported in its *Monetary Policy Report* submitted to Congress two months after the hike, inflation was then still

> below the FOMC's longer-run goal of 2 percent: The price index for personal consumption expenditures (PCE) rose only 1/2 percent over the 12 months ending in December. The PCE price index excluding food and energy items, which often provides a better indication of future inflation, also remained subdued, rising 1-1/2 percent over that period. Inflation has been held down substantially by the drop in energy prices; declines in the prices of non-oil imported goods have contributed as well. Meanwhile, survey-based measures of longer-run inflation expectations have drifted down a little since the middle of last year and generally stand near the lower ends of their historical ranges; market-based measures of inflation compensation have fallen and are at low levels.

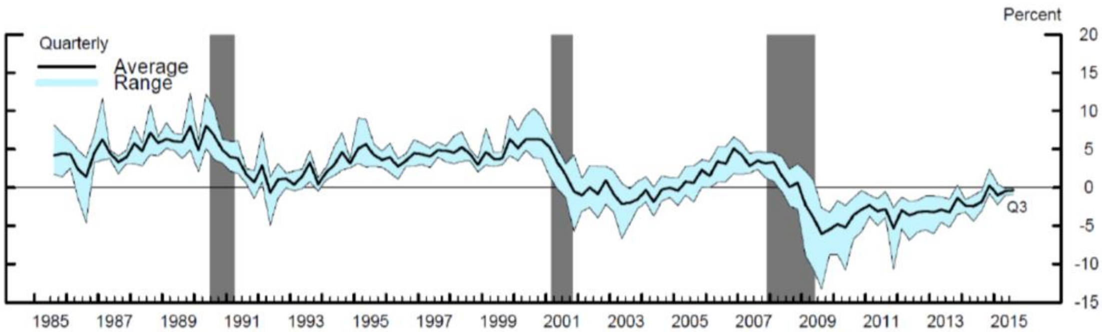
Owing to this and subsequent, equally discouraging reports, instead of moving ahead with further post-liftoff rate increases, as its had planned to do, the FOMC waited a full year before its next rate hike. Although that wasn't exactly an official admission that the December hike had been a mistake. it came pretty darn close.

Too Low for Too Long?

What of the possibility that rates had been kept "too low for too long," so that keeping them there longer might "encourage inappropriate risk-taking by investors, potentially undermining the stability of financial markets"? Yellen was hardly alone in worrying that excessively low rates would eventually prove unhealthy. As far back as September 2014, St. Louis Fed President James Bullard worried that "asset bubbles could form if policymakers move too slowly and mechanically in tightening monetary policy." Six months later, during his last official speech of March 9th, 2015, Dallas Fed President Richard Fisher expressed the same view more colorfully. "You can't consistently binge without getting into trouble," he remarked. "Sooner or later, you have to bring your caloric intake back to normal, lest your weight and your waistline balloon and your health deteriorate." Fisher added that he was sure Yellen would "resist any temptation to delay for too long that path-changing task," implying that she held similar beliefs. But neither he nor Bullard took part in the FOMCs December 16th decision.[1]

As plausible as the "too low for too long" thesis may sound, it suffered from one obvious drawback: there wasn't much evidence that rates had been "too low," or that the U.S. economy had been "binging" on easy money, in the years leading up to the Fed's liftoff date. Instead, popular estimates, shown in figure 4 (which Yellen herself displayed and discussed during her December 2nd speech), suggested that the short-run neutral rate, aka "R-star," had been *below,* and often well below, the Fed's inflation-adjusted rate target settings ever since the 2008 crash.

[1] Bullard was not a voting FOMC member in 2015. Because Fisher left the Fed in March of that year, Richmond Fed President Jeff Lacker, the committee's remaining hawk, was the only FOMC member to dissent when the FOMC voted to put off a rate raise on September 17th and again on October 29th. Lacker defended his stand by observing, among other things, that "Further delay would be a departure from a pattern of behavior that has served us well in the past." While other FOMC members preferred to wait, it's clear that their December votes were informed by similar thinking.



