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Fed reaction function: This time is *way* different [as if we didn't know]

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Our detailed *Monthly Monitors* will arrive next week, but by way of a sneak peak, we'll be incorporating a large-scale upgrade to our baseline economic forecast for the U.S and wholesale changes to the corresponding interest rate outlook. To us, it now appears likely that the U.S. output gap will be closed by the end of 2021—an astonishing feat given just how ugly things were a year ago and highlighting once more how fundamentally different this latest recession has been from all those that have gone before it.

Normally, if you'll permit use of the word to describe disparate economic cycles, the Fed is hiking a few quarters BEFORE the output gap is closed… and continuing to tighten as the economy moves further above its non-inflationary potential. In the most recent historical episode, the Fed technically started to tighten nine quarters before the output was finally closed in 2018:Q1, getting quite serious five quarters prior. That was during the final stages of the long and tortured recovery from the GFC. That more deliberate recovery pace (partly a function of working through a major deleveraging process) meant the Fed had time to wean markets off QE before tapping the policy brakes.

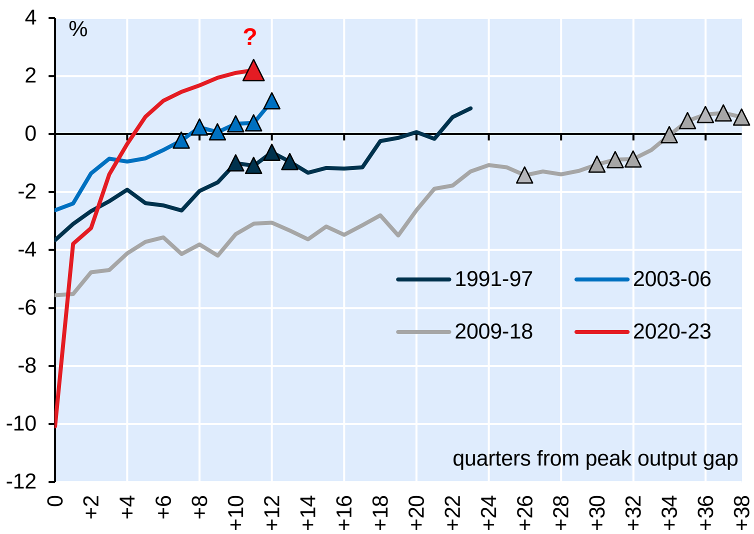
An output gap is an imperfect measure, subject to big-time estimate error. More importantly for the Fed, given its revised and more flexible dual mandate, progress on the unemployment rate (and other measures of labour market health, including inclusivity in the recovery) will be equally or perhaps more telling than an economist's guess at where GDP resides versus potential. Today's U.S. employment data showed some important (necessary) progress being made. Mind you, as Powell reminded us just yesterday, even getting back to 4% unemployment wouldn't necessarily signify full employment. In other words, going by the jobless rate, the Fed's reaction function (via the policy rate) is clearly meant to be *much delayed* versus (a) past economic recoveries and (b) what the output gap might be telling us.

There's also the non-too-trivial problem of the QE-related calendar. Since the recovery is unfolding so quickly, there simply isn't sufficient time for the Fed to unwind the QE program before the output gap is closed. Actually, it appears that a QE taper might not even commence until the output gap is all but eradicated. If you're searching for precedents here, you won't find any.

The Fed has promised to provide "well in advance" warning of a taper, as they did in 2013. In fact, this prior tapering experience may be an appropriate guide to follow, at least according to some on the FOMC (see Philadelphia Fed President Patrick Harker's comments Wednesday). Recall, the Fed needed about 10 months to wind down Treasury purchases in 2014 (they started in January and were out of the way by the end of October). True, today's QE program is considerably larger in terms of sheer dollars, though it's not nearly as outsized (more like one quarter to one third larger) when scaled to GDP or outstanding Treasuries. Assuming the Fed takes 12-18 months to wrap up QE, and starts the process as early as this Fall, the earliest the overnight rate could be nudged higher looks to be in/around 2023:Q1. That's when we've formally penciled in the first of what could be three hikes in 2023. (Note: We assume QE fully wraps up before the Fed moves on overnight.)

