Treasury Presentation to TBAC

Office of Debt Management

Fiscal Year 2025 Q3 Report

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*All sources are from Treasury unless otherwise specified

Section I:
Executive Summary

Highlights of Treasury's August 2025 Quarterly Refunding Presentation to the Treasury Borrowing Advisory Committee (TBAC)

*Receipts and Outlays through Q3 FY2025**

	$ billion	Change from same period last year ($ billion)	Change from same period last year (%)	As % of GDP	Change from same period last year (% GDP)
Total Receipts thru Q3 FY2025	$4,008	+$254	7%	17.7%	0.3%
Total Outlays thru Q3 FY2025	$5,346	+$318	6%	23.6%	0.3%

*After excluding the impact of the FY2023 and FY2024 tax deferrals, the growth in FYTD 2025 receipts would have been $339 billion or 9% higher. Also, adjusting outlays to account for calendar impacts, the growth in outlays would have been $246 billion or only 5%.

Treasury's Projected Privately-held Net Marketable Borrowing for the Current and Next Fiscal Quarters

Treasury OFP Near Term Fiscal Projections	Privately-Held Net Marketable Borrowing ($ billion)	Assumed End-of-Quarter Cash Balance ($ billion)
Q4 FY2025	$1,007	$850 (Sep)
Q1 FY2026	$590	$850 (Dec)

*Projected Privately-held Net Marketable Borrowing for the Next Three Fiscal Years from Various Sources***

Fiscal Year	Primary Dealers, Median, July 2025 ($ billion)	OMB Estimates, July 2024 ($ billion)	CBO Estimates, July 2025 ($ billion)
2025	$2,065	$2,081	$2,027
2026	$2,135	$1,710	$2,246
2027	$2,132	$1,648	$2,319

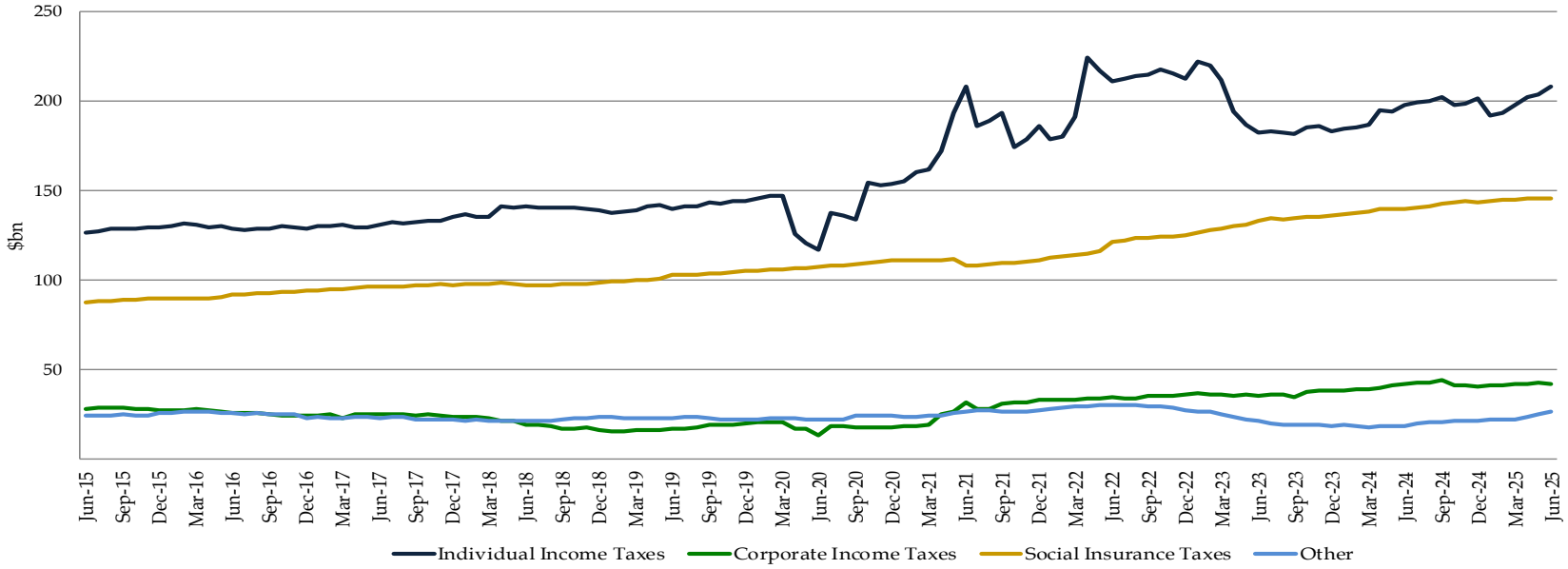
**All privately-held net marketable borrowing estimates are "normalized" with details from page 18. CBO estimates have been adjusted to account for the effects of the One Big Beautiful Bill, but not other factors such as tariffs revenue. Uncertainty regarding future funding needs remains relatively high, reflecting a variety of views on the path of monetary policy, the duration of SOMA redemptions, and the outlook for the economy.

Latest Market Expectations for Treasury Financing in July 2025

- Primary dealers expected no changes to nominal coupon or FRN issuance sizes at the August refunding.
- Regarding TIPS, nearly all dealers expect no change in the auction size for the August 30-year reopening, but expect a $1 billion increase in auction size for both the September 10-year reopening and October 5-year original issue.

Section II:
Recent Fiscal Results
Receipts, Outlays, and Deficits

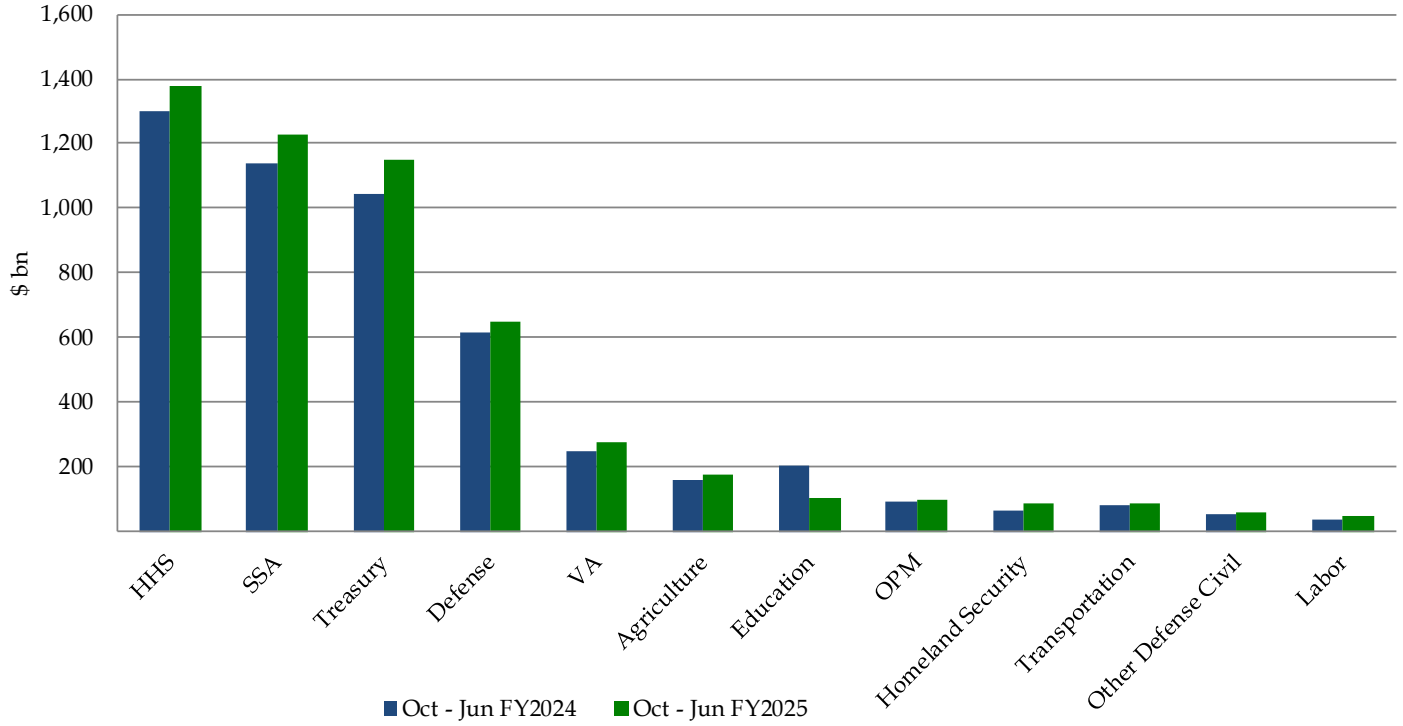
Monthly Receipt Levels
(12-Month Moving Average)



Notable Receipt Category	YoY change thru Q3 FY25 ($ billion)	YoY change thru Q3 FY25 (%)	Comments
Withheld & FICA Taxes	+$158	+6%	Increased due to wage and employment growth.
Non-withheld and SECA Taxes	+$69	+8%	Mainly due to IRS extension of several major deadlines for some taxpayers, including those in California, from FY2023 into FY2024. YoY change thru Q3 FY2025 would have been even larger had it not been for IRS extension of several major deadlines for some taxpayers, including those in California, from FY2023 into FY2024.
Customs Deposits	+$52	+86%	Mainly due to several already enacted tariffs.
Gross Corporate Taxes	-$30	-7%	Mainly due to deferred taxes from FY 2023 to FY 2024.
Individual Refunds (negative receipt)	+$19	+7%	Mainly due to increased Employee Retention Credit processing this fiscal year, some of which is categorized as individual refunds.

Individual Income Taxes include withheld and non-withheld. Social Insurance Taxes include FICA, SECA, RRTA, UTF deposits, FUTA and RUIA. Other includes excise taxes, estate and gift taxes, customs duties and miscellaneous receipts.

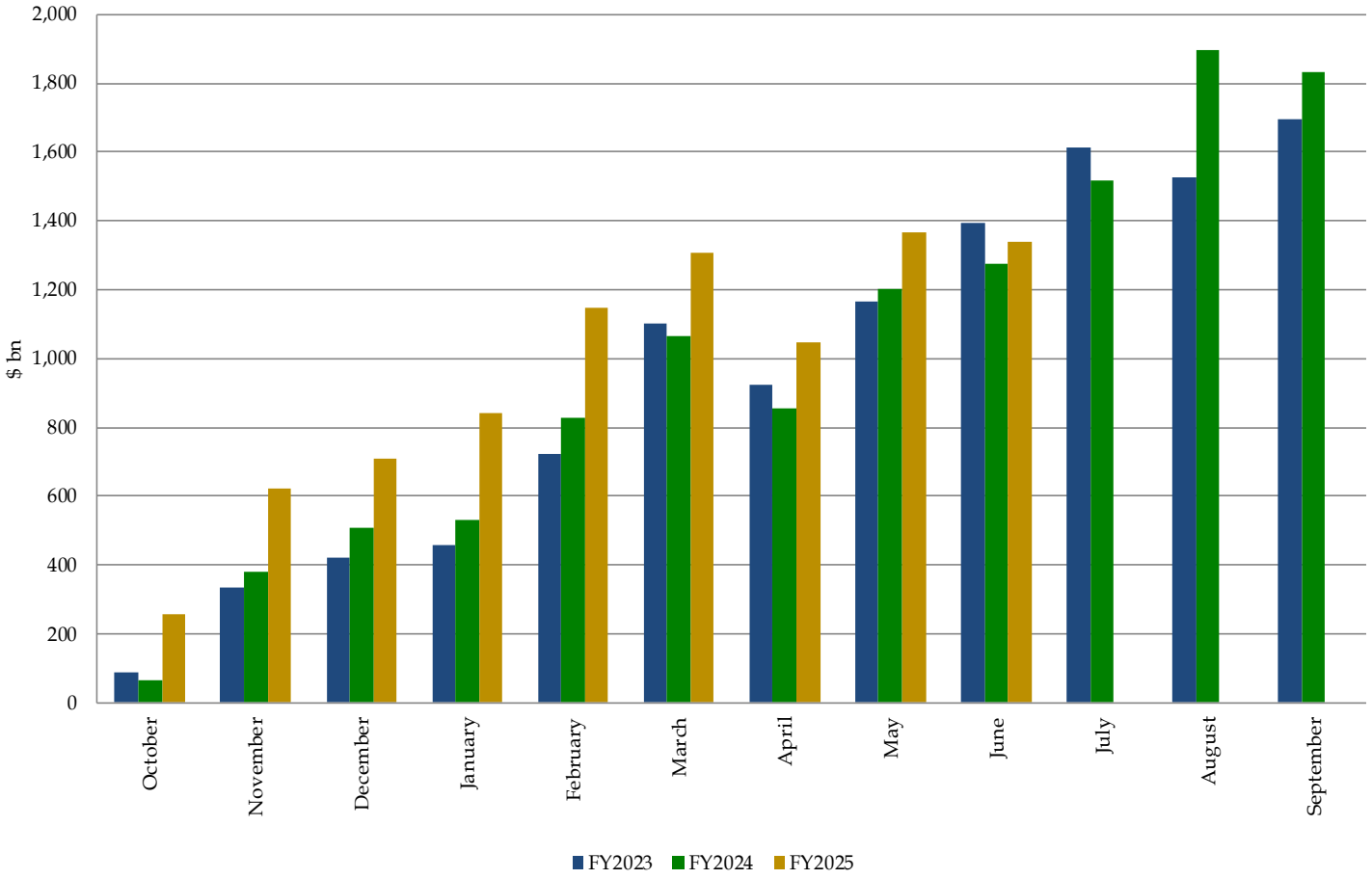
Largest Outlays



Notable Outlay Category	YoY change thru Q3 FY25 ($ billion)	YoY change thru Q3 FY25 (%)	Comments
Department of Treasury	+$105	+10%	Primarily due to increase in gross interest on the public debt, higher Affordable Care Act & Refundable Premium Tax Credits, Earned Income Tax Credit and Child Tax Credit, etc.
Health and Human Services (calendar adjusted)	+$73	+6%	Primarily due to increase in Medicare and Medicaid spending.
Social Security Administration (calendar adjusted)	+$93	+8%	Due to implementation of the Social Security Fairness Act, increases from cost-of-living adjustments (COLA) and increased number of beneficiaries.
Department of Defense (calendar adjusted)	+$35	+6%	Due to higher outlays for operation, maintenance, procurement, research, development, test, and evaluation.
Department of Veterans Affairs (calendar adjusted)	+$30	+12%	Due to increased spending per person and veterans' increased use of health care facilities. The Promise to Address Comprehensive Toxics Act of 2022 (PACT Act) and the Fiscal Responsibility Act of 2023 are contributing to the increase in outlays.
Department of Education	-$102	-50%	Decrease mainly from the Office of Federal Student Aid. There was a large subsidy adjustment booked in June 2024 that did not occur in June 2025. The decrease is also due to lower Elementary & Secondary Education outlays.

Outlays in the chart above are on a calendar adjusted basis

Cumulative Budget Deficits by Fiscal Year



Section III:
Various Fiscal Forecasts

Primary Dealers, OMB, CBO

Recent Economic Forecasts

Primary Dealer Median Estimates July 2025

	CY2025	CY2026	CY2027
	% Change from Q4 to Q4		
GDP			
Real	1.0	1.8	2.0
Nominal	4.0	4.3	4.2
Inflation			
CPI Headline	3.1	2.5	2.5
CPI Core	3.3	2.6	2.4
	Fourth Quarter Levels		
Unemployment Rate (%)	4.5	4.4	4.2
	FY2025	**FY2026**	**FY2027**
Deficits ($bil)	$1,848	$2,000	$2,098

CBO Estimates July 2025

	CY2025	CY2026	CY2027
	% Change from Q4 to Q4		
GDP			
Real	1.9	1.8	1.8
Nominal	4.1	3.9	3.8
Inflation			
CPI Headline	2.3	2.4	2.3
	Fourth Quarter Levels		
Unemployment Rate (%)	4.3	4.4	4.4
	FY2025	**FY2026**	**FY2027**
Deficits ($bil)	$1,844	$2,200	$2,289

OMB Estimates July 2024

	CY2025	CY2026	CY2027
	% Change from Q4 to Q4		
GDP			
Real	2.1	2.0	2.0
Nominal	4.4	4.1	4.1
Inflation			
CPI Headline	2.3	2.3	2.1
	Fourth Quarter Levels		
Unemployment Rate (%)	3.8	3.8	3.8
	FY2025	**FY2026**	**FY2027**
Deficits ($bil)	$1,878	$1,601	$1,535

Note: OMB's Economic assumptions are from "Mid-Session Review Budget of The U.S. Government, Fiscal Year 2025," July 2024. Their forecast is based on information available as of May 28, 2024. CBO's economic assumptions are from "The Budget and Economic Outlook: 2025 to 2035," January 2025. They reflect developments in the economy as of December 4, 2024. CBO deficit projections are from "Estimated Budgetary Effects of Public Law 119-21, to Provide for Reconciliation Pursuant to Title II of H. Con. Res. 14, Relative to CBO's January 2025 Baseline", July 2025.

Recent Deficit Forecasts

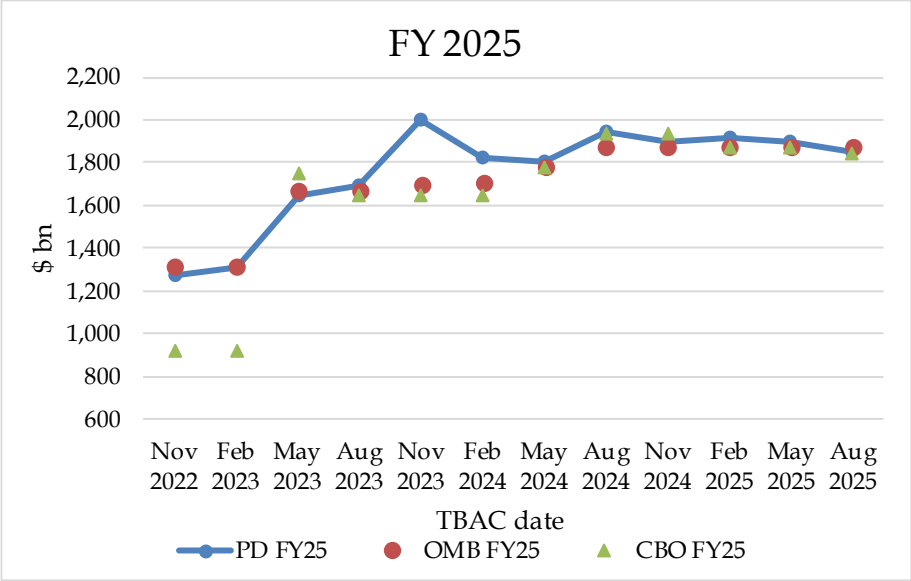
Primary dealers' median deficit estimates in July 2025 were virtually unchanged relative to estimates they provided in April 2025, declining by $14 billion in aggregate over the FY25-FY27 period.

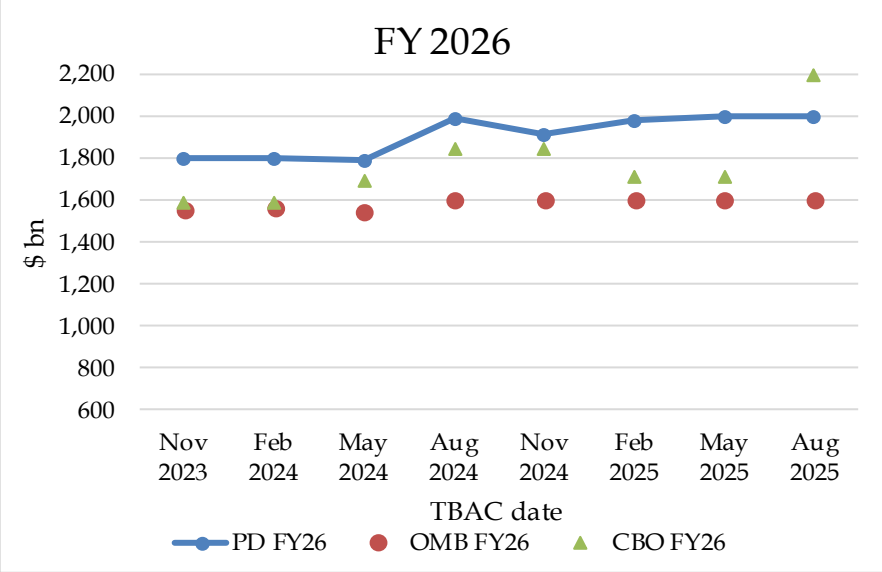
- The latest OMB and CBO estimates in the table below are provided for reference.

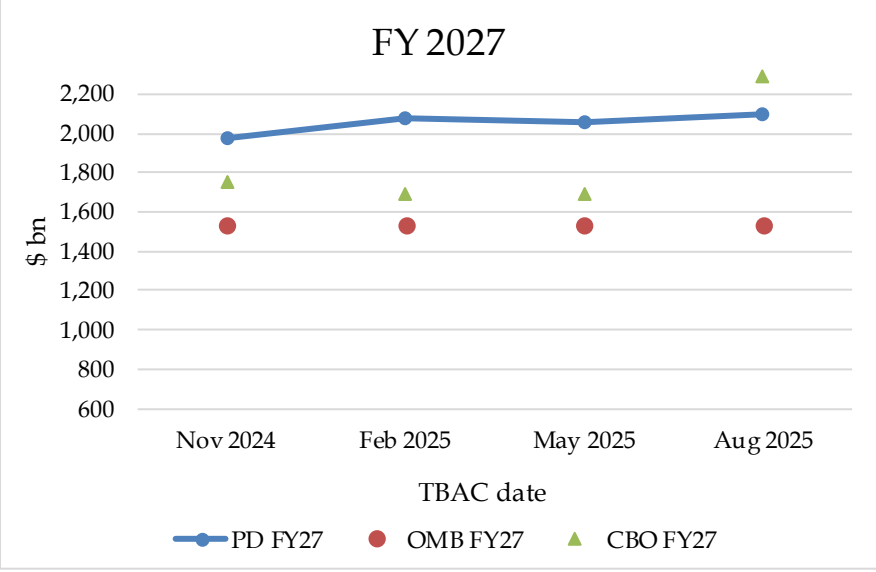
Deficit Estimates ($ billion)	PD 25th Percentile	Primary Dealers (Median)	PD 75th Percentile	Change from Prior Quarter (Median)	OMB	CBO
FY 2025	1,800	1,848	1,900	-52	1,878	1,844
FY 2026	1,940	2,000	2,125	0	1,601	2,200
FY 2027	2,043	2,098	2,108	38	1,535	2,289
As of date	Jul-25	Jul-25	Jul-25		Jul-24	Jul-25

- OMB projections are using estimates from Table S-3 of "Mid-Session Review Budget of The U.S. Government, Fiscal Year 2025," July 2024.
- CBO projections are from "Estimated Budgetary Effects of Public Law 119-21, to Provide for Reconciliation Pursuant to Title II of H. Con. Res. 14, Relative to CBO's January 2025 Baseline", July 2025.

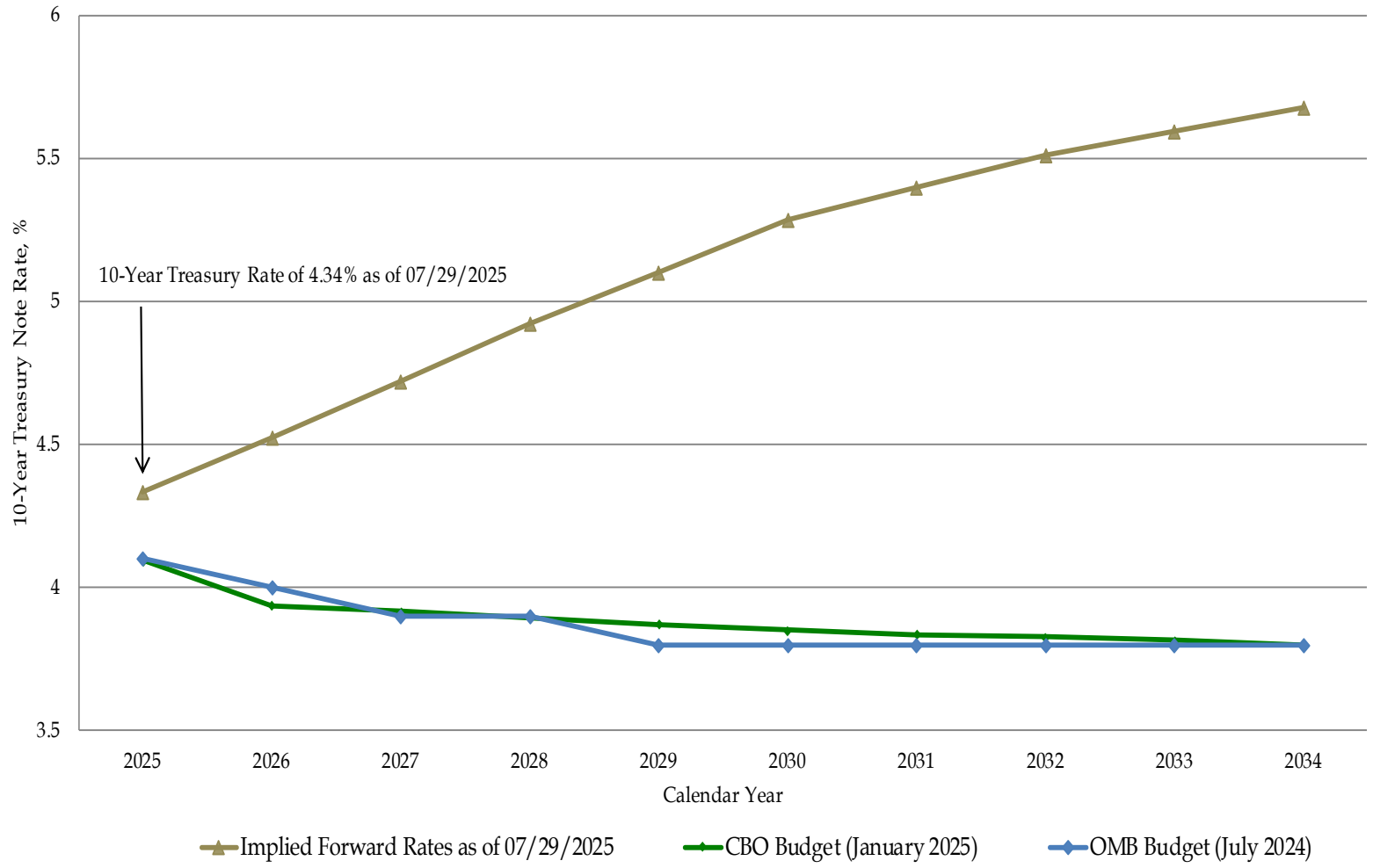
Evolution of Median Primary Dealer, OMB, and CBO Deficit Estimates







Interest Rate Assumptions: 10-Year Treasury Note

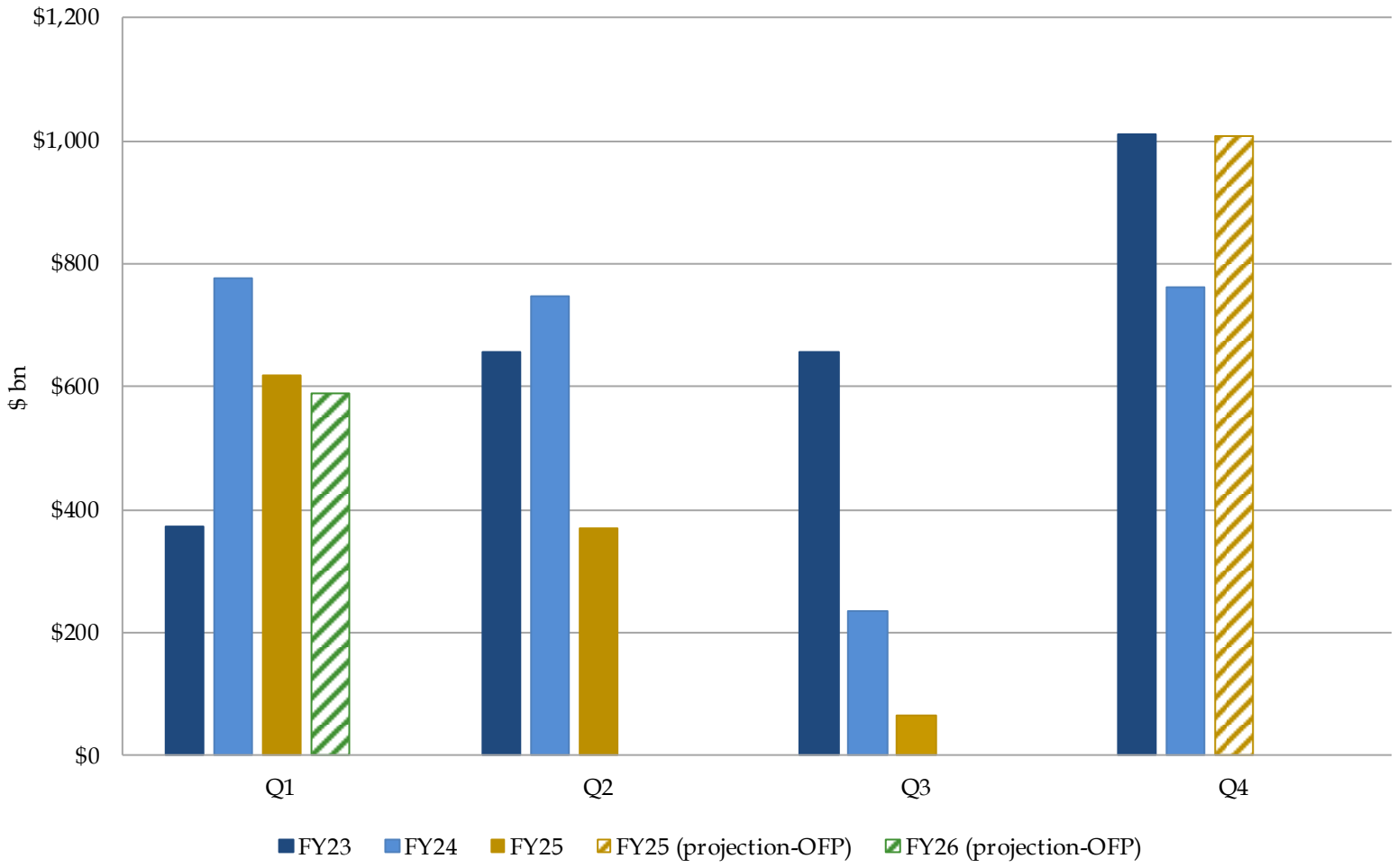


Section IV:
Estimated Borrowing Needs and Financing Implications

Assumptions for Financing Section (pages 16 to 20)

- Portfolio and SOMA holdings as of 06/30/2025, unless otherwise noted (see slide 20).
- Estimates assume privately announced issuance sizes and patterns remain constant for nominal coupons, TIPS, and FRNs given the issuance sizes in effect in July 2025, while using total bills outstanding of ~$5.78 trillion as of 06/30/2025, unless otherwise noted (see slide 20).
- The principal on the TIPS securities was accreted to each projection date based on market ZCIS levels as of 06/30/2025, unless otherwise noted (see slide 20).
- No attempt was made to account for future financing needs.
- **Privately-held marketable borrowing** excludes rollovers (auction "add-ons") of Treasury securities held in the Federal Reserve System Open Market Account (SOMA) but includes financing required due to SOMA redemptions. Secondary market purchases of Treasury securities by SOMA do not directly change privately-held net marketable borrowing but, all else equal, when the securities mature and assuming the Fed does not redeem any maturing securities, this would increase the amount of cash raised for a given privately-held auction size by increasing the SOMA "add-on" amount. These borrowing estimates are based upon current law and do not include any assumptions for the impact of additional legislation that may be passed. Additionally, buybacks are not expected to significantly affect privately-held net marketable borrowing as new issuance replaces securities that are bought back.

Privately-Held Net Marketable Borrowing Outlook



Implied Bill Funding for the Current and Next Quarters Based on Recent Borrowing Estimates

Sources of Privately-Held Financing in FY25 Q4

July - September 2025	
Assuming Constant Coupon Issuance Sizes[1]	
Treasury Announced Net Marketable Borrowing[2]	1,007
Net Coupon Issuance	470
Implied Change in Bills[3]	537

Sources of Privately-Held Financing in FY26 Q1

October - December 2025	
Assuming Constant Coupon Issuance Sizes[1]	
Treasury Announced Net Marketable Borrowing[2]	590
Net Coupon Issuance	447
Implied Change in Bills[3]	143

	July - September 2025 Coupon Issuance			Fiscal Year-to-Date Coupon Issuance				October - December 2025 Coupon Issuance			Fiscal Year-to-Date Coupon Issuance		
Security	Gross	Maturing	Net	Gross	Maturing	Net	Security	Gross	Maturing	Net	Gross	Maturing	Net
2-Year FRN	86	72	14	344	276	68	2-Year FRN	86	78	8	86	78	8
2-Year	207	126	81	828	503	325	2-Year	207	151	56	207	151	56
3-Year	174	121	53	696	570	126	3-Year	174	120	54	174	120	54
5-Year	210	137	73	840	458	382	5-Year	210	154	56	210	154	56
7-Year	132	65	67	528	267	261	7-Year	132	60	72	132	60	72
10-Year	120	49	71	480	212	268	10-Year	120	58	62	120	58	62
20-Year	42	0	42	168	0	168	20-Year	42	0	42	42	0	42
30-Year	69	3	66	276	10	266	30-Year	69	0	69	69	0	69
5-Year TIPS	0	0	0	94	71	23	5-Year TIPS	48	40	8	48	40	8
10-Year TIPS	40	45	(5)	113	85	28	10-Year TIPS	19	0	19	19	0	19
20-Year TIPS[4]	0	0	0	0	27	(27)	20-Year TIPS[4]	0	0	0	0	0	0
30-Year TIPS	8	0	8	17	0	17	30-Year TIPS	0	0	0	0	0	0
Coupon Subtotal	1,088	618	470	4,384	2,479	1,904	Coupon Subtotal	1,107	660	447	1,107	660	447

[1] Keeping announced issuance sizes and patterns constant for nominal coupons, TIPS, and FRNs.
[2] Assumes end-of-September 2025 and end-of-December 2025 cash balances of $850 billion and $850 billion, respectively, versus end-of-June 2025 cash balance of $457 billion. Financing Estimates released by the Treasury can be found here: http://www.treasury.gov/resource-center/data-chart-center/quarterly-refunding/Pages/Latest.aspx
[3] Implied change in bills doesn't incorporate the effects of any buyback operations conducted during the specified periods.
[4] Treasury is currently not issuing 20-year TIPS.

