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# US Rates Watch

# Nov refunding preview: higher deficits, higher coupons

## Higher interest cost => higher deficit => higher coupons

Our US Economists revised deficits higher since our last refunding update. As discussed in greater detail below, the largest swing factor is an increase in interest expense rather than a notable change in the primary deficit. Higher interest expense will mean more coupon supply, in our view. We now expect a repeat of the increase in auction sizes observed at the August refunding, followed by moderating increases at the February and May refundings (Exhibit 2 and Exhibit 3). Per our forecasts, this results in auction sizes rising to historic highs across all tenors besides the 7y and 20y (Exhibit 1).

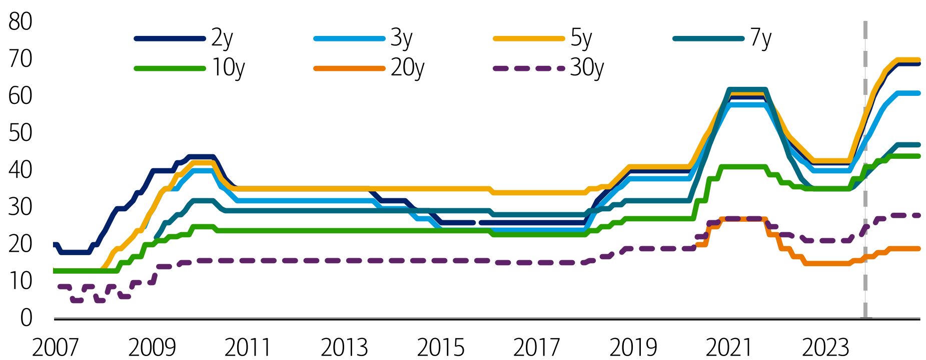
## Expect bills >20% through FY 26, but no WAM shift

An important tenant of our forecasts is that UST will allow for moderate deviations above TBAC's 15-20% recommended range of bills as a share of marketable borrowing. We believe these moderate deviations will be tolerated provided bills as a share of the total portfolio is on a trajectory to bend back towards 20% over time (Exhibit 10). This is consistent with comments from Assistant Secretary Frost in late September. We do not expect Treasury to use bills >20% to meaningfully lower UST WAM; rather bills >20% will be tolerated to smooth the path towards higher net cash raise via coupons. Exhibit 9 shows UST WAM will still rise over time even with higher bill supply in coming years.

## Bill path conditional on QT timing

As shown in Exhibit 4, assuming our deficit figures and QT ending in the middle of next year, bills will be modestly above 20% over the next three fiscal years but bend back towards 20%. Should QT end later, this level of coupon supply would see bills even higher and may necessitate higher coupon supply than we have currently penciled in.

**Exhibit 1: Treasury auction sizes by tenor with projections through YE '24 ($bn)**
We forecast that Treasury note and bond auction sizes will grow through July 24




**Source:** BofA Global Research, US Treasury

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**24 October 2023**

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UST = Treasury

QT= quantitative tightening

TBAC= Treasury Borrowing Advisory Committee

FY= fiscal year

WAM= weighted average maturity

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Timestamp: 24 October 2023 06:00AM EDT

## Regular and predictable > opportunistic

An important assumption in our forecasts is that UST does not alter its overall issuance strategy based on shape of the yield curve and/or interest rate levels. If UST believes interest rates will move lower, an opportunistic approach might suggest reducing WAM and issuing more in bills & shorter-dated coupons. We think that this is unlikely.

As shown in Exhibit 8, UST WAM typically extends when the yield curve is flat/ inverted and contracts when the curve is steeper. While this is not a hard and fast rule—the fact that some parts of the UST curve are still inverted or historically flat would suggest that UST instead continue to extend WAM.

If UST were to take a more formal view on the direction of rates and implement a strategy that is opportunistic vs regular and predictable—this would create more uncertainty around issuance patterns. UST believes that regular and predictable issuance is the way to issue at lowest cost to taxpayer. Additionally, Treasury solicits feedback from TBAC and dealers before making major financing changes. A quick and unexpected change in UST issuance strategy would violate its current framework.

