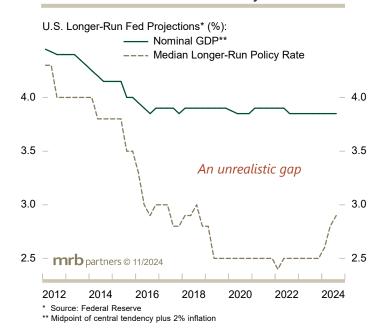
November 18, 2024

# The Fed Is (Predictably) Talking Up The Neutral Rate

- MRB's view is that a realistic estimate of the neutral policy rate for the U.S. should be at least in the 4.5% range.
- Even with the long-overdue revisions to the Fed's neutral rate estimate this year, the latter (2.9%) is clearly too low relative to what is warranted for the U.S. economy.
- O Note, however, the Fed has been talking up the neutral rate further recently. For the first time (in decades) a Fed member has acknowledged the possibility of the neutral rate being as high as 4.5%.
- Investors should expect the Fed's median forecast of the longer-run (or neutral) policy rate to rise ahead.
- The implication is that Fed will ease rates less next year than what it had signaled in the September dot-plot, and what the bond market has been pricing in.
- Future increases in the Fed's neutral rate estimate will have a profound implication for U.S. Treasury yields (higher) and shape of the yield curve (steeper).

MRB's long-standing view has been that the Fed's estimate of the longer run or neutral¹ policy rate (i.e. the nominal "R-star") has been unrealistically low for several years, embedding a secular stagnation bias developed in the aftermath of the Global Financial Crisis² (chart 1). We predicted that the Fed would eventually be forced to revise its estimate higher (as it became clear that the expansion was resilient to high interest rates and as inflation remained sticky and elevated)³.

Chart 1 The Fed's Neutral Rate
Estimate Is Unrealistically Low



MRB "<u>U.S. Fed: Cautious, But Still Dovish In Intent</u>", June 13, 2024 and MRB "<u>The Impact Of A Higher Neutral Fed Funds Rate</u>", June 13, 2024

The "equilibrium" or "neutral" policy rate is used interchangeably to refer to the rate that is consistent with aggregate output at its potential growth rate and stable inflation at the central bank target in the medium-to-long term.

MRB "<u>R-Starring The U.S. Economy</u>", September 6, 2023.
MRB "<u>U.S. Treasurys: Understanding The Fed's Influence</u>",
September 13, 2022 and MRB "<u>How Are U.S. Treasurys Being Valued?</u>", October 1, 2021

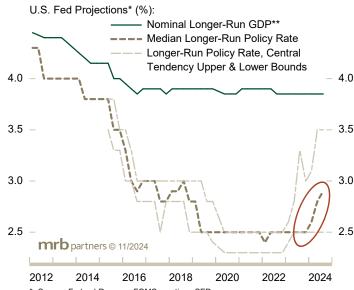
Just as we had predicted, the Fed finally raised its estimate of the neutral rate from 2.5% in December 2023 to 2.9% by this September (chart 2). This revision has been an important development, but the fact is that the Fed's neutral rate estimate is still too low relative to what is warranted for the U.S. economy.

neutral policy rate should be at least in the 4.5% range or possibly even higher (for the reasons we discuss below). Given our view, we believe that the Fed will raise its estimate of the neutral rate further over the coming months.

## Recent "Fedspeak" Foretells Such A Move...

MRB's view is that a realistic estimate of the

### Chart 2 The Fed Finally Lifted Its **Neutral Rate Estimate This Year**



<sup>\*</sup> Source: Federal Reserve, FOMC meetings SEP

The latest Fed member to talk up the neutral rate was Dallas Fed President Lorie Logan, who noted in a speech4 last week that "I see substantial signs that the neutral rate has increased in recent years, and some hints that it could be very close to where the fed funds rate is now."