Longer-Term Privately-Held Net Marketable Borrowing Estimates and SOMA Redemption Assumptions

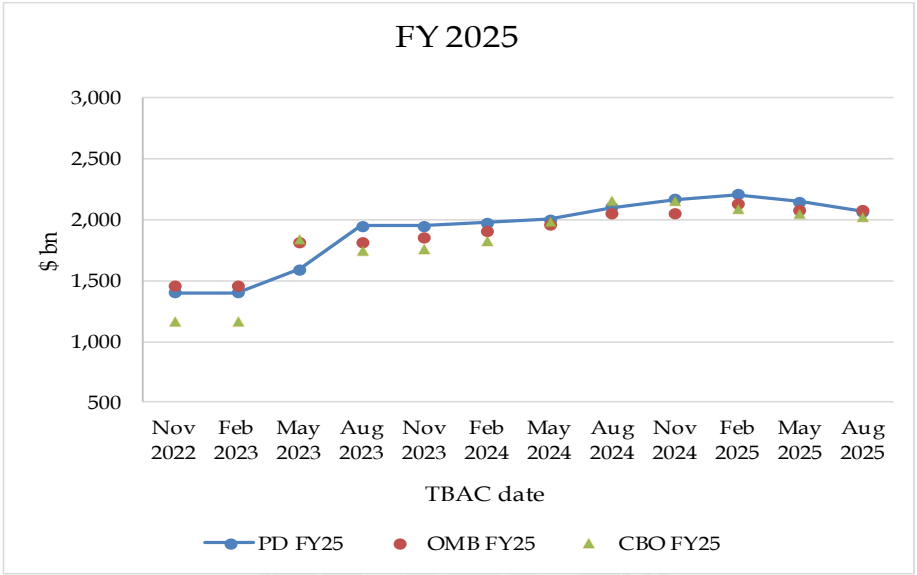
FY 2025-2027 Deficits and Privately-Held Net Marketable Borrowing Estimates, in $ billions

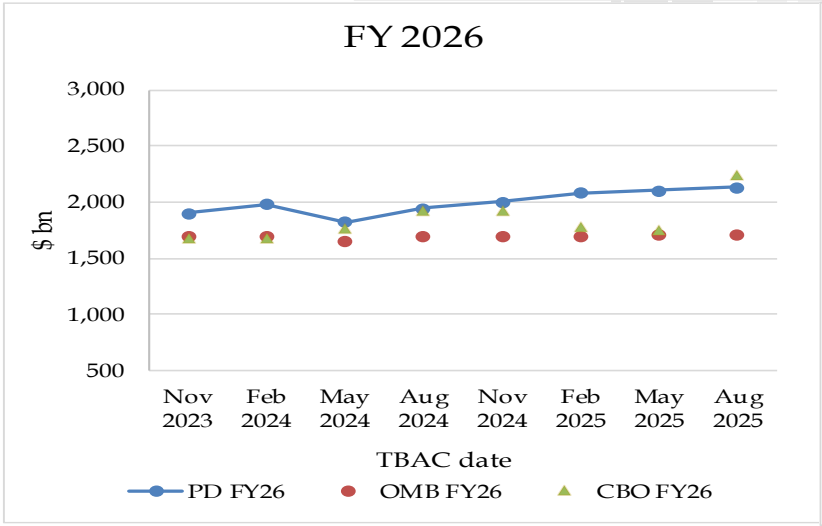
	Primary Dealer			OFP	OMB	CBO
	25th	Median	75th			
FY 2025 Deficit	1,800	1,848	1,900		1,878	1,844
FY 2026 Deficit	1,940	2,000	2,125		1,601	2,200
FY 2027 Deficit	2,043	2,098	2,108		1,535	2,289
FY 2025 SOMA Redemption	180	180	180	180		
FY 2026 SOMA Redemption	5	15	40			
FY 2027 SOMA Redemption	0	0	0			
FY 2025 Privately-Held Net Marketable Borrowing*	1,992	2,065	2,150	2,061	2,081	2,027
FY 2026 Privately-Held Net Marketable Borrowing*	2,000	2,135	2,200		1,710	2,246
FY 2027 Privately-Held Net Marketable Borrowing*	2,030	2,132	2,200		1,648	2,319
Estimates as of:		Jul-25		Jul-25	Jul-24	Jul-25

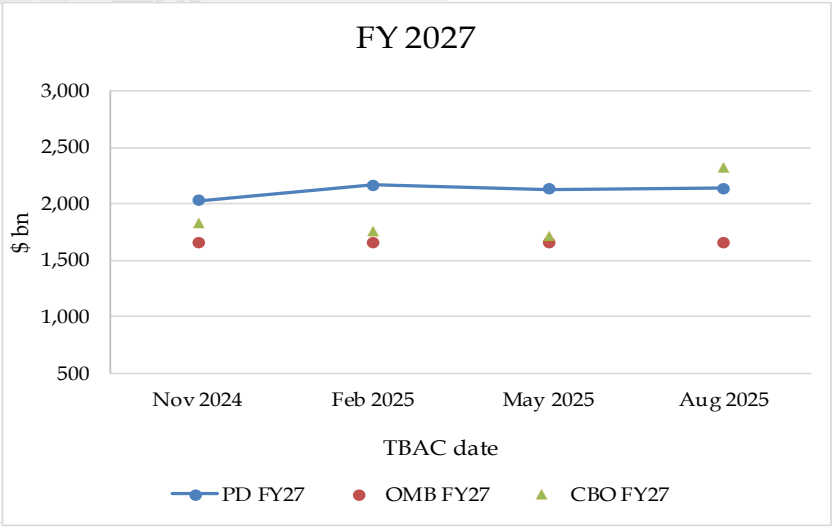
* All privately-held net marketable borrowing estimates are "normalized" using:
1) the median Primary Dealer's estimates for SOMA redemptions, and
2) assumed Fiscal Year 2025 cash balance of $850 billion, held constant in out years.

- OMB projections are using estimates are from Table S-3 of "Mid-Session Review Budget of The U.S. Government, Fiscal Year 2025," July 2024.
- CBO deficit projections are from "Estimated Budgetary Effects of Public Law 119-21, to Provide for Reconciliation Pursuant to Title II of H. Con. Res. 14, Relative to CBO's January 2025 Baseline", July 2025. CBO's total borrowing projections are derived by applying the same changes from deficit to the CBO's January 2025 total borrowing estimates.

Evolution of Median Primary Dealer, OMB, and CBO Privately-Held Net Marketable Borrowing Estimates*

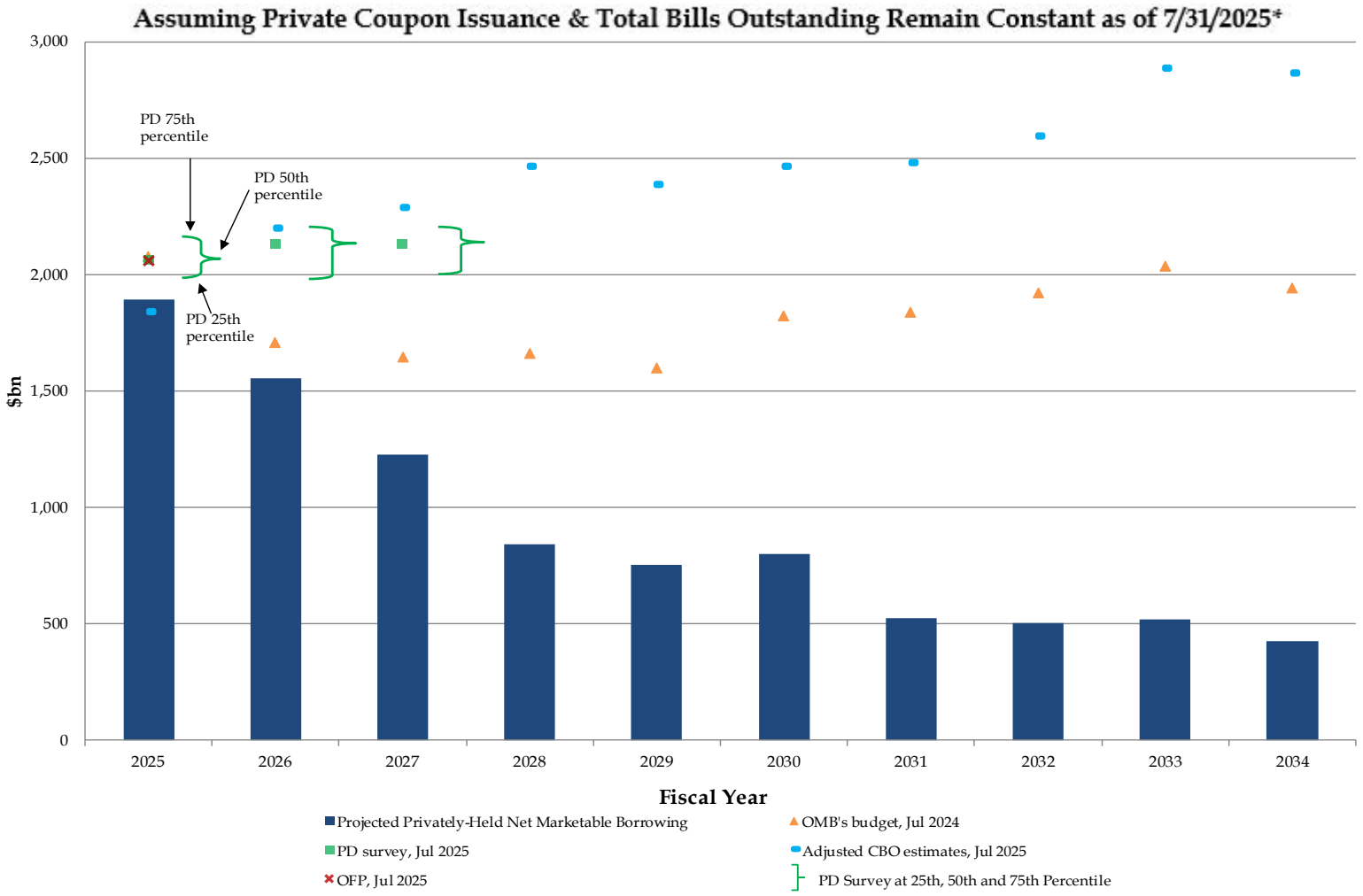






* Note that both the OMB and CBO privately-held net marketable borrowing estimates are calculated by adjusting their respective deficit estimates using dealer's median SOMA redemption estimates. In addition, all the PD, OMB and CBO privately-held marketable borrowing estimates are normalized with the same cash balance changes. See slide 18 for details.

Projected Privately-Held Net Marketable Borrowing



*Treasury's latest primary dealer survey median/interquartile range estimates can be found on page 18. OMB projections are using estimates from Table S-3 of "Mid-Session Review Budget of The U.S. Government, Fiscal Year 2025," July 2024. CBO borrowing estimates are derived by adjusting its January 2025 total borrowing estimates with the same changes in deficit sourced from "Estimated Budgetary Effects of Public Law 119-21, to Provide for Reconciliation Pursuant to Title II of H. Con. Res. 14, Relative to CBO's January 2025 Baseline", July 2025. OMB and CBO borrowing estimates from FY25 to FY27 are normalized to privately-held net marketable borrowing after adding PD survey median SOMA redemption assumptions for FY25/26/27. In addition, all privately-held net marketable borrowing estimates are normalized with a cash balance assumption of $850 billion.

Section V:
Select Portfolio Metrics

Note: Several of the portfolio metric charts that follow include three years of projections.

These projections are hypothetical and <u>are meant for illustrative purposes only</u>. The projections contained in these charts <u>should not</u> be interpreted as representing any future policy decisions regarding Treasury financing.

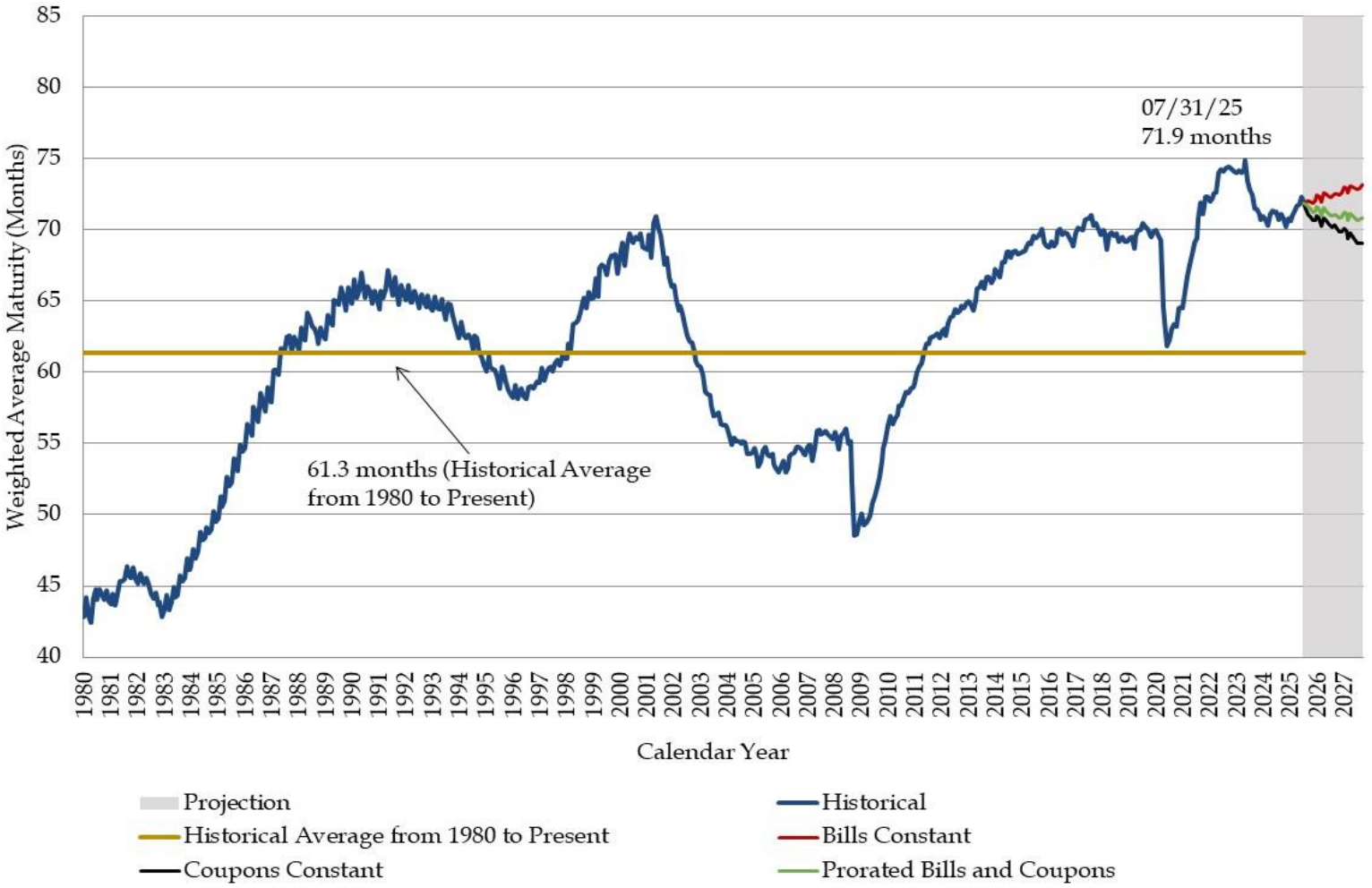
Projections illustrate how various portfolio metrics could evolve under three hypothetical financing scenarios. The scenarios were chosen to illustrate a potential range of portfolio metric outcomes based on hypothetical issuance choices.

The scenarios are:

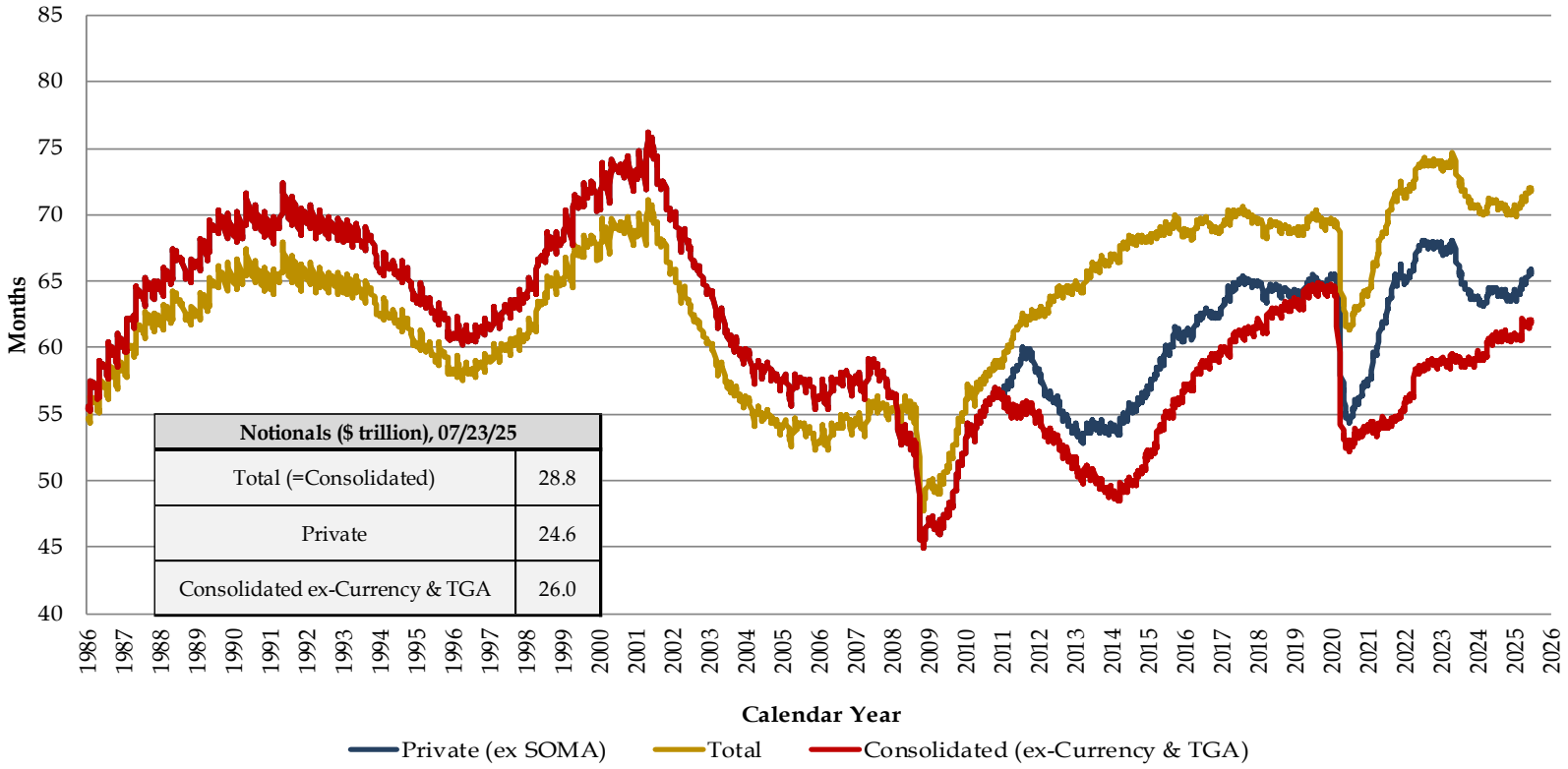
1) ***"Coupons Constant":*** Treasury maintains **coupon, FRN, and TIPS auction sizes constant** as of July 2025 and addresses any changes in financing needs by only increasing or decreasing T-bill auction sizes;
2) ***"Bills Constant":*** Treasury maintains **T-bills aggregate supply constant** at $6.0 trillion as of 7/31/2025 and increases or decreases coupon, FRN, and TIPS auction sizes in response to financing needs in a manner that maintains current issuance proportions going forward;
3) ***"Prorated Bills and Coupons":*** Treasury maintains **T-bills share constant** at 20.7% as of 7/31/2025 and addresses any changes in financing needs by pro rata increasing or decreasing coupon, FRN, and TIPS auction sizes.

Privately-held net marketable borrowing needs used in the projections section of these charts are proxied using median primary dealer estimates for FY25, FY26 & FY27 (see page 18).

Weighted Average Maturity of Marketable Debt Outstanding



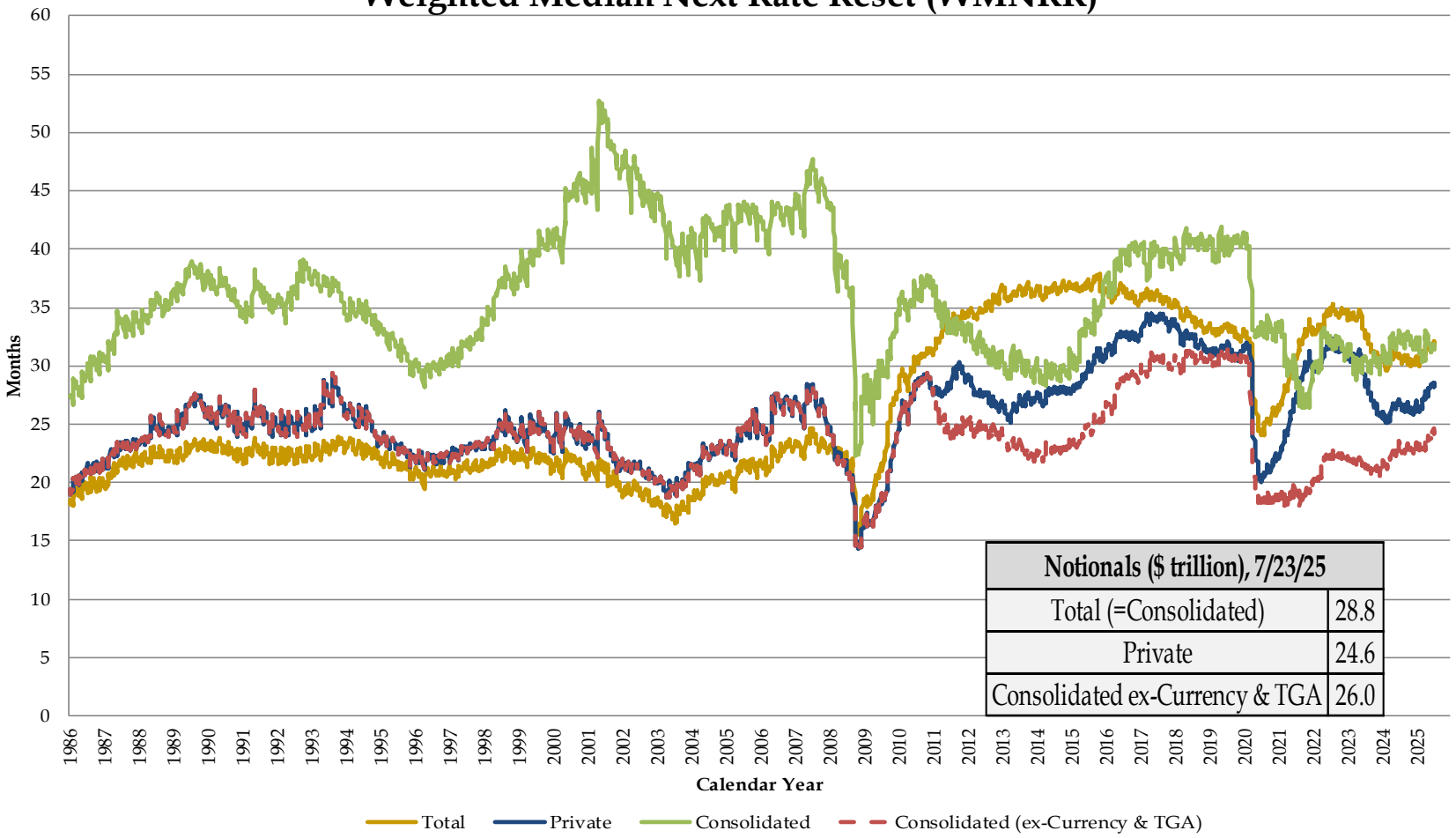
Consolidated **WANRR** Calculation*



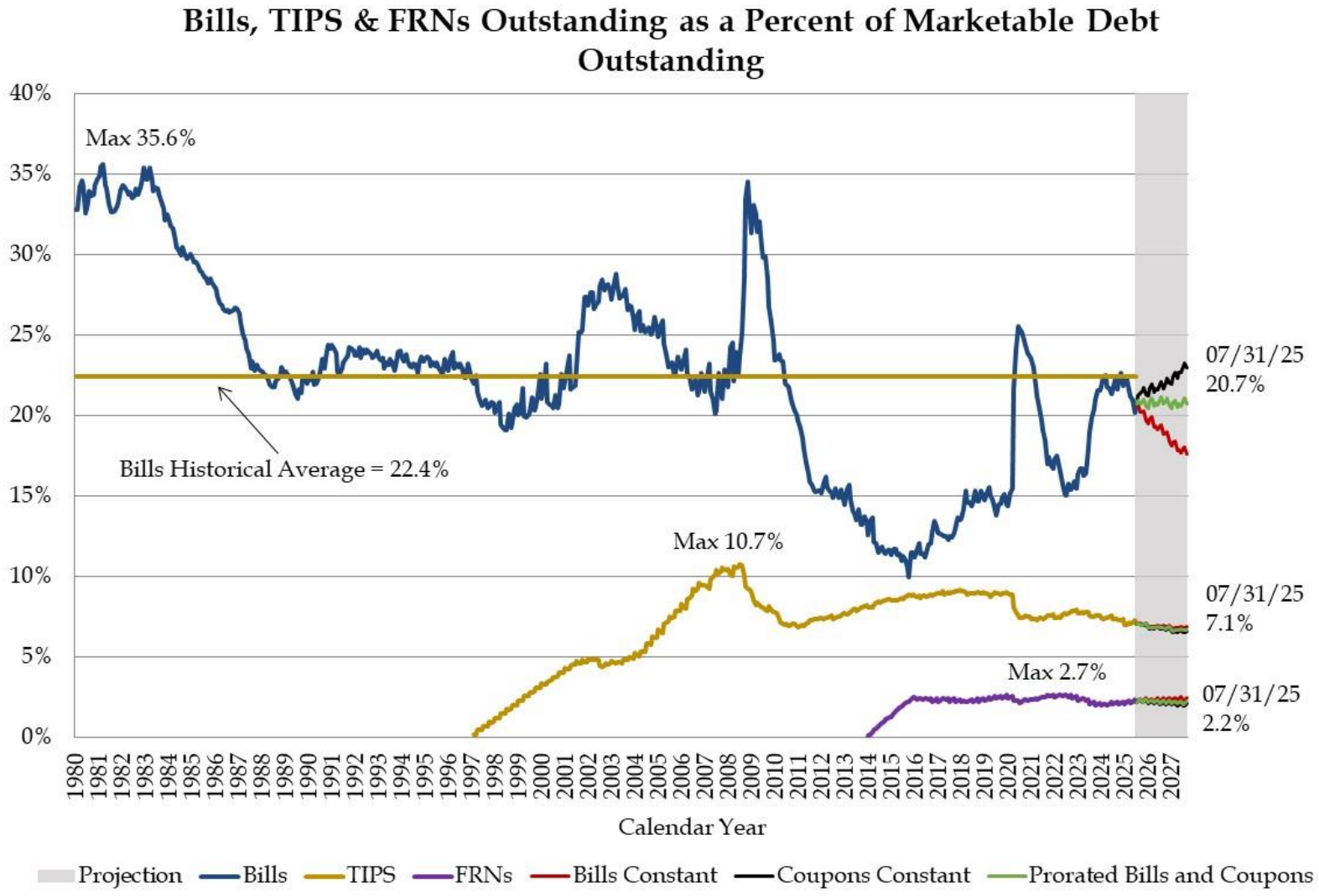
Notionals ($ trillion), 07/23/25	
Total (=Consolidated)	28.8
Private	24.6
Consolidated ex-Currency & TGA	26.0

* Weighted Average Next Rate Reset (WANRR) is a "Weighted Average Maturity" metric that attempts to adjust for the floating rate aspect of some Treasury debt. The WANRR is the average time until the outstanding debt's interest rate is set to a new interest rate. For bills and fixed rate notes and bonds, the next rate reset is equal to the maturity date.
In contrast, for floating rate obligations, the time between the next rate reset date or maturity date is examined and the shorter period is used in the calculation.
The consolidated outstanding debt is defined as the private amount plus SOMA Treasury securities holdings less currency in circulation and the size of the Treasury General Account (TGA). In this calculation, SOMA Treasury holdings greater than the sum of the level of currency in circulation and the size of the TGA is treated as if it has a daily rate reset.

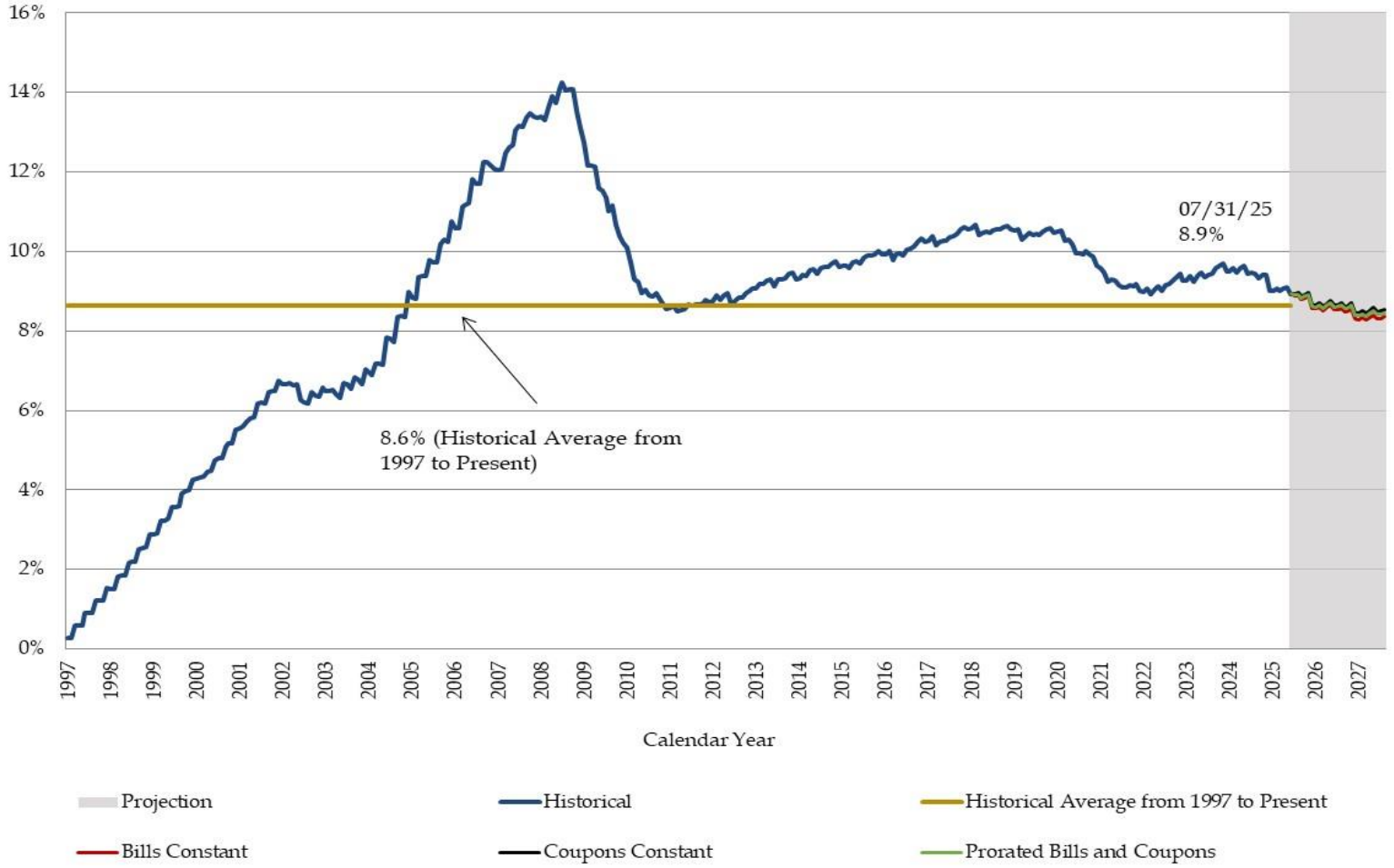
Weighted Median Next Rate Reset (WMNRR)*



*Weighted Median Next Rate Reset (WMNRR) of the Treasury portfolio (Total or Private) is the time, in months, by which half the portfolio by current-face is scheduled to mature (or be subject to rate-reset for FRNs). In most cases no existing tenor/coupon-date will demarcate exactly 50% of cumulative-notional; as such, linear interpolation between two nearest tenors is used.
WMNRR of the Consolidated portfolio is calculated in the same manner, but with SOMA Treasury holdings netted-out, against combined non-interest-bearing liabilities of currency in circulation & the size of the TGA (treated as having a de facto infinite next-reset date) and the remainder, as applicable, against reserve balances and RRP (considered to have a one-day next-reset). WMNRR Consolidated (ex-Currency & TGA) reflects the WMNRR of the consolidated portfolio but excluding that portion of SOMA Treasury holdings implicitly financed by the currency in circulation and the size of the TGA; this is equivalent to Privately-held Treasuries outstanding + SOMA Treasury holdings, less Currency & TGA balance.