Treasury's issuance approach has long sought to lower costs to the taxpayer through 2 key tenants: (1) lowest interest cost over time (2) lowest interest cost variability. Lowest interest cost has typically meant issuing short, while lowest interest cost variability has typically meant issuing long. Treasury has sought to optimize the two and is unlikely to quickly change strategy. Treasury views their debt management approach like steering a tanker: they need to move slowly & carefully because they issue so much debt.

## Deficit: 6% is the new 3%

The FY 2023 deficit surprised expectations and finished the year at $1.7tn. After netting out the effects of student loans, the deficit effectively doubled to $2.0tn or 7.5% of GDP. The upside surprise was largely a function of a drop in revenues, primarily from other income tax receipts. Given this upside surprise, we revise up our deficit forecast for the next several fiscal years. We now expect deficits of $1.8tn in FY 2024, $1.9tn in FY 2025 and $2.0tn in FY 2026.

In addition to the higher FY 2023 deficit, a major reason for our upward revisions are higher interest expenses. Assuming that market forwards are realized, gross financing costs from marketable debt will increase materially as a share of GDP in coming years (Exhibit 11). While net interest expenses will get some relief from the resumption in student loan payments, net interest expenses will account for an increasing portion of the overall deficit (Exhibit 12). Indeed, we expect net-interest expenses as a share of GDP to increase from 2.5% in FY 2023 to 3.5% in FY 2026, highest on record.

Meanwhile, we forecast the primary deficit to fall from 5.0% in FY 2023 to 3.3% of GDP in each of the next two fiscal years. Admittedly, there remains considerable uncertainty around our forecasts given the House is still without a speaker and Congress has made little progress on appropriations for FY 2024, which started on October 1.

If we do see a primary deficit in line with the caps from the Fiscal Responsibility Act, then we expect a drop in mandatory outlays to and a partial rebound in revenues to drive he primary deficit lower in FY 2024. In short, we expect deficits to remain elevated and at levels not typically seen at this stage in the economic cycle.

## Supply picture looks even more daunting

In Global Rates Viewpoint (see report), we discussed the significant duration supply adjustment starting in Q4 for the US (Exhibit 6). Our new forecasts reflect upward revisions to these numbers. Assuming QT ends in June 2024, we anticipate that supply over calendar year 2024 will be around $1.34tn in 10y equivalents around $90bn higher than previously forecasted. This would see marketable debt ex-Fed at the highest levels observed historically, even beyond 2021, when there was larger structural demand from investors like banks (Exhibit 7). Should QT extend through mid-2025 (likely more consistent with Fed projections) marketable debt ex-Fed in 2024 would total $1.53tn.

All of the duration supply means continued upward pressure at the back end of the rates curve, cheaper longer-dated USTs vs OIS, & steeper UST curves. Higher duration supply should mean structurally steeper UST curves. The supply backdrop support our cheaper intermediate to longer-dated SOFR spread & 5s30s nominal curve steepening views.

## Bill supply has room to grow

We forecast net bill supply to grow $732b in FY '24, decline $27b in FY '25, and increase $479b in FY '26, assuming QT ends in June 2024 with the first Fed cut (Exhibit 14). As noted earlier, bills as a % of outstanding will continue to grow due to higher deficits unless coupon auction sizes continue to increase beyond our forecasts.

To determine how much Treasury can grow bill supply without overwhelming demand, we use MMF bill ownership as a proxy for total demand. Pre-COVID, MMFs held roughly 30% of bills outstanding, which is only $200b above current levels (Exhibit 13). To scale for the industry size, Treasury could issue ~$670b ($200b/30%) in net new bill supply. This would imply bills as a % of the portfolio at 22.75%. In an extreme, MMFs could takedown up to 45% of bills outstanding, as they did in the post-COVID bill surge.

In projecting out future years, we think Treasury could hold bills as a % of total at 22.5%, this would imply a max bill outstanding in FY '24 / 25/ 26 of $6.3tn / $6.85tn / $7.3tn.

