





## What to Expect from a Yellen Fed

## **Executive Summary**

- A Yellen Fed would most likely continue the pattern of its immediate predecessors of being consensus-driven and communicative.
- In terms of policy implementation, Ms. Yellen has proposed two possible alternatives to the Taylor Rule: a "balanced approach" that would pay more attention to economic weakness than does the Taylor Rule and "an optimal control policy," whereby policy paths would be evaluated based on their expected effects on economic growth and inflation.
- With the Fed funds rate currently stuck near zero, either of these approaches would have to rely on transparency and credibility with the financial markets if they are to prove successful.

Federal Reserve (Fed) Vice Chair Janet Yellen has been nominated by the President to be the next Fed Chairman. Her public mien is gentle and engaging, qualities that will likely expedite her confirmation process and also influence her leadership of the Fed.

Things were not always so in Fed land. Historically, Fed Chairmen ran the Federal Open Market Committee (FOMC) with iron hands, imposing their will on their colleagues and policy and often dropping policy shifts as unexpected shocks on the markets and the economy. However, the Alan Greenspan Fed embarked on a practice of driving policy more by consensus among FOMC members, with regular public statements as to the intentions of Fed policy and the likelihood or inevitability of future policy changes. Fed Chairman Ben Bernanke has intensified each of these trends, and we would expect a Chairman Yellen to follow suit.

Even apart from collegiality, there is reason to think that a Yellen Fed would be at least as communicative as its two predecessors. Short-term interest rates remain at the zero bound. The US banking system, the traditional transmission mechanism from Fed policy to the economy, is still essentially flat on its back. The one policy tool the Fed has left in its arsenal is forward guidance on its intended future path of short rates. To maximize the usefulness of forward guidance, a Yellen Fed would need to be just as communicative as Bernanke's.

Ms. Yellen would certainly bring an activist stance to Fed policy. Her statements indicate that she believes current employment levels are too low and that she believes it's the Fed's responsibility to address that problem. How would she go about implementing that intention? Her writings provide insight here. Ms. Yellen's recent statements offer two alternatives to the Taylor Rule<sup>1</sup>, which has achieved some credence among policymakers and economists in recent decades.

The Taylor Rule provides a formula describing how short-term interest rates should be adjusted in response to shifts in inflation and real growth. If inflation were at its target with real GDP at full-employment trend levels, as understood by the Fed, then the funds rate should be set at two percentage points above the inflation rate. Each percentage point move in inflation above target should elicit a 0.5% hike in the funds rate and vice versa, and each percentage point move in real GDP below target should elicit a 0.5% point cut in the funds rate, and vice versa. Notice that the Taylor Rule responds equally forcefully to movements in real GDP away from target as to movements in inflation.

Yellen has proposed what she calls a *balanced approach*, consistent with her concern about low employment levels stemming from a weak economy. Such an approach would take the same basic structure as the Taylor Rule, but react twice as forcefully to movements in GDP as to movements in inflation. Thus, if real GDP were 1.0% below target and inflation 1.0% above target, this approach would still call for short rates to be 0.5% below their "normal" level, 1.5% above the inflation rate.

<sup>&</sup>lt;sup>1</sup> The Taylor rule was introduced by Stanford economist John B. Taylor in his 1993 paper "Discretion versus Policy Rules in Practice." He formulated the rule as an equation describing how Fed policy could be said to have operated over 1987-92.

Now, what relevance do these rules have when the funds rate is essentially at zero and further cuts are impossible? For example, presently, most formulations of trend GDP growth and inflation targets would prescribe a negative funds rate even under the Taylor Rule and all the more so under a balanced approach. Desired funds rates would have been even more negative during and just after the 2008-09 recession. If the funds rate can't be lowered to the (negative) desired levels, an alternative approach is to guide forward rates lower for a long period of time in the hope that guidance lowers present term yields to much the same levels as would hold if the funds rate were at the negative levels the Fed desires but can't attain.

This gets us back to forward guidance. It also paves the way for the *optimal control* approach Ms. Yellen has introduced. Under that approach, different forward paths for the funds rate would be run through the Fed's macro-model of the economy, and the resulting estimated paths for inflation and real GDP would be fed into a "loss function" that rates the outcomes based on the amounts of deviation of each from desired paths. The policy path with the best loss function result would then be the path the Fed would announce and embark on. The idea here is that by including in the mix not only present but also future outcomes—or at least the Fed's estimates of future outcomes—a Yellen Fed could determine the optimal amount of forward guidance to provide to markets today in order to overcome the zero-bound constraint.

In an ideal world, optimal control would work perfectly. Of course, in an ideal world, we wouldn't need models, nor forward guidance nor even a Fed. So, what possible real-world challenges might arise?

First, there is reason to think Fed models' estimates will prove inaccurate. If inflation and GDP behave differently from model specifications, prescribed policies could be sub-optimal.

Second, we've predicted that a Yellen Fed would be as consensus-driven as its immediate predecessors, but it is hard to envision what there would be to reach consensus on, should policy be model-driven. Fed district presidents will not have as much influence as Board members over the structure of the Fed Board's model or the loss function employed. However, once these are chosen, policy is all but determined, and it is not clear what would then be left to reach consensus on. On what grounds could dissent be voiced or prevail? Similarly, should the model or the policy prescriptions prove unsatisfactory, how could a Yellen Fed gracefully back away from them?

A third issue is whether an optimal control policy is indeed a policy rule at all. Taylor and others meant for his rule to impose discipline on policymakers and minimize their discretion. It is clear that Ms. Yellen has introduced both the balanced approach and the optimal control approach in order to achieve more leeway—if not discretion—than the Taylor Rule affords. Also, it is hard to know whether periodic "refits" of the Fed model or the loss function would be free of discretion. So, the credibility of an optimal control policy would be an issue.

Of course, the same could be said with respect to Fed forward guidance. Just because the Fed announces it will keep short rates at zero until mid-2015 and thereafter raise them only gradually doesn't necessarily mean it will actually act thus. And if forward guidance is not credible within the markets, its impact on yields and on the economy is suspect. In the same way, optimal control policy in practice would only be as optimal as it is credible and understandable to the public. Economists call this the "time inconsistency" issue with policy pronouncements. Optimal-control policy announcements would be just as subject to this issue as the announcements we now receive.

In other words, the successfulness of an optimal policy approach would be dependent in part on the avoidance of disconnects between Fed intentions/announcements and market reactions. An example of such disconnects is provided by the bond market's selloff this spring and summer in response to the Fed's

"guidance" on possible tapering of quantitative easing (QE) and Chairman Bernanke's subsequent displeasure. Note also that tapering of QE is a much simpler concept than policy paths arising from model simulations and loss functions.

Mr. Greenspan's policies were applauded—at the time at least—for their simplicity and clarity. Amid the upheaval of the last six years, Chairman Bernanke has resorted to more complex operations, with less than clearly satisfactory results. Ms. Yellen appears willing to up the ante yet further, with a possible resort to model-driven policy that may be hard to explain clearly to the markets.

The balanced approach she proffers in her writings provides a reasonably clear policy rule. It would provide Ms. Yellen more scope to address her policy concerns, but not unlimited leeway, and it would require retrenchment when and as the occasion arises (that is, when GDP and unemployment have attained their targets).

In the near-term, none of this makes much difference. The time for tightening is far away. Meanwhile, Ms. Yellen should be credited for advancing the discussion of Fed policymaking and transparency. Whatever one might think of her proposed policy approaches, she has introduced and discussed them openly and well in advance of the day when they might take hold. This itself is yet another advance from the lack of communication that characterized Fed policymaking in prior decades.

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