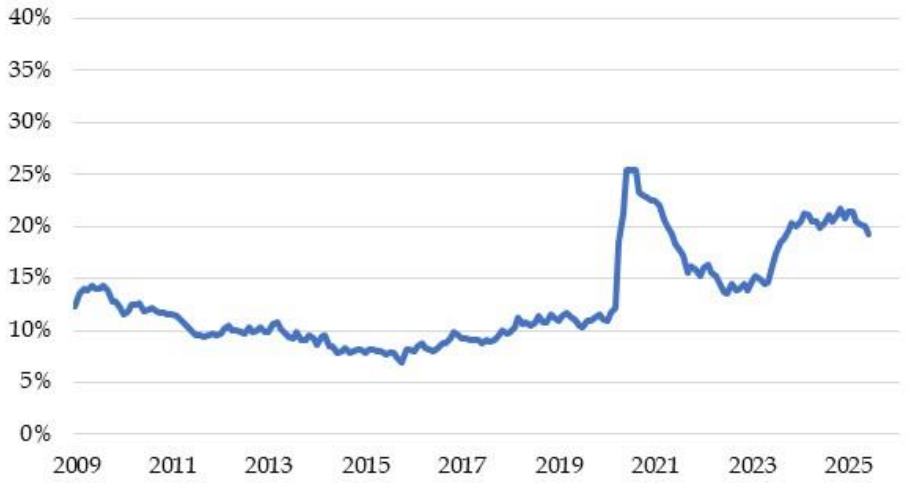

Bills, TIPS & FRNs Outstanding as a Percent of Marketable Debt Outstanding
40%
35%
30%
25%
20%
15%
10%
5%
0%
Max 35.6%
Bills Historical Average = 22.4%
Max 10.7%
Max 2.7%
07/31/25
20.7%
07/31/25
7.1%
07/31/25
2.2%
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027
Calendar Year
Projection
Bills
TIPS
FRNs
Bills Constant
Coupons Constant
Prorated Bills and Coupons

TIPS Outstanding as a Percentage of Total Coupon Bearing Securities

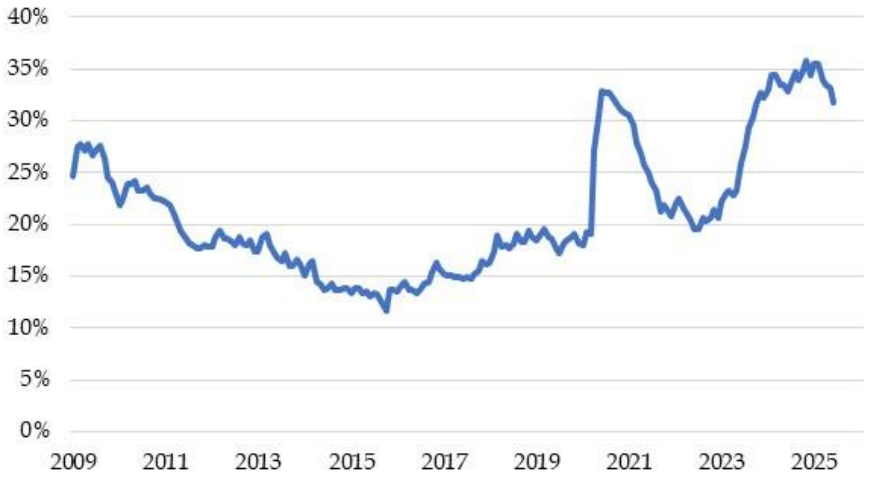


Measures of Treasury Bill Supply

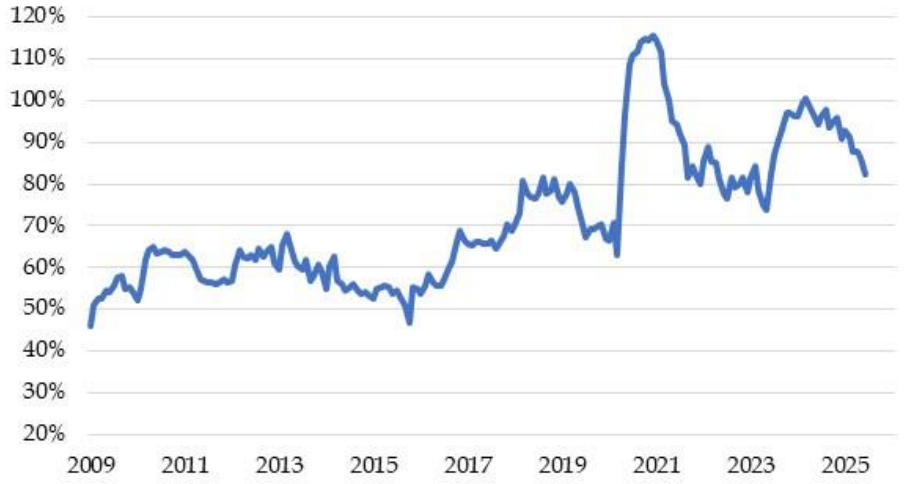
Total Bills Outstanding/Nominal GDP



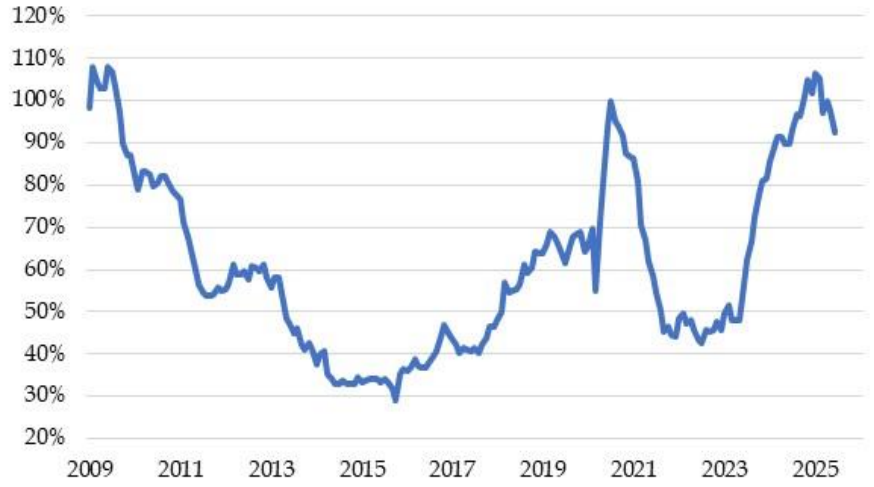
Total Bills Outstanding/Commercial Bank Deposits



Total Bills Outstanding/Total MMF AUM

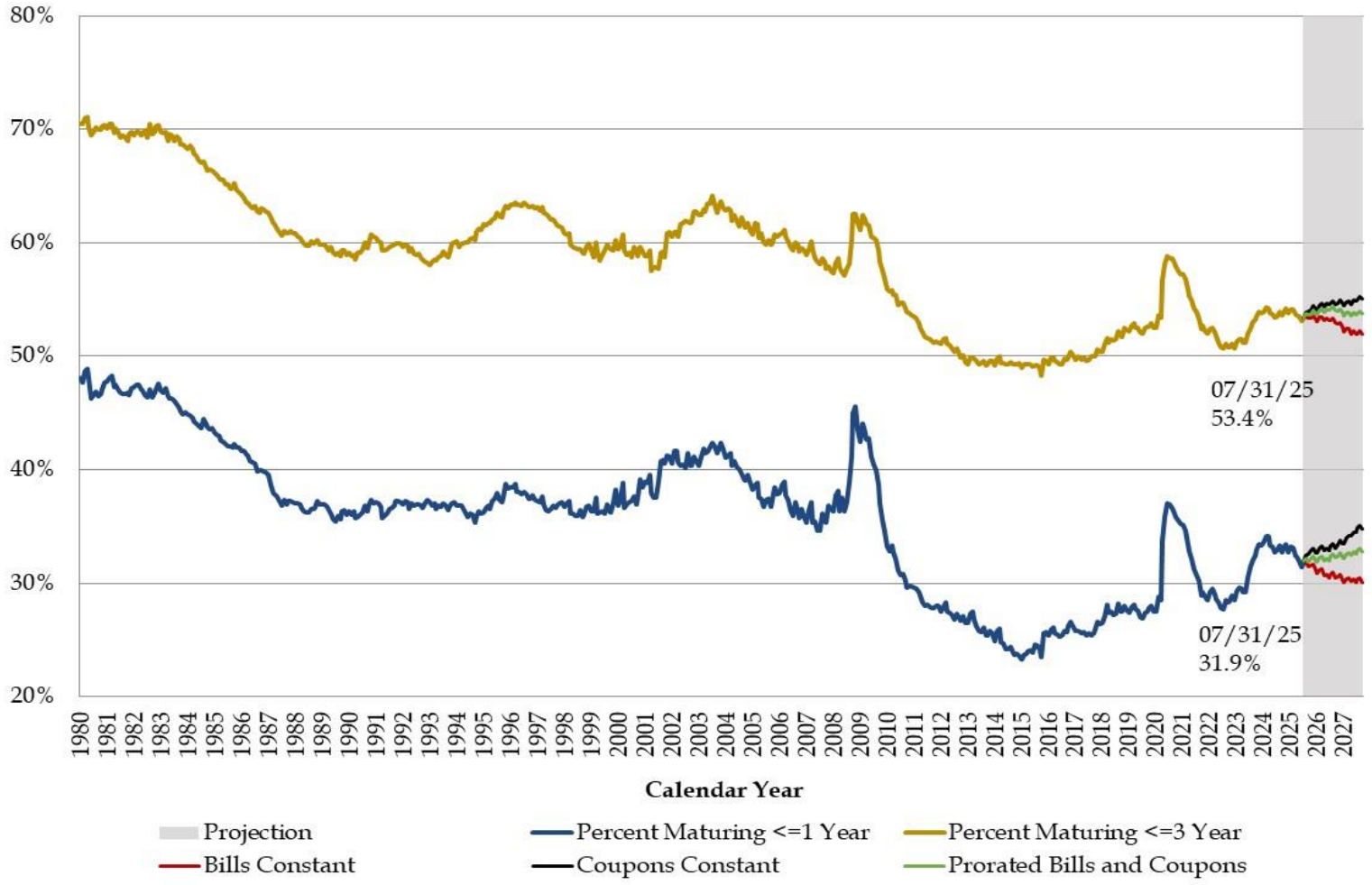


Total Bills Outstanding/Federal Reserve Liabilities ex. TGA



Source: Bloomberg and Treasury

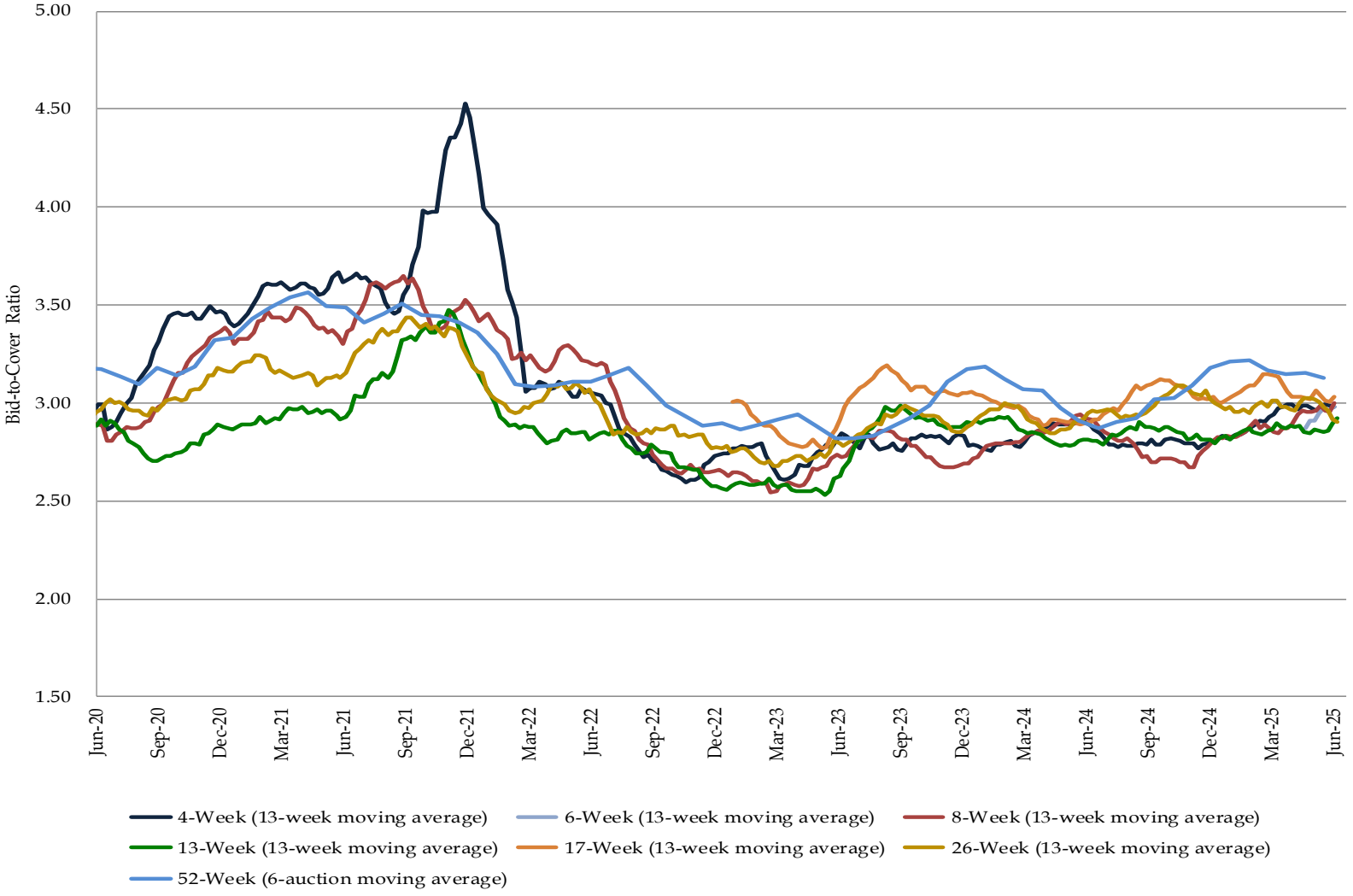
Treasury Maturity Profile



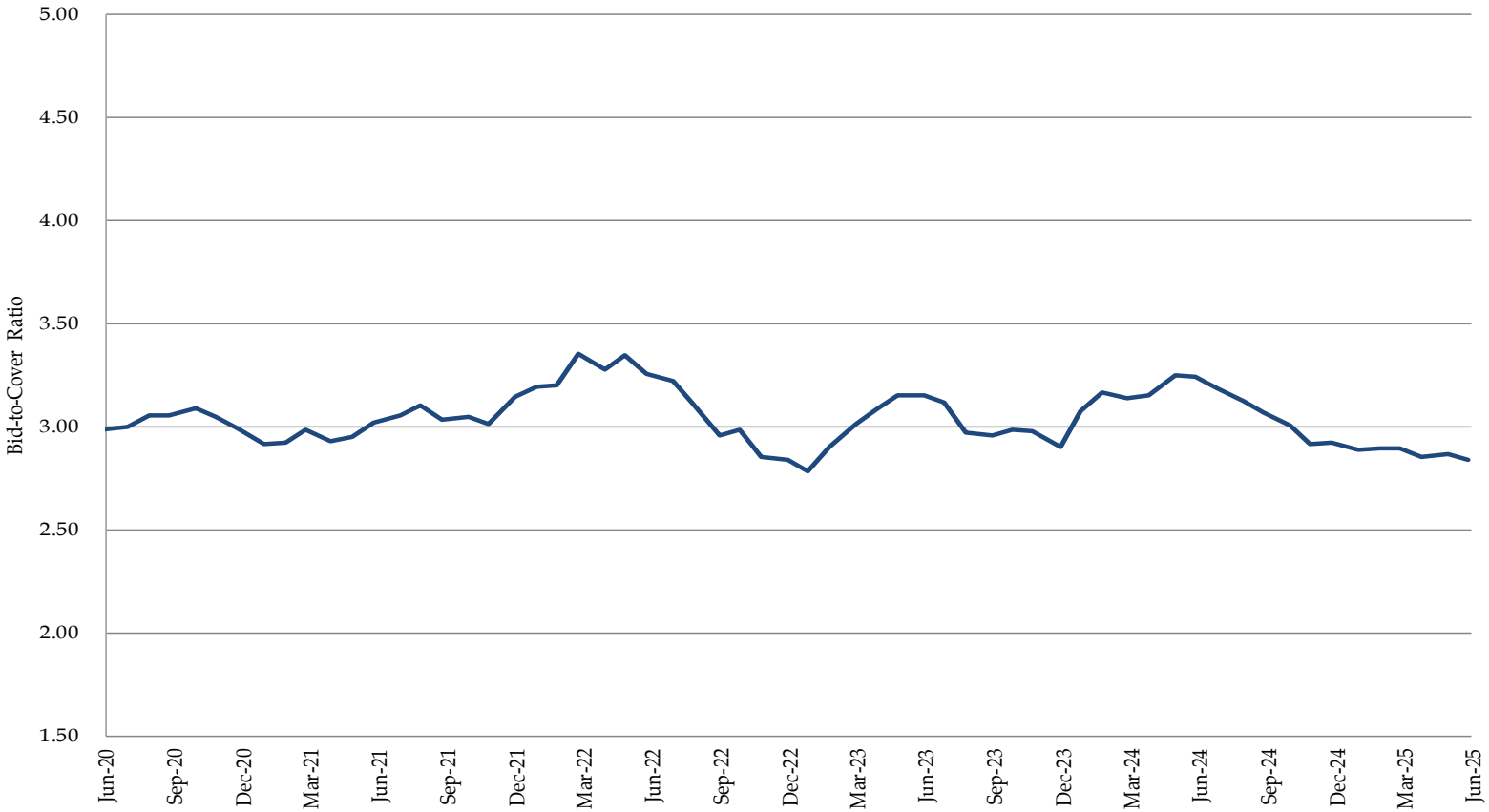
Section VI:
Select Demand Metrics

Bid-to-Cover Data, Investor Class Data,
Direct & Primary Dealer Awards, and Foreign Demand

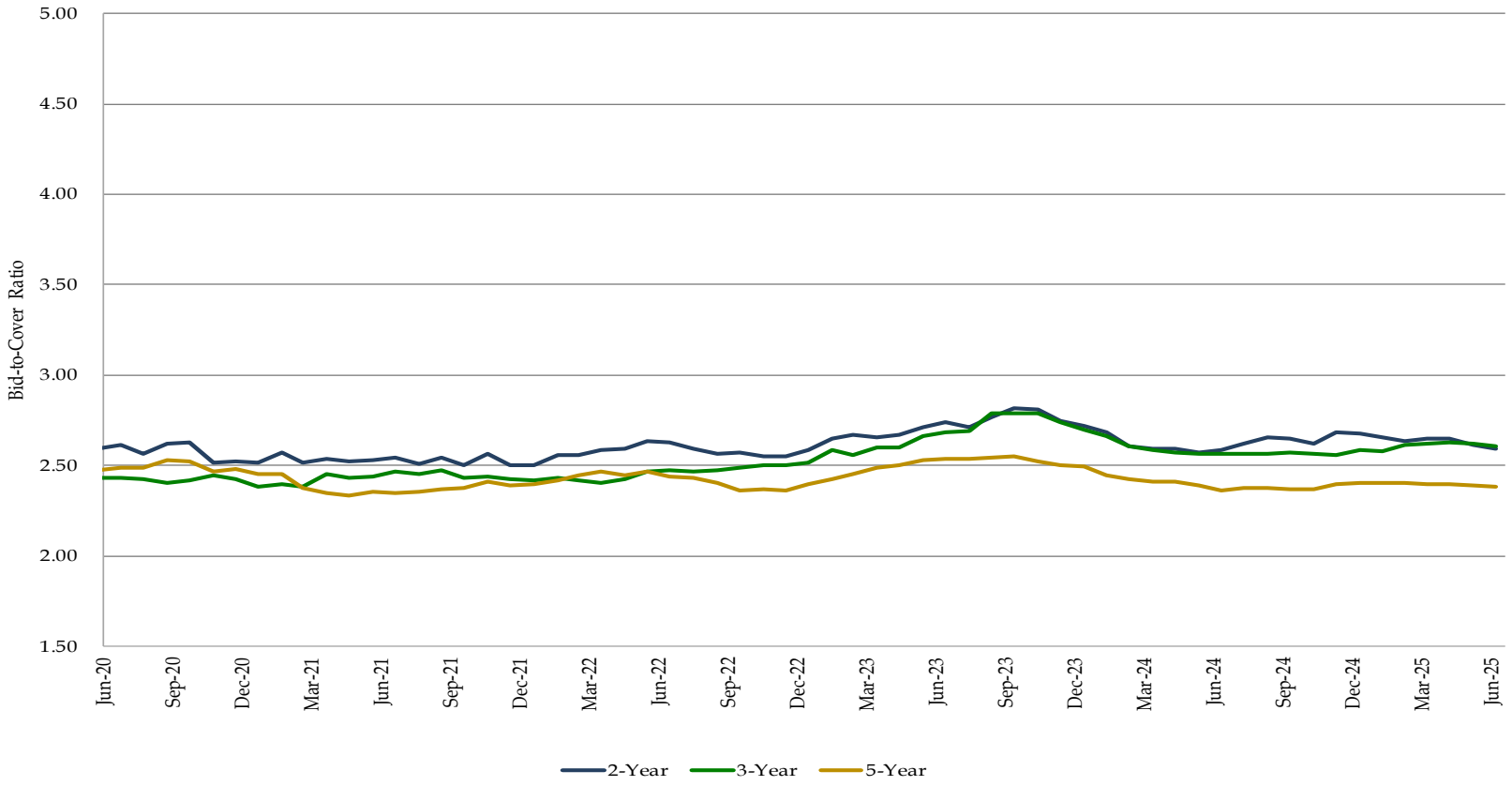
Bid-to-Cover Ratios for Treasury Bills



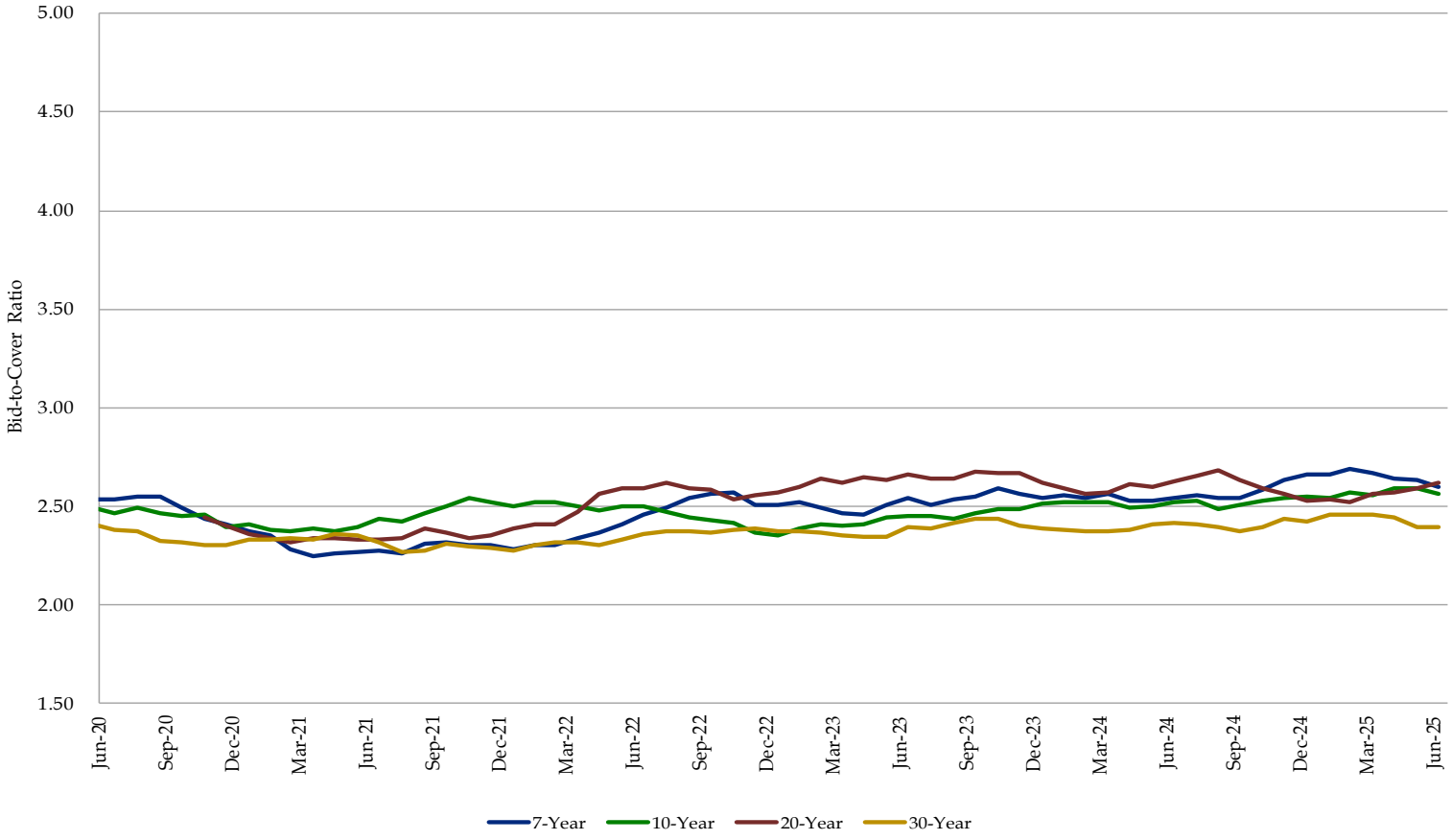
Bid-to-Cover Ratios for FRNs
(6-Month Moving Average)



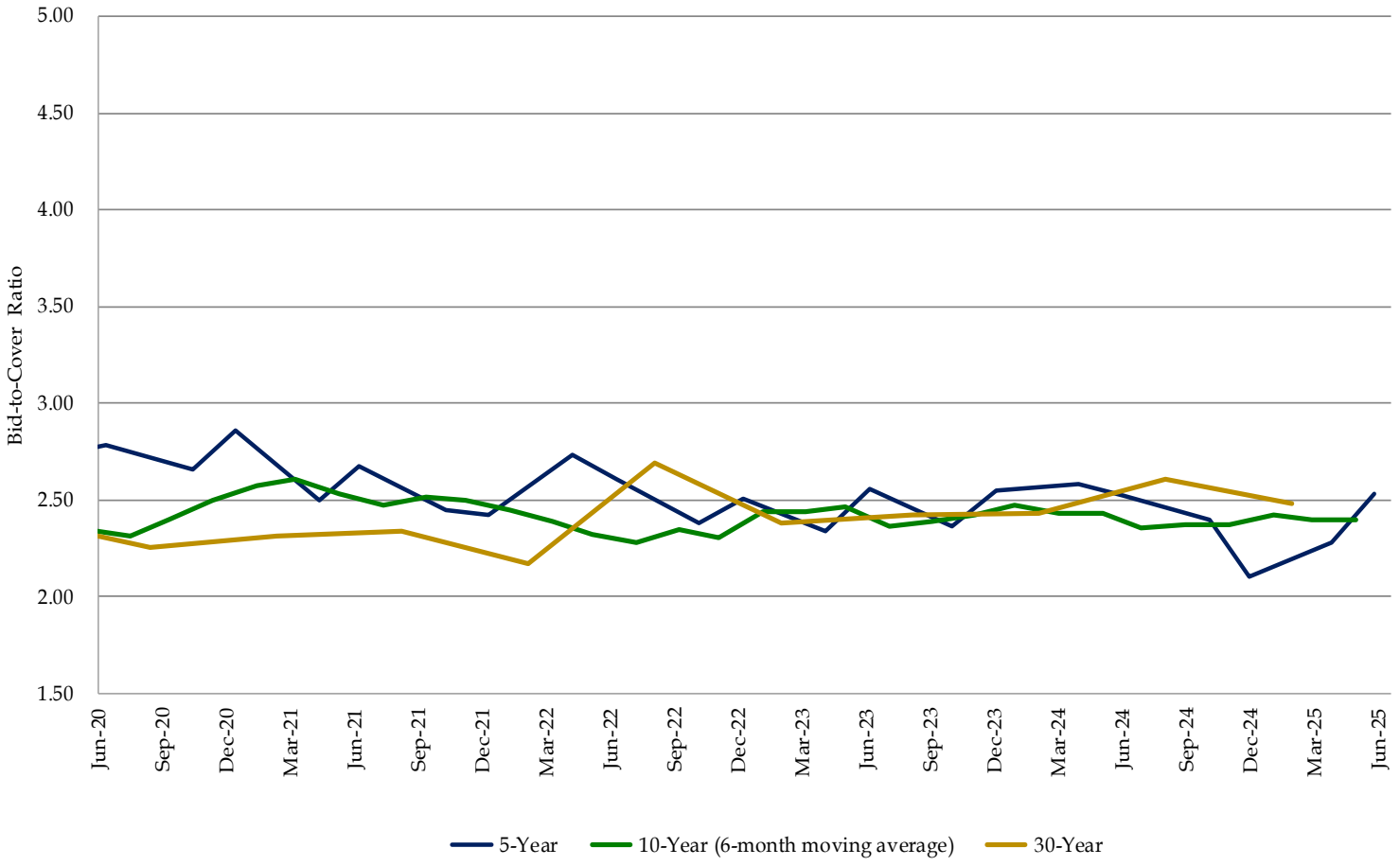
Bid-to-Cover Ratios for 2-, 3-, and 5-Year Nominal Securities (6-Month Moving Average)



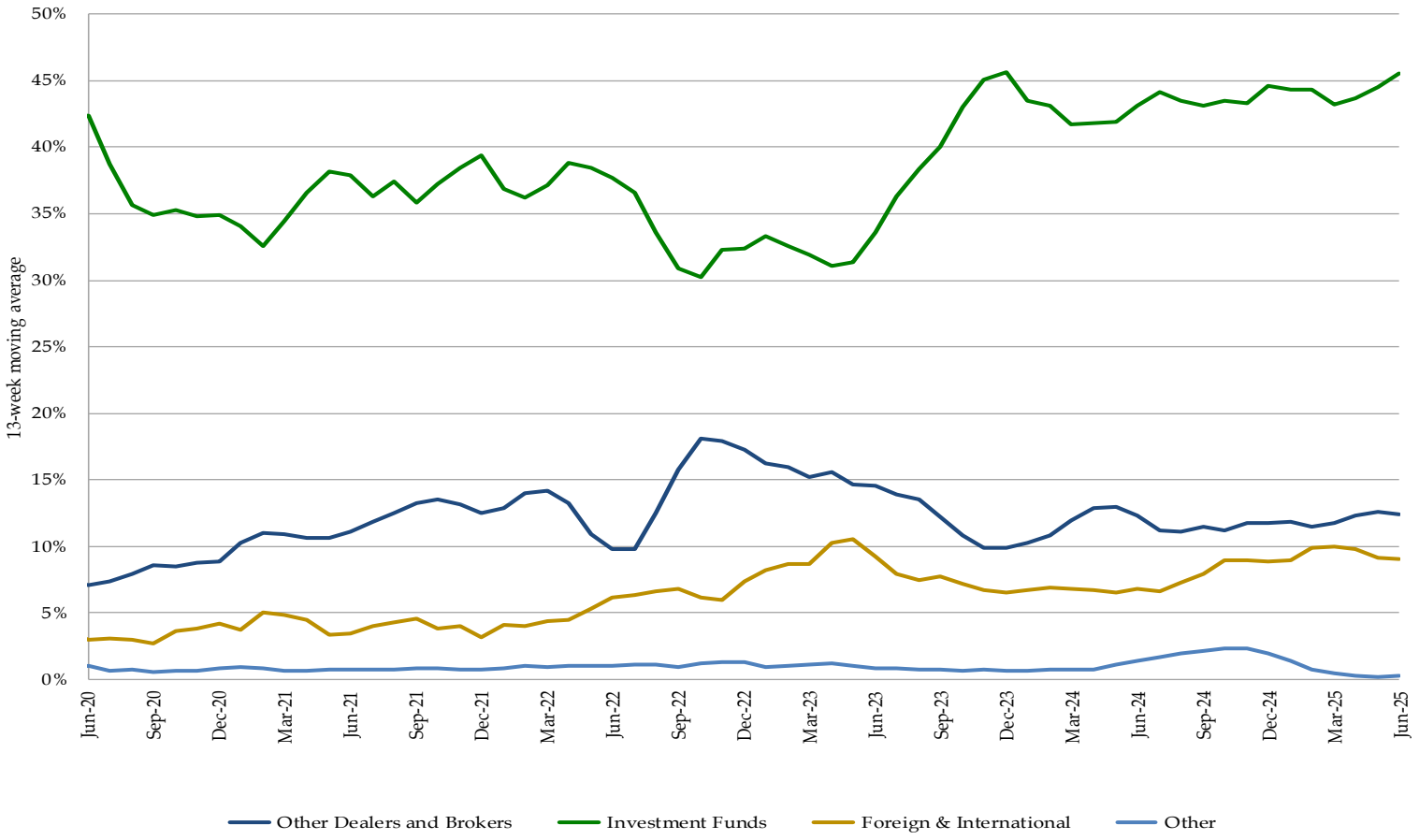
Bid-to-Cover Ratios for 7-, 10-, 20-, and 30-Year Nominal Securities (6-Month Moving Average)



Bid-to-Cover Ratios for TIPS

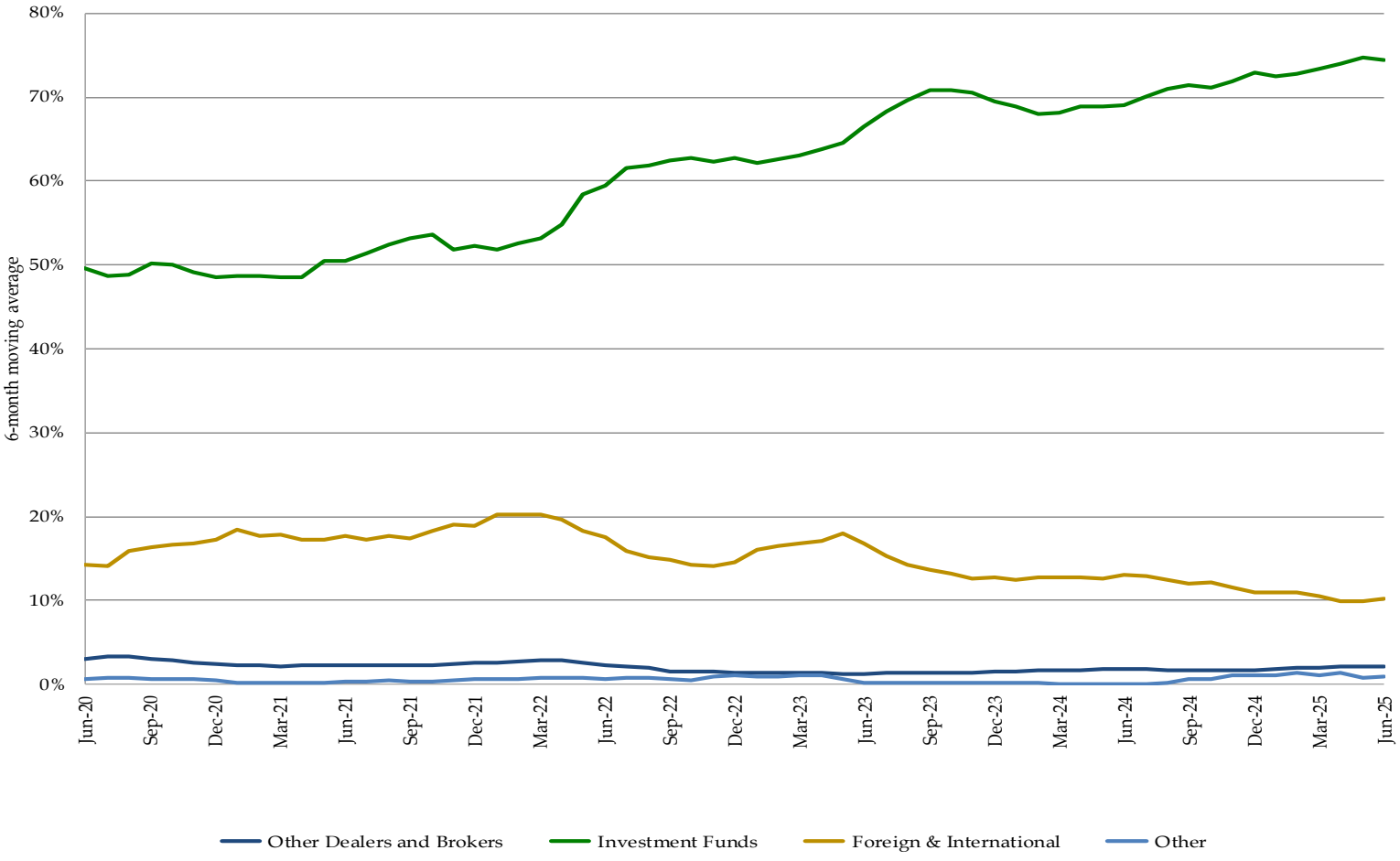


Percent Awarded in Bill Auctions by Investor Class (13-Week Moving Average)