## Further progress on buybacks

We anticipate UST to signal that they are continuing to make progress on implementation of buybacks. As discussed in August refunding (see report) UST has already announced that buybacks will start in 2024. In our forecasts we pencil in February as the tentative start. We expect a signal of Feb '24 buyback start at the Nov refunding.

In the latest refunding survey, dealers were asked to weigh in on timing and frequency of operations. We believe Treasury should conduct buybacks the week before an auction to clean up dealer sheet in advance of the new issue. We suggest avoiding days when there are big market events (i.e. non-farm payrolls, CPI, ECB meetings). We recommend buybacks be conducted around 10:30-11 AM, after US data but during London trading. For liquidity support buybacks, we recommended Treasury split the 10-20Y nominal & 7.5-30Y TIPS auctions into 2 separate operations.

**Bottom line**: higher interest costs => higher deficits => higher coupon supply. We pencil in larger coupon increases due to higher financing costs & larger deficits. Even with the larger coupon increases we expect bills to modestly exceed 20% of the total portfolio in coming years. The higher bill share does not imply a change in Treasury debt issuance strategy or materially lower WAM, but rather temporary flexibility as net coupon funding grows. The Nov refunding should also provide clearer guidance on buyback timing.

**Exhibit 2: Expected auction sizes through July 24**

Expect another increase in auction sizes like August refunding, followed by moderating increases in February and May

| | 2y | 3y | 5y | 7y | 10y | 20y | 30y | 5y II | 10y II | 30y II | 2y FRN |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/31/2023 | 45 | 42 | 46 | 36 | 38 | 16 | 23 | | | 8 | 24 |
| 9/29/2023 | 48 | 44 | 49 | 37 | 35 | 13 | 20 | | 15 | | 24 |
| 10/31/2023 | 51 | 46 | 52 | 38 | 35 | 13 | 20 | 22 | | | 26 |
| 11/30/2023 | 54 | 48 | 55 | 39 | 41 | 17 | 25 | | 15 | | 26 |
| 12/29/2023 | 57 | 50 | 58 | 40 | 38 | 14 | 22 | 20 | | | 26 |
| 1/31/2024 | 60 | 52 | 61 | 41 | 38 | 14 | 22 | | 18 | | 28 |
| 2/29/2024 | 62 | 54 | 63 | 42 | 43 | 18 | 27 | | | 10 | 28 |
| 3/29/2024 | 64 | 56 | 65 | 43 | 40 | 15 | 24 | | 16 | | 28 |
| 4/30/2024 | 66 | 58 | 67 | 44 | 40 | 15 | 24 | 23 | | | 30 |
| 5/31/2024 | 67 | 59 | 68 | 45 | 44 | 19 | 28 | | 16 | | 29 |
| 6/28/2024 | 68 | 60 | 69 | 46 | 41 | 16 | 25 | 21 | | | 29 |
| 7/31/2024 | 69 | 61 | 70 | 47 | 41 | 16 | 25 | | 19 | | 31 |

**Source:** BofA Global Research, US Treasury

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**Exhibit 3: Expected change in auction sizes from August refunding quarter**

Expect another increase in auction sizes like August refunding, followed by moderating increases in February and May

| | 2y | 3y | 5y | 7y | 10y | 20y | 30y | 5y II | 10y II | 30y II | 2y FRN |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/30/2023 | 3 | 2 | 3 | 1 | 3 | 1 | 2 | - | | | 2 |
| 12/29/2023 | 6 | 4 | 6 | 2 | 3 | 1 | 2 | 1 | | | 2 |
| 1/31/2024 | 9 | 6 | 9 | 3 | 3 | 1 | 2 | | 1 | | 2 |
| 2/29/2024 | 11 | 8 | 11 | 4 | 5 | 2 | 4 | | | 1 | 4 |
| 3/29/2024 | 13 | 10 | 13 | 5 | 5 | 2 | 4 | | 1 | | 4 |
| 4/30/2024 | 15 | 12 | 15 | 6 | 5 | 2 | 4 | 1 | | | 4 |
| 5/31/2024 | 16 | 13 | 16 | 7 | 6 | 3 | 5 | | | | 5 |
| 6/28/2024 | 17 | 14 | 17 | 8 | 6 | 3 | 5 | 2 | | | 5 |
| 7/31/2024 | 18 | 15 | 18 | 9 | 6 | 3 | 5 | | 2 | | 5 |