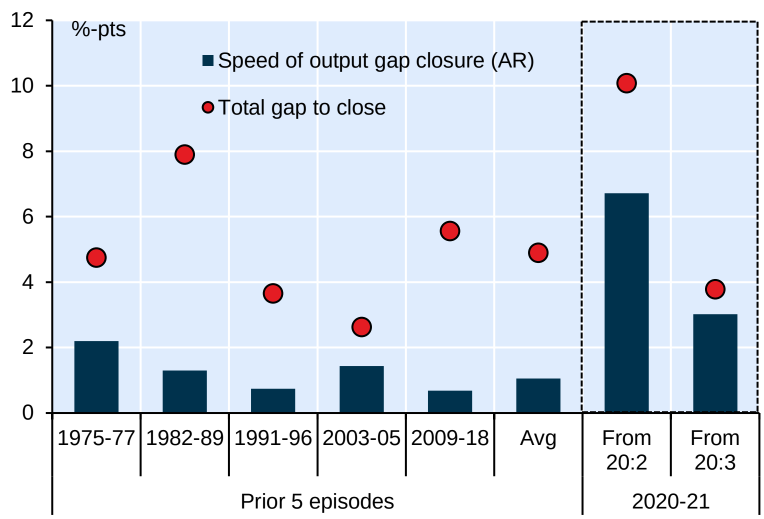
Our assumed first Fed hike would arrive five to six quarters AFTER the output gap has been closed or 2+ years later than "normal", based on five prior episodes going back to the 1970s. As for another meaningful point of departure, we would still see real 10-year U.S. Treasury yields in negative territory at that time, contrasting mightily with past experiences. Real 10-year yields have tended to average closer to 2% at the time of output gap closure; never were they still negative. To us, this still accommodative real yield environment will be needed to ensure the longevity of the recovery. All in all, our proposed policy rate timeline acknowledges a delayed reaction function at today's Fed, but would nonetheless represent quicker onset of tightening than most FOMC members (and a number of market participants) are yet willing to concede. It's a view predicated on a recovery coming on full bore, a powerful fiscal impulse and an inflation threat that's very real and growing.

Chart 1: Fed hikes to come well after output gap closes
Output gap trajectory from trough, overlaid w/ Fed hikes above level at t=0



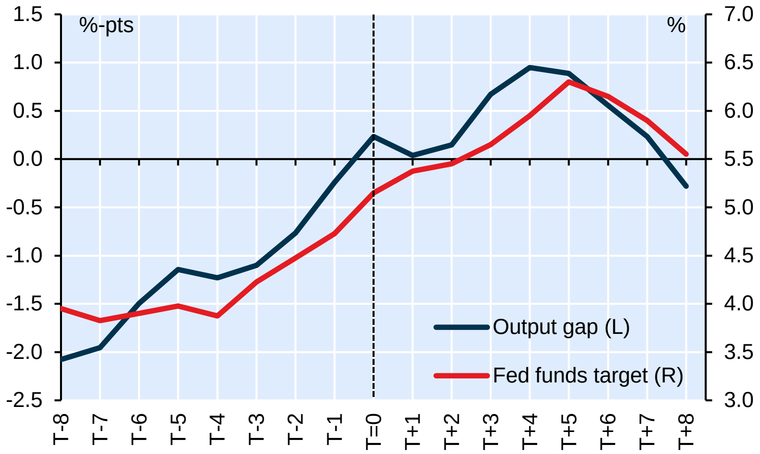
Source: NBF, CBO, Bloomberg | Note: Does not include Fed cuts which occurred in the 1990s experience or subsequent hikes to levels below t=0 fed funds target.