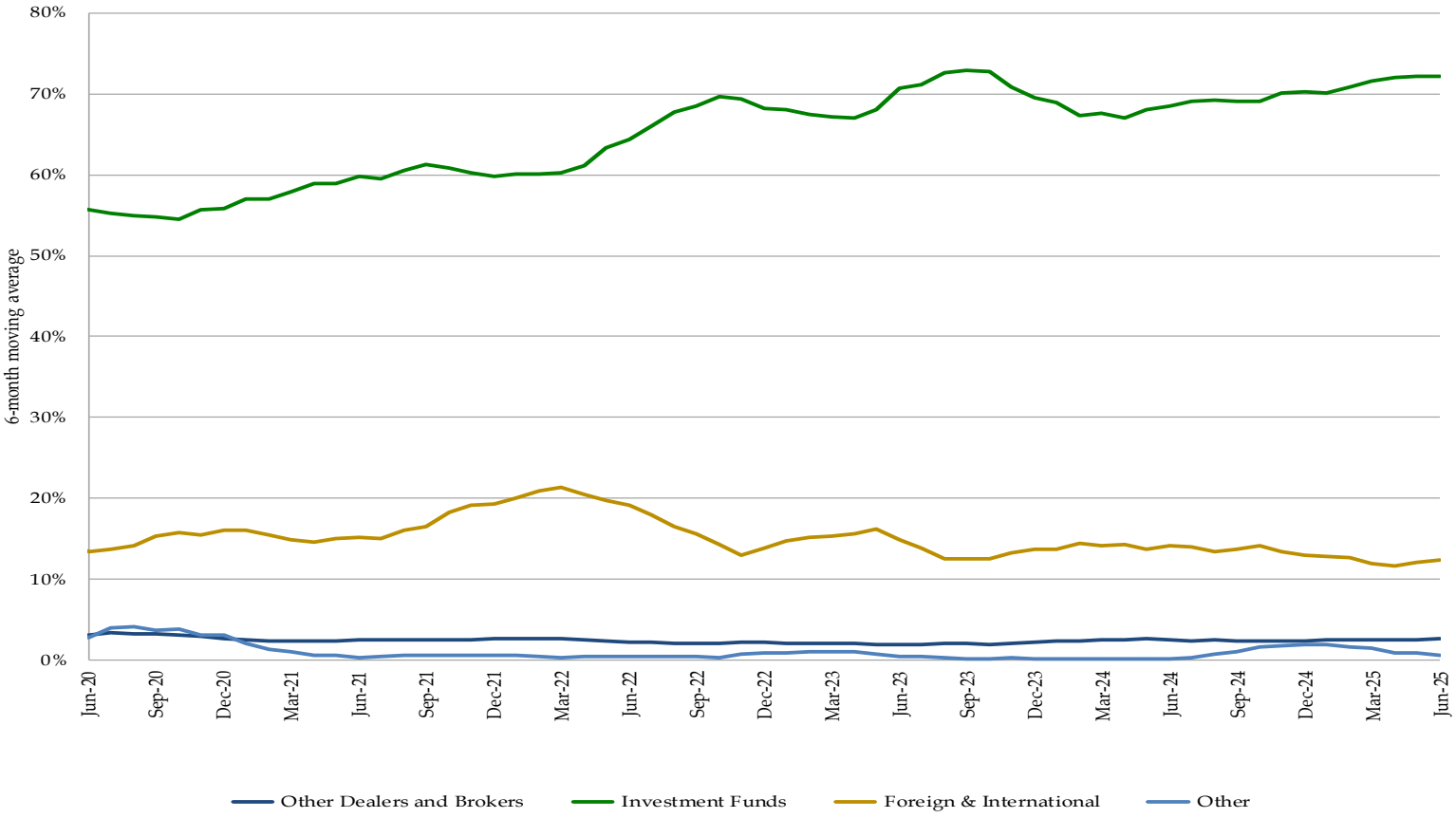
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

Percent Awarded in 2-, 3-, and 5-Year Nominal Security Auctions by Investor Class (6-Month Moving Average)



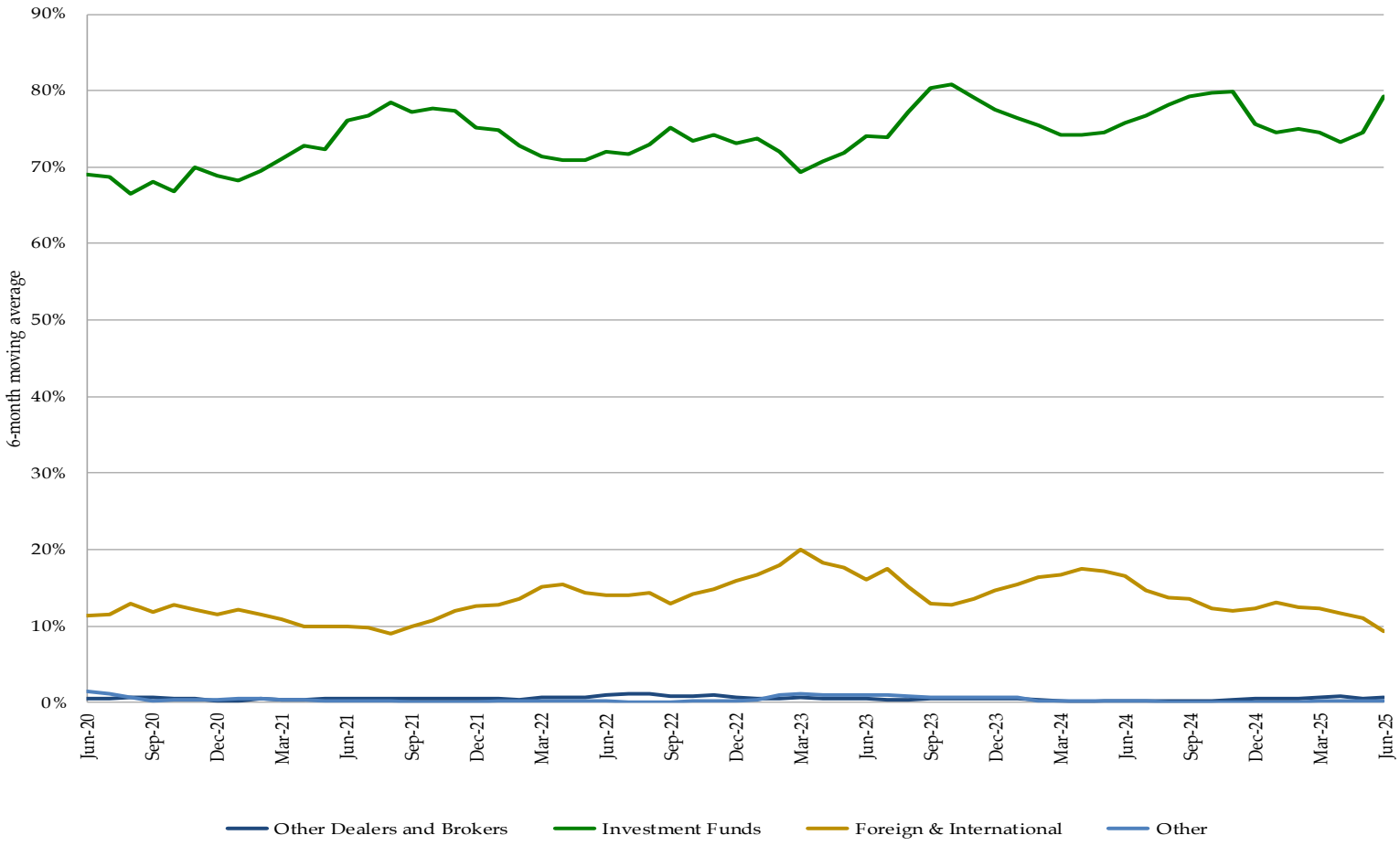
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

Percent Awarded in 7-, 10-, 20-, 30-Year Nominal Security Auctions by Investor Class (6-Month Moving Average)



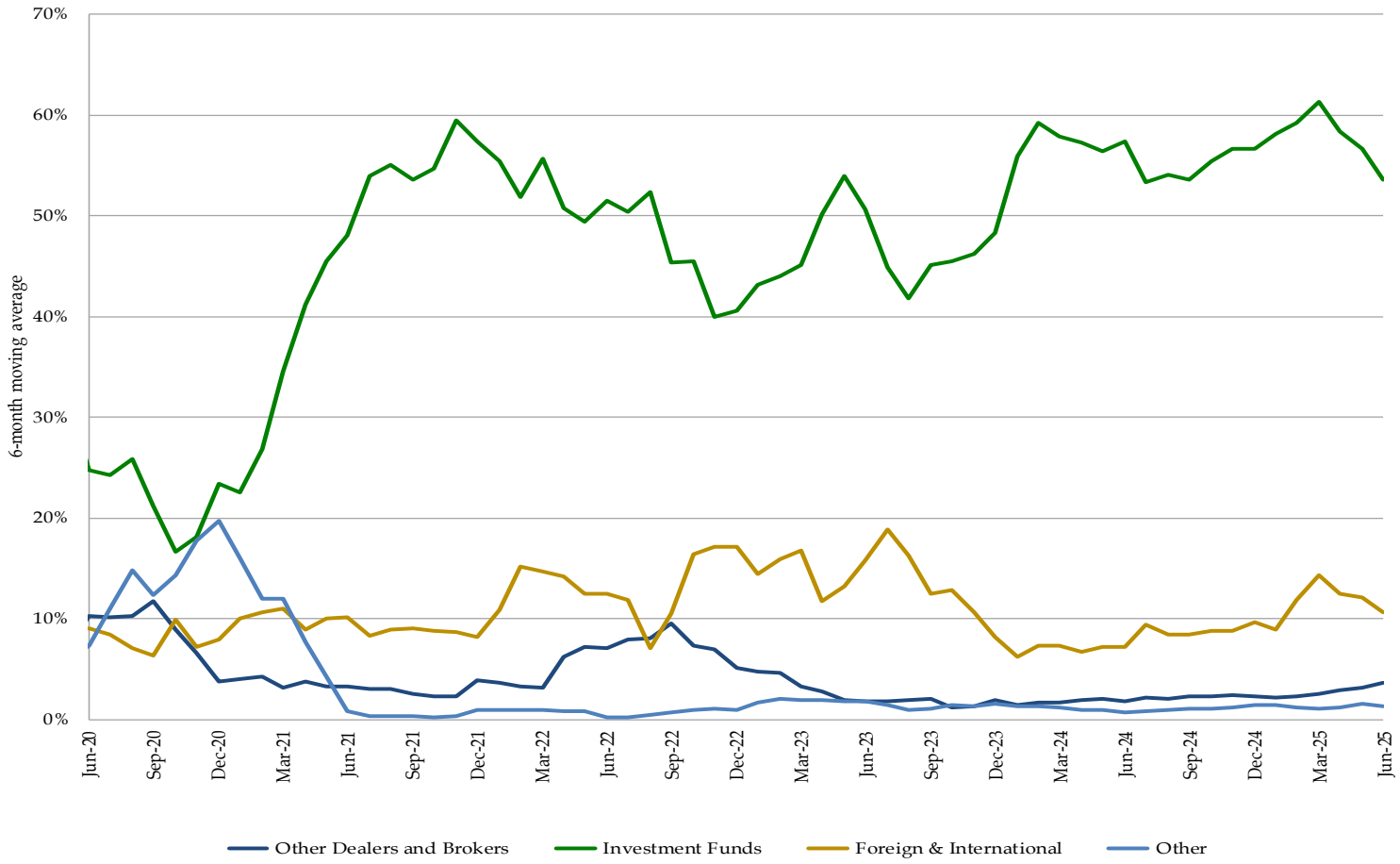
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

Percent Awarded in TIPS Auctions by Investor Class (6-Month Moving Average)



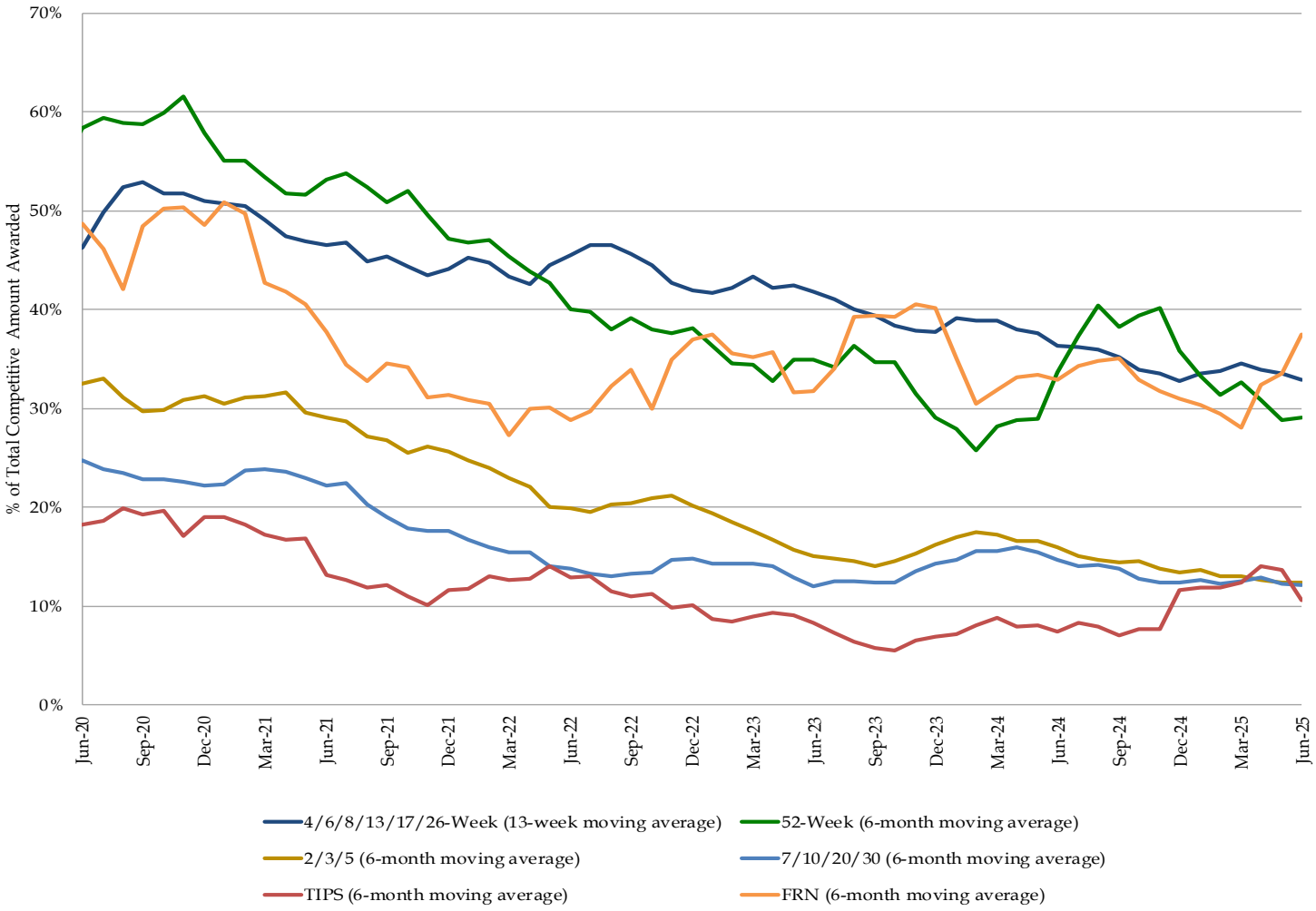
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

Percent Awarded in FRN Auctions by Investor Class (6-Month Moving Average)



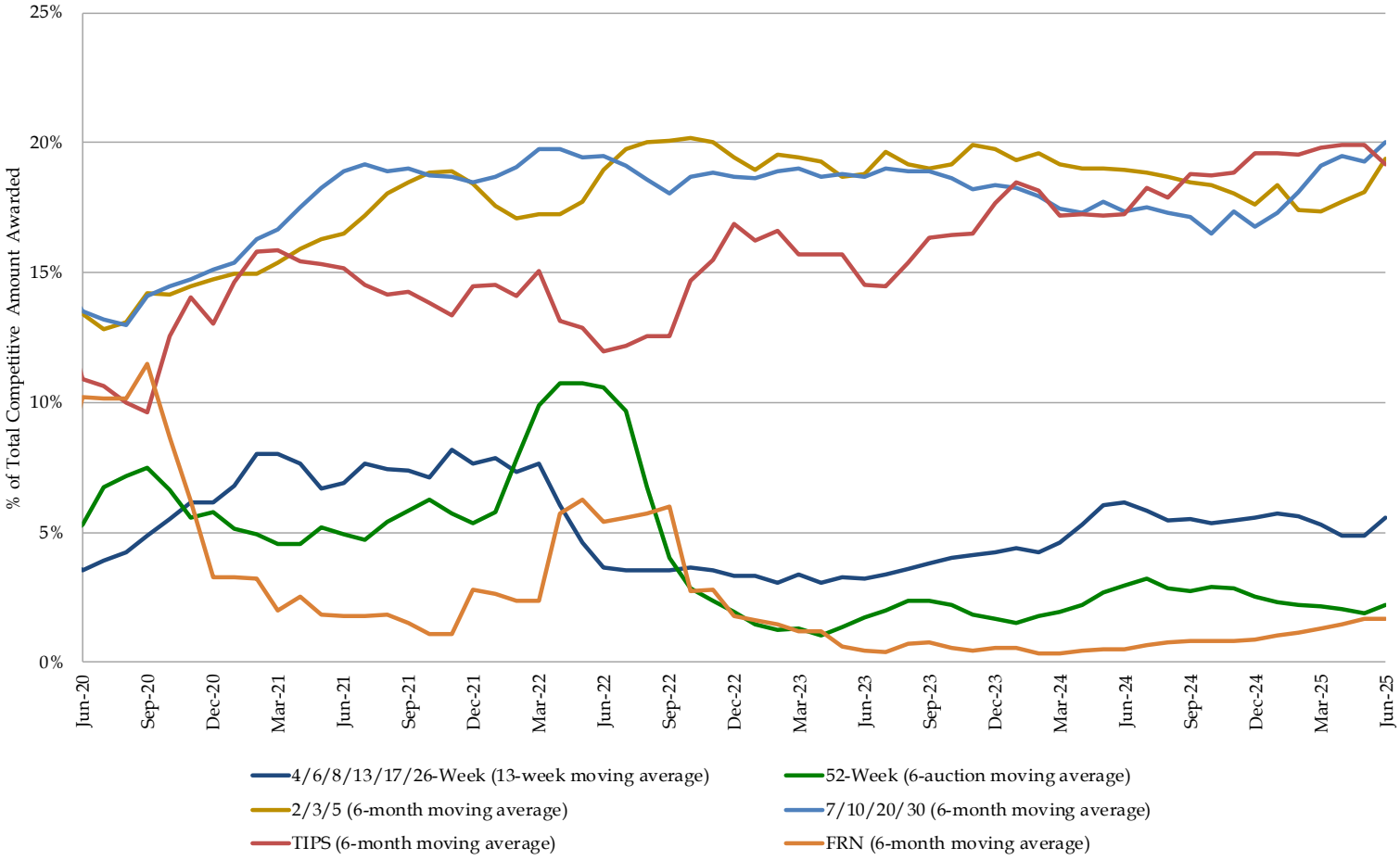
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

Primary Dealer Awards at Auction



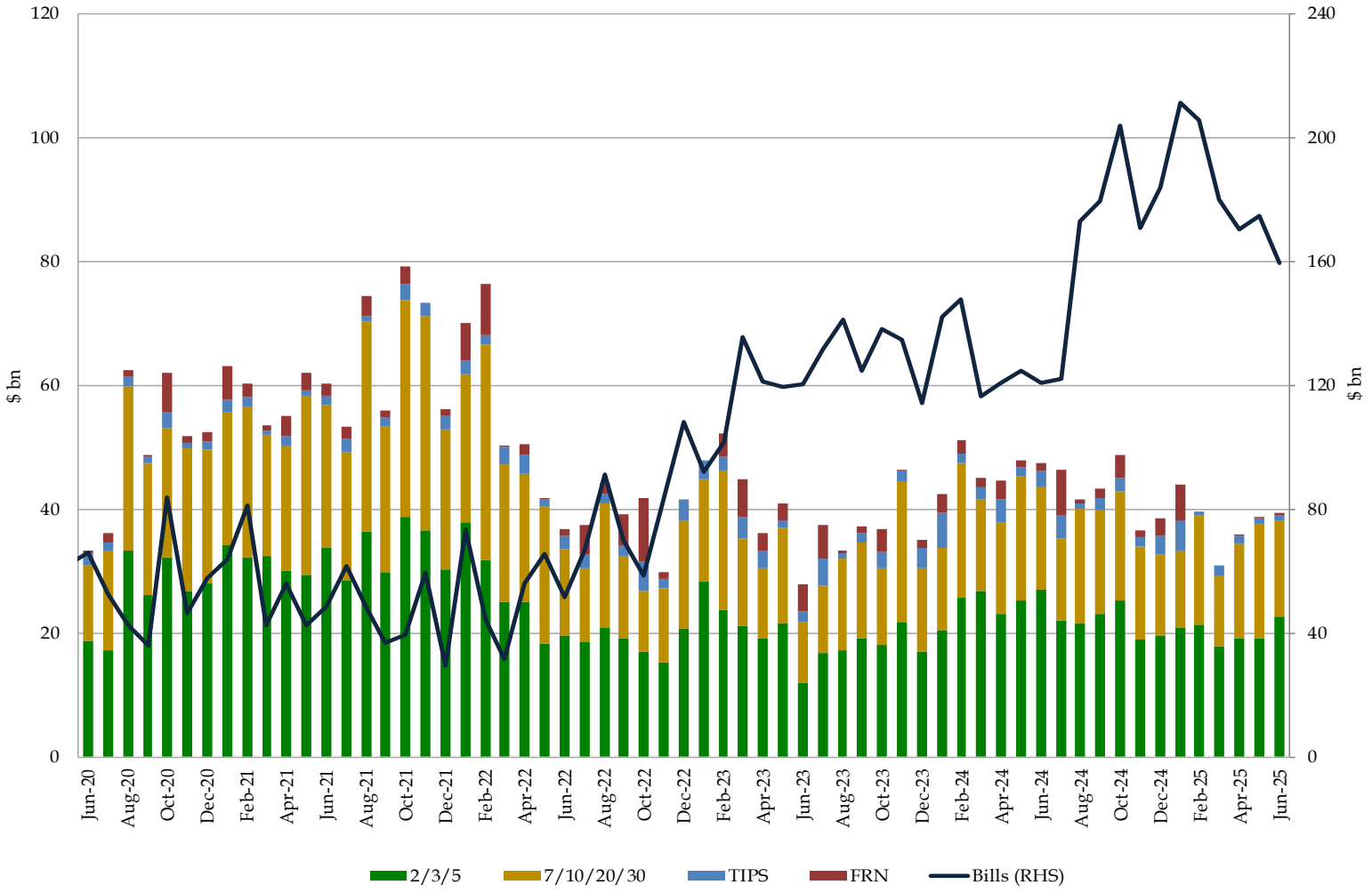
Competitive Amount Awarded excludes SOMA add-ons.

Direct Bidder Awards at Auction



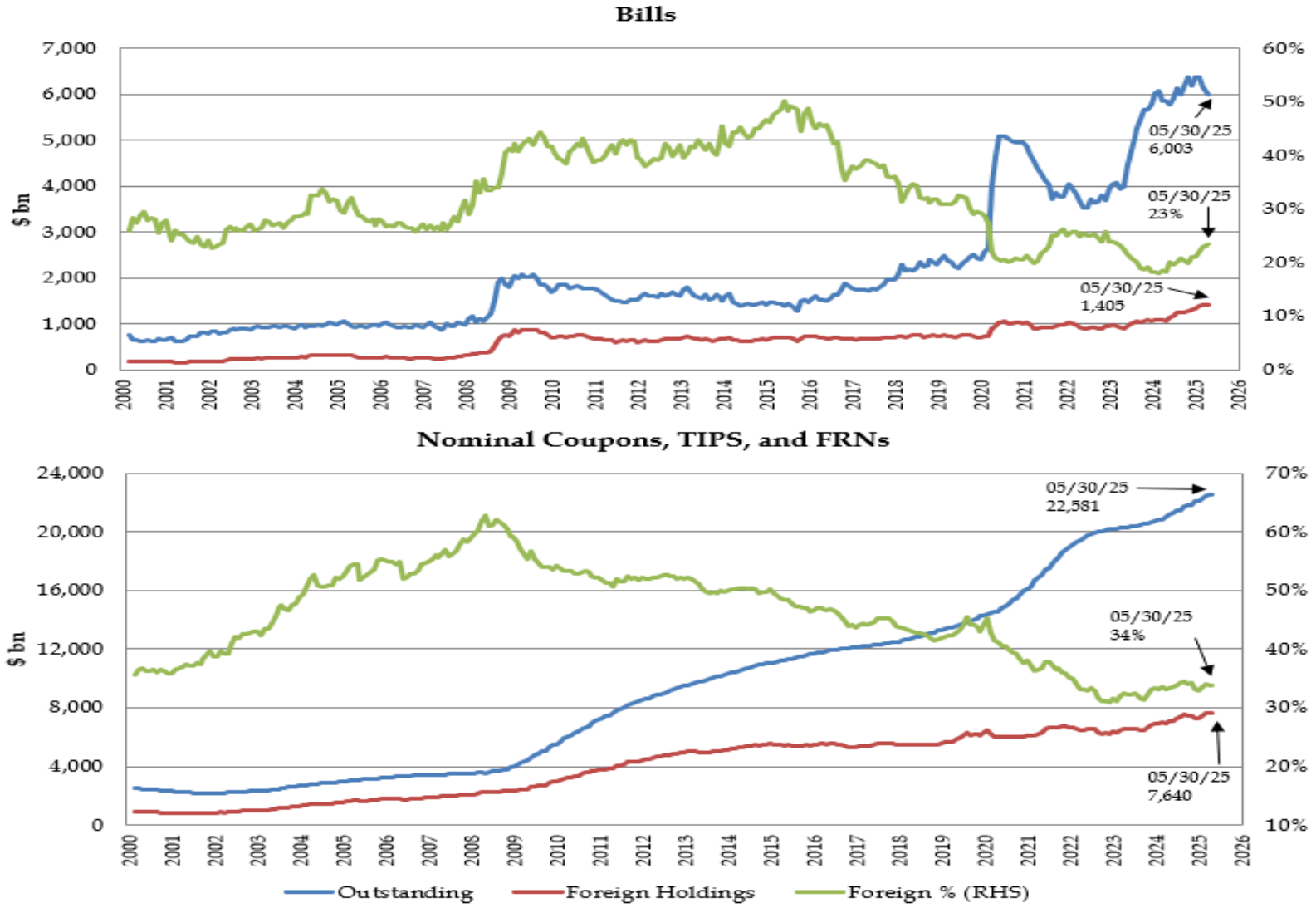
Competitive Amount Awarded excludes SOMA add-ons.

Total Foreign Awards of Treasuries at Auction, $ billions



Foreign includes both private sector and official institutions.

Total Foreign Holdings



Source: Treasury International Capital (TIC) System as of May 2025.
For more information on foreign participation data, including more details about the TIC data shown here, please refer to Treasury Presentation to TBAC "Brief Overview of Key Data Sources on Foreign Participation in the U.S. Treasury Securities Market" at the Treasury February 2019 Refunding.

Section VII:
Review of Treasury Buyback Results

CUSIP Concentration, Offer to Maximum Purchase Ratio, Buyback Amount, Buyback-Eligible and Purchased CUSIPs, etc.

The following applies to slides 47 to 55:

- The top left chart shows the total par amount purchased in each liquidity support buyback operation relative to the maximum purchase amount.
- Different colors within each bar correspond to the CUSIP-level purchase amounts.

- The top right chart shows the "offer to max" ratio for each liquidity support buyback.
- The "offer to max" ratio is the ratio of the total par amount offered (red bar) in a buyback operation to Treasury's maximum purchase amount (blue bar).

- The bottom left chart shows the count of eligible (red) and purchased (blue) CUSIPs for each liquidity support buyback operation as well as the ratio of purchased to eligible securities.
- Prior to August 2024, Treasury limited the buyback eligible population to at most 20 CUSIPs.

Summary of Treasury Buyback Results

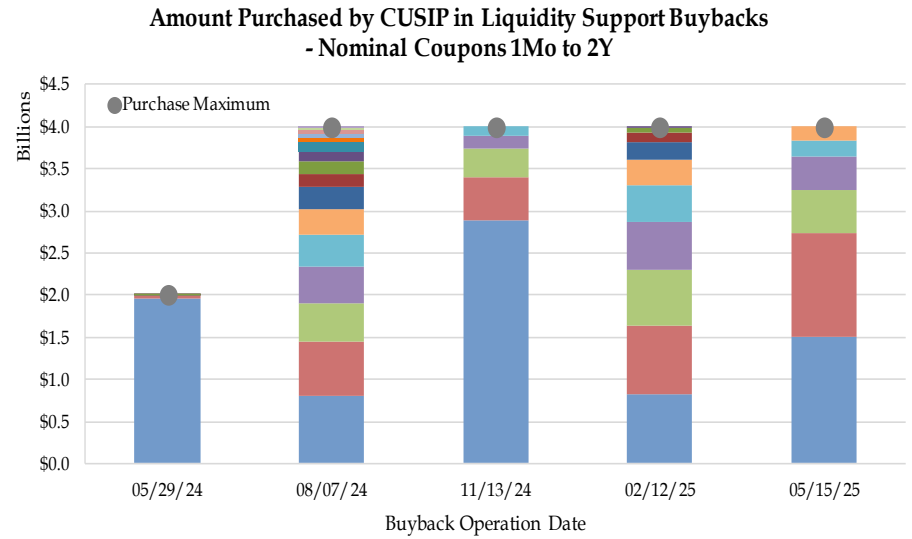
Treasury Buyback Results from 5/2/25 to 7/23/25 (Current Refunding Quarter) [1]								
Operation Type	Maturity Sector	Operation Size	Total Number of Operations	Total Par Amount Offered ($BN)	Total Purchase Maximum ($BN)	Total Par Amount Purchased ($BN)[2]	Offer to Maximum	Buyback Ratio
Formula		**A**	**B**	**C**	**D = A * B**	**E**	**F = C / D**	**G = E / D**
Cash Management	1Mo to 2Y	$10 BN	2	$41.0	$20.0	$20.0	2.0	1.0
Liquidity Support	1Mo to 2Y	$4 BN	1	$30.0	$4.0	$4.0	7.5	1.0
	2Y to 3Y		1	$7.5	$4.0	$1.5	1.9	0.4
	3Y to 5Y		1	$14.8	$4.0	$4.0	3.7	1.0
	5Y to 7Y		1	$3.9	$4.0	$1.3	1.0	0.3
	7Y to 10Y		1	$4.0	$4.0	$1.1	1.0	0.3
	10Y to 20Y	$ 2 BN	2	$44.9	$4.0	$4.0	11.2	1.0
	20Y to 30Y		2	$36.6	$4.0	$4.0	9.2	1.0
	TIPS 1Y to 7.5Y	$500 MM	2	$5.4	$1.0	$1.0	5.4	1.0
	TIPS 7.5Y to 30Y		2	$2.9	$1.0	$0.7	2.9	0.7
Total			**15**	**$191.0**	**$50.0**	**$41.5**	4.6	0.8

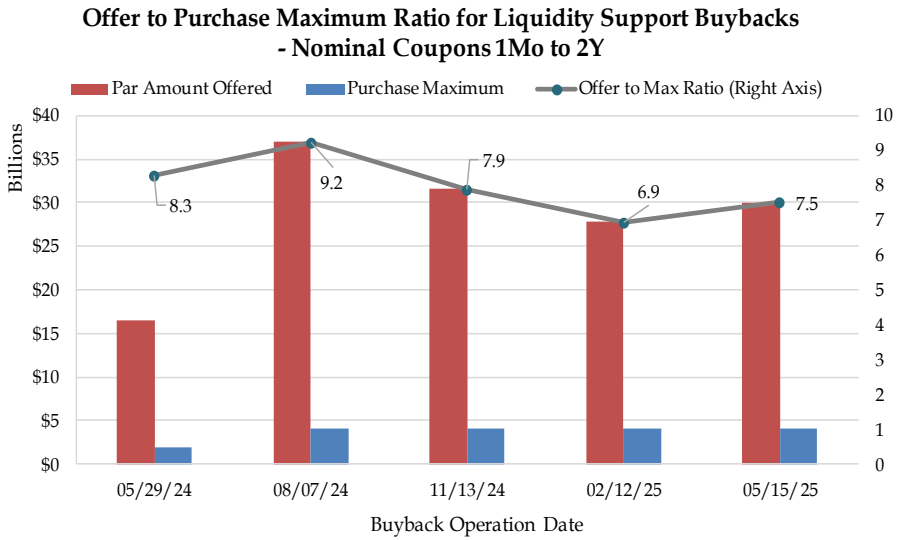
Treasury Buyback Results from 5/29/24 to 7/23/25 (All Buybacks)							
Operation Type	Maturity Sector	Total Number of Operations	Total Par Amount Offered ($BN)	Total Purchase Maximum ($BN)	Total Par Amount Purchased ($BN)[2]	Offer to Maximum (Min | **Avg** | Max)	Buyback Ratio (Min | **Avg** | Max)
Formula			**C**	**D**	**E**	**F = C / D**	**G = E / D**
Cash Management	1Mo to 2Y	16	$339.8	$122.0	$112.7	1.4 | **2.9** | 5.2	0.3 | **0.9** | 1.0
Liquidity Support	1Mo to 2Y	5	$142.9	$18.0	$18.0	6.9 | **8.0** | 9.2	1.0 | **1.0** | 1.0
	2Y to 3Y	5	$42.5	$18.0	$12.1	1.8 | **2.6** | 4.4	0.4 | **0.7** | 1.0
	3Y to 5Y	5	$57.9	$18.0	$16.8	2.4 | **3.1** | 3.7	0.4 | **0.9** | 1.0
	5Y to 7Y	5	$30.3	$18.0	$8.2	1.0 | **1.8** | 3.2	0.1 | **0.5** | 0.9
	7Y to 10Y	5	$19.1	$18.0	$2.7	0.8 | **1.1** | 1.9	0.0 | **0.1** | 0.3
	10Y to 20Y	8	$110.6	$16.0	$16.0	3.2 | **6.9** | 11.4	1.0 | **1.0** | 1.0
	20Y to 30Y	9	$93.2	$18.0	$18.0	1.9 | **5.2** | 9.4	1.0 | **1.0** | 1.0
	TIPS 1Y to 7.5Y	9	$23.7	$4.5	$3.8	1.7 | **5.3** | 8.1	0.3 | **0.8** | 1.0
	TIPS 7.5Y to 30Y	8	$10.6	$4.0	$2.6	1.5 | **2.7** | 4.1	0.1 | **0.7** | 1.0
Total		**75**	**$870.5**	**$254.5**	**$210.9**		

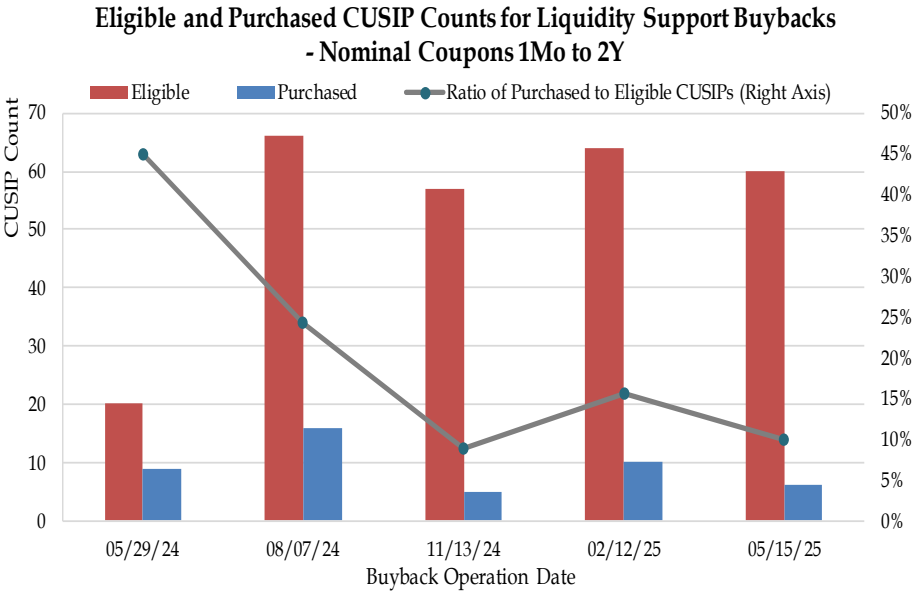
- Treasury bought back $41.5 BN of securities in the current refunding quarter and has repurchased $210.9 BN of securities since the buyback program launched in May 2024.
- In June of the current refunding quarter, Treasury conducted two cash management buybacks for up to $10 BN each.
  - Treasury bought back the maximum par amount in both cash management buybacks for a total of $20 BN.
- Treasury also conducted 13 liquidity support buybacks between 5/2/25 and 7/23/25. Treasury had an 100% buyback ratio in all but four sectors: the Nominal Coupons 2Y to 3Y, 5Y to 7Y, 7Y to 10Y, and the TIPS 7.5Y to 30Y.