**Source:** BofA Global Research, US Treasury

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**Exhibit 4: Financing estimates by fiscal year ($bn)**

Bills as a share of marketable debt will remain above 20% assuming deficit forecasts & coupon supply estimates are realized

| | 2024 | | 2025 | | 2026 | |
|---|---|---|---|---|---|---|
| | QT ends Jun '24 | QT ends in Jun '25 | QT ends Jun '24 | QT ends in Jun '25 | QT ends Jun '24 | QT ends in Jun '25 |
| 1 Baseline deficit | 1,800 | 1,800 | 1,900 | 1,900 | 2,000 | 2,000 |
| 2 Other adjustment | - | - | - | - | - | - |
| 3 Financing need (1 + 2) | 1,800 | 1,800 | 1,900 | 1,900 | 2,000 | 2,000 |
| 4 Change in cash balance | 133 | 133 | 50 | 50 | - | - |
| 5 Note: cash balance end period assumption | 790 | 790 | 840 | 840 | 890 | 890 |
| 6 **Marketable borrowing need (3 +4 )** | **1,933** | **1,933** | **1,950** | **1,950** | **2,000** | **2,000** |
| 7 Gross coupon auctioned | 4,227 | 4,227 | 4,553 | 4,553 | 4,553 | 4,553 |
| 8 Total coupon maturing | 3,085 | 3,085 | 3,035 | 3,035 | 3,377 | 3,377 |
| 9 Fed coupon rollover | 207 | 59 | 578 | 187 | 465 | 465 |
| 10 Public coupon maturing (8 - 9) | 2,878 | 3,026 | 2,456 | 2,847 | 2,912 | 2,912 |
| 11 Expected buybacks* | 80 | 80 | 120 | 120 | 120 | 120 |
| 12 **Net coupon supply (7 - 10 - 11)** | **1,269** | **1,121** | **1,977** | **1,586** | **1,521** | **1,521** |
| 13 Coupon runoff from Fed bal sheet | *472* | *620* | - | *391* | - | - |
| 14 *Net coupon supply to public (12 + 13)* | *1,741* | *1,741* | *1,977* | *1,977* | *1,521* | *1,521* |
| 15 **Net bill supply (6 - 12)** | **664** | **812** | **(27)** | **364** | **479** | **479** |
| 16 Bill runoff from Fed bal sheet | 68 | 100 | - | - | - | - |
| 17 *Net bill supply to public (15 +16)* | *732* | *912* | *(27)* | *364* | *479* | *479* |
| 18 **Net supply issued (12 + 15)** | **1,933** | **1,933** | **1,950** | **1,950** | **2,000** | **2,000** |
| 19 *Net supply to public (14 + 17)* | *2,473* | *2,653* | *1,950* | *2,341* | *2,000* | *2,000* |
| 20 Starting assumed coupons | 20,488 | 20,488 | 21,609 | 21,609 | 23,586 | 23,195 |
| 21 Starting assumed bills | 5,360 | 5,360 | 6,172 | 6,172 | 6,145 | 6,536 |
| 22 End assumed coupons (12 + 20) | 21,757 | 21,609 | 23,586 | 23,195 | 25,107 | 24,716 |
| 23 End assumed bills (15 + 21) | 6,024 | 6,172 | 6,145 | 6,536 | 6,624 | 7,015 |
| 26 **Bills as % of coupons + bills (23 / (22 + 23))** | **21.7%** | **22.2%** | **20.7%** | **22.0%** | **20.9%** | **22.1%** |

*Expect buybacks at a $10bn/ month pace (half <1y sector, half >1y sector) and start Feb 24