Note that the Fed's view of the neutral rate has for a long time been dominated by far-too-low estimates generated by the New York Fed's Laubach-Williams model (whose flaws we have critiqued before5). Logan's speech is remarkable as the first time (in decades) that a Fed member explicitly acknowledged the possibility of a much higher 4.5% nominal neutral rate (which is in line with MRB's view):

"Among widely consulted models, point estimates of the neutral real interest rate currently range from 0.74% to 2.60%. Adding in the 2% inflation target, those figures correspond to a neutral fed funds rate of 2.74 to 4.60%...the fed funds rate stands today at 4.58%, right at the top of that range... when policymakers look at mid-range estimates that suggest there's meaningful room to cut before reaching neutral, I think we should recall

The Fed will further raise its neutral rate estimate ahead

<sup>\*\*</sup> Midpoint of central tendency plus 2% inflation

<sup>&</sup>lt;sup>4</sup> Federal Reserve Bank of Dallas "<u>Navigating in shallow waters: Monetary policy strategy in a better</u> balanced economy", November 13, 2024

<sup>&</sup>lt;sup>5</sup> MRB "*R-Starring The U.S. Economy*", September 6, 2023

<sup>&</sup>lt;sup>6</sup> Federal Reserve Bank of New York: "<u>Measuring the Natural Rate of Interest</u>"

<sup>&</sup>lt;sup>7</sup> Federal Reserve Bank of Richmond: "<u>Lubik-Matthes Natural Rate of Interest</u>"

the technique of a ship captain whose depth finder might mistake mud for water. If we cut too far, past neutral, inflation could reaccelerate and the FOMC could need to reverse direction. In these uncertain but potentially very shallow waters, I believe it's best to proceed with caution. [emphasis added]"

To summarize, Logan is in the camp of those that think the neutral rate is much higher than the Fed's official median estimate and was actively guiding investors' attention to alternative research that supports such a view.

In short, investors should expect the Fed's median forecast of the longer-run (or neutral) policy rate to rise ahead. Moreover, the Fed will lower the policy rate by less next year, than what it had indicated in the September dot-plot, and what the bond

market has been pricing in<sup>8</sup> (although market expectations for the fed funds rate for next year-end have come in by 50 bps in recent weeks).

Amid the Fed's pivot to policy easing this year, the rise in the Fed's neutral rate estimate has flown somewhat under the radar. However, future increases in the Fed's median longer run policy rate, especially since they will coincide with a *curbing* of rate cut expectations, will have a have a profound implication for U.S. Treasury yields (higher) and shape of the yield curve (steeper)<sup>9</sup>.

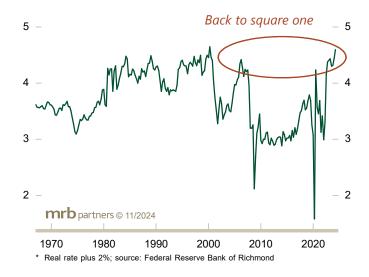
# **Models Don't Always Work**

Note that the Richmond Fed's 4.6% nominal neutral rate estimate is exactly where it was before the Great Recession began (chart 3). Contrary to what all the secular stagnationists had been proclaiming, it's almost as if the neutral rate never fell at all during the past decade!

Our diagnosis is that most economic neutral rate models (and most economists) misinterpreted the lengthy cyclical adjustment of the deleveraging that followed the Great Recession as a structural slowdown, when it was not so. It is important to remember that the neutral rate is a parameter that only changes with structural shifts in the economy and is not a value that sways with the business cycle.