(1) Data as of 7/23/25. Liquidity support buybacks for 10Y to 20Y Nominal Coupons and 7.5Y to 30Y TIPS are scheduled for 7/31/25 and 8/6/25, respectively.
(2) Original par amount.

Liquidity Support Buybacks – Nominal Coupons 1Mo to 2Y

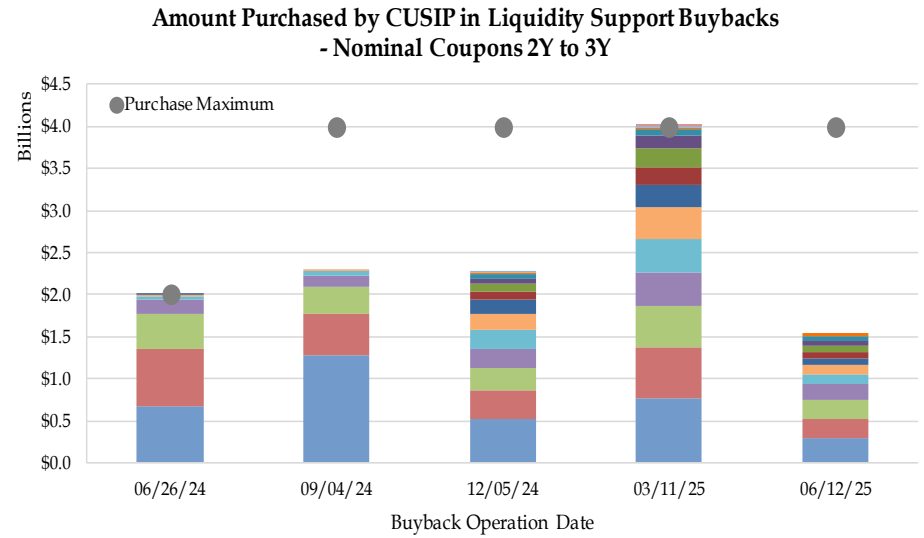


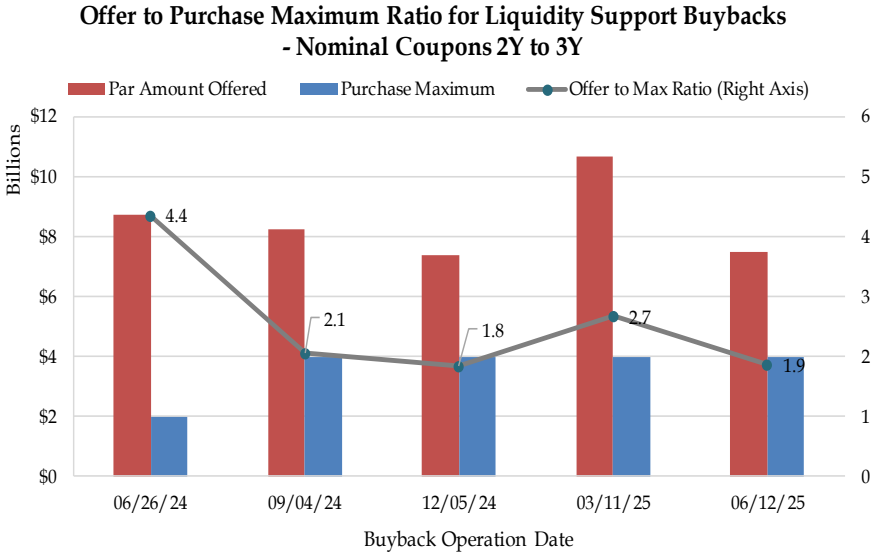


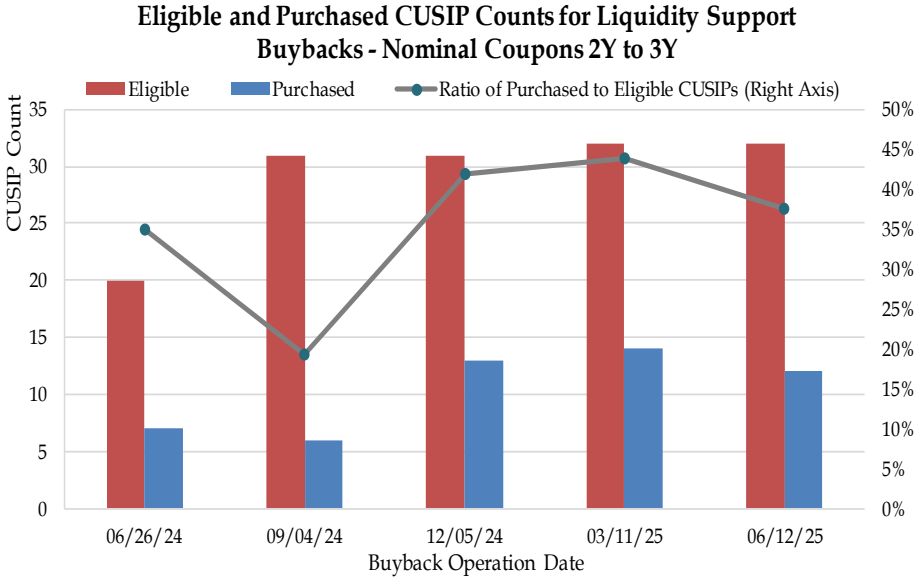


- Treasury has consistently bought back the maximum par amount in liquidity support buybacks in the 1Mo to 2Y maturity sector (top left).
- Buyback operations in this sector have been consistently oversubscribed with high offer to purchase maximum ratios (top right).

Liquidity Support Buybacks – Nominal Coupons 2Y to 3Y



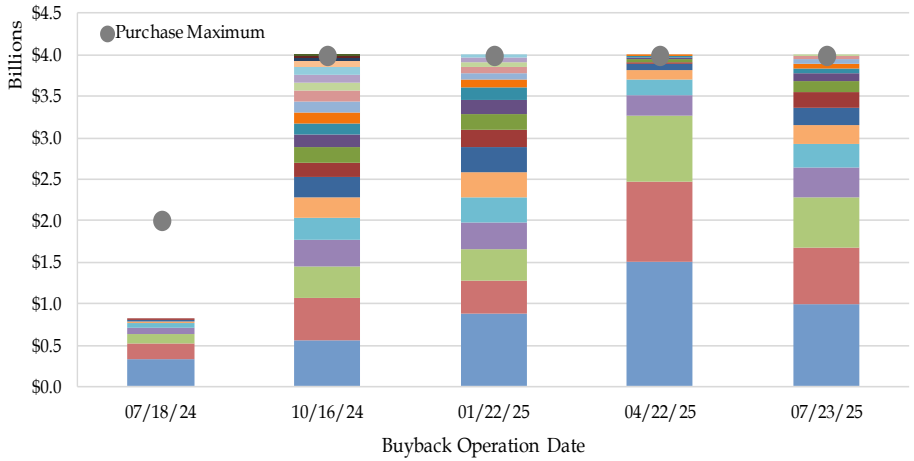




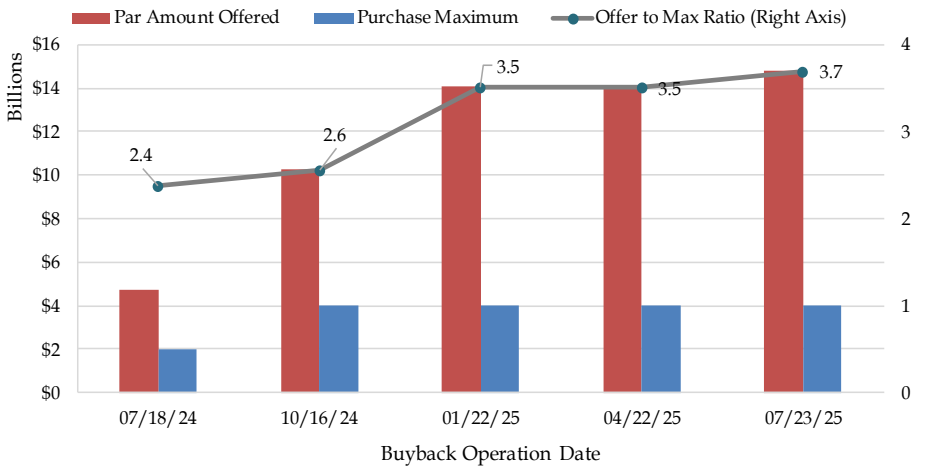
- This quarter, Treasury bought back less than half of the $4 billion maximum par amount in the 2Y to 3Y sector on 6/12/25 (top left).
- In the last quarter, Treasury bought back the full amount of the $4 billion purchase maximum in this sector.

Liquidity Support Buybacks – Nominal Coupons 3Y to 5Y

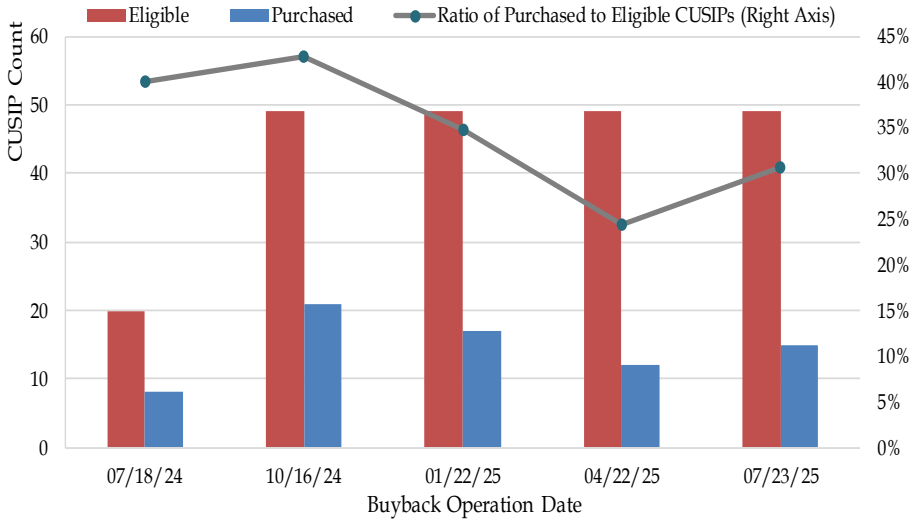
Amount Purchased by CUSIP in Liquidity Support Buybacks - Nominal Coupons 3Y to 5Y



Offer to Purchase Maximum Ratio for Liquidity Support Buybacks - Nominal Coupons 3Y to 5Y

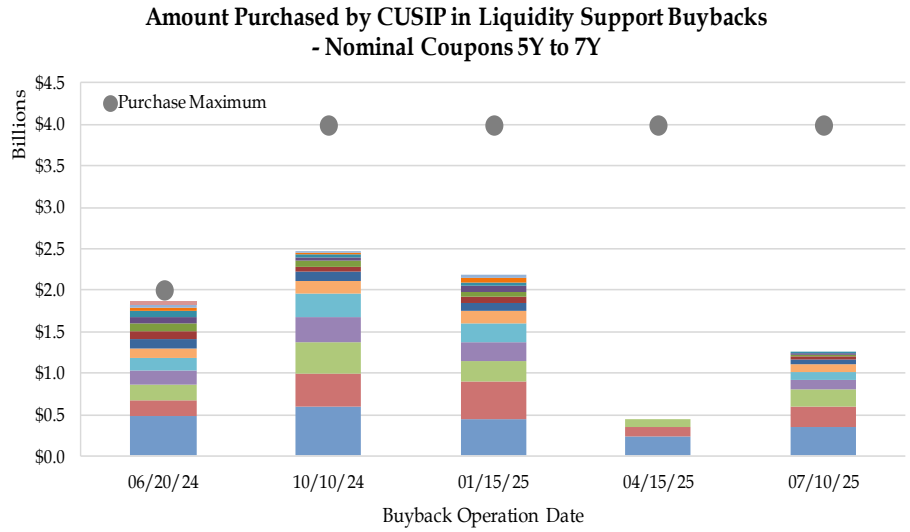


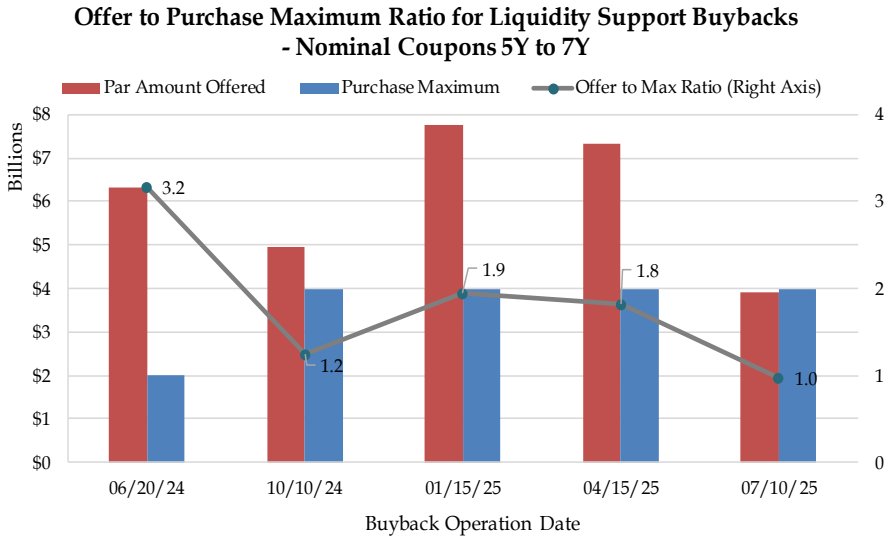
Eligible and Purchased CUSIP Counts for Liquidity Support Buybacks - Nominal Coupons 3Y to 5Y

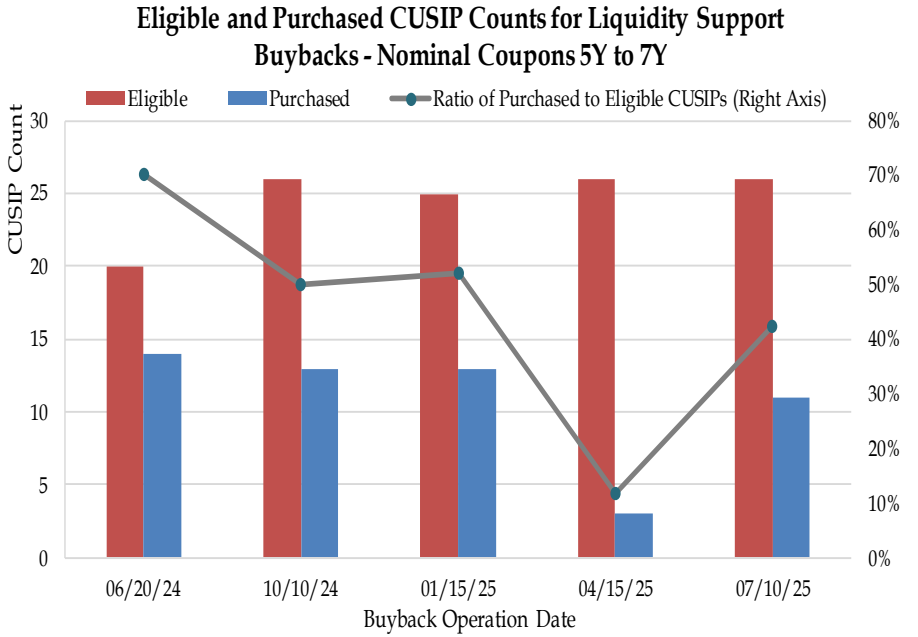


- Treasury bought back the $4 billion maximum par amount in the 3Y to 5Y sector for the fourth consecutive quarter (top left).

Liquidity Support Buybacks – Nominal Coupons 5Y to 7Y

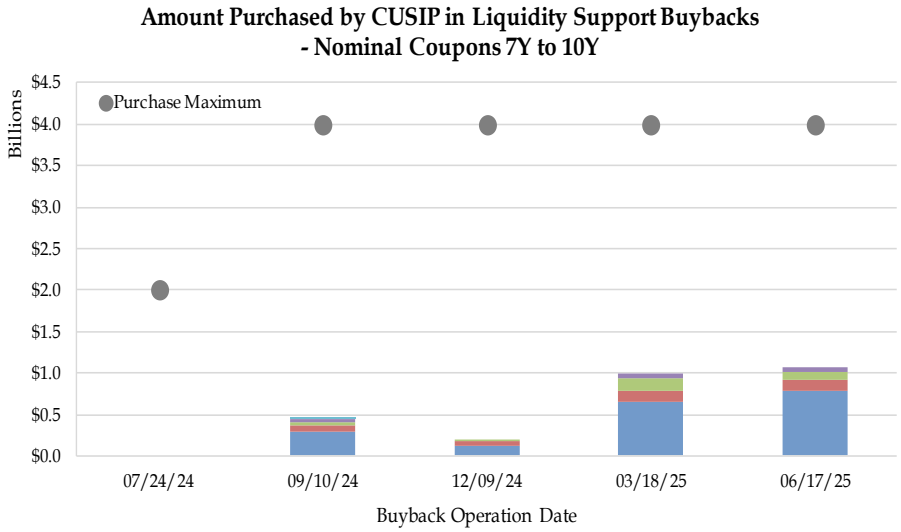


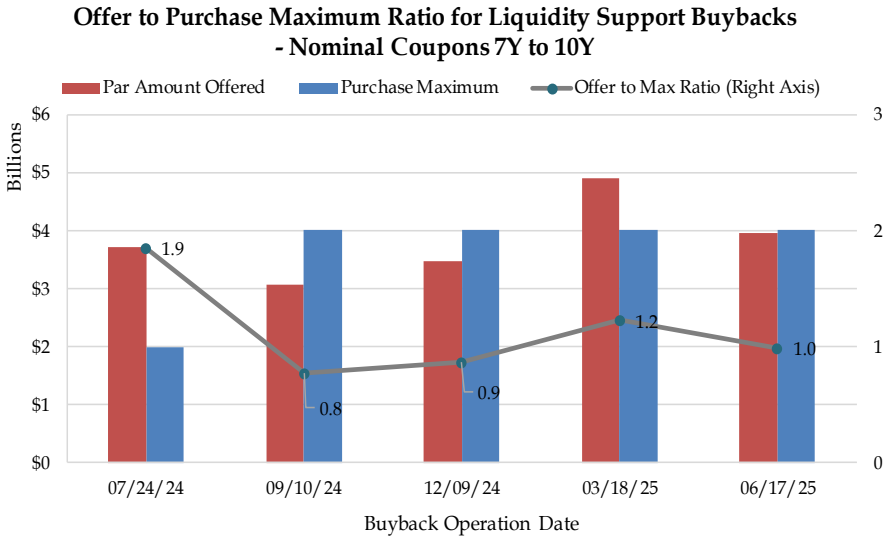


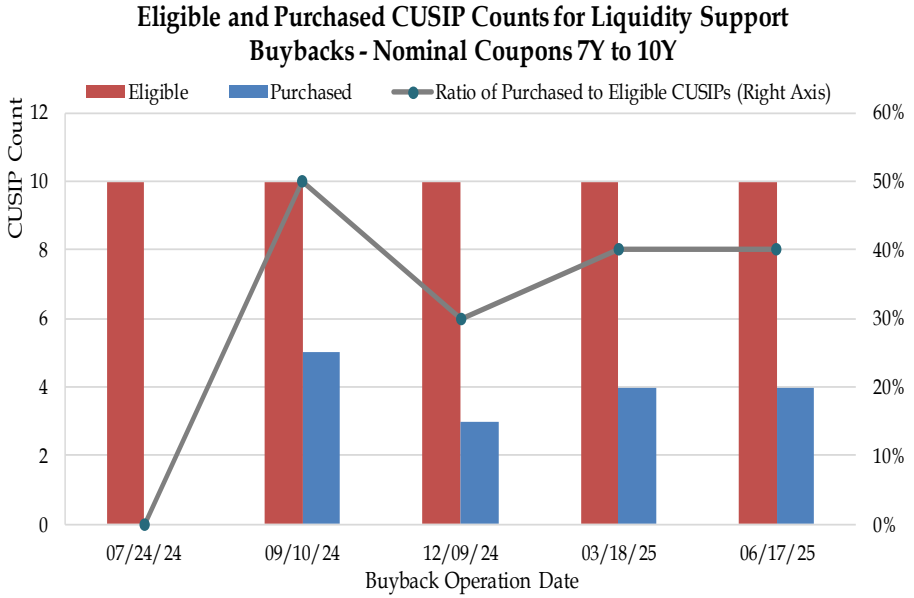


- On 7/10/25, Treasury purchased $1.25 billion of the $4 billion purchase maximum in the 5Y to 7Y sector (top left) with lowest offer to max ratio of 1.0.

Liquidity Support Buybacks – Nominal Coupons 7Y to 10Y



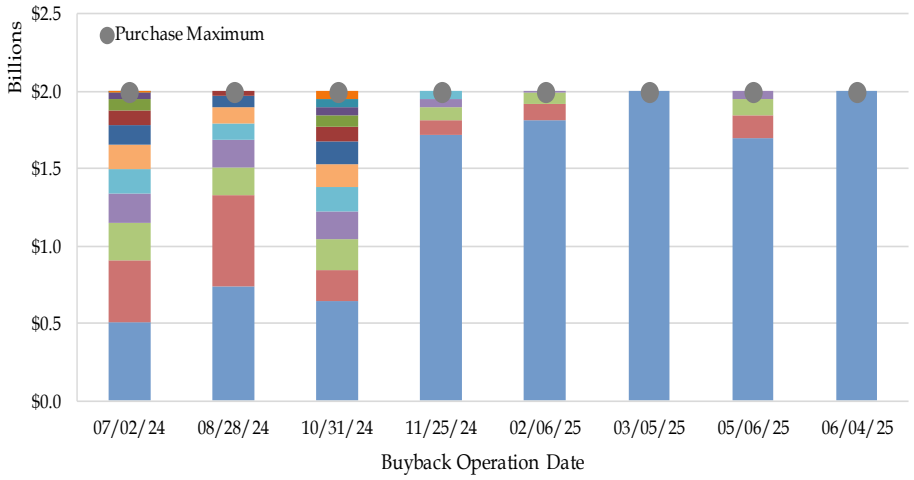




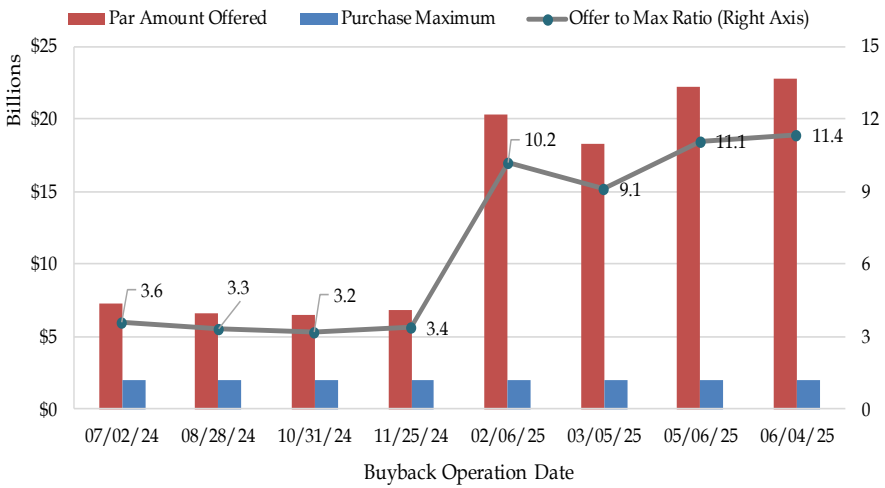
- On 6/17, Treasury purchased a little over $1 billion of the $4 billion purchase maximum in the 7Y to 10Y maturity sector (top left). This was Treasury's largest purchase to-date in the 7Y to 10Y sector.
- The offer to max ratio for the 6/17 buyback was 1.0, which was slightly lower than the 3/18 operation.
- Treasury continues to buy back significantly less than the maximum purchase amount in the 7Y to 10Y sector.

Liquidity Support Buybacks – Nominal Coupons 10Y to 20Y

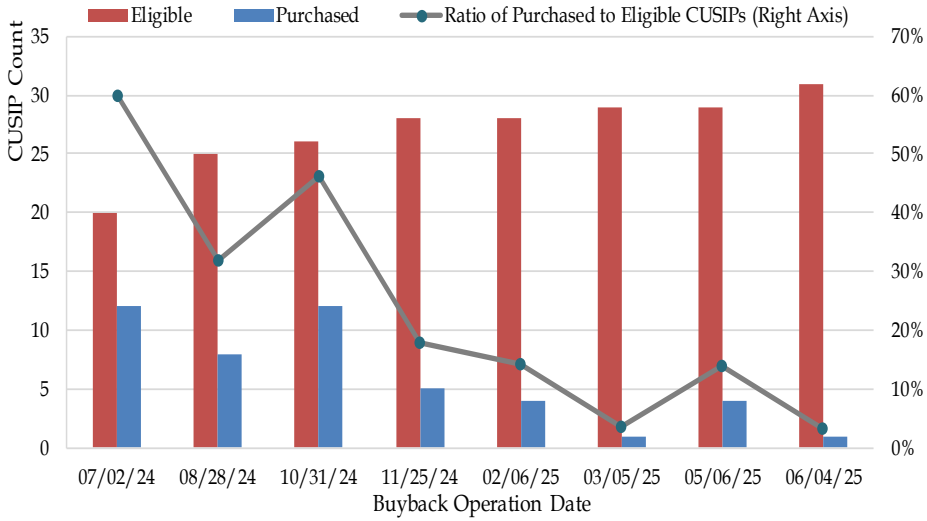
Amount Purchased by CUSIP in Liquidity Support Buybacks - Nominal Coupons 10Y to 20Y



Offer to Purchase Maximum Ratio for Liquidity Support Buybacks - Nominal Coupons 10Y to 20Y

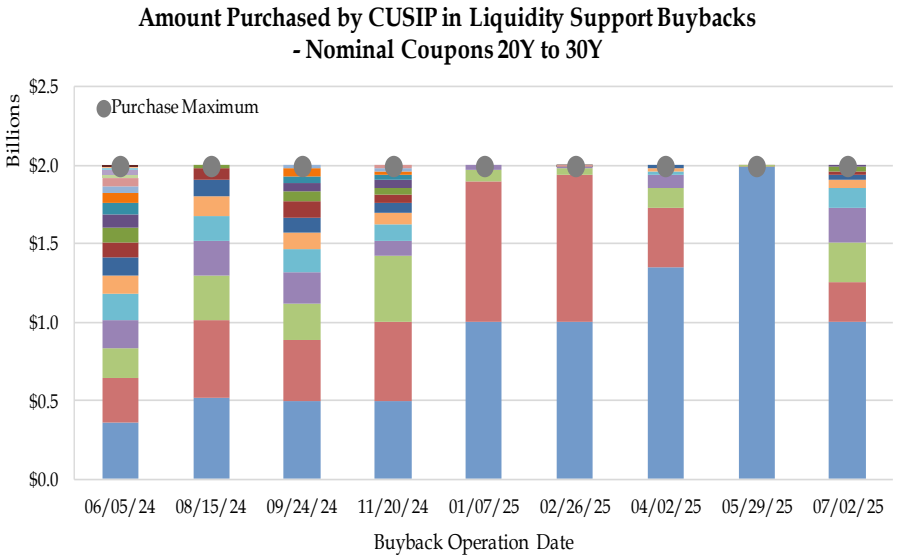


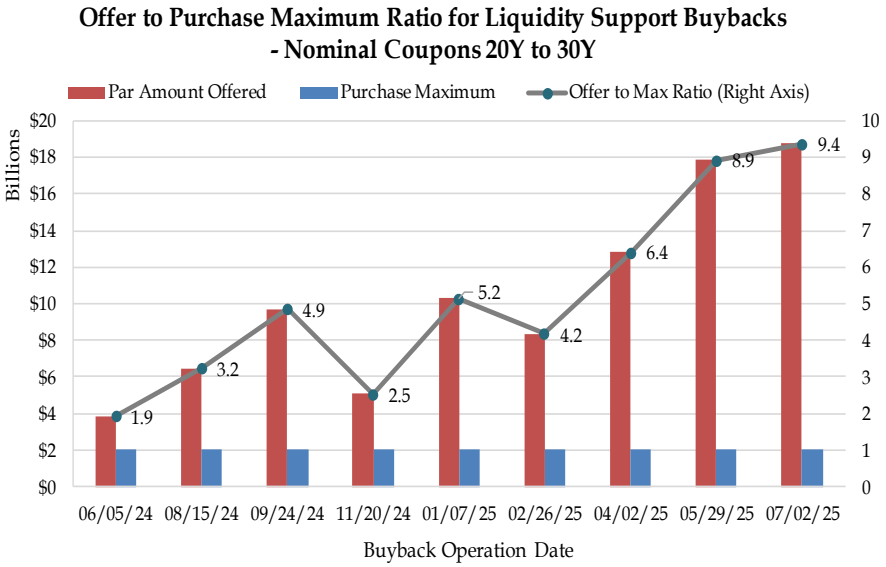
Eligible and Purchased CUSIP Counts for Liquidity Support Buybacks - Nominal Coupons 10Y to 20Y

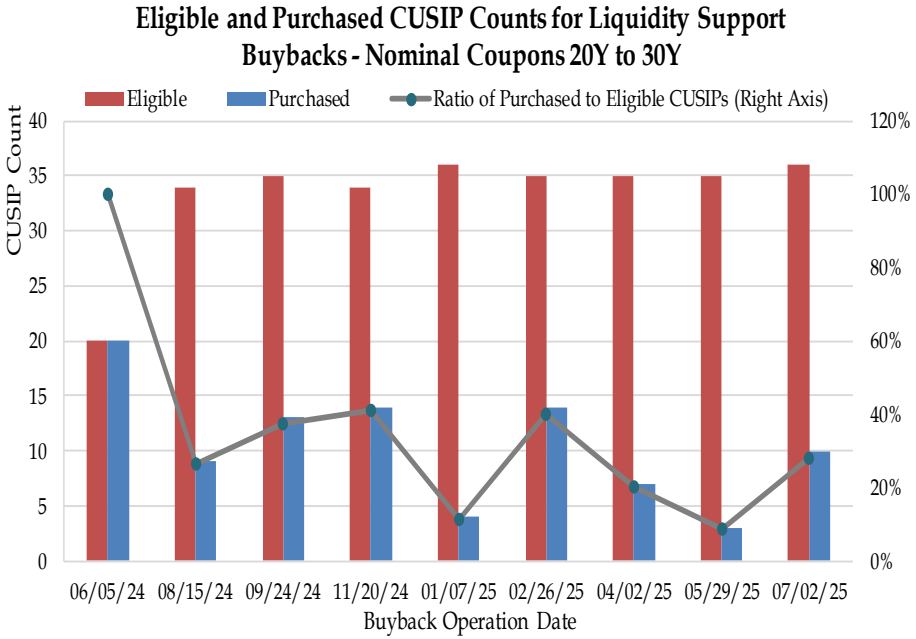


- Treasury continues to buy back the maximum par amount in the 10Y to 20Y sector.
- Both operations conducted in May and June printed high offer to max ratios of 11.1 and 11.4 (top right).
- Recent Treasury purchases in the 10Y to 20Y maturity range continue to be concentrated in a narrow subset of securities (see top left).

Liquidity Support Buybacks – Nominal Coupons 20Y to 30Y

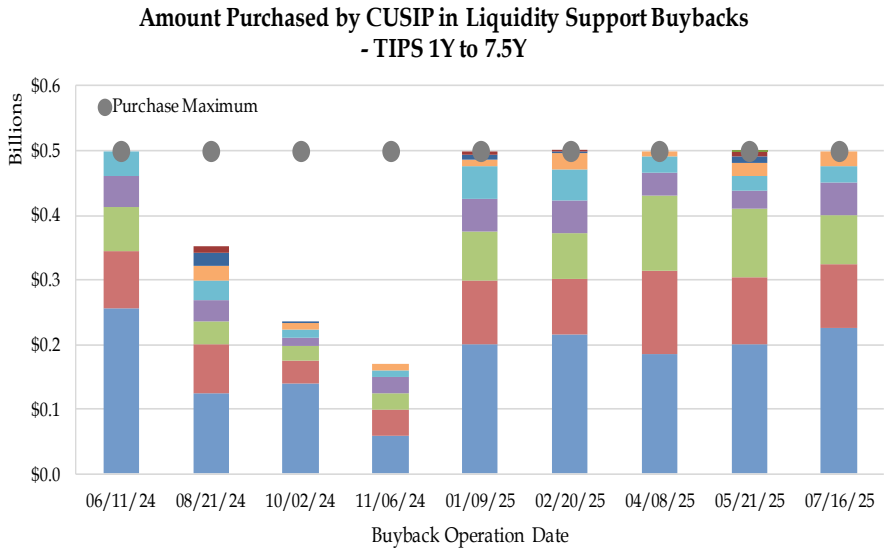


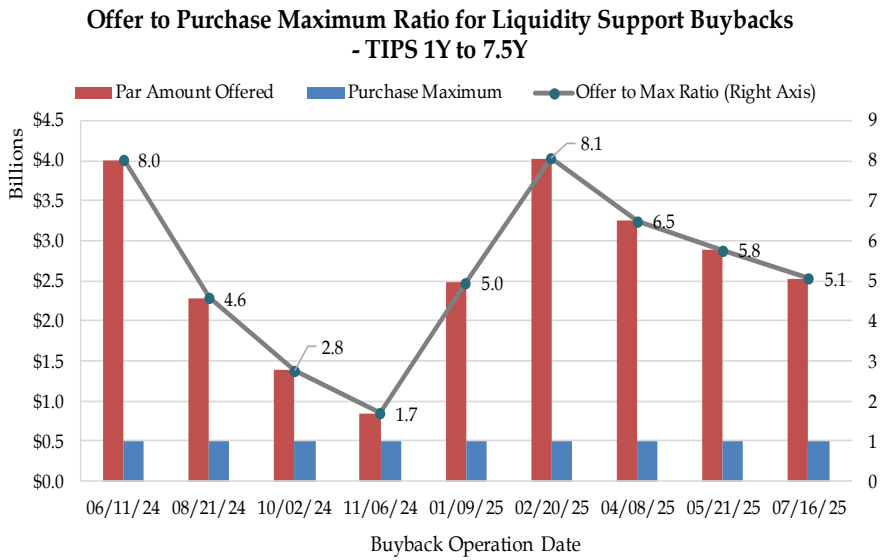


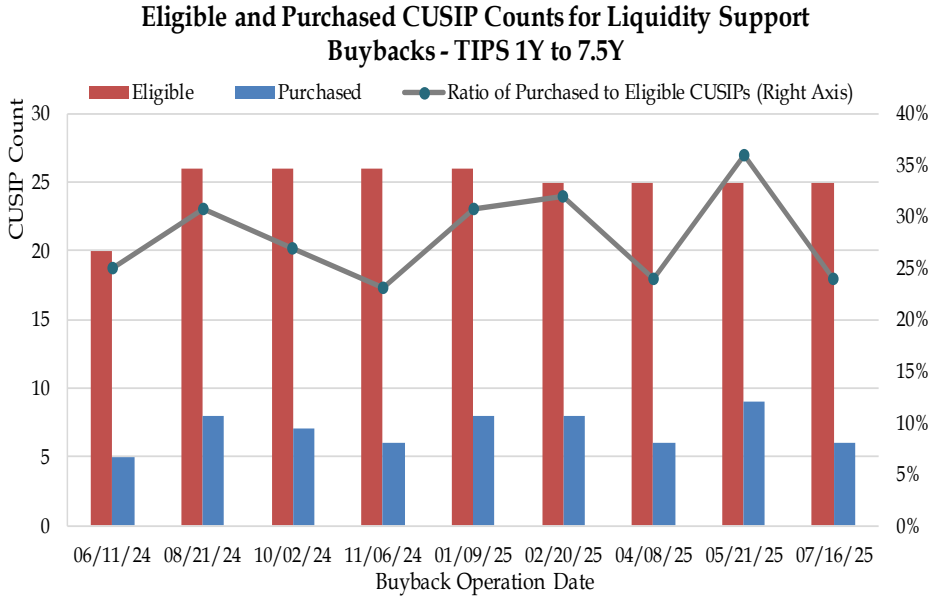


- Treasury has consistently bought back the maximum par amount in the 20Y to 30Y sector.
- The past five buybacks in this sector have printed relatively high offer to max ratios with purchases of $1 billion or more concentrated in single securities.
- The offer to max ratio for the most recent operation in this sector was a record high 9.4.

