May 28, 2024

Focus On r* Returns

Is r* Higher or Lower?

- Renewed focus on level of r*
- Popular estimates show a further decline
- But markets disagree and yields reflect higher r* expectations
- Fed's Waller argues structural demand for USTs keeps r* low
- Supply and demand imbalance in UST market could drive term premia higher

Markets vs the Economists:

There has been much focus recently on the value – indeed, even the concept – of r*.

Conceptually, r* is the policy rate that neither stimulates nor restricts an economy operating at full employment with stable inflation close to the central bank's target rate. It's a long-run equilibrium policy setting. We would argue (and do below) that current market perceptions of r* are mostly responsible for the current level of US 10y note yields, which have been trading near 4.5%. But others aren't so sure that r*, reckoned before the pandemic to be around 2.0-2.5% in nominal terms, has risen – if at all – from those pre-COVID levels.

Again, think of r* as a "goldilocks" policy rate, neither too stimulative nor too restrictive – everything humming along in the absence of shocks. What would determine its actual level under this equilibrium assumption? Most model-based estimates of r* are derived from measuring long-term trends of potential output of the economy and trend growth, and fitting a rate of interest that would correspond to those values – the rate of interest that would prevail when the economy is equilibrium.

One popular and oft-cited estimate of r* was developed by current NY Fed President Williams and his colleague at the Fed, Thomas Laubach. Post-pandemic, it was augmented – along with Kathryn Holston – to include time-varying economic shocks, such as COVID, to represent an economy out of equilibrium. Both the Laubach-Williams (LW) and the Holston-Laubach Williams (HLW) models have documented a long-term decline in r* estimates since

the 1960s, continuing after the pandemic through the present day.

In the chart below we plot the HLW estimate of r*(amber line) since 1992. Two things stand out. First, it has been in steady decline throughout the period shown. Second, it has fallen even further since the pandemic. In 1992, it was estimated to be around 5%. It rose to 6% in 1999 and then declined to around 2.8% in the 2010s. It currently sits at a mere 2%.

Markets appear to disagree, however. For comparison, we also plot two market-based interest rates that should reveal what investors think about r*. The orange line is the 5y5y forward 10y rate, and the blue line is an estimate of the short interest rate in 10 years' time, from the NY Fed, which produces these and related estimates that are widely followed. For most of the period shown, these two measures moved very much in line with the HLW estimate. But they diverged during the pandemic – the HLW estimate remaining stable and the two interest rate series dipping below 1% during the lockdown.

Market vs. Economists

Long term interest rate estimates
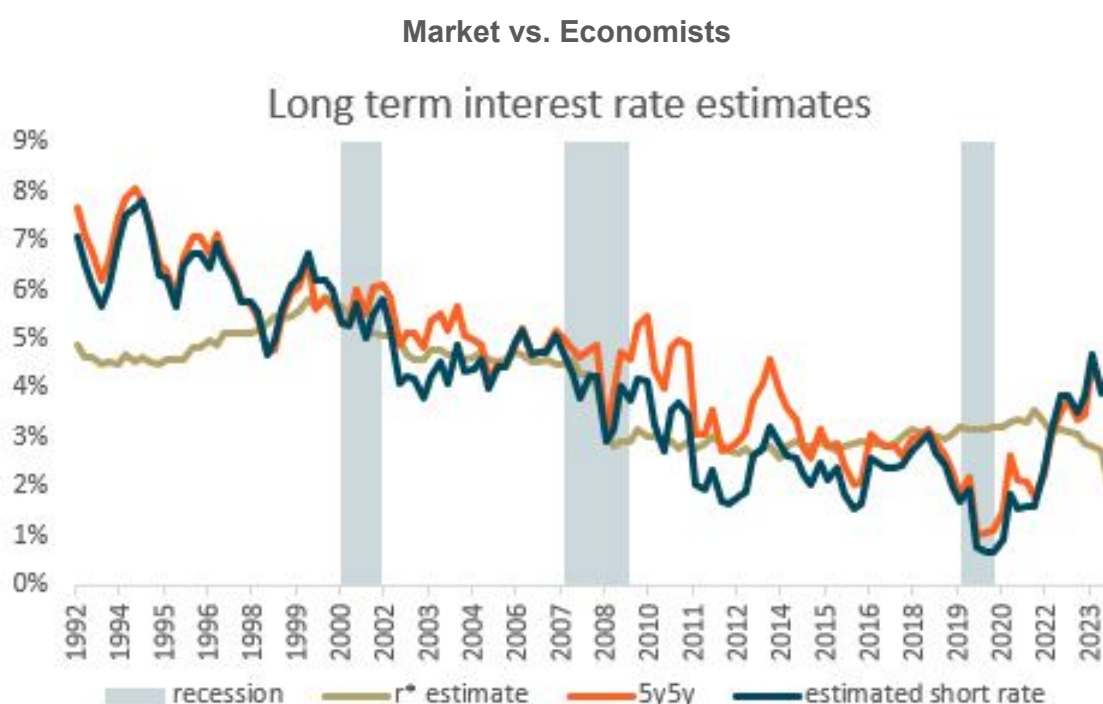
Fed Governor Waller took on the r* discussion in a recent speech. He argues that r* has declined primarily due to an inexorable demand for US Treasuries that has developed over the decades, from both private and public sources. Globalization of financial markets as well as the subsequent buildup in foreign governments' reserves and sovereign wealth holdings, ageing populations' savings, and regulations which drive more appetite for Treasuries are all cited as creating sufficient demand to keep 10y yields low and hence, as a reflection of monetary policy, indicating that r* can be similarly lower.

