Report to the Secretary of the Treasury from the Treasury Borrowing Advisory Committee

November 1, 2023

October 31, 2023

Letter to the Secretary

Dear Madam Secretary:

Since the TBAC last convened in early August, ten-year Treasury yields have traded in nearly a 100bp range and remain near the highest levels of the past 15 years. Over the same period, two-year Treasury yields have been more stable, but have still traded in a 45bp range. Several factors have likely contributed to the rise in longer-term yields. For example, strong activity and labor market data, the possibility that the neutral rate of interest is now higher, supply-demand dynamics and the return of a positive "term premium" in long-dated Treasury securities have all likely contributed to a certain degree.

The rise in yields is partially a response to stronger-than-expected activity and labor market data. Real GDP growth registered just above 2% in the first two quarters of 2023 and a very strong 4.9% in Q3. Strong consumption remains the key driver of growth, but spending has broadened away from just spending on services, with both goods and services consumption rising in Q3. Residential investment increased for the first time since Q1-2021. Strength in durable goods orders has supported a rebound in manufacturing sector activity and should be reflected in increased business equipment investment into Q4. Job growth has been slowing, but the 336k increase in September and upward revisions to previous months mean the sixmonth moving average sits at 234k and the three-month moving average at 266k. The unemployment rate remains at a low 3.8% and initial claims for unemployment insurance have remained at low levels around 200k, although continuing jobless claims have risen somewhat.

One interpretation of the significant steepening of the two-year to ten-year yield curve is that market participants are revising up their expectations for near-term growth and revising down the probability of a near-term recession. A complementary interpretation is that investors are putting higher probability on the possibility that the "neutral" real rate of interest is now

higher. The five-year forward five-year overnight index swap rate had been stable around 3-3.5% over the first half of the year, but has recently risen to as high as 4.54%, its highest level since 2011.

Changing expectations around the near-term monetary policy path may be a driver of the recent rise in yields, but the relative stability of two-year yields suggests that is not the most important factor. Median "dots" for 2024 and 2025 increased by 50bp in the Federal Reserve's September summary of economic projections (SEP) relative to the previous SEP in June. Chair Powell and other Fed officials have emphasized that rates may stay at higher levels for a longer period of time.

Additionally, the rise in ten-year yields is largely due to higher real yields as measured by TIPS securities. Market-implied "breakeven" inflation has remained more stable. Core CPI and PCE inflation slowed substantially from June through September to 2.8% and 2.4% respectively on a 3m/3m annualized basis. But both measures of core inflation strengthened on a monthly basis in September and risk remains for a further pick-up in core inflation in Q4. Slower shelter price increases have contributed to disinflation, but house prices are once again rising rapidly as higher mortgage rates are limiting the supply of existing homes. Wage growth has cooled with average hourly earnings rising 4.2%YoY in September, but the tight labor market risks keeping labor costs rising faster than would be consistent with two percent inflation. Non-shelter core services inflation has remained stubbornly elevated. Finally, energy prices are higher and geopolitical risks suggest further upside risk.

There is a view among market participants that the growing imbalance between supply of and demand for US Treasury debt may also have contributed to the sell-off. The \$1.7 trillion fiscal year 2023 deficit was larger than originally forecast and both private sector and official projections expect a similarly large deficit next year. In addition, the Federal Reserve is allowing \$60 billion in US Treasuries to run off its balance sheet each month, funding that will need to be replaced by issuance to the private market. On August 1st Fitch downgraded the US long-term rating from AAA to AA+, though the market reaction to the news was limited.

Demand for US Treasuries may have softened among several traditional buyers. Bank security portfolio assets have been declining since last year with bank holdings of Treasuries down \$154 billion compared to one year ago. The appreciation of the US dollar means some foreign central banks may consider liquidating Treasury securities in the process of defending their currencies. Anecdotally, some investors had expected that ten-year Treasury yields would not rise beyond the approximately 4.25% high of last year and had already extended the duration

of their fixed-income portfolios – meaning they now have limited capacity to add more interest rate exposure. Investors who own mortgages or callable debt have had their duration exposure mechanically increase as higher interest rates mean slower rates of early repayment. Treasury auctions continue to be consistently oversubscribed but there may be some early evidence of waning demand. On October 12th a reopening of the thirty-year bond auctioned 3.7bp cheaper than the prevailing rate before the auction, the largest "tail" in a thirty-year bond auction since 2021.

Consistent with the idea that structural demand for duration risk has decreased, investors may now require an additional yield or "term premium" to hold longer-term debt. Two commonly used term premium models (Kim-Wright and Adrian, Crump and Moench) suggest that much of the rise in Treasury yields can be attributed to "term premium" rather than to expectations of higher future policy rates.

The rise in Treasury yields has been accompanied by substantial volatility. Volatility implied by three-month options on ten-year swap rates has risen to 134bp/year, the highest level since March. Standard measures of cash-Treasury liquidity including spreads to swap rates and spreads between on-the-run and off-the-run securities have been relatively well behaved, but liquidity remains something to carefully monitor.