Liquidity Support Buybacks – TIPS 1Y to 7.5Y

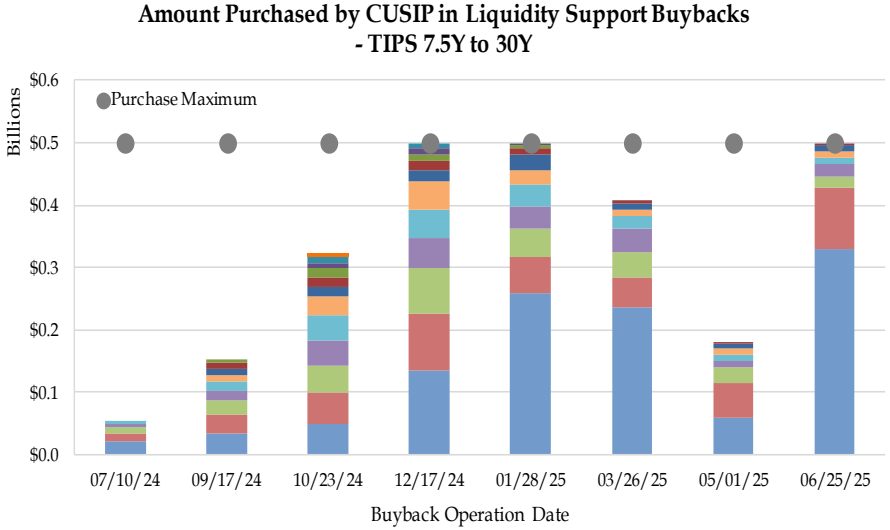


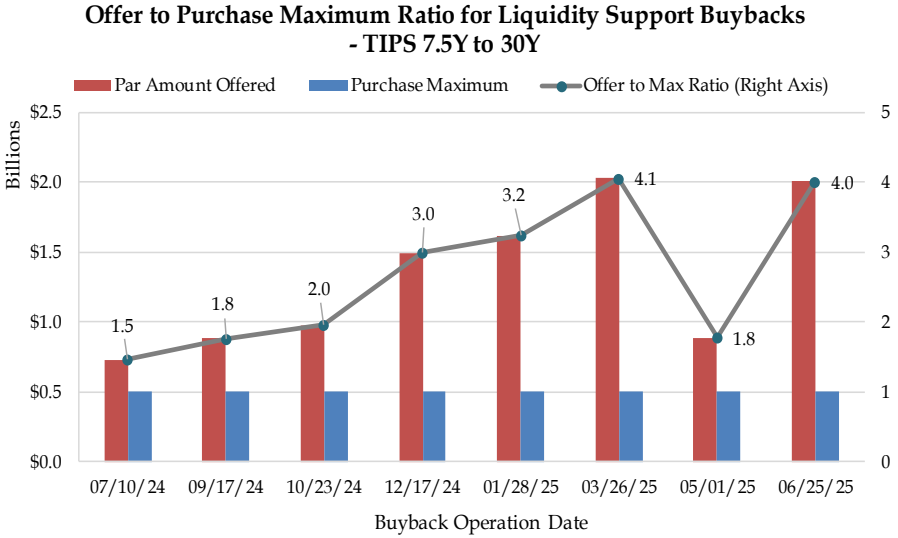


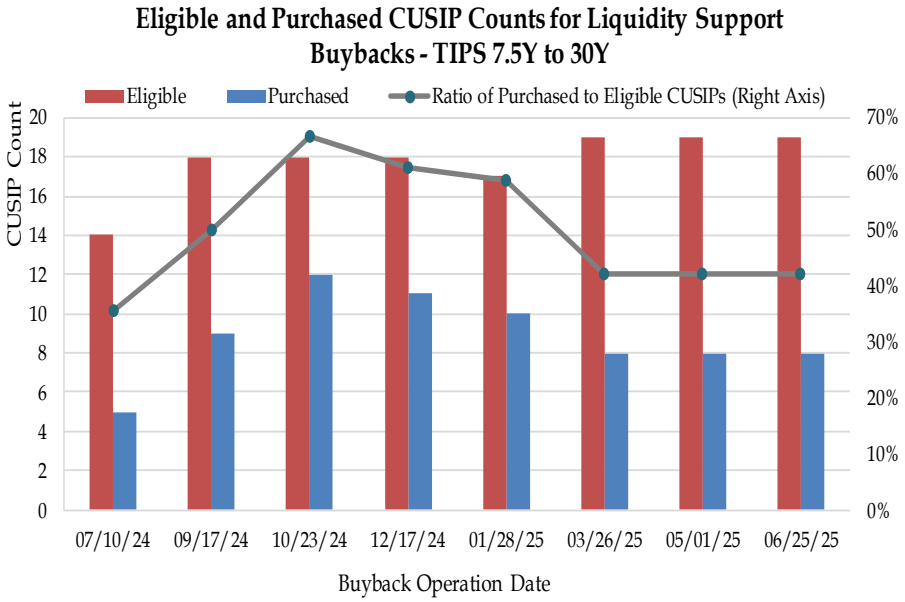


- Treasury continued to buy back the maximum par amount in short-end TIPS operations.
- Offer to max ratios for recent short-end TIPS operations are down from the February peak, but still well above the lows observed in November 2024.

Liquidity Support Buybacks –TIPS 7.5 to 30Y

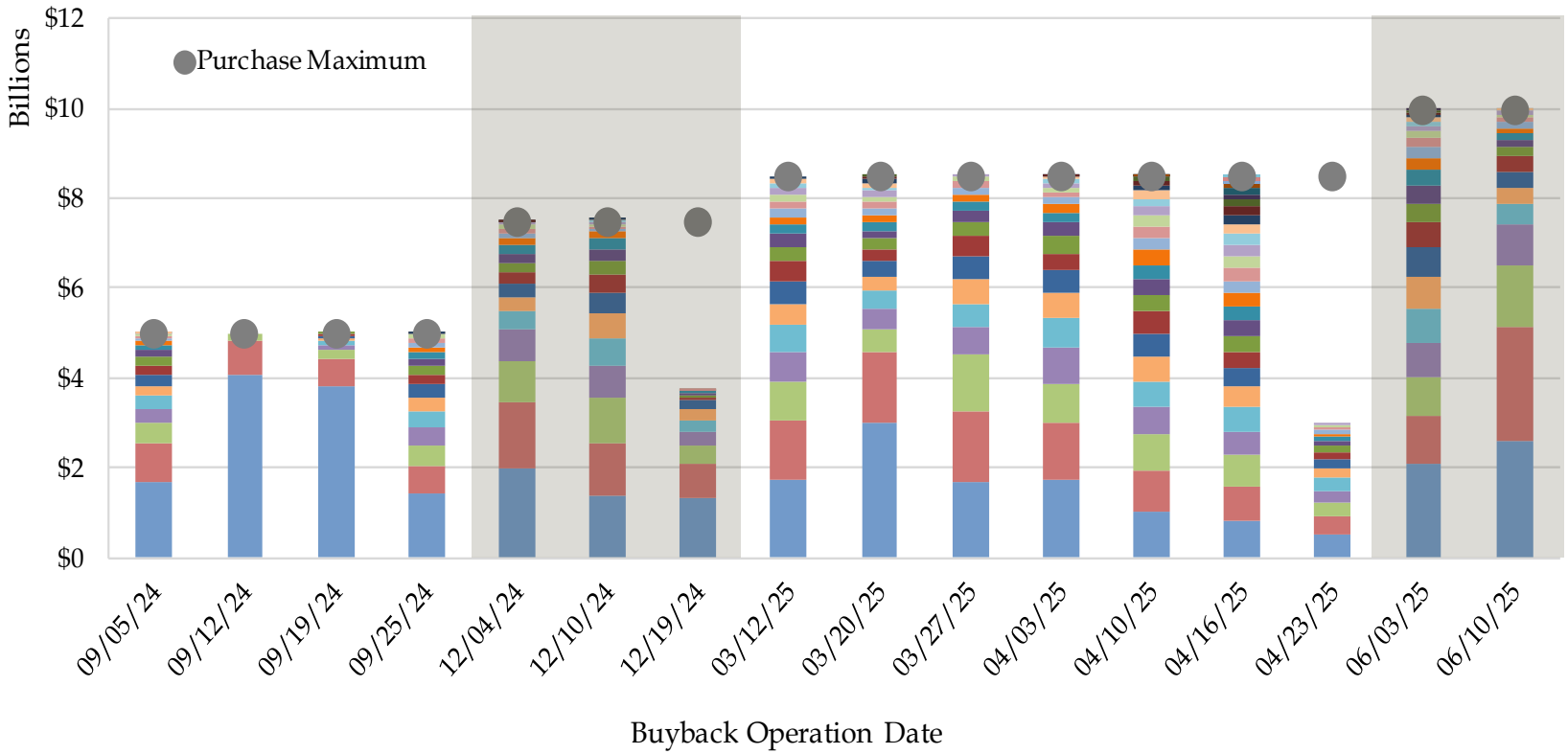




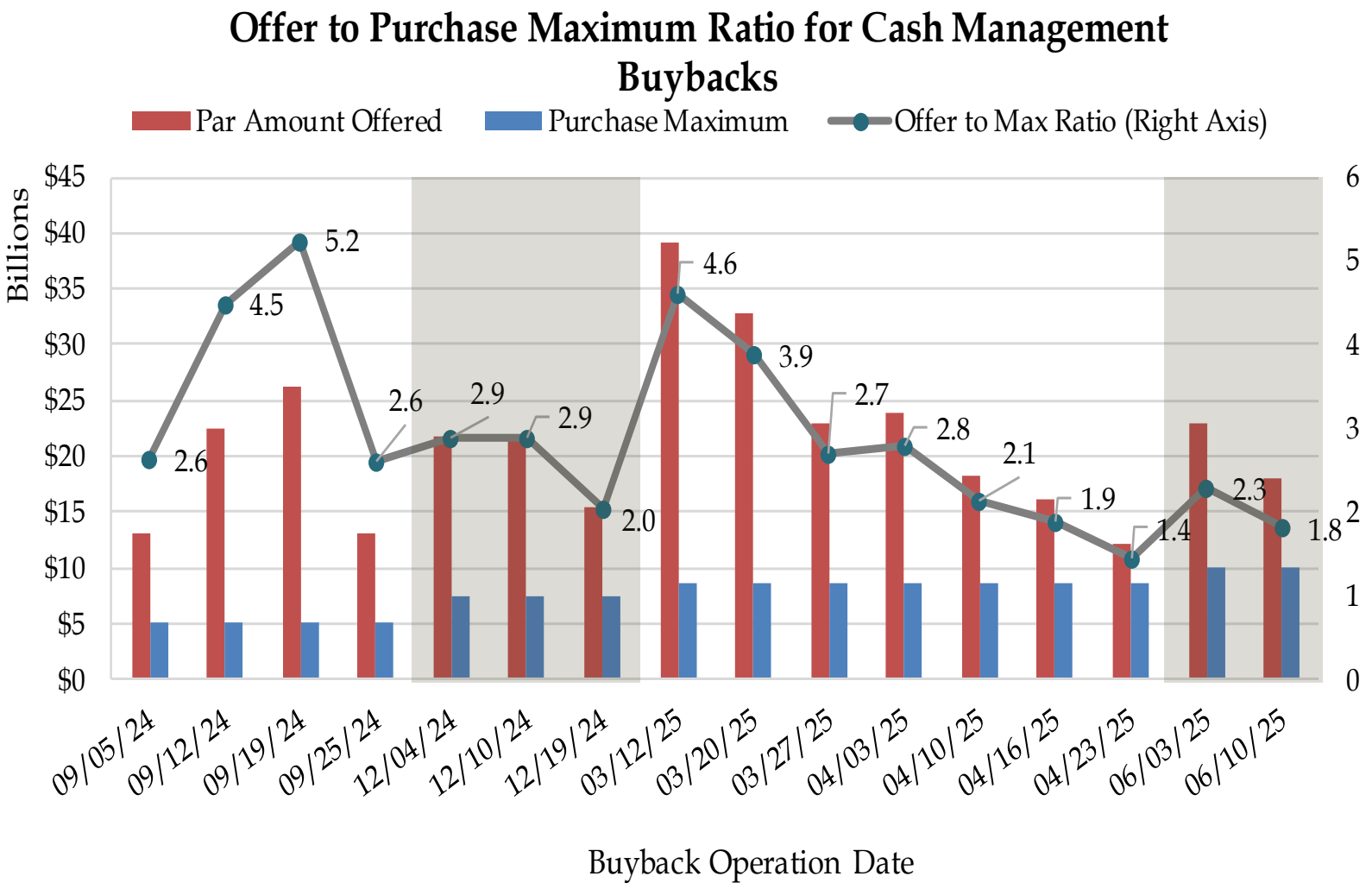


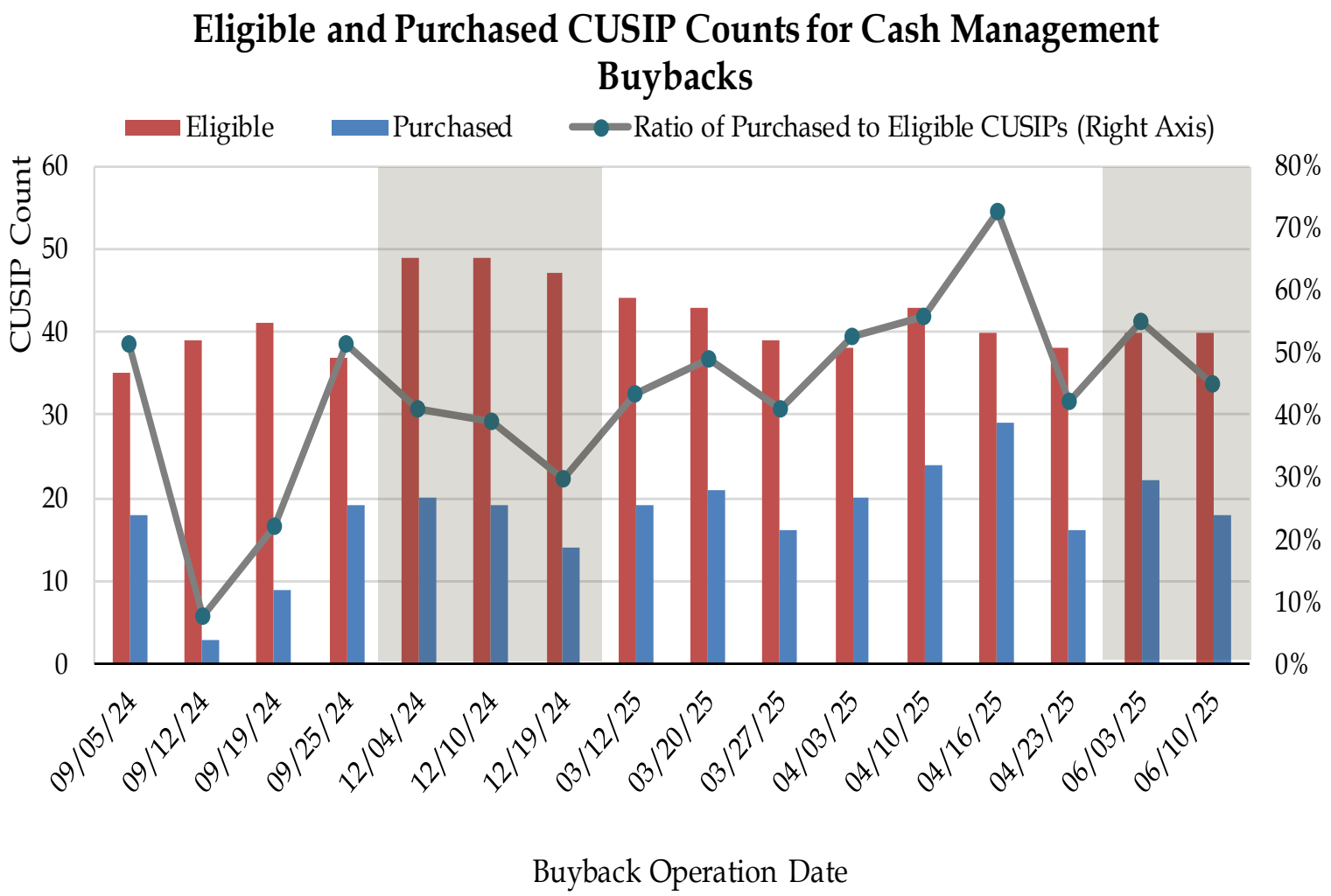
- In long-end TIPS, Treasury bought back the maximum par amount in the June operation after a smaller takedown in May.

Amount Purchased by CUSIP in Cash Management Buybacks

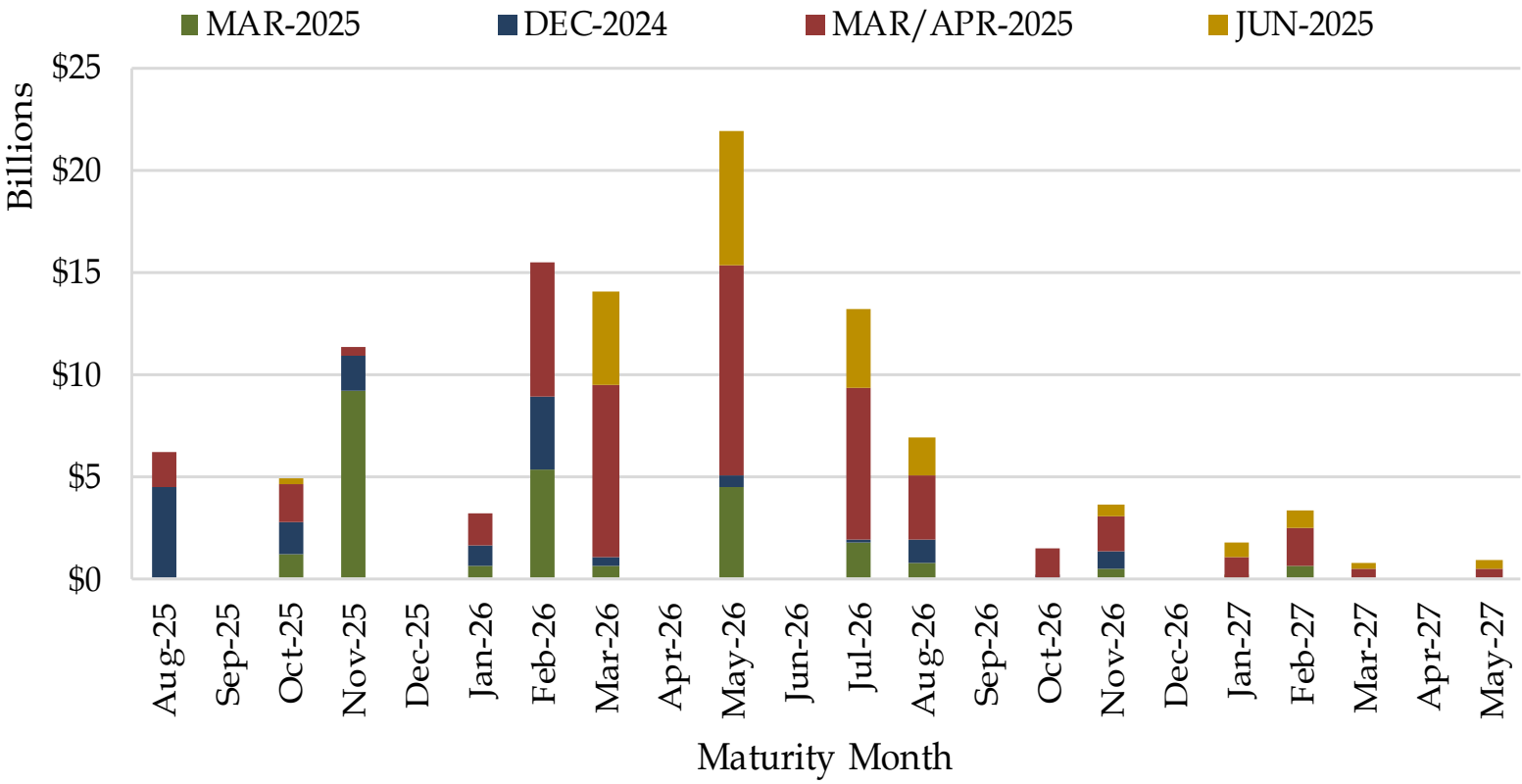


- Treasury conducted two cash management buybacks for up to $10 billion each in June (an increase from $8 billion from prior quarter). Treasury bought back the maximum par amount in both cash management buybacks this quarter. All cash management buybacks occur in the 1Mo to 2Y maturity sector.


Offer to Purchase Maximum Ratio for Cash Management Buybacks
Par Amount Offered
Purchase Maximum
Offer to Max Ratio (Right Axis)
Billions
$45
$40
$35
$30
$25
$20
$15
$10
$5
$0
6
5
4
3
2
1
0
2.6
4.5
5.2
2.6
2.9
2.9
2.0
4.6
3.9
2.7
2.8
2.1
1.9
1.4
2.3
1.8
09/05/24
09/12/24
09/19/24
09/25/24
12/04/24
12/10/24
12/19/24
03/12/25
03/20/25
03/27/25
04/03/25
04/10/25
04/16/25
04/23/25
06/03/25
06/10/25
Buyback Operation Date


Eligible and Purchased CUSIP Counts for Cash Management Buybacks
Eligible
Purchased
Ratio of Purchased to Eligible CUSIPs (Right Axis)
CUSIP Count
60
50
40
30
20
10
0
80%
70%
60%
50%
40%
30%
20%
10%
0%
09/05/24
09/12/24
09/19/24
09/25/24
12/04/24
12/10/24
12/19/24
03/12/25
03/20/25
03/27/25
04/03/25
04/10/25
04/16/25
04/23/25
06/03/25
06/10/25
Buyback Operation Date

Maturity Composition of Cash Management Buybacks

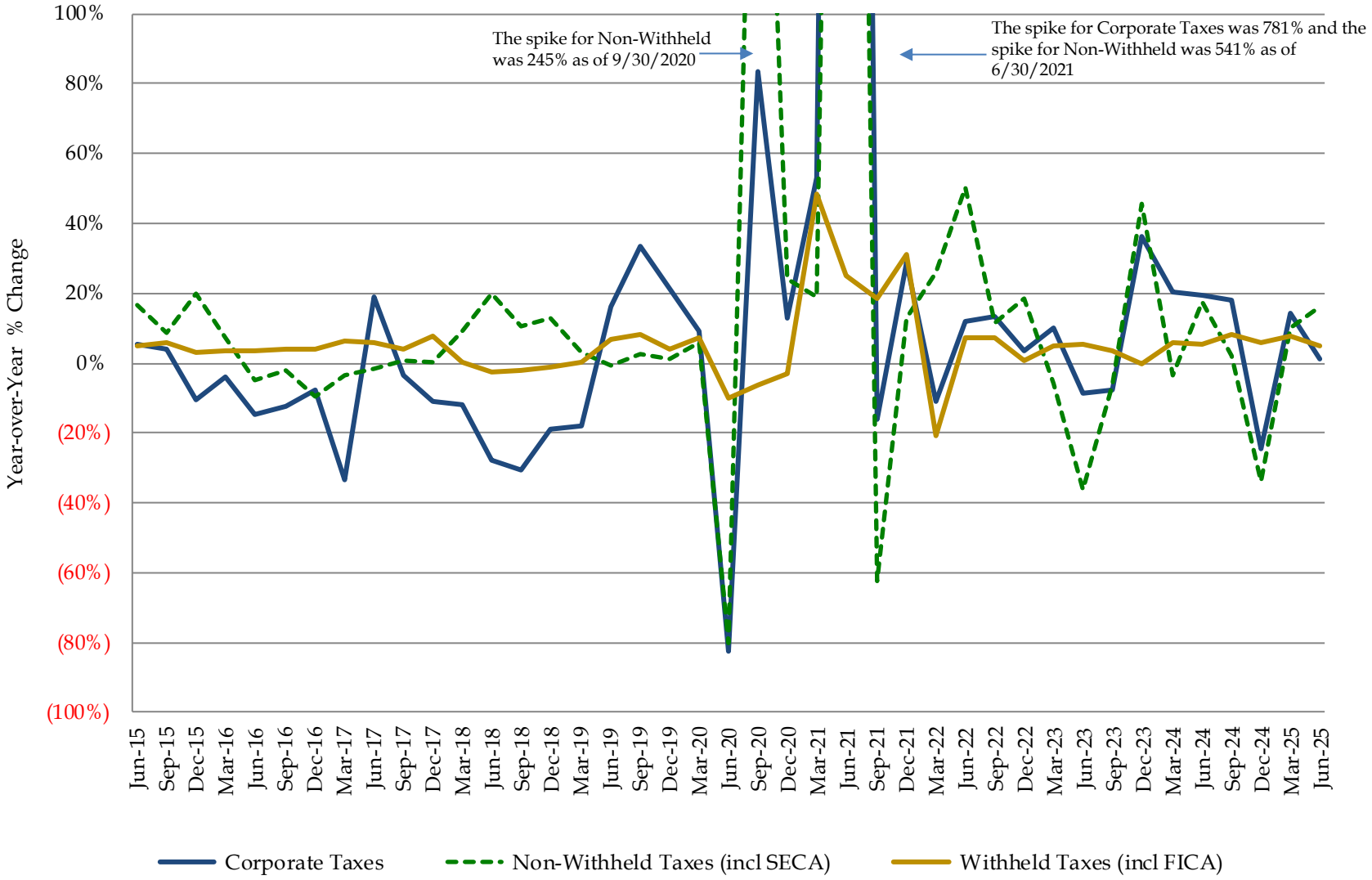


- Most of Treasury's cash management purchases in June 2025 were in securities maturing in March 2026, May 2026 and July 2026.

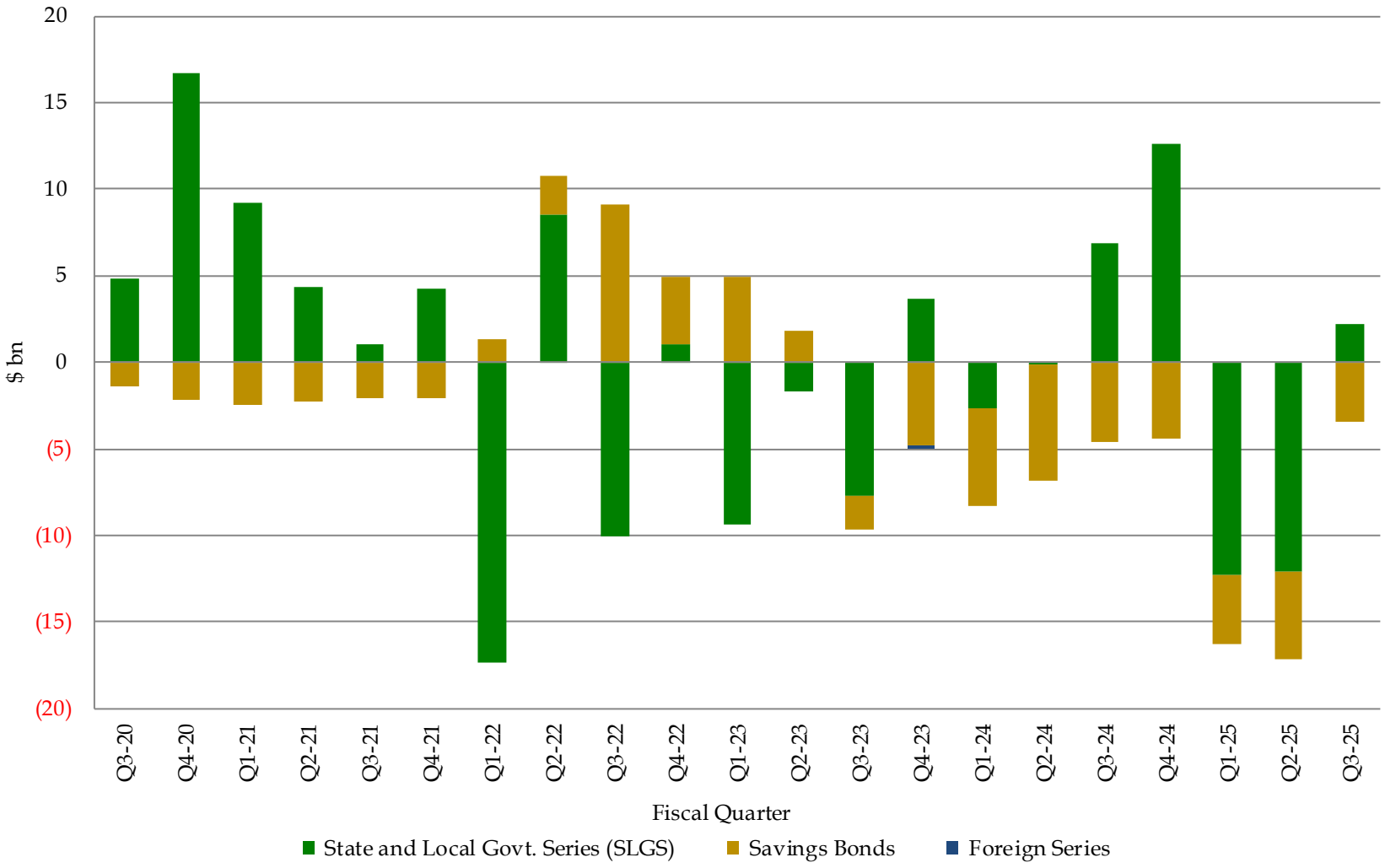
VIII. Appendix

Contents

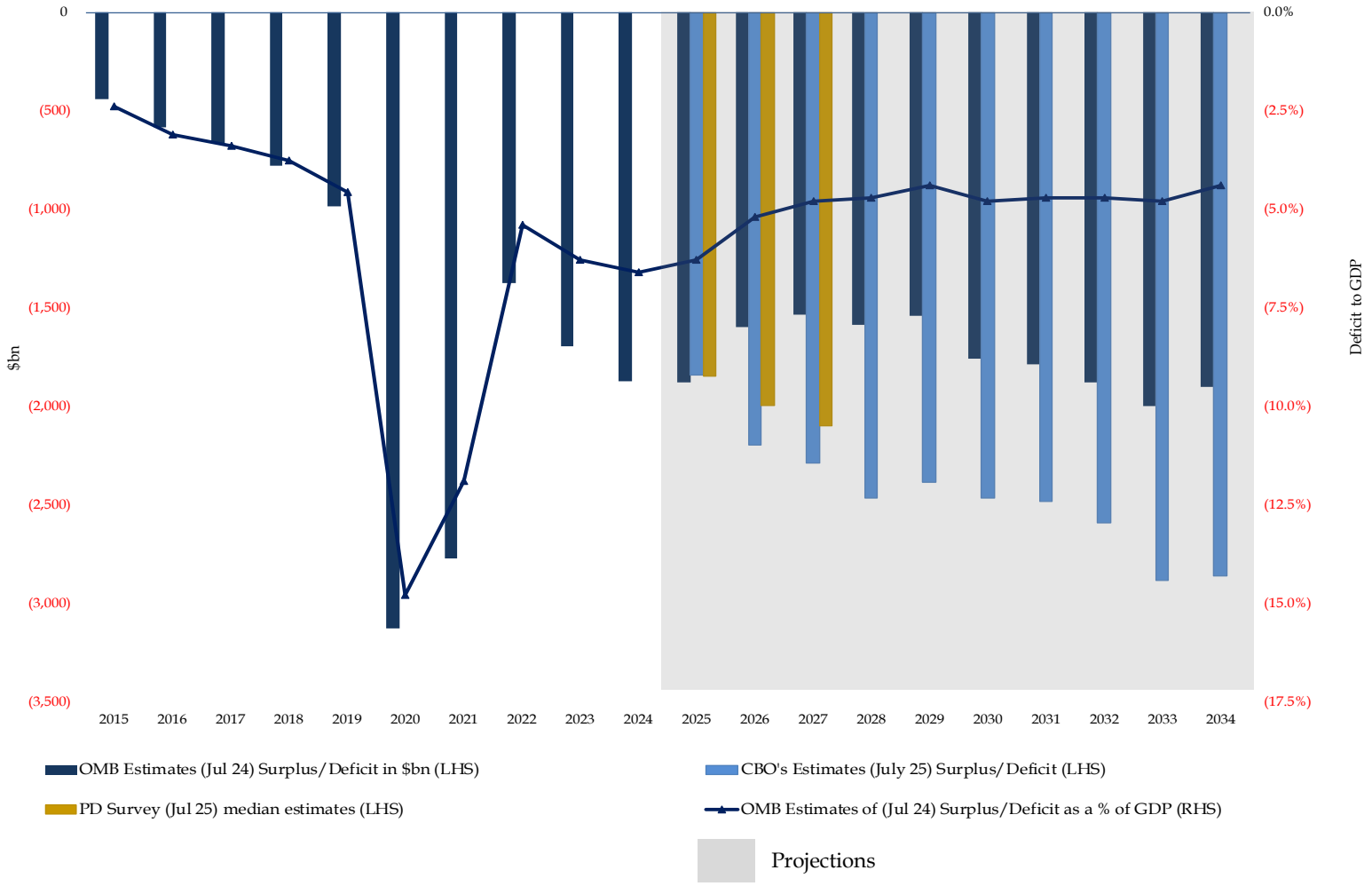
Quarterly Tax Receipts



Treasury Net Nonmarketable Borrowing



Budget Surplus/Deficit*



- OMB projections are using estimates from Table S-3 of "Mid-Session Review Budget of The U.S. Government, Fiscal Year 2025," July 2024.
- CBO projections are from "Estimated Budgetary Effects of Public Law 119-21, to Provide for Reconciliation Pursuant to Title II of H. Con. Res. 14, Relative to CBO's January 2025 Baseline", July 2025.

Sources of Privately-Held Financing in FY25 Q3

April - June 2025	
Net Bill Issuance	(372)
Net Coupon Issuance	506
Subtotal: Net Marketable Borrowing	134
Buyback	69
Ending Cash Balance	457
Beginning Cash Balance	406
Subtotal: Change in Cash Balance	51
Net Implied Funding for FY25 Q3*	14

1

Security	April - June 2025 Bill Issuance Gross	Maturing	Net	Fiscal Year-to-Date Bill Issuance Gross	Maturing	Net
4-Week	1,020	1,055	(35)	3,324	3,379	(55)
6-Week	855	925	(70)	1,290	925	365
8-Week	905	1,020	(115)	3,095	3,240	(145)
13-Week	988	1,048	(60)	3,087	3,084	3
17-Week	780	826	(46)	2,420	2,420	0
26-Week	884	936	(52)	2,734	2,756	(22)
52-Week	144	138	6	480	452	28
6-Week CMB	0	0	0	1,620	2,015	(395)
CMBs	125	125	0	270	270	0
Bill Subtotal	5,701	6,073	(372)	18,320	18,541	(221)

Security	April - June 2025 Coupon Issuance Gross	Maturing	Net	Fiscal Year-to-Date Coupon Issuance Gross	Maturing	Net
2-Year FRN	86	68	18	258	204	54
2-Year	207	126	81	621	377	244
3-Year	174	134	40	522	449	73
5-Year	210	125	85	630	321	309
7-Year	132	64	68	396	202	194
10-Year	120	50	70	360	163	197
20-Year	42	0	42	126	0	126
30-Year	69	0	69	207	7	200
5-Year TIPS	48	32	16	94	71	23
10-Year TIPS	18	0	18	73	40	33
20-Year TIPS**	0	0	0	0	27	(27)
30-Year TIPS	0	0	0	9	0	9
Coupon Subtotal	1,106	600	506	3,296	1,862	1,434
Buyback		69			160	

Total	6,807	6,742	134	21,616	20,562	1,214

* By adjusting the change in cash balance, Treasury arrives at the net implied funding number.
** Treasury is currently not issuing 20-year TIPS.