**Source:** BofA Global Research, US Treasury, Federal Reserve

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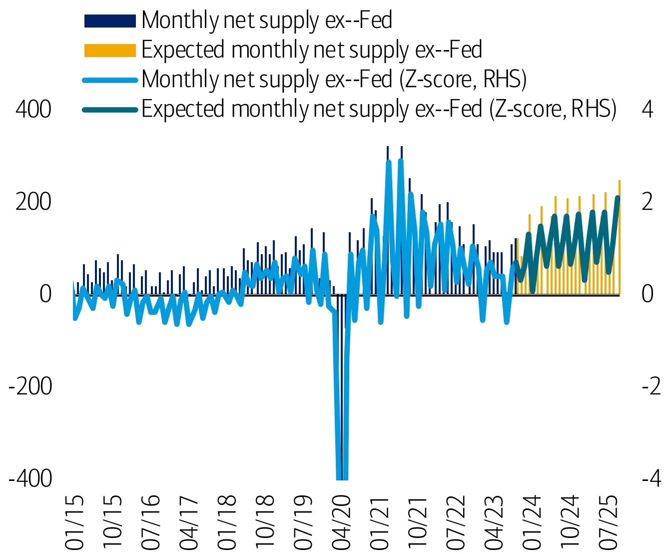
**Exhibit 5: Z-score of coupon supply ex-Fed**
Coupon supply ex-Fed expected to be historically elevated




**Source:** BofA Global Research, US Treasury, Federal Reserve, Note: >1y maturities only Z-score calculated over last 20y

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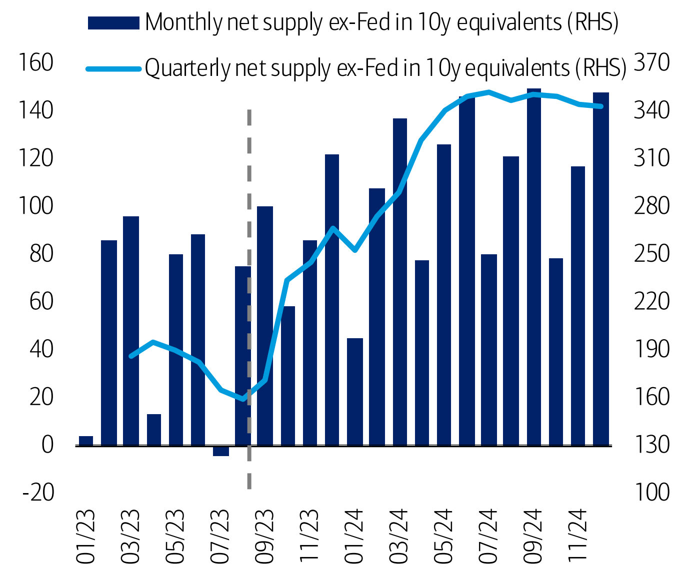
**Exhibit 6: 10y equivalent net supply ex Fed ($bn)**
Supply picks up meaningfully in next quarter