Chart 2: An unprecedented pace of output gap closure
Total output gap to close versus annualized speed of output gap closure



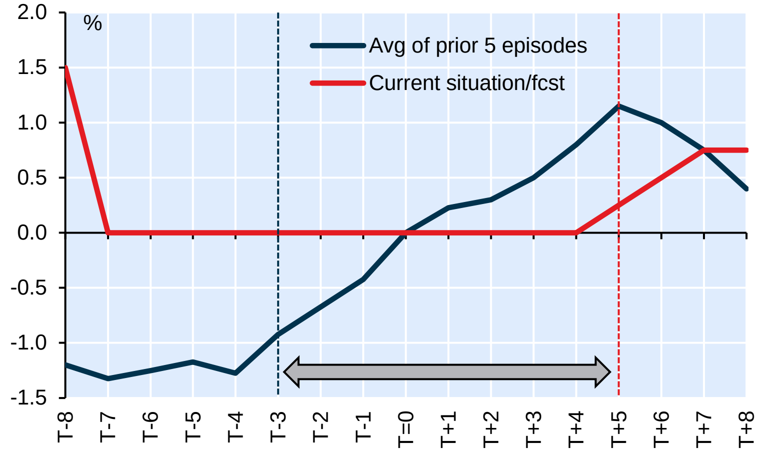
Source: NBF, CBO

Chart 3: Fed funds target tends to track output gap…
Average of output gap and fed funds target during last 5 output gap closures



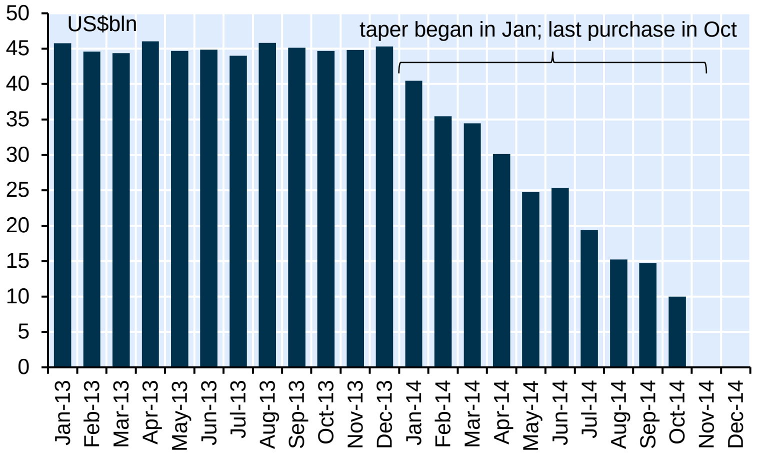
Source: NBF, CBO, Bloomberg | Note: Quarterly data with T = 0 corresponding with quarter in which the output gap was closed

Chart 4: …but expect a significant delay this time
Average chg. in policy rate relative to output gap closure versus 2021-23 proj.



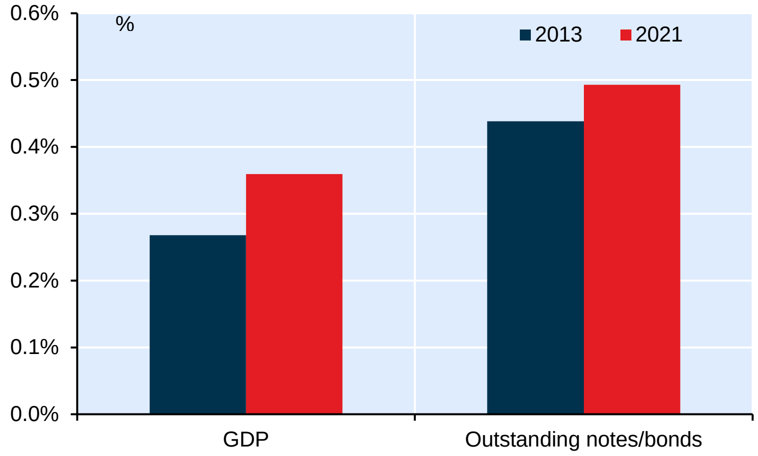
Source: NBF, CBO, Bloomberg | Note: Quarterly data with T = 0 corresponding with quarter in which the output gap was closed

Chart 5: The Fed's tapering playbook
Monthly Treasury purchases from 2013 to 2014



Source: NBF, New York Fed | Note: Does not include MBS purchases

Chart 6: A bigger QE hole to climb out of in 2021
Monthly Treasury purchases: 2013 vs. 2021 as a share of notes/bonds, GDP



Source: NBF, New York Fed, Bloomberg, SIFMA, CBO | Note: GDP and outstanding figures are for 2013. Outstandings relate to all non-bill marketable treasury securities. Purchase pace in 2021 is US$80 bln. Purchase pace in 2013 was US$45 bln.

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