Note: The shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research.
Source: The estimates are drawn from four models: (1) a dynamic stochastic general equilibrium (DSGE) model developed by the staff of the Federal Reserve Board and described in Kiley (2013); (2) a DSGE model developed by the staff of the Federal Reserve Bank of New York and described in Del Negro and others (2013); (3) a DSGE model developed by the staff of the Federal Reserve Board based on Christiano, Motto, and Rostagno (2014); and (4) a DSGE model developed by the staff of the Federal Reserve Board based on Guerrieri and Iacoviello (2013 [rev. 2014]).

Figure 4: Various Estimates of the Neutral Nominal Fed Funds Rate, 1984-2015.

Reaching for Yield

The possibility remains that Yellen and other Fed officials feared that persistently low rates could undermine financial stability even if they were low only in an absolute sense, and not compared to their neutral levels. The belief that low rates encouraged financial intermediaries to "reach for yield" was one basis for such fears. In his very informative 2016 study of the December 2015 rate increase, Flavia Dantas concludes that it was mainly this worry that finally compelled the FOMC to delay liftoff no longer.

The "reach for yield" hypothesis first gained widespread attention in 2005, when Rhaguram Rajan, who was then the IMF's chief economist, drew attention to it at that year's Jackson Hole conference. Though interest rates were then low by historic standards, they were considerably higher than they were between 2009 and 2016. Nor had they been low for as long. So it was only natural for Yellen's FOMC to worry about it. Yellen's own concerns went at least as far back as a June 2011 speech she gave at the Bank of Japan. During it she recognized that

> a sustained period of very low and stable yields may incent a phenomenon commonly referred to as 'reaching for yield,' in which investors seek higher returns by purchasing assets with greater duration or increased credit risk.

Yellen added that while such a shift is itself "a normal channel through which monetary policy supports economic activity," a policy of low rates might be "taken too far":

> For example, with interest rates at very low levels for a long period of time, and in an environment of low volatility, investors, banks, and other market participants may become complacent about interest rate risk. Similarly, in such an environment, investors holding assets which entail exposure to greater credit risk may not fully appreciate, or demand proper compensation for, potential losses. Finally, investors may seek to boost returns by employing additional leverage, which can amplify interest rate and credit risk as well as make exposures less transparent.

Despite Rajan's 2005 talk, when Yellen spoke there still wasn't much evidence that reach-for-yield fears were justified.[2] Researchers did eventually come up with evidence that low rates encourages more risk taking; but their findings didn't suggest that the problem was severe enough to pose a systemic threat that could warrant monetary overtightening.

In a spring 2014 Brookings Paper, for example, Gabriel Chodorow-Reich reported finding that banks, life insurance companies, pension funds, and money market funds, had been reaching for yield between 2008 and 2011. But she did not find any evidence that they did so, and thereby "fomented a trade-off between expansionary policy and financial stability," afterwards. And a 2017 Boston Fed Working Paper by Christina Wang concludes that, while smaller banks, and the smallest BHCs (Bank Holding Companies) especially, reached for yield after the financial crisis by taking on non-credit risk, the largest BHCs, which then accounted for three-quarters of U.S. banking assets, hadn't done so. Wang also found that both larger and smaller banks responded to the spring 2013 "taper tantrum" by employing new "tactics to minimize the negative future impact of the greater term risk."

[2] Writing in the third quarter 2013 issue of the Richmond Fed's *Econ Focus*, Renee Haltom observed that such evidence was still "hard to come by."

It seems far-fetched, in light of such findings, to suppose the Fed would have been taking things "too far" by not raising its policy rates in 2015. Bankers and others surely hadn't already forgotten the 2013 taper tantrum; nor is it reasonable to suppose that they completely discounted the Fed's efforts (discussed further below) to inform them that higher rates were coming. In fact, their expectations were disappointed only in so far as the rate hike ultimately came later than they'd anticipated; and several months' delay was hardly likely to have caused them to drop their guards entirely.

Back to Normal

The real key to the Fed's rate hike decision, and Yellen's part in it, was its plan to "normalize" monetary policy. Broadly speaking, policy "normalization" means returning to business-as-usual after a crisis or recession. After the Great Recession, it also meant unwinding the Fed's balance sheet, swollen by three rounds of quantitative easing, and otherwise abjuring "unconventional" policy contrivances.

