

ON POINT

ECONOMIC AND POLICY INSIGHT FROM THE OCC

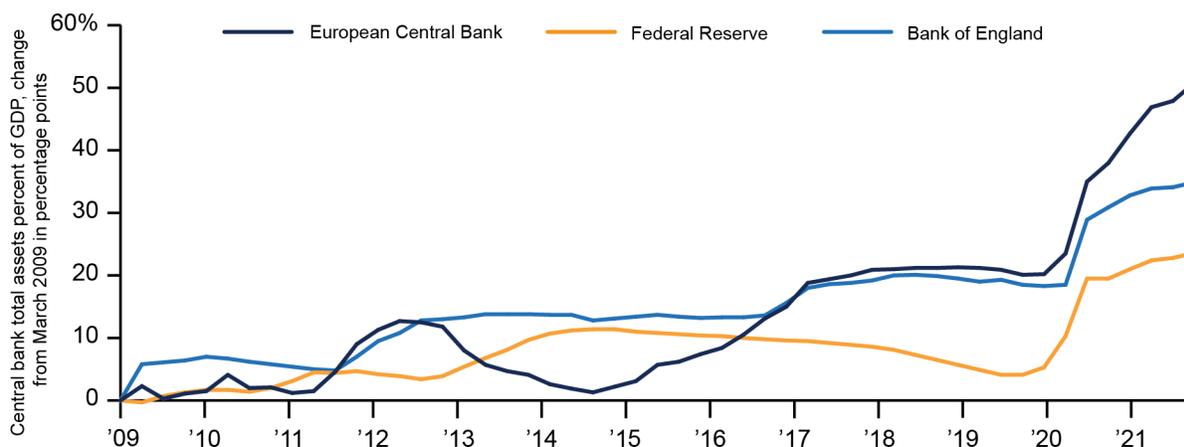
Policy Unwind Adds Risk of Sharply Higher Long-Term Bond Yields

Most economists expect a gradual rise in long-term bond yields in the United States and other advanced economies over the next few years. Indeed, central banks are expected to gradually unwind support for their economies and tighten monetary policy, putting steady upward pressure on long-term interest rates. But concerns over the risk of a more rapid increase in long-term yields are not uncommon. Many analysts warn that a quick jump to higher yields could hurt economic growth or trigger volatility in asset prices. Since historical tightening of monetary policy has sometimes resulted in financial market turmoil, these concerns are worth considering.

Policy Unwind Could Unleash Financial Market Turbulence

The unwinding of policy is getting under way as central banks “taper” or reduce new central bank asset purchases to zero and start raising short-term interest rates from near-zero (or negative) levels. The central banks will also start “quantitative tightening” by reducing assets held on central bank balance sheets. Until these assets are substantially reduced, central bank holdings of assets continue to cap long-term yields to some extent. Central bank asset reductions will take some time as asset holdings have become quite large as a share of gross domestic product (GDP) (see figure 1).

Figure 1: Central Bank Asset Holdings Have Grown Sharply



Source: Haver Analytics

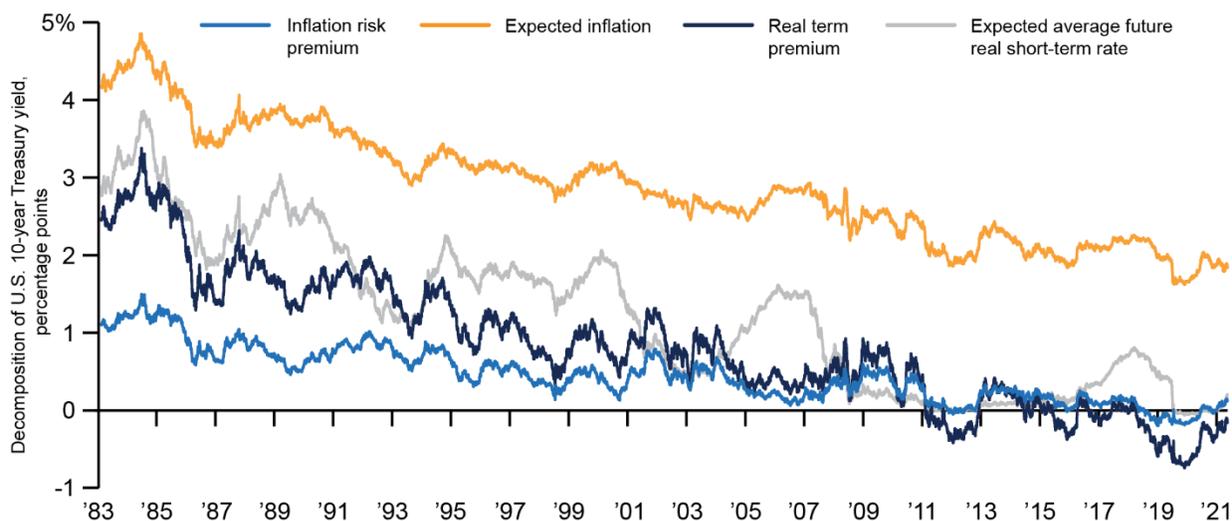
Note: This figure represents the change from March 2009 in the central bank assets/GDP ratio for each central bank in percentage points. For example, if a central bank assets/GDP ratio were 20 in March 2009 and 40 in March 2011, then the values in the figure would be 0 in March 2009 and 20 in March 2011, indicating the ratio rose 20 percentage points from March 2009.