### Chart 3 Models Show An Unrealistic Neutral Rate Slump In The Last Cycle

U.S.: Lubik-Matthes Nominal Natural Rate Of Interest\* (%)



The neutral rate never fell at all during the previous decade

<sup>8</sup> MRB "<u>U.S. Fed:The Makings Of Another Dovish Error</u>", September 19, 2024

<sup>&</sup>lt;sup>9</sup> MRB "*The Impact Of A Higher Neutral Fed Funds Rate*", July 17, 2024

Deleveraging was a major *cyclical* force in the last decade, dampening growth, and inflation. Low interest rates (easy monetary policy) had no effect on the process of deleveraging, which households were compelled to undertake after the severe balance sheet shock of the financial crisis/housing crash and the Great Recession that followed. Yet, economic models mistakenly attributed the low growth and low inflation outcomes of deleveraging to a restrictive policy stance, by wrongly inferring that the economy's neutral rate had fallen<sup>10</sup>.



## MRB's Neutral Rate Framework

Sometimes, a simplified framework for estimating the neutral rate, based on common sense, and a nuanced understanding of economic reality works better than pure economic models, as we discuss below.

A basic premise is that the average of interest rates (across maturities) in an economy should equal the economy's nominal potential GDP growth rate in the long run. For the U.S. economy, this average of all interest rates would equal 4.1% (that is, 2.1% potential growth per the CBO's latest estimate plus 2% inflation- that is, *if* one assumes that the Fed's 2% inflation target will prevail, which we doubt will be the case<sup>11</sup>).

If one adjusts this average interest rate lower, to account for a positive term premium in the longer run<sup>12</sup>, then the "baseline" nominal neutral **policy** rate consistent with the U.S. potential growth rate would be at least about 3.8% (or a real rate of at least 1.8%).

Of course, the inflation assumption in the above calculation is crucial. MRB's research suggests that the underlying inflation rate for the U.S. economy is likely to be around 3% in the absence of secular disinflationary forces that existed up until the late-2010s<sup>13</sup>. If so, then long run nominal GDP will be closer to 5% and aggregate interest rates will need to average around these levels. Adjusting for a positive 50 to 100 bps U.S. Treasury term premium would imply a baseline neutral policy rate of 4.5% to 4.75% and the "fair value" of the 10-year Treasury yield at 5.25% to 5.5% (note that policy rates and bond yields typically need to overshoot their longer-term equilibrium rates to cool an economic expansion).

In the long run, average interest rates should mirror the potential GDP growth rate

<sup>&</sup>lt;sup>10</sup> A decline in the neutral rate would mean that a given stance of policy would be more restrictive than before, all else being equal.

<sup>&</sup>lt;sup>11</sup> MRB "*U.S. Inflation: What Will Be The Underlying Run Rate?*", June 5, 2024

<sup>&</sup>lt;sup>12</sup> MRB "Fixed Income – The Return Of The Term Premium", October 31, 2024

<sup>&</sup>lt;sup>13</sup> Including the greatest increase in globalization in modern history, the widespread implementation of technological advancements stemming from the tech revolution, and the massive deleveraging drags in the U.S. (and euro area) economy.

In addition to potential growth, there are other structural factors that matter for determining the neutral rate, that alter the aggregate supply of savings and the demand for borrowing in the economy, such as demographic profile of the economy, or the size of the public debt.

Estimates by Rachel and Summers<sup>14</sup> suggest that that real neutral interest rates rose by 3 bps for every percentage point rise in the public debt to GDP ratio in advance economies, from 1980 to 2018. By this yardstick, the CBO's projections for U.S. debt to GDP for the next 10 years would underpin a 50 bps incremental effect on the neutral rate by, all else being equal.

A model by Carvalho, Ferrero, and Nechio<sup>15</sup> calibrated to capture the stylized features of the

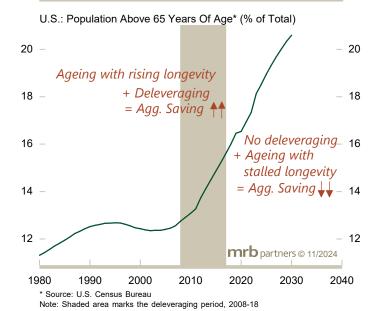
demographic transition of developed economies suggested that the demographic changes in developed countries from 1990 to 2014 (slower population growth, ageing populations and increasing life spans) would have lowered the neutral rate by 150 percentage points in a "representative" model economy<sup>16</sup>.