The FOMC first set-forth its principles for "normalizing the stance and conduct of monetary policy" during the spring of 2011, when interest rates had been near to the ZLB for several years, and the Fed had yet to begin its final round of quantitative easing. Among other things, it made clear that is plans included raising its funds rate target and the interest rate it paid on bank reserves from their then-current near-zero levels. The FOMC didn't say just when it planned to raise rates, by how much it planned to raise them, and whether it would raise them gradually or quickly. Instead, by declaring that any steps it took would be timed so as "to promote its statutory mandate of maximum employment and price stability," it left the impression that no steps would be taken unless prevailing macroeconomic conditions called for them.

But in truth Fed officials already had some definite ideas concerning both the timing and the extent of the interest rate increases they were contemplating. Over time those ideas hardened into a plan that would ultimately crowd-out data-driven rate decision making. To understand why we must delve further into those officials'' particular understanding of what "normalizing" monetary policy meant.

That understanding rested upon several assumptions. One was that, among its other meanings, normalizing meant raising interest rates to “more normal levels.” Another was that “normal levels” meant levels that prevailed before the Great Recession. And a third was that the initial timing and pace of its post-slump interest rate hikes would resemble those of past recoveries, such as those of 1994 to 1995 and 2004 to 2007. Together these assumptions caused Yellen and other Fed officials to consider only a limited set of potential policy-rate trajectories. Those officials’ commitment to forward guidance in turn caused it to convey to the public its intent to reestablish “normal” rates within several years.

Concerning the Fed’s understanding of what a “normal” fed funds rate meant, figure 5 shows the FOMC’s median estimates of the long-run neutral fed funds rate from the start of 2012 until recently:

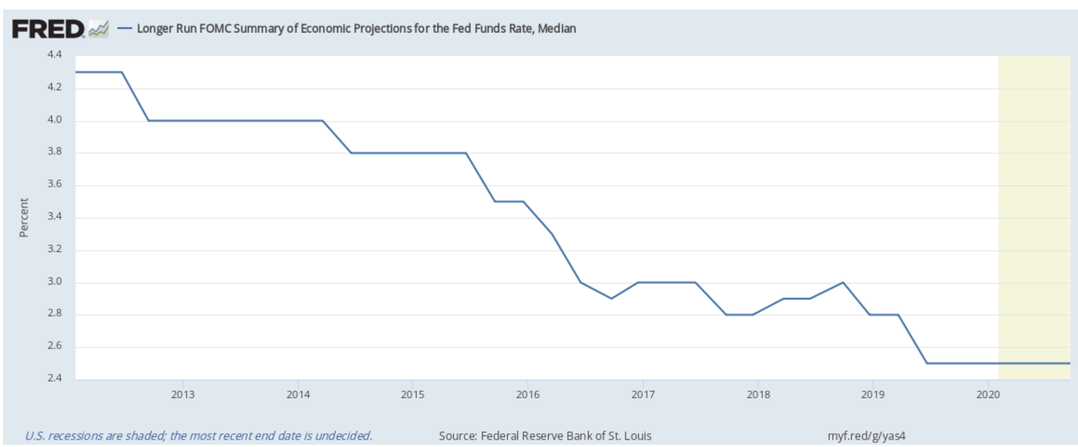


Figure 5: Median FOMC Projections of the Long-Run Neutral Federal Funds Rate, January 2012-November 2020.

When the Fed first announced its normalization plans in September 2014, the FOMCs put the value of the (nominal) long-run fed funds rate, which allowed for 2 percent inflation, at 3.8 percent. By the time of the Fed’s December 16th rate hike its median projection had fallen to 3.5 percent. But as the chart also shows, that downward adjustment was trivial compared to those still to come. A year after the liftoff it was just 3 percent; and at the start of 2019 it fell to just 2.5 percent, where it has remained ever since. Had the Fed based its post-2008 normalization strategy on its current long-run funds rate estimate, it would have considered a 25 basis-point rate hike, not merely a first-step in normalizing rates, but the whole kit and caboodle!