Privately-Held Net Marketable Borrowing Definition and Calculation Example

FY 2022 Actual Deficits and Privately-Held Net Marketable Borrowing, in $ billions

	FY 2022 Actual
FY 2022 Deficit	1,375
FY 2022 + Change in Cash Balance	421
FY 2022 + Other Means of Financing (e.g. Direct Loans)	-125
FY 2022 **= Total Net Marketable Borrowing**	1,671
FY 2022 + SOMA Redemption	150
FY 2022 **= Privately-Held Net Marketable Borrowing**	1,821

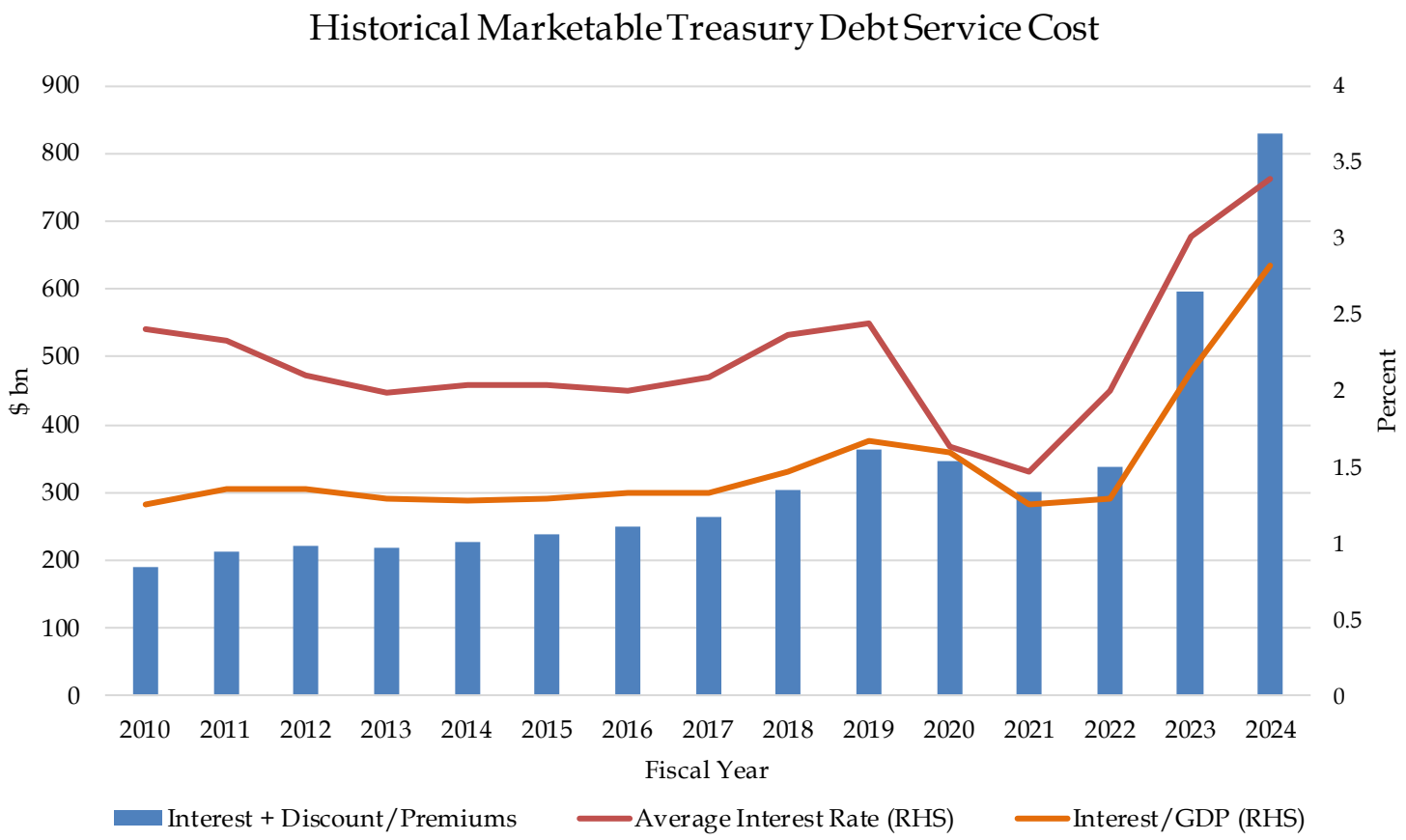
- Actual deficits are sourced from the Monthly Treasury Statement.
- Actual change in cash balance is sourced from the Daily Treasury Statement. Change in cash balance = cash balance of Sept 30, 2022 - cash balance of Sept 30, 2021
- Other Means of Financing include cash flows associated with federal credit programs, such as those related to student loans and loans to small businesses.
- Privately-Held Net Marketable Borrowing = Total Net Marketable Borrowing + SOMA Redemption
- SOMA redemption is the amount that the Federal Reserve redeems securities that Treasury has to replace with privately-held marketable borrowing. Actual SOMA redemptions amounts is from the Sources and Uses Reconciliation Table.
- Actual Privately-Held Net Marketable Borrowing is from the Sources and Uses Reconciliation Table.

FY 2025-2027 Deficits and Privately-Held Net Marketable Borrowing Estimates, in $ billions

	Primary Dealer			OFP	OMB	CBO
	25th	Median	75th			
FY 2025 Deficit	1,800	1,848	1,900		1,878	1,844
FY 2026 Deficit	1,940	2,000	2,125		1,601	2,200
FY 2027 Deficit	2,043	2,098	2,108		1,535	2,289
FY 2025 Change in Cash Balance	-86	-36	-36	-36	0	-36
FY 2026 Change in Cash Balance	0	0	0		0	0
FY 2027 Change in Cash Balance	0	0	0		0	0
FY 2025 Total Net Marketable Borrowing					1,901	1,883
FY 2026 Total Net Marketable Borrowing					1,695	2,267
FY 2027 Total Net Marketable Borrowing					1,648	2,355
FY 2025 SOMA Redemption	180	180	180	180		
FY 2026 SOMA Redemption	5	15	40			
FY 2027 SOMA Redemption	0	0	0			
FY 2025 Privately-Held Net Marketable Borrowing*	1,992	2,065	2,150	2,061	2,081	2,027
FY 2026 Privately-Held Net Marketable Borrowing*	2,000	2,135	2,200		1,710	2,246
FY 2027 Privately-Held Net Marketable Borrowing*	2,030	2,132	2,200		1,648	2,319
Estimates as of:		Jul-25		Jul-25	Jul-24	Jul-25

* All privately-held net marketable borrowing estimates are "normalized" using:
- 1) the median Primary Dealer's estimates for SOMA redemptions, and
- 2) assumed fiscal year 2025 cash balance of $850 billion, held constant in out years.

- OMB projections are using estimates are from Table S-3 of "Mid-Session Review Budget of The U.S. Government, Fiscal Year 2025," July 2024.
- CBO deficit projections are from "Estimated Budgetary Effects of Public Law 119-21, to Provide for Reconciliation Pursuant to Title II of H. Con. Res. 14, Relative to CBO's January 2025 Baseline", July 2025. CBO's total borrowing projections are derived by applying the same changes from deficit to the CBO's January 2025 total borrowing estimates.

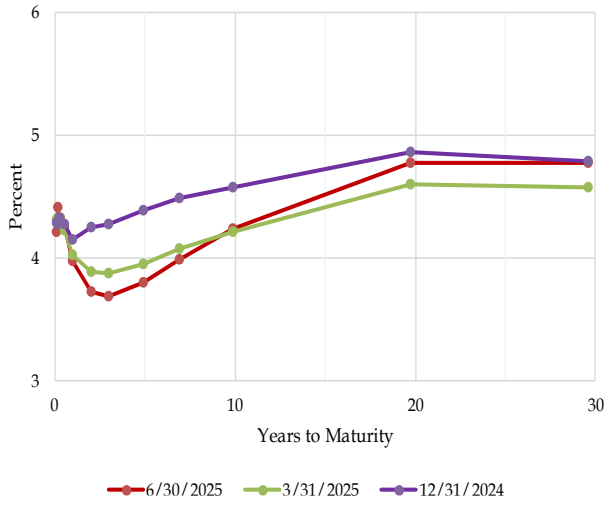


Source: https://fiscaldata.treasury.gov/datasets

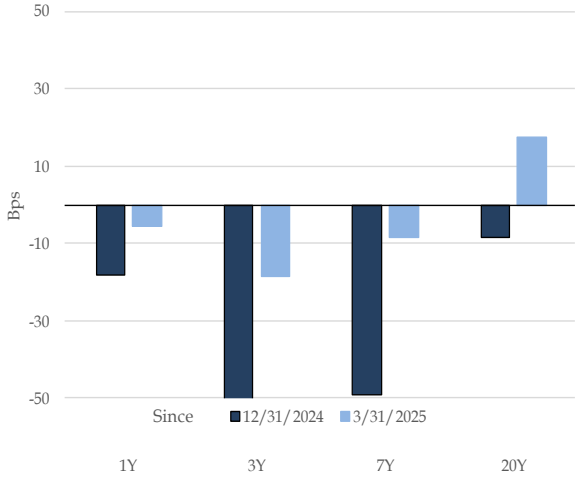
The average interest rates for total marketable debt do not include the Treasury Inflation-Indexed Securities and the Treasury Floating Rate Notes. However, they include securities from Federal Financing Bank. The average interest rates in the chart are as of corresponding fiscal year-end-dates.

Various Historical Treasury Interest Rate Metrics

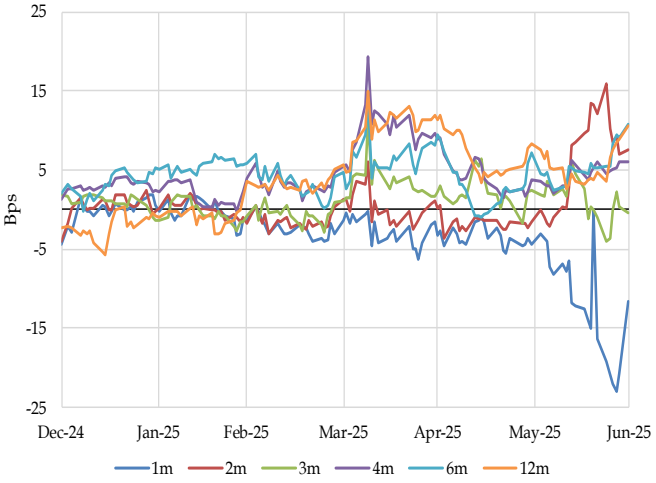
Treasury Nominal Yield Curve
as of specified dates



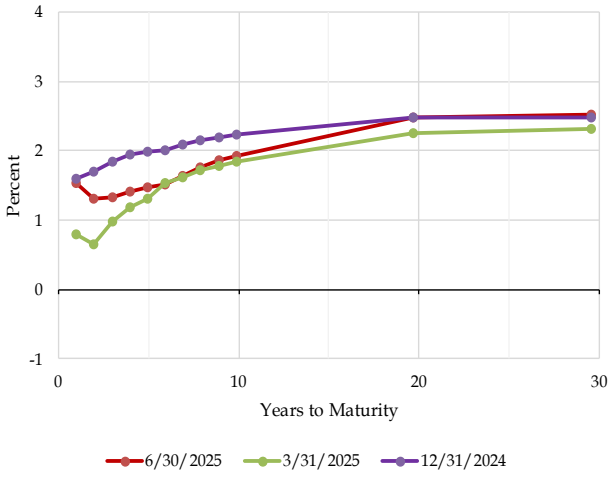
Nominal Yield Changes in Selected Tenors
Through the end of 06/30/25



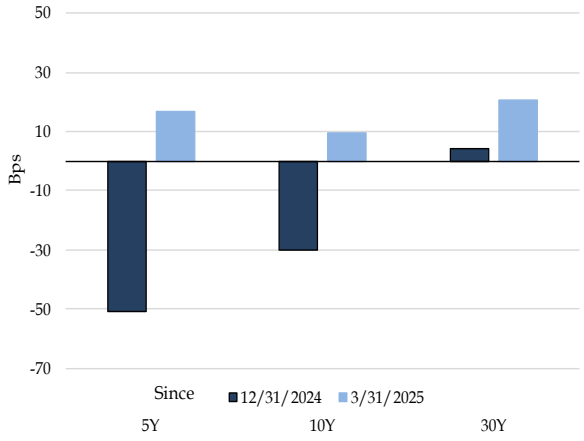
Bills-SOFR OIS spreads



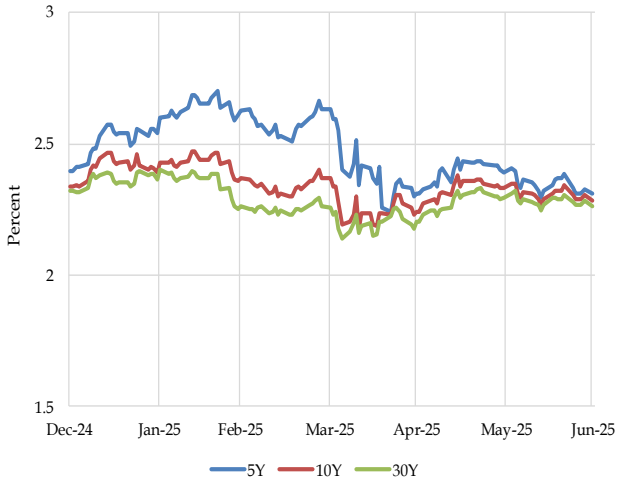
Treasury Real Yield Curve
as of specified dates



Real Yield Changes in Selected Tenors
Through the end of 06/30/25



Breakevens



Source: Bloomberg

Projected Privately-Held Net Marketable Borrowing
Assuming Private Coupon Issuance & Total Bills Outstanding Remain Constant as of 7/31/2025*

Fiscal Year	Bills	2/3/5	7/10/20/30	TIPS	FRN	Historical/Projected Net Borrowing Capacity
2020	2,652	538	724	46	55	4,015
2021	(1,315)	1,260	1,328	55	92	1,420
2022	(53)	744	1,027	61	42	1,821
2023	1,689	319	680	50	(38)	2,699
2024	789	737	902	87	52	2,567
2025	(9)	832	963	41	68	1,896
2026	0	510	969	66	10	1,554
2027	0	337	843	47	0	1,227
2028	0	297	521	25	0	843
2029	0	85	646	25	0	756
2030	0	70	702	32	0	803
2031	0	0	508	19	0	527
2032	0	0	509	(5)	0	504
2033	0	0	519	2	0	521
2034	0	0	438	(10)	0	428
2035	0	0	444	(25)	0	419

*Projections reflect only SOMA rollovers at auction of principal payments of Treasury securities. No adjustments are made for open-market outright purchases and subsequent rollovers.

Bills										
Issue	Settle Date	Stop Out Rate (%)	Bid-to-Cover Ratio	Competitive Awards ($bn)	% Primary Dealer	% Direct	% Indirect	Non-Competitive Awards ($bn)	SOMA "Add Ons" ($bn)	10-Year Equivalent ($bn)*
4-Week	4/8/2025	4.240	3.14	73.5	21.9	2.6	75.5	6.5	0.3	0.8
4-Week	4/15/2025	4.245	2.95	78.5	24.7	2.1	73.3	6.5	0.3	0.8
4-Week	4/22/2025	4.240	2.91	78.5	29.0	2.5	68.5	6.5	0.3	0.8
4-Week	4/29/2025	4.220	2.90	78.5	27.3	3.3	69.4	6.5	0.3	0.8
4-Week	5/6/2025	4.240	2.74	78.5	36.3	3.7	60.0	6.5	0.3	0.8
4-Week	5/13/2025	4.225	2.82	78.5	35.6	3.1	61.3	6.5	0.3	0.8
4-Week	5/20/2025	4.220	2.91	78.6	29.2	2.5	68.3	6.4	0.3	0.8
4-Week	5/27/2025	4.220	2.78	78.6	30.5	3.0	66.4	6.4	0.3	0.8
4-Week	6/3/2025	4.215	2.92	68.6	27.6	4.2	68.1	6.4	0.3	0.7
4-Week	6/10/2025	4.170	3.26	58.4	21.8	3.8	74.3	6.6	0.3	0.6
4-Week	6/17/2025	4.080	3.22	58.8	13.4	5.1	81.5	6.2	0.3	0.6
4-Week	6/24/2025	4.060	3.15	59.4	18.1	2.9	78.9	5.6	0.3	0.6
4-Week	7/1/2025	4.000	3.06	53.9	22.3	2.8	74.9	6.1	0.3	0.6
6-Week	4/3/2025	4.245	2.88	69.2	32.2	2.7	65.0	0.8	4.5	1.1
6-Week	4/10/2025	4.265	2.83	69.1	35.7	4.6	59.6	0.9	3.9	1.1
6-Week	4/17/2025	4.245	2.74	69.0	35.6	3.7	60.7	1.0	3.4	1.1
6-Week	4/24/2025	4.240	2.83	69.0	46.9	3.7	49.4	1.0	3.1	1.1
6-Week	5/1/2025	4.230	3.14	69.1	34.7	3.7	61.7	0.9	5.2	1.1
6-Week	5/8/2025	4.235	2.91	69.0	37.0	2.7	60.3	1.0	4.2	1.1
6-Week	5/15/2025	4.245	2.77	69.0	36.6	5.6	57.8	1.0	6.1	1.1
6-Week	5/22/2025	4.235	2.97	69.1	37.0	5.3	57.6	0.9	4.4	1.0
6-Week	5/29/2025	4.235	3.00	69.3	40.0	5.5	54.5	0.7	3.9	1.0
6-Week	6/5/2025	4.225	3.44	59.0	36.6	3.8	59.7	1.0	1.3	0.9
6-Week	6/12/2025	4.195	3.32	54.2	32.4	4.9	62.7	0.8	1.8	0.8
6-Week	6/20/2025	4.180	2.78	54.2	45.5	6.0	48.6	0.8	1.3	0.8
6-Week	6/26/2025	4.420	3.11	53.8	32.8	6.3	60.8	1.2	2.3	0.8
8-Week	4/8/2025	4.240	2.87	73.4	31.3	2.9	65.8	1.6	0.3	1.4
8-Week	4/15/2025	4.235	3.10	73.5	27.2	2.7	70.1	1.5	0.2	1.4
8-Week	4/22/2025	4.235	2.94	73.6	33.9	3.5	62.6	1.4	0.2	1.4
8-Week	4/29/2025	4.225	3.01	73.4	33.4	3.0	63.6	1.6	0.2	1.4
8-Week	5/6/2025	4.220	3.28	73.4	24.9	2.9	72.2	1.6	0.3	1.4
8-Week	5/13/2025	4.225	2.98	73.5	34.1	3.4	62.5	1.5	0.2	1.4
8-Week	5/20/2025	4.235	2.85	73.5	30.8	2.6	66.5	1.5	0.2	1.4
8-Week	5/27/2025	4.235	2.89	73.4	38.8	4.3	56.9	1.6	0.2	1.4
8-Week	6/3/2025	4.225	3.07	63.6	31.5	4.5	63.9	1.4	0.2	1.2
8-Week	6/10/2025	4.225	3.38	53.5	38.3	3.6	58.0	1.5	0.2	1.0
8-Week	6/17/2025	4.380	2.67	53.4	56.4	9.2	34.4	1.6	0.2	1.0
8-Week	6/24/2025	4.470	2.70	51.4	48.7	9.1	42.2	3.6	0.2	1.0
8-Week	7/1/2025	4.390	3.24	47.3	35.4	11.4	53.2	2.7	0.2	0.9

*Approximated using prices at settlement and includes both competitive and non-competitive awards.

Bills (cont.)										
Issue	Settle Date	Stop Out Rate (%)	Bid-to-Cover Ratio	Competitive Awards ($bn)	% Primary Dealer	% Direct	% Indirect	Non-Competitive Awards ($bn)	SOMA "Add Ons" ($bn)	10-Year Equivalent ($bn)*
13-Week	4/10/2025	4.175	2.82	73.8	29.3	4.6	66.1	2.2	4.3	2.5
13-Week	4/17/2025	4.225	2.96	73.4	32.6	4.3	63.1	2.6	3.7	2.5
13-Week	4/24/2025	4.225	3.01	73.6	30.0	8.1	61.9	2.4	3.3	2.5
13-Week	5/1/2025	4.200	3.10	73.7	27.2	4.2	68.5	2.3	5.6	2.5
13-Week	5/8/2025	4.220	2.74	73.6	37.3	4.6	58.1	2.4	4.6	2.5
13-Week	5/15/2025	4.300	2.51	73.5	46.6	4.7	48.7	2.5	6.7	2.6
13-Week	5/22/2025	4.285	2.76	73.3	35.8	4.5	59.7	2.7	4.8	2.5
13-Week	5/29/2025	4.255	3.18	73.7	31.5	8.3	60.2	2.3	4.3	2.4
13-Week	6/5/2025	4.250	2.68	73.6	45.1	6.4	48.5	2.4	1.6	2.4
13-Week	6/12/2025	4.250	2.69	73.4	32.9	7.2	59.8	2.6	2.5	2.4
13-Week	6/20/2025	4.240	2.99	73.5	28.9	8.2	62.8	2.5	1.8	2.4
13-Week	6/26/2025	4.195	3.49	73.8	11.9	6.9	81.3	2.2	3.2	2.4
13-Week	7/3/2025	4.235	3.04	77.0	21.1	7.4	71.5	2.0	5.3	2.6
17-Week	4/8/2025	4.200	2.98	59.4	34.3	4.9	60.8	0.6	0.2	2.4
17-Week	4/15/2025	4.250	2.71	59.4	43.1	4.0	52.8	0.6	0.2	2.4
17-Week	4/22/2025	4.225	2.75	59.3	38.8	1.6	59.6	0.7	0.2	2.4
17-Week	4/29/2025	4.210	2.92	59.4	40.7	3.0	56.3	0.7	0.2	2.5
17-Week	5/6/2025	4.190	3.08	59.3	33.9	2.8	63.3	0.7	0.2	2.5
17-Week	5/13/2025	4.200	3.02	59.4	31.6	3.5	64.9	0.6	0.2	2.5
17-Week	5/20/2025	4.240	3.28	59.4	34.4	4.5	61.1	0.6	0.2	2.5
17-Week	5/27/2025	4.230	3.21	59.4	37.6	3.5	58.9	0.6	0.2	2.4
17-Week	6/3/2025	4.220	3.36	59.4	26.7	11.4	61.9	0.6	0.2	2.4
17-Week	6/10/2025	4.205	3.13	59.4	33.8	4.0	62.2	0.6	0.2	2.4
17-Week	6/17/2025	4.220	2.96	59.4	32.6	5.1	62.3	0.6	0.2	2.4
17-Week	6/24/2025	4.235	2.88	59.5	26.6	5.4	68.0	0.5	0.2	2.4
17-Week	7/1/2025	4.195	3.13	62.5	21.0	6.6	72.4	0.5	0.3	2.5

*Approximated using prices at settlement and includes both competitive and non-competitive awards.

Bills (cont.)										
Issue	Settle Date	Stop Out Rate (%)	Bid-to-Cover Ratio	Competitive Awards ($bn)	% Primary Dealer	% Direct	% Indirect	Non-Competitive Awards ($bn)	SOMA "Add Ons" ($bn)	10-Year Equivalent ($bn)*
26-Week	4/10/2025	4.000	2.79	66.5	23.9	4.2	71.9	1.5	3.8	4.4
26-Week	4/17/2025	4.060	2.80	66.5	23.7	9.5	66.8	1.5	3.3	4.4
26-Week	4/24/2025	4.050	2.93	66.3	23.3	13.4	63.3	1.7	3.0	4.4
26-Week	5/1/2025	4.065	2.80	66.5	30.3	10.0	59.7	1.5	5.0	4.5
26-Week	5/8/2025	4.090	3.52	66.2	23.7	9.2	67.1	1.8	4.1	4.5
26-Week	5/15/2025	4.105	3.26	66.1	22.1	12.8	65.1	1.9	6.0	4.6
26-Week	5/22/2025	4.140	2.59	66.3	38.9	10.6	50.5	1.7	4.3	4.4
26-Week	5/29/2025	4.160	2.95	66.4	35.5	9.7	54.9	1.6	3.8	4.4
26-Week	6/5/2025	4.150	3.13	66.0	29.3	11.3	59.4	2.0	1.5	4.2
26-Week	6/12/2025	4.150	2.74	66.2	37.5	12.0	50.5	1.8	2.2	4.3
26-Week	6/20/2025	4.155	2.73	66.1	32.6	11.3	56.1	1.9	1.6	4.2
26-Week	6/26/2025	4.120	2.70	66.4	38.1	7.4	54.4	1.6	2.9	4.4
26-Week	7/3/2025	4.110	2.77	68.8	29.8	8.7	61.5	2.2	4.8	4.7
52-Week	4/17/2025	3.820	2.94	47.0	28.3	2.7	69.0	1.0	2.4	6.3
52-Week	5/15/2025	3.930	3.31	47.0	21.0	2.0	77.0	1.0	4.2	6.5
52-Week	6/12/2025	3.940	3.22	46.9	24.0	3.2	72.8	1.1	1.6	6.1
CMB	4/3/2025	4.250	3.43	49.9	31.1	4.1	64.8	0.1	0.0	0.2
CMB	4/8/2025	4.300	2.65	49.9	57.5	6.0	36.5	0.1	0.0	0.2
CMB	5/13/2025	4.240	4.00	24.9	72.9	5.2	21.8	0.1	0.0	0.1
CMB	7/1/2025	4.250	2.46	59.9	50.5	6.5	43.0	0.1	0.0	1.6

*Approximated using prices at settlement and includes both competitive and non-competitive awards.

Nominal Coupons & FRNs										
Issue	Settle Date	Stop Out Rate (%)*	Bid-to-Cover Ratio	Competitive Awards ($bn)	% Primary Dealer	% Direct	% Indirect	Non-Competitive Awards ($bn)	SOMA "Add Ons" ($bn)	10-Year Equivalent ($bn)**
2-Year	4/30/2025	3.795	2.52	68.6	13.7	30.1	56.2	0.4	4.7	17.9
2-Year	6/2/2025	3.955	2.57	68.7	10.5	26.2	63.3	0.3	9.4	18.6
2-Year	6/30/2025	3.786	2.58	68.7	13.2	26.3	60.5	0.3	6.9	18.1
3-Year	4/15/2025	3.784	2.47	57.8	20.7	6.2	73.0	0.2	9.7	24.2
3-Year	5/15/2025	3.824	2.56	57.7	13.9	23.7	62.4	0.3	20.5	28.2
3-Year	6/16/2025	3.972	2.52	57.9	15.2	18.0	66.8	0.1	1.0	20.7
5-Year	4/30/2025	3.995	2.41	69.9	11.1	24.8	64.0	0.1	4.8	43.0
5-Year	6/2/2025	4.071	2.39	69.9	9.2	12.4	78.4	0.1	9.6	44.5
5-Year	6/30/2025	3.879	2.36	69.9	10.9	24.4	64.7	0.1	7.0	43.4
7-Year	4/30/2025	4.123	2.55	43.9	15.3	25.4	59.3	0.1	3.0	36.2
7-Year	6/2/2025	4.194	2.69	43.8	4.8	23.6	71.5	0.2	6.0	37.5
7-Year	6/30/2025	4.022	2.53	43.9	11.6	11.6	76.7	0.1	4.4	36.6
10-Year	4/15/2025	4.435	2.67	38.9	10.7	1.4	87.9	0.1	6.5	45.4
10-Year	5/15/2025	4.342	2.60	41.9	8.9	19.9	71.2	0.1	14.8	58.5
10-Year	6/16/2025	4.421	2.52	38.9	9.0	20.5	70.6	0.1	0.7	39.6
20-Year	4/30/2025	4.810	2.63	12.9	17.0	12.3	70.7	0.1	0.9	22.3
20-Year	6/2/2025	5.047	2.46	15.8	16.9	14.1	69.0	0.2	2.2	28.0
20-Year	6/30/2025	4.942	2.68	12.9	13.4	19.9	66.7	0.1	1.3	22.2
30-Year	4/15/2025	4.813	2.43	22.0	12.3	25.8	61.9	0.0	3.7	51.3
30-Year	5/15/2025	4.819	2.31	24.9	13.9	27.2	58.9	0.1	8.8	67.0
30-Year	6/16/2025	4.844	2.43	22.0	11.4	23.4	65.2	0.0	0.4	43.1
2-Year FRN	4/30/2025	0.160	2.69	30.0	49.6	1.8	48.6	0.0	2.1	0.1
2-Year FRN	5/30/2025	0.144	2.95	28.0	34.9	2.0	63.1	0.0	0.0	0.0
2-Year FRN	6/27/2025	0.157	2.79	28.0	53.5	0.9	45.6	0.0	0.0	0.0

TIPS										
Issue	Settle Date	Stop Out Rate (%)	Bid-to-Cover Ratio	Competitive Awards ($bn)	% Primary Dealer	% Direct	% Indirect	Non-Competitive Awards ($bn)	SOMA "Add Ons" ($bn)	10-Year Equivalent ($bn)**
5-Year TIPS	4/30/2025	1.702	2.28	24.8	18.1	17.8	64.2	0.2	1.7	15.9
5-Year TIPS	6/30/2025	1.650	2.53	22.9	6.6	18.8	74.6	0.1	2.3	14.4
10-Year TIPS	5/30/2025	2.220	2.36	17.9	11.9	16.7	71.4	0.1	0.0	19.2

*FRNs are reported on discount margin basis.
**Approximated using prices at settlement and includes both competitive and non-competitive awards.
For TIPS 10-Year equivalent, a constant auction BEI is used as the inflation assumption.

Treasury Buyback Program Enhancements

Treasury Borrowing Advisory Committee

July 29, 2025

Charge Text:

In the May 2025 quarterly refunding statement, Treasury announced that it is evaluating a broad range of possible enhancements to the buyback program, such as: changes to maximum purchase amounts, buyback operation scheduling and frequency, security eligibility, maturity bucket composition, execution process, and counterparty eligibility. Please provide input on these or other possible enhancements to the buyback program.

What factors should Treasury consider in evaluating changes to maximum purchase amounts? Are there certain buyback sectors where either increases or decreases in purchase maximums are warranted? What changes to the buyback schedule, if any, should Treasury consider? Are there any other buyback enhancements not listed in the quarterly refunding statement that Treasury should consider?