**Source:** BofA Global Research, US Treasury, Federal Reserve, Note: >1y maturities only

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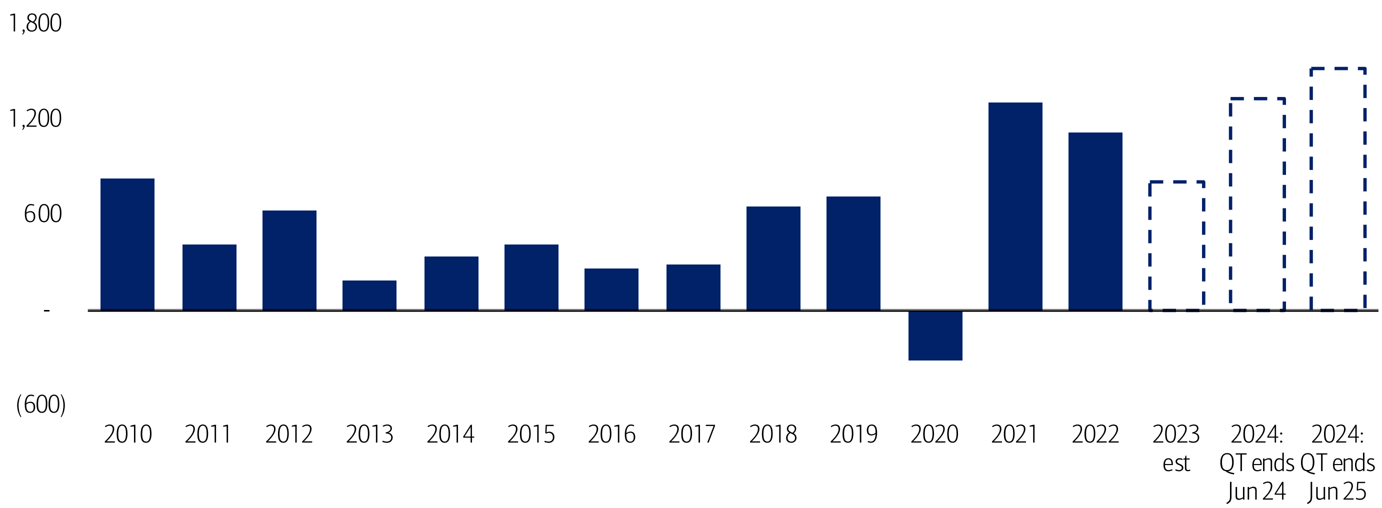
**Exhibit 7: Net coupon supply ex Fed purchases and including Fed QT impact by FY ($bn, 10y equivalent)**
Our forecasts suggest historically elevated supply in 2024




**Source:** BofA Global Research, US Treasury, Federal Reserve

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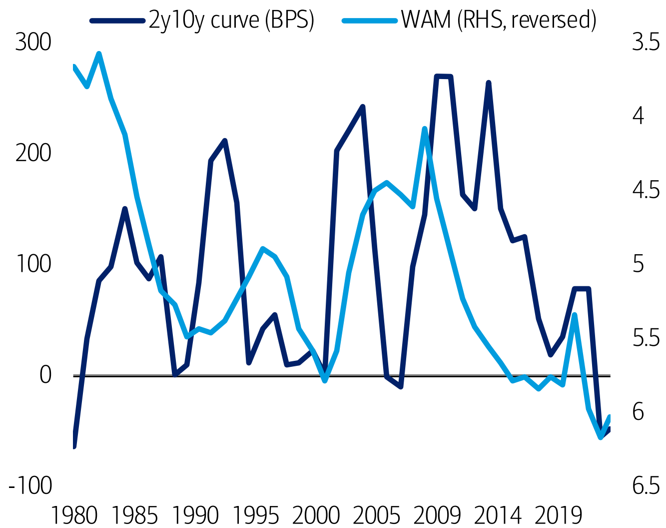
**Exhibit 8: Yield curve and UST WAM**

WAM typically higher when curve is flatter




**Source:** BofA Global Research, Bloomberg

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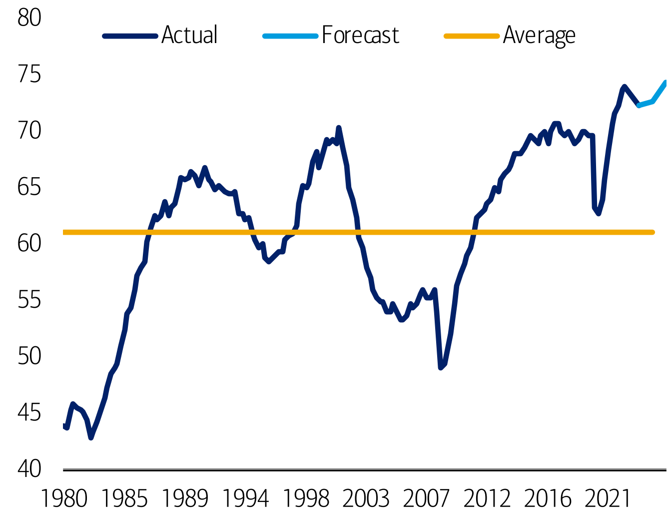
**Exhibit 9: Actual and expected weighted average maturity (WAM) through FY '25 (months)**