Of course, the FOMC couldn't know in advance just how low its long-run neutral rate projections would go. But that's the point: it's dangerous treat post-crisis policy "normalization" as a matter of getting to some preconceived "normal" policy rate, and especially as one of getting there within a relatively short time span. Instead, and assuming that the Fed was serious about normalizing policy, it should have defined "normalization" to mean shrinking the Fed's balance sheet enough to make bank reserves scarce again, thereby preparing the way for a transition from its post-2008 "floor" system to a more conventional "corridor" system.[3] As for changes to its fed funds target (or target range), the Fed should have continued to base them on the same macroeconomic considerations it took into account in "normal" times. That its target range had been near zero for some time, that it used to be much higher, and that the effects of rate changes come after "long and variable lags"—none of these considerations shouldn't have made any difference.

At least one FOMC member seems to have understood the Fed's mistake, and the fix it had gotten itself into because of it. Speaking at the Stanford Institute for Economic Policy Research on December 1, 2015, Lael Brainard, who joined the Board in June 2014, began by saying that she wouldn't "address the timing of the liftoff." Still her remarks made clear her doubts concerning the strategy to which the Fed was by then committed. Noting the Fed's definition of normalization as a series of steps aimed at raising interest rates "to more normal levels," and that "many observers" took this to mean "rates viewed as normal in the decades before the [2008] crisis," she then proceeded to raise doubts about that understanding:

[3]Instead Jerome Powell announced, in January 2019, the Fed's decision to make its floor system permanent. Concerning the Fed's late-2008 switch to that system for regulating interest rates, how it differs from the previous system as well as from more typical "corridor" systems, and how the Fed might returned to a corridor system of some sort after the crisis, see Selgin (2018).

> A broad deterioration in foreign growth prospects, together with greater risk sensitivity in the wake of the crisis and changes in the rate of potential output growth, may be contributing to a "new normal." The new normal is likely to be characterized by a lower level of interest rates than in the decades preceding the crisis, which counsels a cautious and gradual approach to adjusting monetary policy.

Brainard went on to observe that projections of the real long-run federal funds rate had already fallen considerably since the crisis, and that "a host of factors" could cause it not just to remain low, but to fall even further. Inflation expectations informed by persistent, below-target inflation could in turn cause long-run neutral nominal rates to fall even more. Although she recognized that neutral rate estimates could end up being either higher or lower than the Fed's estimates, Brainard argued that the cost of raising rates prematurely were likely to exceed those of proceeding too cautiously:

> If the actual neutral rate is higher than estimated, and policy is more accommodative than intended, the stance of policy can be readily tightened later to restrain any buildup in inflationary pressures. But, if the actual neutral real rate is lower than estimated, and the stance of monetary policy is tighter than intended, unexpected policy restraint may prove difficult to offset later with more accommodative policy because the policy rate is already close to the zero lower bound.[4]

One might suppose that such thinking led Brainard to vote against the Fed's rate hike two weeks later. In fact the vote was unanimous: Brainard, no less than Yellen and the rest of

[4] Although Brainard admitted that, by erring on the side of excessive accommodation, the Fed might encourage investors to reach for yield, she downplayed that risk. "Since the crisis," she observed, "the Federal Reserve and other regulatory agencies have implemented a number of new rules to strengthen capital, liquidity, and risk management at the largest financial institutions. Many of these rules are "through the cycle" safeguards, meaning that they impose structurally higher standards. In addition, when the risks to financial stability increase, the Federal Reserve, in consultation with the other banking agencies, can temporarily increase the amount of capital that large banks are required to hold in order to build resilience at these institutions and to restrain undue risk-taking on a cyclical basis." As Christina Wang's research, cited above, shows, experience appears to support these opinions.

the FOMC, was caught in the Fed's normalization trap—a fact she herself alluded to much later, in the course of November 26, 2019 speech. "As we saw in the United States at the end of 2015," she said,

> there tends to be strong pressure to "normalize" or lift off from the ELB preemptively based on historical relationships between inflation and employment. A better alternative might[5] have been to delay liftoff until we had achieved our targets. Indeed, recent research suggests that forward guidance that commits to delay the liftoff from the ELB until full employment and 2 percent inflation have been achieved on a sustained basis—say over the course of a year—could improve performance on our dual-mandate goals.