Considering this fiscal and economic backdrop, the Committee reviewed Treasury's October 2023 Quarterly Refunding Presentation. Based on the marketable borrowing estimates published on October 30, Treasury currently expects privately-held net marketable borrowing of \$776bln in Q1 FY 2024 (Q4 CY 2023), with an assumed end-of-December cash balance of \$750bln. The borrowing estimate is lower than what was cited at the August refunding, primarily due to projections of higher receipts which were somewhat offset by higher outlays. For Q2 FY 2024 (Q1 CY 2024), privately-held net marketable borrowing is expected to be \$816bln, with a cash balance of \$750bln assumed at the end of March. Primary dealer projections for issuance have increased for FY 2024 and FY 2025, with dampened expectations for economic growth and an anticipated increase in the duration of SOMA redemptions. Dealers explicitly noted a high degree of uncertainty overall around deficit and growth forecasts, reinforcing Treasury's need to maintain flexibility in their issuance strategy.

The Committee's review of primary dealer feedback included near unanimous support for converting the 6-week cash management bill to a benchmark tenor. Primary dealers felt there was sufficient support for the security and also observed that having an additional short benchmark tenor would likely support Treasury's overall borrowing strategy. Some members

noted that increased choice within the very short-dated bill space would support money market funds' ability to absorb bills in larger size overall.

The Committee then moved to review the two charges of the quarter. Our first charge examined the factors driving the market moves across the Treasury yield curve in the three months since we last met. Yields have moved notably higher, with longer term yields having increased over 120bps (as of October 20th), in comparison with only 20bps for the 2yr note. While some of this repricing is due to improved realized growth data and propagation of that to forward projections, the charge concluded that the bulk of the long end yield moves were driven by increased term premium. The Committee felt it was important to note that term premium began the quarter at what, over the past decade, had become normalized though notably depressed levels.

The Committee discussed this in detail, focusing on the unusual confluence of strong growth and high issuance, and debated to what extent strong Q3 growth exacerbated the moves. It was noted that estimates of Quantitative Tightening (QT) and increased interest expense could contribute to the local increased procyclicality between the two. Members also highlighted that the less negative correlation we have seen recently between Treasuries and risk assets has contributed to the rise in term premium. There was agreement that shifts in Fed expectations have contributed to the rise in longer term yields, both due to changed expectations for the policy path and for the lengthened anticipated timing of the end of QT. However, there was consensus that shifts in Fed expectations have only had limited pass-through into longer term yields. Additionally, the view was that the scale of this incremental QT was not significant relative to the scale of supply and updated fiscal outlooks.

This conversation naturally led to our second charge, which explored the outlook for structural demand for US Treasuries and important factors Treasury should consider when evaluating demand going forward. The charge highlighted three notable factors: global macroeconomic outlook, assessment of higher term premium, and synchronization of global monetary policy.

Both charges highlighted the recent shift to more price sensitive investors that we have seen in US Treasury demand, with households (which includes hedge funds) absorbing the majority of the recent increases. Effectively, while there is still reasonable demand for US Treasuries from many domestic and international market participants, it has not kept pace with the increase in supply. This has been somewhat offset by strong demand from money market funds, both as a shift from the Overnight Reverse Repurchase Facility (ON RRP) and on an

absolute basis. Both charges also highlighted the continued reasonable market functioning, given the scale of the recent moves.

Ultimately, the Committee's second charge highlighted the importance of retaining flexibility in issuance strategy within Treasury's regular and predictable framework. The charge suggested Treasury consider skewing increases in issuance towards tenors which have less sensitivity to term premium increases, and ones that benefit from greater liquidity. The Committee supported meaningful deviation from the historical recommendation for 15-20% T-Bill share. While most members supported a return to within the recommended band over time, the Committee noted that the work Treasury has done to meaningfully increase WAM over the past 15 years affords them increased flexibility with T-Bill share in the medium term.

The Committee then discussed the composition of coupon auction size increases. The group favors coupon size increases over this quarter and expects at this point to see further increases next quarter as well. However, the Committee favored relatively larger increases in more liquid parts of the curve. While most Committee members favored increases across the curve similar in scale to what Treasury implemented in August, some preferred more meaningful increases in belly tenors relative to long end tenors, or to slow the pace of increases – smaller increases for a longer period of time. Strong demand for shorter duration assets on a relative basis, as well as Treasury's meaningful WAM extension over the past 15 years, were noted as a part of the discussion.

The robust discussion informed the Committee's ultimate recommendation: no increase in 20yrs, and a more modest increase in 7yrs relative to other points on the curve. At this point, the Committee expects that the need for similar further increases at the Q2 FY2024 meeting is likely, but increases beyond Q2 FY2024 may not be required. Given the scale of change in forecasted borrowing needs, the Committee expects key debt characteristics (notably T-Bill supply) will deviate from TBAC recommended ranges for a significant period. While we see this as necessary and well received by the market, we suggest Treasury take steps to normalize toward these metrics over time. The Committee also felt that the return of term premium served to emphasize the importance of fiscal sustainability. Both gross debt outstanding and debt servicing costs are projected to increase meaningfully, and that should increasingly be a consideration for policymakers.

The Committee also discussed changing the format in which its auction-by-auction issuance recommendations are submitted to Treasury. Historically, the Committee's two quarters of recommendations have aligned to calendar quarters. Going forward, the Committee would

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like to align to refunding quarters, with the recommendations displayed in table format. For this meeting, the Committee is providing the recommendations in both formats for comparison, but plans to shift to only providing the new format at the next scheduled meeting in January 2024.

Of course, given the considerable uncertainty surrounding the economy and projected borrowing needs, Treasury will need to retain flexibility in its approach.

Respectfully,

Deirdre K. Dunn

Chair, Treasury Borrowing Advisory Committee

Colin Teichholtz

Vice Chair, Treasury Borrowing Advisory Committee