Expect WAM to remain relatively stable and elevated through FY 25




**Source:** BofA Global Research, US Treasury

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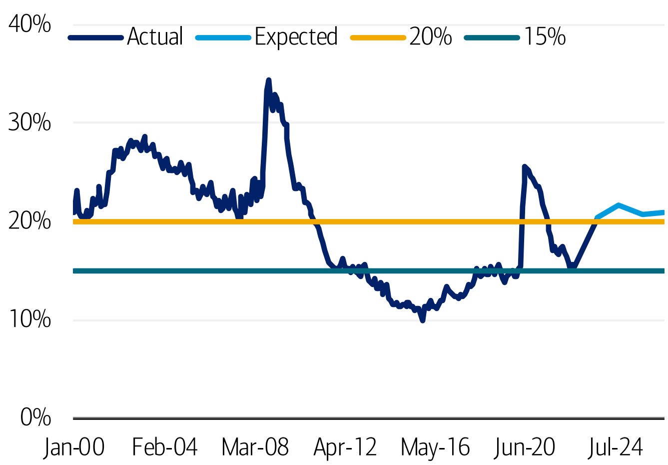
**Exhibit 10: Bills as a % of marketable debt**

Given our expectations for deficit and QT ending in June '24, bills as a share of marketable debt should remain elevated through FY 26




**Source:** BofA Global Research, US Treasury

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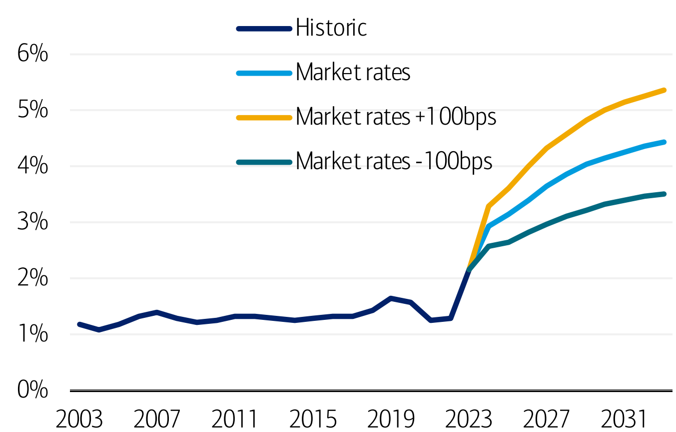
**Exhibit 11: Marketable coupon & bill financing cost as a share of GDP**

Interest rate costs on marketable debt to increase drastically as a share of GDP even if rates realize 100bps below forwards




**Source:** BofA Global Research, Haver, Bloomberg, Note: Calculations assume a constant paydown of coupons outstanding using stable WAM assumption and OIS forwards for market rates

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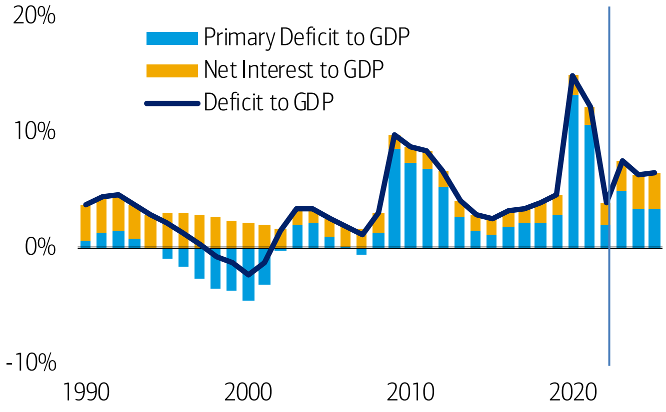
**Exhibit 12: Deficit-to-GDP (%)**
We expect net interest to comprise a larger share of the deficit-to-GDP ratio in coming years