Forward Guidance

But preconceived idea of "normal" monetary policy alone can't explain why the Fed couldn't delay its rate increase once incoming data made it evident that sticking to its plan would be contrary to its mandate. That's where the FOMC's commitment to "forward guidance" came into play. Providing such guidance—that is, giving the public some advance notice of its likely future interest rate movements—had been part of the Fed's strategy since the early 2000s, and was part of the Fed's intention in first announcing its normalization principles in 2011. Although for some time the Fed's normalization guidance was extremely vague, with the FOMC saying only that it planned to leave its target unchanged for "a considerable time" after wrapping-up its asset purchases, as the end date for those purchases approached, its guidance became more explicit until, it hardened into what many saw as an explicit liftoff date deadline.

During its September 2014 meeting, the FOMC decided to taper the Fed's security purchases; and as October approached, it became evident that it would almost certainly end those purchases altogether at that month's meeting. In view of that development, the FOMC began to reconsider its former, vague language. As Atlanta Fed President Dennis

[5] In the published version of Brainard's speech, "would" replaces the more tentative "might." (H/T Jeanna Smialek.)

Lockhart observed during the October meeting, one of the meeting's aims was "setting up…a forward-guidance framework for moving toward a decision to initiate normalization." By doing so, Lockhart recognized, the FOMC was

> likely to agree on verbiage that, whether we like it or not, puts that decision to some extent "on the clock." This is the reality, I think, even with our strong admonitions that liftoff is data-dependent.

Lockhart also recognized that the prevailing "environment would be a very challenging circumstance in which to signal initiation of normalization of the policy rate." In short, the FOMC seemed to be on the verge of painting itself into a potentially awkward corner, sacrificing some of the flexibility it had previously allowed itself at the forward-guidance altar.

But several FOMC participants fought against the sacrifice. Boston Fed President Eric Rosengren continued to believe that liftoff should depend on "clear evidence that full employment is within reach and inflation is trending toward our 2 percent goal." Nor was it only doves who thought so. Dallas Fed President Richard Fisher also didn't "want to be locked into a particular timing of liftoff or pace of subsequent rate increases." And although she didn't vote in the October meeting, in a speech she gave just over a week later, Cleveland Fed President Loretta Mester said that she also favored having the FOMC be "as clear as it can be that monetary policy will be contingent on the state of the economy" while "putting less focus on a particular calendar date for liftoff."

Thanks to such pushback, the FOMC refrained that October from formally committing itself to a specific liftoff date. Instead, it ended up retaining the "considerable time" language of its previous press statements. "However," its press release stated,

> if incoming information indicates faster progress toward the Committee's employment and inflation objectives than the Committee now expects, then increases in the target range for the federal funds rate are likely to occur sooner than currently anticipated. Conversely, if progress proves slower than expected,

> then increases in the target range are likely to occur later than currently anticipated.

Although to some this might resemble the Fed's previous claims that its rate liftoff would be data-driven, to experienced Fed watchers the words "later than currently anticipated" suggested something more explicit. For the Fed's own surveys showed that markets had then been anticipating a liftoff the following spring or summer. It followed that the FOMC was in fact planning to raise rates then *unless* conditions compelled it to change its mind.

The merit of this interpretation becomes that much clearer when one considers the wording the FOMC *rejected*. Of three options it considered, options B and C each included the passage just quoted. Option A, on the other hand, had the FOMC saying that it would

> maintain the current target range for the federal funds rate for a considerable time after the asset purchase program ends, especially if projected inflation continues to run below the Committee's 2 percent longer-run goal, and *at least as long as inflation between one and two years ahead is projected to be below 2 percent, provided that longer-term inflation expectations remain well anchored*. (My emphasis.)

Thus, the FOMC formally backed away from its previous insistence that the timing of its rate liftoff would be strictly data driven, and toward a more explicit time commitment, thereby lashing itself to the normalization mast, if only rather loosely.