These negative demographic impact results (in spite of an ageing population) were the result of rising longevity- ageing people were saving more instead of dissaving as one would expect, because they were trying to catch up to their rising lifespans. The resulting impetus to aggregate savings suppressed the neutral rate.

However, the negative demographic impact found by these studies will reverse likely reverse ahead: U.S. life expectancy has stopped rising, which means that the increasing dependency ratio (greater retiring baby boomers) will henceforth have a positive effect on the neutral rate via greater consumption and dissaving (chart 4).

Given the range of the estimates of the effect of demographics and the public debt on U.S. interest rates, our assumption is that the rising debt to GDP ratio and retirement of baby boomers combined could have a 75 bps incremental effect on

# Chart 4 No Deleveraging And More Retirees Imply A Boost To The Neutral Rate



An ageing population without rising lifespans implies a lift to the neutral rate

<sup>&</sup>lt;sup>14</sup> Brookings Papers On Economic Activity "<u>On Falling Neutral Real Rates, Fiscal Policy, and the Risk of Secular Stagnation</u>", March 7–8, 2019

<sup>&</sup>lt;sup>15</sup> FRBSF Economic Letter "*Demographic Transition and Low U.S. Interest Rates*", September 25, 2017

<sup>&</sup>lt;sup>16</sup> Meanwhile, the Rachel and Summers study imputed a 200-bps decline in the U.S. R-star due to demographic changes over 1980 -2018.

<sup>&</sup>lt;sup>17</sup> American Economic Association "*Economic Shocks, Crises and Their Consequences*", January 7, 2023

the neutral rate (it could well be higher than that, given the historical estimates for each channel listed above).

The bottom line is that the CBO's estimate of potential GDP, the *conservative* assumption that long term inflation will be 2% and *highly conservative* assumptions on the effects of demographics and public debt *would put the estimate of the neutral rate near 4.5%*. Stronger fiscal/demographic effects, or structurally higher longer-run inflation would push the neutral rate even higher. Additionally, recent advances in AI and other technological progress that yield an increase in the economy's trend productivity growth rate – would also imply upward pressure on the neutral rate.

In short, as Logan acknowledged in her speech, the current fed funds rate is possibly not too far from the neutral rate.

upward revision even in market expectations.

There is no single 'clean' measure of the U.S. Treasury bond-market's estimate of the neutral rate. But based on the Federal Reserve's D'Amico, Kim & Wei (DKW) No-Arbitrage Term Structure Model of the 10-year Treasury yield, the 5-10 year expected nominal short rate is 4% (2.75% expected inflation plus 1.25% expected real short rate) at the time of writing (chart 5). Basically, the bond market seems to have front-run the Fed on revising up the neutral rate, but there is still room for a further

Final Word: As we had expected, the Fed finally raised its estimate of the economy's neutral policy rate this year, from 2.5% to 2.9%. MRB's view is that the Fed will raise its estimate of the neutral rate further over the coming months. Recent communication from Fed members appears to support this view, for the first time explicitly acknowledging the possibility that the neutral rate might be much higher than the Fed has thus far let on, close to 4.5% (which has been MRB's long-standing view). Amid the Fed's pivot to policy easing this year, the rise in the Fed's neutral rate estimates has flown under the radar. However, future increases in the Fed's median longer run policy rate, especially as they coincide with a curbing of rate cut expectations, could have a have a profound implication for U.S. Treasury yields (higher) and shape of the yield curve (steeper).

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Chart 5 The Market-Implied Estimate Of The Neutral Rate Has Risen



\* Expected real rate plus expected inflation; D'Amico, Kim & Wei (DKW), Federal Reserve

The current fed funds rate is not too far from the neutral rate



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