**Source:** CBO, BofA Global Research

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**Exhibit 13: MMF bill holdings as a % of total bill supply (%)**
MMFs currently hold 27% of bills outstanding as of Sept 30 2023


**Source:** BofA Global Research, Crane Data

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**Exhibit 14: Bill and coupon issuance estimates by month**

We expect bills to the public to increase $732b in FY '24

| | Financing Need | TGA EOP | TGA Change | Marketable Borrowing | Buybacks | Net Coupon | Net Bills | Fed Coupon maturities | Fed Bill maturities | Net Coupons to the Public | Net Bills to the Public |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | | 2 | 3 = 1 +2 | 4 | 5 | 6 | 7 | 8 | 9 = 5 + 7 | 10 = 6 + 8 |
| Jan-23 | 71 | 568 | 121 | 192 | 0 | -49 | 241 | 55 | 5 | 6 | 246 |
| Feb-23 | 314 | 415 | -153 | 161 | 0 | 42 | 119 | 60 | 0 | 102 | 119 |
| Mar-23 | 322 | 178 | -237 | 85 | 0 | 74 | 11 | 56 | 4 | 130 | 15 |
| Apr-23 | -305 | 316 | 138 | -167 | 0 | -41 | -126 | 60 | 0 | 19 | -126 |
| May-23 | 361 | 49 | -267 | 94 | 0 | 43 | 51 | 60 | 0 | 103 | 51 |
| Jun-23 | 197 | 402 | 353 | 550 | 0 | 77 | 473 | 48 | 12 | 125 | 485 |
| Jul-23 | 148 | 502 | 100 | 248 | 0 | -56 | 304 | 50 | 10 | -6 | 314 |
| Aug-23 | 294 | 542 | 40 | 334 | 0 | 30 | 304 | 60 | 0 | 90 | 304 |
| Sep-23 | 169 | 657 | 115 | 284 | 0 | 98 | 186 | 39 | 21 | 137 | 207 |
| Oct-23 | 180 | 650 | -7 | 173 | 0 | 33 | 140 | 52 | 8 | 85 | 148 |
| Nov-23 | 318 | 700 | 50 | 368 | 0 | 52 | 316 | 60 | 0 | 112 | 316 |
| Dec-23 | 46 | 750 | 50 | 96 | 0 | 130 | -34 | 46 | 14 | 176 | -20 |
| Jan-24 | -71 | 754 | 4 | -67 | 0 | 10 | -77 | 53 | 7 | 63 | -70 |
| Feb-24 | 391 | 758 | 4 | 395 | 10 | 74 | 321 | 60 | 0 | 134 | 321 |
| Mar-24 | 392 | 760 | 2 | 394 | 10 | 148 | 247 | 45 | 15 | 192 | 262 |
| Apr-24 | -272 | 764 | 4 | -268 | 10 | 55 | -323 | 60 | 0 | 115 | -323 |
| May-24 | 283 | 768 | 4 | 287 | 10 | 110 | 177 | 60 | 0 | 170 | 177 |
| Jun-24 | 67 | 775 | 7 | 74 | 10 | 177 | -103 | 36 | 24 | 213 | -79 |
| Jul-24 | 267 | 779 | 4 | 271 | 10 | 114 | 157 | 0 | 0 | 114 | 157 |
| Aug-24 | 267 | 783 | 4 | 271 | 10 | 156 | 115 | 0 | 0 | 156 | 115 |
| Sep-24 | -68 | 790 | 7 | -61 | 10 | 212 | -272 | 0 | 0 | 212 | -272 |
| Oct-24 | 257 | 794 | 4 | 261 | 10 | 115 | 145 | 0 | 0 | 115 | 145 |
| Nov-24 | 330 | 798 | 4 | 334 | 10 | 159 | 175 | 0 | 0 | 159 | 175 |
| Dec-24 | 42 | 800 | 2 | 44 | 10 | 217 | -172 | 0 | 0 | 217 | -172 |

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