A Soft Deadline Hardens

As 2015 unfolded, Committee members' statements further tightened those bindings. In January, St. Louis Fed President Jim Bullard declared that the Fed's target rate "should come off the zero lower bound in 2015, with the exact timing dependent on how key macroeconomic indicators evolve." Then, at its March meeting, when headline inflation had fallen back to zero, the FOMC announced that liftoff was "unlikely" to occur in April, perhaps unwittingly affirming the public's long-standing belief that it had set its sights on a liftoff that spring. Were many more such delays possible? Within days Yellen herself tried to put such concerns to rest, declaring during her San Francisco speech that notwithstanding conditions that month, she still believed that conditions would "warrant an increase in the federal funds rate target sometime this year."

But the data refused to cooperate, and the FOMC's cold feet stayed that way. Again and again, in June, July, and September, it concluded that its near-zero fed funds target range "remains appropriate." Despite the Fed's painstakingly developed forward guidance strategy, the FOMC was coming to resemble the boy who cried wolf. Yellen now faced a crucial choice: either reinforce that guidance, and make good on it, or risk sacrificing the Fed's credibility by allowing its liftoff plan to be postponed indefinitely. Yellen chose the first course.

Yellen first made her preference evident during a September 24th, 2015 speech at UMass, at which she made it appear all but certain that the FOMC would raise rates at its next (October) meeting. Yet when the moment came, rapidly deteriorating conditions caused the FOMC to balk once again. But the Committee also sent a strong signal that it wouldn't balk again. In its press release, instead of saying it would consider the data in determining "how long it will be appropriate to maintain" its near-zero rate range, it said it would consider it in deciding "whether it will be appropriate to raise the target range at its next meeting." As was noted at the time, this subtle reference to a specific liftoff date was a "calculated gamble" aimed at pinning-down financial market's expectations, which some Fed officials feared amounted to a "promise that would be painful to break."

And that's just what it turned out to be. For come mid December "key macroeconomic indicators" were no better than they were in late October. Yet the FOMC voted unanimously to raise rates at last. The FOMC had left itself no further freedom to maneuver. It would avoid the fate of appearing to break its promises. But it couldn't avoid hampering the nation's recovery.[6]

[6] In a March 24, 2016 post appraising Yellen's choice, Tim Duy usefully distinguishes "soft" credibility, meaning the sort policymakers gain by sticking to "a proscribed course due to some perceived promise,"

Conclusion

Did Janet Yellen become a monetary hawk after she took command of the Fed? Although the notorious rate liftoff, and subsequent rate increases, over which she presided do indeed appear "hawkish," both in view of conditions and in retrospect, I think the fair answer to the question is "no." Yellen's actions didn't reflect a naive attachment to an imagined Phillips Curve. Nor is there any reason to suppose that her preferences changed—that she came to view avoiding unwanted inflation as more important, and avoiding unnecessary unemployment as less important, than she did when she took on Alan Greenspan back in 1996.

Yellen's priorities hadn't changed. Instead, she and the rest of the FOMC signed on to a misguided plan for policy normalization that ultimately compelled many to swallow hard and approve of one or more rate increases they might have opposed otherwise.

That said, the Fed's normalization plan was itself concocted during Yellen's tenure as Fed chair, so she must bear considerable responsibility for it, and for the overtightening to which it led. That's certainly a blemish on her record; and it means that Yellen did in fact become convinced that higher unemployment was a price worth paying to achieve another objective. But that other objective wasn't the hawkish one of avoiding even a remote risk of inflation at all costs. It was restoring interest rates to "normal" levels; and it seemed amply justified by past experience, the heavy burden of which came to weigh heavily on Yellen and her colleagues. Just what sort of bird—or other creature—this makes Janet Yellen, and whether such a creature would make a good Treasury Secretary, readers must decide for themselves.

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from "hard" credibility, meaning the credibility they gain by sticking to policies that maximize the odds of "achieving... maximum sustainable employment, regardless of perceived promises." In Duy's opinion, Yellen and Fed officials ultimately erred in preferring "soft" to "hard" credibility: Yellen and other Fed officials, he says, would have done less harm, both to the Fed itself and to the public, "by breaking their 'promise' than by keeping that promise via a poor decision."