Shrinking central bank balance sheets, however, is easier said than done. Fully unwinding massive past purchases in the years to come means reversing decade-long changes in bank balance sheets and investor portfolios. When they began in 2008-2009, central bank asset purchases initially led to major portfolio shifts between financial institutions and investors. Those changes were one of the main ways in which quantitative easing helped the financial system and the economy. The purchases included both “risk-free” government securities with minimal credit risk (e.g., U.S. Treasury securities, German Bunds) and purchases of assets with more credit risk (e.g., mortgage-backed securities). Because central bank asset purchases became so large as a share of GDP, when central banks unwind their holdings there could be significant financial system adjustments domestically and abroad.

Forecasted Yields Seem Low

The latest Blue-Chip projection for U.S. 10-year yields sees an increase to 2.6 percent by the end of 2023, up nearly 60 basis points from their current level in early February 2022. Yields embody financial market assumptions around four main components: (1) a forecast of real short-term interest rates, (2) a term premium (to price the risk that this forecast is wrong), (3) a forecast of inflation, and (4) an inflation-risk premium (to price the risk that the inflation forecast is wrong). Research staff at the Federal Reserve has estimated both current and historical values for these four yield components (see figure 2).

Figure 2: U.S. Treasury Yield Components Near All-time Lows



Sources: D'Amico, Kim, and Wei (2018), Haver Analytics

The most recent (December) projections of the Federal Reserve Board members and regional Federal Reserve Bank Presidents in the [Summary of Economic Projections](#) (SEP) foresee a longer run real federal funds rate of 0.50 percent. This is well above the forecasted real short-term rate component of yields of just 20 basis points priced-in by financial market participants as of January 31, 2022, according to Federal Reserve research staff estimates (see figure 2). The corresponding inflation expectations component of 10-year yields estimated as of January 31 was just 1.84 percent. This is relatively low both historically and compared with some other measures of long-term inflation expectations, which are now well above 2 percent,¹ not to mention well below the current rate of inflation.

Finally, the financial markets expectation of the term premium component in the 10-year Treasury yield was priced below zero as of January 31, according to Federal Reserve staff estimates, while the inflation risk premium component was around 13 basis points. In both cases, this is substantially below the average since 1983. Although the premiums have been trending down over time, these low premiums may not be a good guide to the future. For example, 15 of 18 SEP participants think there is a risk inflation will be higher than forecast over the next decade, while only three judged risks to be broadly balanced and none think that there is a risk of inflation running below forecast.

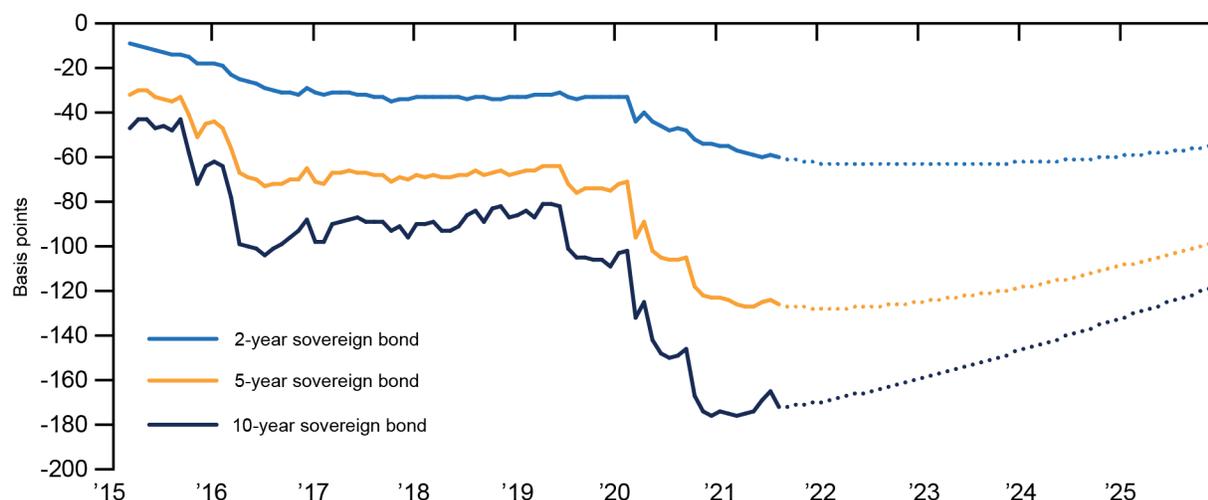
Taken together, most components of recent Treasury yields appear low relative both to their own histories and to alternative benchmarks. Higher inflation expectations and even modest adjustments to expectations for real interest rates and the risk premiums could easily justify an increase in 10-year Treasury yields by 60 basis points to the 2.6 percent projected in the Blue-Chip forecast. By contrast, and as seen below, a scenario in which these components rise much further, lifting 10-year Treasury yields to 4.5 percent or more, is not hard to envision.