As we said, much of his argument centers on long-term structural – and presumably enduring – demand for government debt. Waller then muses that the current unsustainable fiscal policy stance may create more Treasury supply than the market is willing to absorb without driving prices lower and yields higher, which would have to be reflected in a higher r*. He offers the

following synopsis "All of these financing pressures may contribute to a rise in r* in coming years, but only time will tell how large a factor the U.S. fiscal position will be in affecting r*." We have long been warning that potential supply and demand imbalances in the Treasury market could arise sooner rather than later.

Let's step back a bit and reconsider the NY Fed's estimate of the short-term policy rate expected in ten years. In the chart below (top panel) we show both this value and a related series, the estimated term premium on 10y notes since 1962. The term premium can be thought as the extra return one requires to risk lending to the government for ten years. This incorporates time value of money considerations, inflation expectations, policy rate expectations, and other risks – including solvency and liquidity.

Rather than go into a long historical discussion of the term premium, we'll simply note that, first, it tends to rise and fall with the estimated short-term rate. Second, it has declined, just as r* has, over the years. Indeed, by the 2000s investors were barely demanding any additional return over the policy rate. What's more, since the term premium is currently negative, about -12bp, it looks like investors are actually paying "extra" for UST risk than the estimated short-term rate implies. This would bolster Waller's argument based on structural long-term demand for USTs.

Current 10y yields are basically in line with this expected short-term policy rate. This rate has risen from 1% during the depths of the pandemic to almost 4.5% today. The absence of term premium suggests to us that in recent years, 10y yields have been almost entirely driven by changing market estimates of long-term policy rates, or a much higher r*.

Next To No Term Premium, Higher Risk Short-Term Rates

Term premium & estimated short rate (long sample)

Term premium & estimated short rate (short sample)

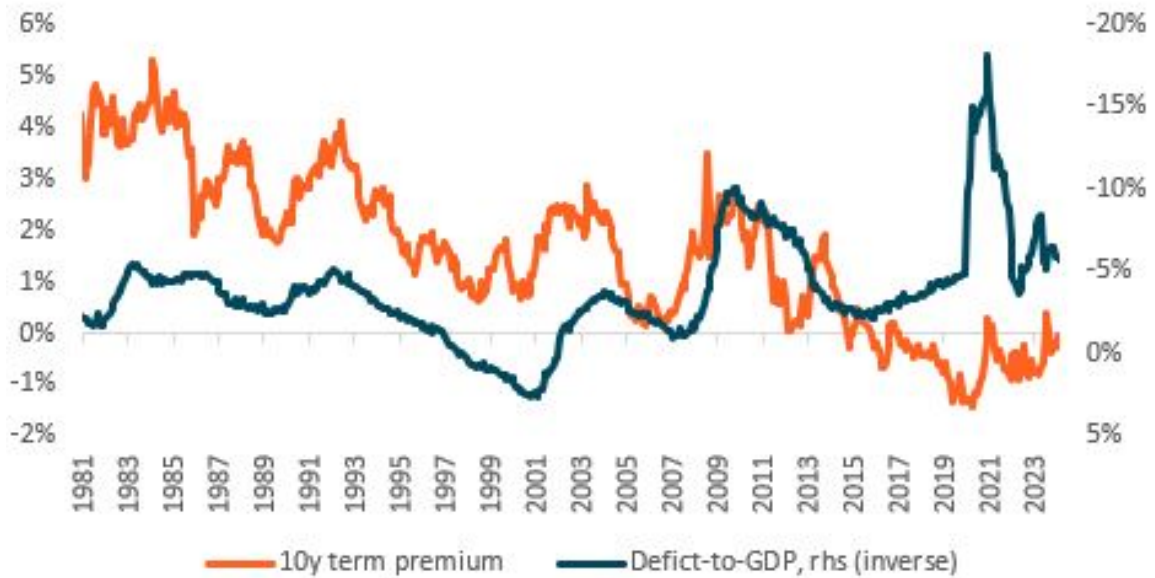Source: BNY Mellon Markets, Federal Reserve Bank of New York

But what about the notion – much discussed by us, also mentioned by Waller – that higher debt levels and an unsustainable fiscal policy path would require a higher term premium. It hasn't materialized yet, except for a brief period last autumn when 10y yields rose to near 5% – driven by a higher term premium, it driven by a worrying quarterly refunding statement from the US Treasury. We're fearful such a situation could arise again in the second half of the year, and that we could experience another bout of bear steepening in the UST curve.

The chart below suggests that the term premium has a link – however imperfect – with deficit levels. Should we enter a prolonged period of high deficits, we could expect the term premium to rise. If r* really is higher now, say, in the region of 4.0-4.5%, and term premia rise in light of too much UST supply, yields could comfortably hit 5%.

Our own data – the iFlow series of custody-related flows – shows the current, short-term demand for USTs; we wrote about this in-depth last week. So far, real money investors have not wavered in buying up available supply. However, we wonder how long it will be before they start to become worried about what appears to be excessive supply going forward.

Term Premium & Fiscal Policy

Fiscal deficit and term premium

Legend: 10y term premium, Defict-to-GDP, rhs (inverse)

Source: BNY Mellon Markets, Federal Reserve Bank of New York, US Treasury

Disclaimer & Disclosures

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