As central banks tighten policy, the evolution of the term premium is something to watch closely. Research suggests that central bank asset purchases primarily affect bond yields by lowering

¹ The latest University of Michigan consumer inflation expectation over the next five years is 3.1 percent, while the Livingston Survey measure of expectations over the next 10 years is 2.4 percent.

this term premium.² As these asset holdings are reduced, the term premium should rise again. We have no precise estimates of the magnitude of these effects for the United States but can get some sense in estimates from the European Central Bank (ECB). As seen in figure 3, as of March 2021 the cumulative estimated impact of the ECB’s post-2008 financial crisis asset purchase programs on term premia in Euro area government bond markets was estimated to be over 170 basis points.³

Figure 3: Lingering Impact on Yields From ECB Asset Purchases



Source: ECB calculations

As the ECB’s holdings are unwound, their downward pressure on yields should lessen, possibly by 50 basis points or more over the next four years. With cumulative ECB balance-sheet expansion (as a share of GDP) nearly double that of the Federal Reserve, a simple extrapolation of the ECB estimates suggests the impact of U.S. quantitative tightening could be at least 25 basis points.

Policy Shock Could Send 10-Year Yield Over 4 Percent

In addition to some potential underpricing of risks in current long-term yields, a key risk for sharply higher yields involves inflation and a “catch up” central bank policy response. If the recent acceleration in inflation and wages persists longer than expected, expectations may quickly become “unanchored” from current low single digits, and the federal funds rate would

² Other factors driving the term premium lower may include post-2008 regulatory changes on the demand for government securities, the adoption of negative policy interest rates in some countries, and trends in global productivity growth.

³ The chart is based on updated yield impacts derived from the model of Eser et al. (2019) and a recalibrated version of the model so that the model-implied yield reactions to the March 2020 Pandemic Emergency Purchase Programme (PEPP) announcement match the two-day yield changes observed after 18 March (average estimates across the two model specifications, latest observation: August 2021 for past estimates). These results were also shown in Isabel Schnabel’s (Member of the Executive Board of the ECB) speech “[Asset Purchases: From Crisis to Recovery](#),” from September 20, 2021. See “[Tracing the Impact of the ECB’s Asset Purchase Programme on the Yield Curve](#),” Fabian Eser, Wolfgang Lemke, Ken Nyholm, Soren Radde, Andreea Liliana Vladu, ECB Working Paper Series, July 2019.

likely be raised faster to a higher level than otherwise. Unexpected policy rate increases historically led to greater financial market turbulence, both in the United States and overseas.

If U.S. inflation settles around 2.75 percent in the medium term, then inflation expectations would likely increase, perhaps as much as 75 to 100 basis points, with the inflation risk premium rising to around 50 basis points. In the past two tightening cycles, the average real federal funds rate peaked at 100 basis points, well above the 20 basis points expected recently. Even if there is a substantial increase in the term premium to perhaps 50 basis points or more, adding these parts together would point to a medium-term rise in 10-year Treasury yields by 250 basis points or more. This would imply a 10-year Treasury yield of 4.5 percent. This is more than 100 basis points above the average of the 10 highest year-end 2023 forecasts in the latest Blue-Chip survey and would reflect a significant tightening in financial conditions versus the consensus.

The Point?

The coming unwind of highly accommodative global monetary policies and an uncertain path for inflation could result in sharply higher government bond yields in the United States and abroad.