Executive Summary

- **Treasury conducts two types of buyback operations**
  - **Cash management** buybacks are intended to reduce volatility in Treasury's cash balance and T-Bill issuance, minimize bill supply disruptions, and/or reduce borrowing costs over time
  - **Liquidity support** buybacks are intended to bolster market liquidity by establishing a regular and predictable opportunity for market participants to sell off-the-run Treasury securities
  - A TBAC charge in 1Q25 highlighted that buybacks are broadly achieving Treasury's stated objectives, with scope to evolve the program in line with these stated goals

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- **In the following pages, we review the Treasury market's overall functioning and the buyback program results to date, which help inform our recommendations**
  - We find that the broader Treasury market is functioning well but note an increase in primary dealer inventories over the last year and higher offer-to-max ratios in long-end buybacks this year

- **In evaluating potential changes to maximum purchase amounts, Treasury should consider the impact of liquidity buybacks on the WAM of marketable debt outstanding**
  - Given the stated intent to support market liquidity, broader metrics like WAM of marketable debt outstanding should be managed through Treasury's issuance decisions, not through the liquidity support buyback program
  - We demonstrate that Treasury can increase buyback sizes without materially altering the overall maturity composition of Treasury debt outstanding

- **We introduce a quantitative framework to identify sectors where either increases or decreases in purchase maximums could be considered** Currently, we find that the 10y-20y and 20y-30y sectors could be considered for larger buybacks
  - Treasury should remain flexible in the future when making changes to the program; this illustrative framework can be adapted or offer areas of further study as more data is collected
  - Treasury's cashflow projections may take priority in determining cash management buybacks, however a quantitative approach could be used to supplement the process. Since the cash management and liquidity support buybacks both occur in the 1m-2y sector, there is also value in evaluating results across operation types

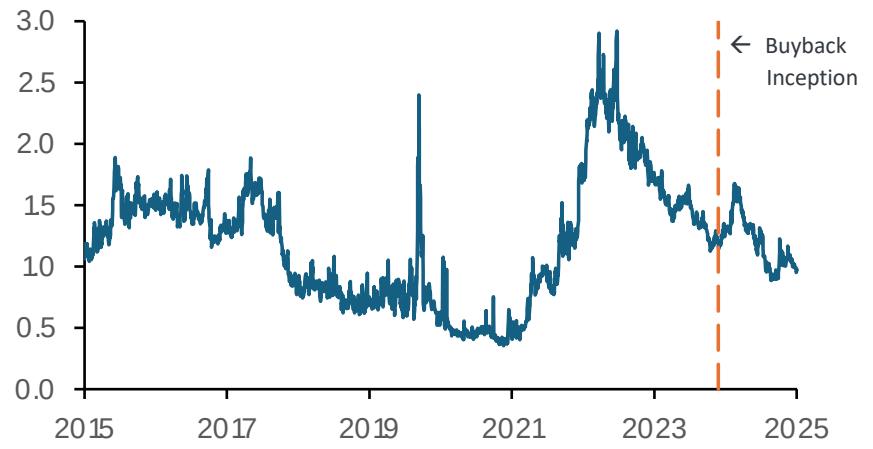
- We find that the program schedule, security exclusions and maturity bucket composition are appropriate. Offering the option to execute on swap vs. on-the-runs could minimize duration impacts at the time of operations but introduces curve risk and might not be the desired format for all participants. Yield-spread bidding could simplify the process for dealers. Broadening counterparty eligibility should improve results but introduces operational complexity for Treasury

- **In conclusion, we find that Treasury can be regular and predictable with guidance on buyback operations provided as part of the quarterly refunding while adopting a flexible approach to sizing and sector composition**

Various measures indicate that off-the-run functioning has improved since buyback program inception

- **Treasury market functioning has improved since 2023; this trend has continued since the inception of the buyback program in 2024**
- The dispersion of off-the-runs relative to a fitted Treasury curve peaked during the tightening cycle in 2023, but has been on a declining trend since then, and has continued lower since the buyback program began in May 2024 (see bottom left)
- At times, off-the-run Treasuries can trade at a discount to a similar maturity on-the-run, indicating a liquidity preference or premium for on-the-runs
  - This can be observed in the asset swap spread differential between the on-the-run and off-the-runs
  - For example, at the onset of the pandemic all off-the-run sectors traded at a steep discount to on-the-runs until the Fed began large scale QE in 2020 at which point off-the-runs traded rich until coupon issuance increased meaningfully in 2021
  - Off-the-runs were generally cheap during the beginning of the Fed's hiking cycle and more recently in aggregate spread differentials are narrow. However, performance at the sector level can be a consideration for buybacks which we discuss later in the presentation

RMSE of Treasury par curve (bp)



Source: Presenter's calculations

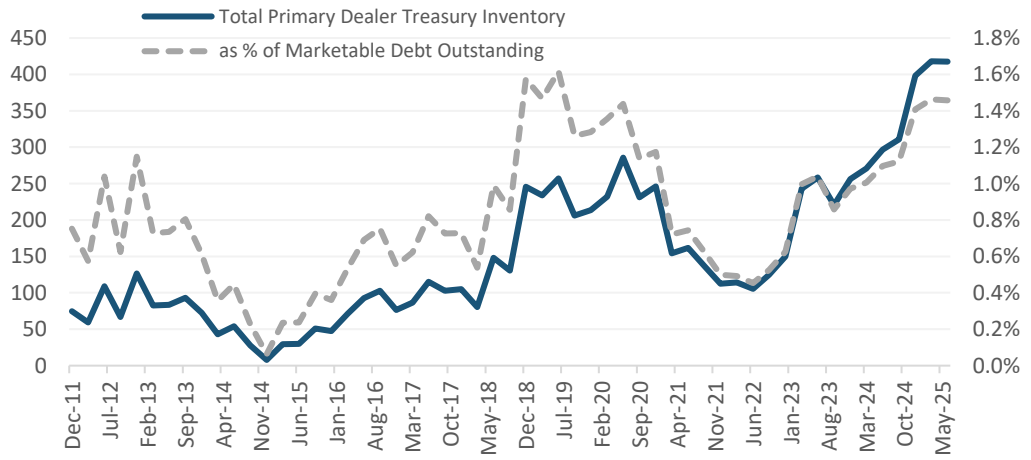
4x-old vs current UST Asset Swap Spread Differential* (bp)

Note: Positive spread indicates cheaper off-the-run UST
*Unweighted average of 2y, 3y,5y, 7y, 10y, 20y, & 30y

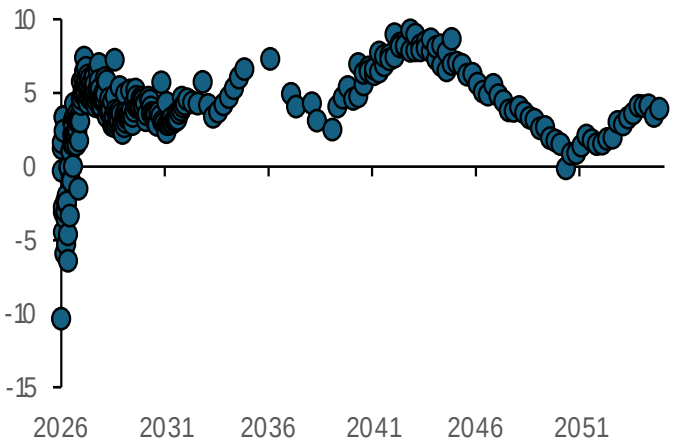
Primary dealer inventory has increased in the last year and Treasuries have cheapened vs. swaps

- Notwithstanding the broader backdrop of improved market functioning, primary dealer inventories continue to grow (bottom left) and Treasuries have cheapened vs. swaps this year, particularly in the short-end and 15y-20y sectors (bottom right)
- Primary dealer inventory in Treasuries has been steadily rising since QE ended in 2022. On a normalized basis, compared to the size of marketable debt outstanding, current dealer inventory is close to the all-time highs reached in 2019
  - In the last year, total Treasury inventory has grown **$93B or 31%** (2Q25 avg /2Q24 avg) with the <2y, 7y-11y and 11y-21y sectors having the largest percentage increases
- An increase in primary dealer inventories is not necessarily indicative of decreased market liquidity, as many factors can inform dealer balance sheet allocations; however, inventory trends and buyback operation details should be monitored, particularly as certain regulations like SLR are modified

Total Primary Dealer Treasury Inventory ($B)



6mo Change in UST Z-Spreads to SOFR (bps)



Note: Positive spread indicates cheaper UST vs. SOFR swaps
Source: Presenter's calculations

Treasury Inventory by Sector (qly avg, $B)

Quarter	Bills	FRN	TIPS	Nominals							Total
				<2y	2-3y	3-6y	6-7y	7-11y	11-21y	>21y	
2Q24	84	10	22	23	13	61	24	17	18	27	299
3Q24	80	10	22	24	13	72	22	27	26	34	329
4Q24	71	6	21	20	16	68	20	31	24	35	310
1Q25	82	7	23	59	19	82	27	31	26	44	400
2Q25	62	6	28	65	17	71	35	37	35	37	392
Δ 2Q24 to 2Q25	-21	-4	6	41	4	10	11	20	17	10	93
in %	*-26%*	*-38%*	*26%*	*176%*	*29%*	*17%*	*46%*	*115%*	*91%*	*36%*	*31%*

Source: Federal Reserve Bank of New York

Summary results for buybacks since May 2024

- We refresh an analysis of buyback results as shown in the 1Q25 TBAC charge to include operations through July 22, 2025
  - Offer-to-max ratios in the 1m-2y, 10y-20y, and 20y-30y sectors are elevated relative to other maturity buckets, while long-end ratios have also been increasing this year
  - Operations in the belly of the curve and TIPS continue to have lower fill ratios

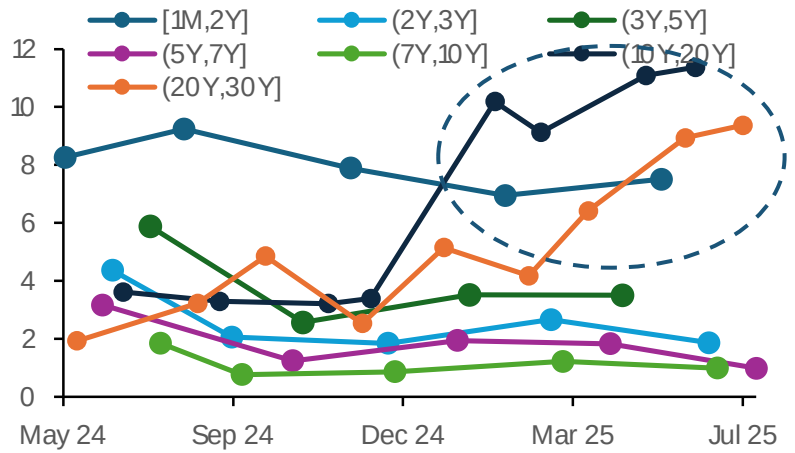
- On the subsequent pages we consider what factors Treasury should consider when evaluating changes to the maximum purchase amounts and provide a quantitative framework to help inform which sectors should be considered for increased or decreased buybacks

Cash Management and Liquidity Support Buyback Results (May 2024 – July 22, 2025)

Operation	Security Type	Bucket	Max to be Redeemed ($mn)	Offered ($mn)	Accepted ($mn, par)	% Filled	Offer-to-Max	Offer-to-Cover
Cash Management	Nominal Coupons	[1M,2Y]	122,000	339,827	112,668	92%	2.79	3.02
Liquidity Support	Nominal Coupons	[1M,2Y]	18,000	142,852	18,000	100%	7.94	7.94
		(2Y,3Y]	18,000	42,477	12,108	67%	2.36	3.51
		(3Y,5Y]	14,000	43,094	12,809	91%	3.08	3.36
		(5Y,7Y]	18,000	30,310	8,216	46%	1.68	3.69
		(7Y,10Y]	18,000	19,095	2,695	15%	1.06	7.09
		(10Y,20Y]	16,000	110,559	16,000	100%	6.91	6.91
		(20Y,30Y]	18,000	93,160	18,000	100%	5.18	5.18
	TIPS	[1Y,7.5Y]	4,500	23,677	3,756	83%	5.26	6.30
		(7.5Y,30Y]	4,000	10,616	2,615	65%	2.65	4.06

Source: U.S. Treasury Department

Liquidity Support Offer-to-Max Results (Nominal Coupons)



What factors should Treasury consider in evaluating changes to maximum purchase amounts?

- **In evaluating changes to maximum purchase amounts, Treasury should consider the impact that liquidity buybacks have to the WAM of marketable debt outstanding**
  - Given the stated intent to support market liquidity, broader metrics such as WAM of marketable debt outstanding should be managed through Treasury's issuance decisions and not through the liquidity support buyback program
- **Based upon scenario analysis, we find that Treasury can increase the current buyback program without materially altering the overall maturity composition of Treasury debt outstanding in the near term; consistent with its objective of supporting market liquidity, while managing WAM through issuance**
  - To demonstrate this, we explore the impact of hypothetical buyback programs (bottom left)
  - The annual standard deviation of the WAM of marketable debt outstanding is 2 months (bottom right)
  - On an annualized basis, the current program, if done in maximum size ($30B/qtr, ~9y WAM), shortens WAM by 0.4 months per year, well within the typical 1y change
  - The grey shaded area illustrates buyback program sizes with a WAM impact in excess of a typical 1 y change; programs of this size could warrant funding via coupon issuance instead of T-Bills
- **This indicates that Treasury has significant flexibility to adopt a more dynamic approach to sizing and sector composition without materially altering WAM; we introduce a quantitative lens to support this on the following pages**

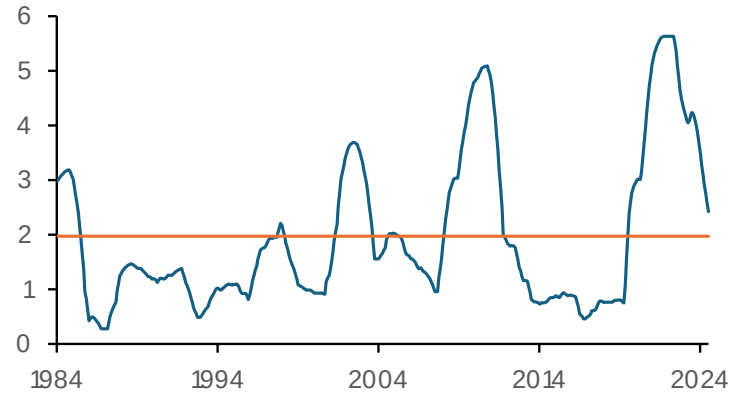
Illustrative annual change in WAM (mos) of marketable Treasury debt outstanding based off scaling Buyback size and WAM*

Larger Buyback Size ($B) →

Longer Buyback WAM ↓

Qly Buyback (Par, $B):		30	60	90	120	150
Ann. Buyback (Par, $B):		120	240	360	480	600
avg px:						
91	Buyback WAM (mos) 72	-0.3	-0.5	-0.8	-1.1	-1.3
87	108	-0.4 (A)	-0.8	-1.2	-1.6	-2.0
82	144	-0.5	-1.1	-1.6 (B)	-2.2	-2.7
79	180	-0.7	-1.4	-2.0	-2.7	-3.4
76	216	-0.8	-1.6	-2.5	-3.3	-4.1

3y standard deviation of annual changes in WAM (mos)



Source: Presenting member

*Assumes the *market value* of buybacks are funded with 3-month T-Bills and uses static $28.6T marketable debt outstanding as of 6/30/25 at a WAM of 72 months. Market value calculations assume average buyback prices ranging from $91 (72mos buyback WAM) to $76 (216mos buyback WAM) scaled using 2Q25 buyback purchase prices to reflect that longer tenor buyback operations would likely involve purchases of more discount bonds and thus require less T-Bill issuance per billion par bought back. Realized WAM impacts could be smaller if operations are not fully filled at maximums.

Are there certain buyback sectors where either increases or decreases in purchase maximums are warranted?

- **We believe there is value in consistently applying a quantitative framework to evaluate which sectors warrant more or less liquidity support from buybacks**

- **We think several of the market factors discussed in prior pages provide Treasury with valuable information on how to size buyback operations across the nominal and TIPS curves**
  1. **Buyback operation offer-to-max ratios derived from Treasury data,** offer insight into the level of demand for a given operation. A higher offer-to-max ratio in a particular sector underscores strong demand to sell into an operation, and consistently high offer-to-max ratios may give Treasury reason to increase sizes in a given maturity sector

  2. **Measures of dispersion relative to a fitted Treasury spline curve** (RMSE) offer insight into whether off-the-runs in a given sector are trading efficiently. Low dispersion is indicative of normal liquidity conditions while rising dispersion argues for increasing operation sizes in a sector

  3. **Liquidity preference is observed via matched-maturity asset swap spreads between near off-the-run Treasuries and their on-the-run counterparts in a given tenor**. On-the-runs traditionally trade with a premium relative to near-off-the-runs due to higher trading volumes and financing demand, but a growing discount in off-the-runs could indicate a deterioration in functioning in off the runs, as observed in 2020 and 2022

  - **Importantly, other variables may need to be added over time to enhance the quantitative framework.** Primary dealer positioning might offer insight into dealer intermediation trends but would offer more value if it could be supplemented with a balance sheet capacity measure. Operation price dispersion statistics could also offer areas for study, for example elevated offer-to-max and primary dealer inventory with narrow price dispersion might suggest a sector warrants larger buybacks. In addition, while the quantitative framework we lay out on the next page does not directly consider the percentage of an operation that goes unfilled, this statistic provides useful information value to supplement the framework

- **We develop a "buyback score" to illustrate which sectors may benefit from larger buyback operations.** The buyback score is the equal-weighted average of the 1-year z-score of each of these three measures; a higher score would indicate consideration for larger buybacks and vice versa
  - Sectors in which we observe increased yield dispersion, larger off-the-run discounts and higher offer-to-max ratios could benefit from increased buybacks; we apply this approach on the next page

A quantitative framework can identify trends at a sector level that are relevant for the sizing of buyback operations

- **Using this stylized "buyback score" and its components we highlight the following takeaways**
  - **In the 10y-20y sector**, offer-to-max ratios have been consistently elevated since fall 2024 and near off-the-runs have cheapened relative to on-the-runs
  - **In the 20y-30y sector**, offer-to-max ratios are elevated
  - **In the 7.5y-30y TIPS sector,** off-the-run TIPS have cheapened recently and the offer-to-max, while low on an outright basis, has increased recently
  - **In the 1m-2y sector,** the buyback-offer to max is consistently high
  - **In the 2y-3y and 7y-10y sector**, offer-to-max ratios are low while off-the-runs have richened. These sectors also have a higher unfilled rate

- **Treasury should remain flexible in the future when making changes to the program as conditions are likely to change over time**
  - This approach could be adapted to include other measures or a different weighting mechanism and offers area for study over time as more data is collected
  - While the z-score itself can be helpful for identifying recent changes, the underlying level of the component also matters

Stylized buyback scores for Treasury buyback sectors

	Tenor	Buyback offer to max*		RMSE (bp)**		Off-the-run discount (bp)†		Buyback score
		Current	1y z-score	Current	1y z-score	Current	1y z-score	
Nominal coupons	1m-2y	7.5	-0.5	11	-12	-2.0	-2.4	-14
	2y-3y	19	-0.7	0.7	-2.3	-2.3	-18	-16
	3y-5y	3.5	0.8	0.9	-0.6	-0.6	-13	-0.4
	5y-7y	18	-0.2	13	-0.6	-0.5	-15	-0.8
	7y-10y	10	-0.3	12	-15	-2.3	-2.3	-14
	10y-20y	11.4	12	12	-0.4	0.4	13	0.7
	20y-30y	9.4	16	13	0.3	0.8	0.1	0.6
TIPS	1y-7.5y	5.8	0.2	2.1	-10	-3.0	-0.1	-0.3
	7.5y-30y	4.0	13	2.7	0.0	-0.6	19	10

Simple average of the 3 z-scores for each sector

* Most recent operation offer-to-max ratio
** RMSE for nominal Treasury and TIPS spline fitted curves, by sector, 1wk moving average
† For nominal Treasuries, defined as 4x-old/current asset swap spread differential for hot run point. For TIPS, defined as 2x-old/current IOTA differential (based on z-spreads of TIPS and the nominal comparator), 1wk moving average

Source: Federal Reserve Bank of New York, Presenter's calculations

Liquidity Support Buyback Recommendation

- Informed by insights from the quantitative framework on the previous page, **we recommend increasing liquidity support buybacks in the 10y-20y and 20y-30y sectors**
  - Increase 10y-20y purchases from $4B to $8B given the sector's increasing offer-to-max ratios and recent cheapening in off-the-runs
  - Increase 20y-30y purchases from $4B to $6B given the overall high level of the sector's offer-to-max ratios
  - We believe these increases are a reasonable initial implementation of a more flexible approach to sizing buybacks with limited additional impacts to the WAM of overall marketable debt outstanding [1]

- **Sectors that bear monitoring are**
  - **TIPS 7.5y-30y sector** where the buyback score is elevated suggesting potential for larger buybacks, however we note that operations have been unfilled
  - **1m-2y sector** where offer-to-max ratios are consistently elevated. Looking ahead, the debt ceiling-driven surge in T-bill issuance may support larger operations in the 1m-2y sector in future quarters as short-end investors switch from short coupons back into T-bills
  - **2y-3y and 7y-10y sector** performance should be monitored for possible decreases

- **We acknowledge that with more data in hand on how operation sizes interact with buyback scores and offer-to-max ratios, future increases or decreases could be either smaller or larger**

1. Using the methodology from page 6: The max program size would increase to $36B/qtr (~10.5y WAM) and on an annualized basis incrementally shorten the WAM of Treasury debt outstanding by -0.2 months per year compared to the current max $30B program. Realized WAM impacts could be smaller if operations are not filled at max.

A similar approach can support Cash Management buybacks, though we recognize this program has different motivations

- **Cash management buybacks serve a different purpose**: to reduce volatility in Treasury's cash balance and T-Bill issuance, minimize bill supply disruptions, and/or reduce borrowing costs over time
  - A quantitative approach may be of secondary importance relative to Treasury's cashflow projections in the weeks around known tax deadlines
  - However, Treasury could monitor buyback offer-to-max ratios, RMSE, primary dealer inventory positions, and matched-maturity coupon/T-bill spreads to inform the tradeoffs between T-Bill issuance and cash management buybacks (illustrative example bottom left)
  - When T-bills richen relative to similar maturity coupons, it may be advantageous to increase the size of cash management buyback operations
- **Since cash management buybacks and liquidity buybacks both operate in the 1m-2y sector, their relative sizing and collective results can be informative**
  - We see evidence of a linear relationship between operation sizes in the 1m-2y sector and offer-to-max ratios looking at both types of buyback operations (see bottom right)
  - Looking ahead, during the post debt ceiling TGA rebuild, there might be less need for cash management buybacks
  - This could drive greater interest in liquidity support buybacks in the 1m-2y sector given the growth in dealer inventories. Larger liquidity support buybacks in the 1m-2y may be warranted if cash management buybacks are reduced

Stylized buyback scores for 1m-2y sector Cash Management Buybacks

	Buyback offer to max		RMSE (bp)*		PD positions ($bn)**		Bill/Cpn spread		
Buyback type	Current	1y z-score	Current	1y z-score	Current	1y z-score	Current	1y z-score	Buyback score
Cash management	1.8	-1.0	1.2	-1.0	93.5	2.1	13	-1	-0.3

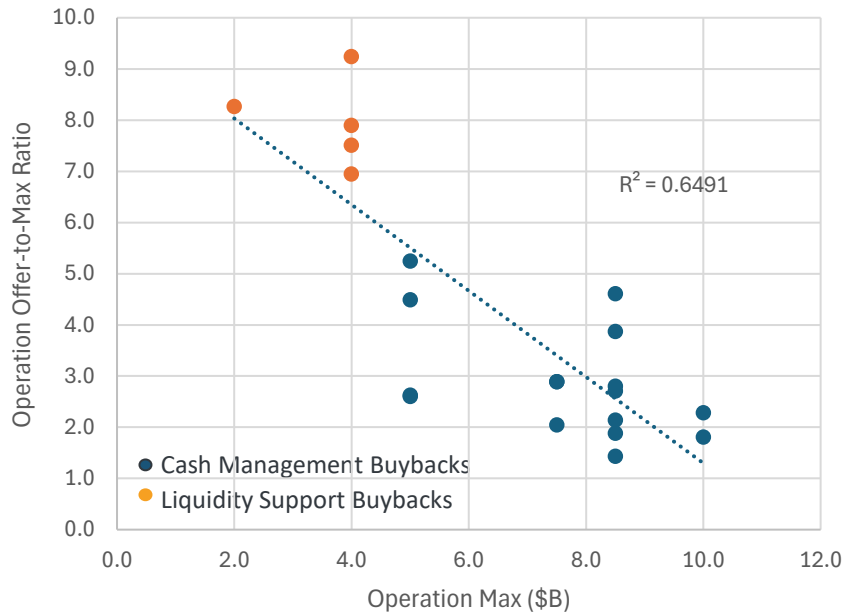
* RMSE for nominal Treasury fitted curve
** See table on right hand side of slide
Source: Federal Reserve Bank of New York, Presenter's calculations

Matched maturity T-bill/Coupon spreads (bp)

Maturity	Last	1y max	1y min	1y avg	1y z-score
1m	-0.7	67.6	-23.7	2.7	-0.3
2m	38.8	40.2	-9.7	7.5	3.9
3m	21.0	26.9	-4.8	4.8	2.9
4m	3.7	18.2	-6.6	4.6	-0.2
6m	10.2	20.6	-5.1	4.1	1.1
12m	2.9	10.6	-5.8	1.0	0.6
Unweighted avg	13	31	-9	4	-1

Bond equivalent yield/yield spread; Positive / (Negative) spread indicates Bills are cheap / (rich) vs. short coupons

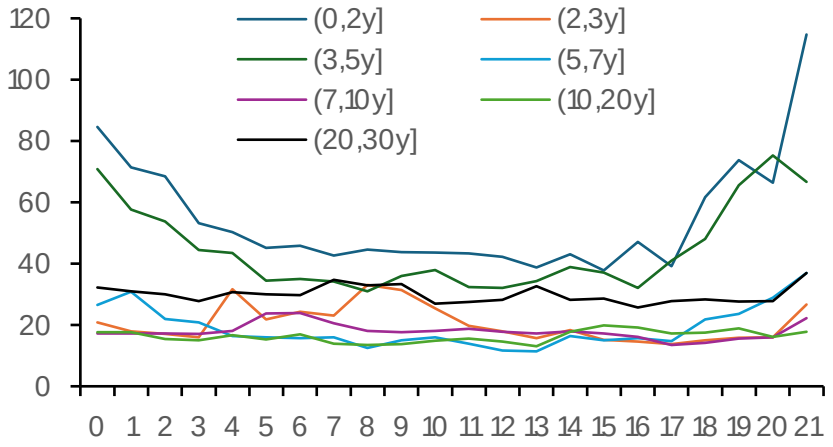
1m-2y Buyback Operations (Max vs. Offer-to-Max)



What changes to the buyback schedule, if any, should Treasury consider?

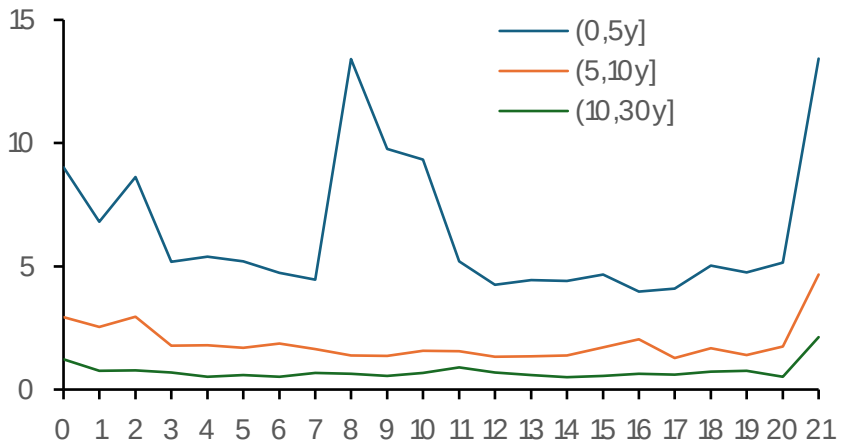
- Under the current schedule, operations are typically during the middle of the week and avoid FOMC dates and same sector Treasury auction conflicts
- **In an ideal world, Treasury could increase the frequency of buyback operations if the overall size of the buyback program grows, but there are operational and logistical obstacles to this:**
  - Treasury auctions, FOMC meetings, lower liquidity on Mondays/Fridays, intra-month cyclicality by sector, ability to perform 2 operations in a day, timing in the afternoon to avoid economic data releases, and security exclusions near coupon payment dates
  - **Acknowledging these constraints, we find that the current schedule is considered and appropriate.** Aligning buybacks with periods of higher activity could provide better execution. However, doing so could be challenging given possible conflicts with security exclusions around coupon payment dates, while the market might benefit from additional liquidity provisioning at other points in the month
- **Nonetheless, Treasury market volumes exhibit intra-month cyclicality demonstrating an elevated demand for liquidity at month-end and around auctions:**
  - Higher volumes are concentrated at month-end for the 0y-2y, 3y-5y, 5y-7y, and 10y-20y sectors
  - Higher volumes are concentrated either mid-month or at month-end for 2y-3y, 7y-10y and 20y-30y sectors
  - TIPS demonstrate a similar pattern, although trading volumes in the 0y-5y bucket are also elevated around the CPI data release

Nominal off-the-run trading volume cyclicals* ($B)



Source: TRACE
*Average daily trading volumes by business day of month. Data since 5/28/24

TIPS off-the-run trading volume cyclicals* ($B)



Source: TRACE
*Average daily trading volumes by business day of month. Data since 5/28/24

Other Considerations: Security Eligibility, Execution Process, Counterparty Eligibility, Bucket Composition

Execution process:

- Prior analysis in the 1Q25 buyback charge showed Treasury generally bought bonds that are cheap to a fitted curve. Anecdotes suggest that Treasury benefits from good execution relative to prevailing market prices, particularly in those sectors where primary dealer inventory is more elevated and interest in the operation is generally higher
- While the current execution process with a fixed offer price does introduce risk in the event of increased volatility around a buyback operation, Treasury has structured these operations at more liquid points within the week and trading day, minimizing those risks
- Larger operations would translate to increased duration risk per operation, which could result in greater variability in results, particularly if volatility increases. Recall that the 7y-10y operation in July 2024 went uncovered due to a sharp rise in yields ahead of the operation close
- **With this in mind, we think Treasury could consider yield spread bidding**, where participants lock an offer yield spread to the nearest on-the-run. This would greatly simplify the process for the dealers by removing the potential need to update offer prices on many CUSIPs into the operation close; only the on-the-run reference UST is updated. However, doing so could complicate Treasury's process to calculate the implied all-in off-the-run price offers
- **While Treasury could consider moving to a duration neutral switch-type model this would introduce significant curve risk in buckets that have wider maturity distributions.** The end user of the operation might prefer to hedge with another instrument (for example, futures or swaps) or not hedge and therefore find it less desirable to execute on switch. One option would be to provide flexibility for participants to submit offers either outright or on switch

Counterparty eligibility:

- **Benefits**: broadening eligibility could increase the number of offers into the buyback operation, expand the pool of participants and potentially improve results. An open access framework similar to Treasury auctions can provide execution capabilities and anonymity directly to the end user. At the same time, open access would broaden Treasury's insights into the behavior of various market participants
- **Challenges**: increased complexity by providing expanded access to FedTrade and/or creation of an additional platform, along with clearing and settling trades with a larger set of counterparties
- Implementation of Treasury clearing may change these tradeoffs

Security eligibility and maturity bucket composition are appropriate (see next page)

Current buyback security eligibility framework and bucket composition is well suited for the current buyback program

- **We think the current framework for security eligibility is appropriate**
  - Treasury's approach to CUSIP eligibility in a given buyback operation is a refined version of the framework the Fed used to conduct Permanent Open Market Operations. The current framework excludes securities which trade with a premium or which pose an operational risk for settlement
- **We think current maturity bucket compositions are well designed and do not recommend any changes.** Each bucket is comprised of securities hedged by the appropriate on-the-run and is consistent with how market makers and investors trade off-the-run securities

Current buyback operation security exclusion list

Operation Type	Exclusion Name	Description of Exclusion Rule
Liquidity Support & Cash Management	On-the-Runs and Near On-the-Runs	Recently issued securities that are not past their first coupon payment date.
	Securities Close to Coupon Payment Date	Securities that have coupon payment dates that fall within two business days prior to, or on, a buyback operation settlement date.
	CTD and Near CTD Securities	Treasury securities that are reasonably likely to be the cheapest-to-deliver for a futures contract.
	Repo Specials	Treasury securities that are trading significantly special in repurchase agreement markets or are otherwise in exceptional demand compared with similar issues.
	Purchase Limits	Free float > $10billion par for nominal coupon securities and $5billion par for TIPS. SOMA holdings will not exceed 70% of outstanding par amount after the buyback operation is settled. The purchase minimum for any single security in any buyback operation is at least $10million par.
	Exceptional Situations	Treasury may decline to buy back securities that are in high demand.
Cash Management	Rich to Treasury Bills	Coupon securities that are trading at a significantly lower yield than Treasury bills with similar maturities.
	Maturing Near Tax Payment Dates	Coupon securities that mature around quarterly tax payment dates or the April tax season.

Appendix: Cash Management Buyback History

- **Cash management buybacks** are intended to reduce volatility in Treasury's cash balance and T-Bill issuance, minimize bill supply disruptions, and/or reduce borrowing costs over time
  - 16 operations to date (through 7/22/2025) focused around individual and corporate tax dates (March/April, June, Sept, Dec) focused in the 1mo-2y sector

Operation	Security Type	Bucket	Date	Issues (count)	Accepted (count)	Max to be Redeemed ($mn)	Offered ($mn)	Accepted ($mn, par)	Accepted ($mn, market value)	% Count Accepted	% Filled	Offer-to-Max	Offer-to-Cover
Cash Management	Nominal Coupons	[1M,2Y]	06/10/2025	40	18	10,000	18,108	10,000	9,763	45%	100%	1.81	1.81
			06/03/2025	40	22	10,000	22,870	10,000	9,843	55%	100%	2.29	2.29
			04/23/2025	38	16	8,500	12,169	2,939	2,926	42%	35%	1.43	4.14
			04/16/2025	40	29	8,500	16,028	8,500	8,398	73%	100%	1.89	1.89
			04/10/2025	43	24	8,500	18,168	8,500	8,428	56%	100%	2.14	2.14
			04/03/2025	38	20	8,500	23,822	8,500	8,402	53%	100%	2.80	2.80
			03/27/2025	39	16	8,500	23,024	8,500	8,380	41%	100%	2.71	2.71
			03/20/2025	43	21	8,500	32,909	8,500	8,442	49%	100%	3.87	3.87
			03/12/2025	44	19	8,500	39,170	8,500	8,376	43%	100%	4.61	4.61
			12/19/2024	47	14	7,500	15,339	3,729	3,583	30%	50%	2.05	4.11
			12/10/2024	49	19	7,500	21,684	7,500	7,304	39%	100%	2.89	2.89
			12/04/2024	49	20	7,500	21,683	7,500	7,370	41%	100%	2.89	2.89
			09/25/2024	37	19	5,000	13,006	5,000	4,956	51%	100%	2.60	2.60
			09/19/2024	41	9	5,000	26,237	5,000	5,003	22%	100%	5.25	5.25
			09/12/2024	39	3	5,000	22,460	5,000	4,939	8%	100%	4.49	4.49
			09/05/2024	35	18	5,000	13,150	5,000	4,813	51%	100%	2.63	2.63

Treasury Cash Management Buyback WAM by Quarter

Quarter	Par Amt Accepted ($B)	Market Value Accepted ($B)	WAM (mos)
3Q24	20.0	19.7	12
4Q24	18.7	18.3	12
1Q25	25.5	25.2	12
2Q25	48.4	47.8	13
Total	**112.7**	**110.9**	

Appendix: Liquidity Support Buyback History

- **Liquidity support buybacks** are intended to bolster market liquidity by establishing a regular and predictable opportunity for market participants to sell off-the-run Treasury securities
  - 58 operations to date (through 7/22/2025), schedule announced quarterly, each sector bucket typically purchased one to two times a quarter
  - Sectors: 1m-2y, 2y-3y, 3y-5y, 5y-7y, 7y-10y, 10y-20y, 20y-30y, TIPS 1y – 7.5y, TIPS 7.5y – 30y

Security Type	Bucket	Date	Issues (count)	Accepted (count)	Max to be Redeemed ($mn)	Offered ($mn)	Accepted ($mn, par)	Accepted ($mn, market value)	% Count Accepted	% Filled	Offer-to-Max	Offer-to-Cover
Nominal Coupons	[1M,2Y]	05/15/2025	60	6	4,000	30,022	4,000	3,914	10%	100%	7.51	7.51
		02/12/2025	64	10	4,000	27,780	4,000	3,957	16%	100%	6.95	6.95
		11/13/2024	57	5	4,000	31,571	4,000	3,934	9%	100%	7.89	7.89
		08/07/2024	66	16	4,000	36,955	4,000	3,913	24%	100%	9.24	9.24
		05/29/2024	20	9	2,000	16,524	2,000	1,890	45%	100%	8.26	8.26
	(2Y,3Y]	06/12/2025	32	12	4,000	7,475	1,546	1,468	38%	39%	1.87	4.84
		03/11/2025	32	14	4,000	10,665	4,000	3,846	44%	100%	2.67	2.67
		12/05/2024	31	13	4,000	7,370	2,267	2,184	42%	57%	1.84	3.25
		09/04/2024	31	6	4,000	8,244	2,295	2,185	19%	57%	2.06	3.59
		06/26/2024	20	7	2,000	8,723	2,000	1,879	35%	100%	4.36	4.36
	(3Y,5Y]	04/22/2025	49	12	4,000	14,012	4,000	3,924	24%	100%	3.50	3.50
		01/22/2025	49	17	4,000	14,065	4,000	3,749	35%	100%	3.52	3.52
		10/16/2024	49	21	4,000	10,257	4,000	3,767	43%	100%	2.56	2.56
		07/18/2024	20	8	2,000	4,760	809	759	40%	40%	2.38	5.88
	(5Y,7Y]	07/10/2025	26	11	4,000	3,924	1,250	1,193	42%	31%	0.98	3.14
		04/15/2025	26	3	4,000	7,316	443	395	12%	11%	1.83	16.51
		01/15/2025	25	13	4,000	7,768	2,190	2,081	52%	55%	1.94	3.55
		10/10/2024	26	13	4,000	4,963	2,469	2,314	50%	50%	1.24	2.01
		06/20/2024	20	14	2,000	6,339	1,864	1,700	70%	93%	3.17	3.40
	(7Y,10Y]	06/17/2025	10	4	4,000	3,964	1,066	990	40%	27%	0.99	3.72
		03/18/2025	10	4	4,000	4,899	985	952	40%	25%	1.22	4.97
		12/09/2024	10	3	4,000	3,459	195	173	30%	5%	0.86	17.74
		09/10/2024	10	5	4,000	3,067	449	409	50%	11%	0.77	6.83
		07/24/2024	10	0	2,000	3,706	-	-	0%	0%	1.85	0.00
	(10Y,20Y]	06/04/2025	31	1	2,000	22,738	2,000	1,307	3%	100%	11.37	11.37
		05/06/2025	29	4	2,000	22,181	2,000	1,430	14%	100%	11.09	11.09
		03/05/2025	29	1	2,000	18,239	2,000	1,349	3%	100%	9.12	9.12
		02/06/2025	28	4	2,000	20,363	2,000	1,453	14%	100%	10.18	10.18
		11/25/2024	28	5	2,000	6,780	2,000	1,459	18%	100%	3.39	3.39
		10/31/2024	26	12	2,000	6,432	2,000	1,507	46%	100%	3.22	3.22
		08/28/2024	25	8	2,000	6,591	2,000	1,489	32%	100%	3.30	3.30
		07/02/2024	20	12	2,000	7,235	2,000	1,453	60%	100%	3.62	3.62
	(20Y,30Y]	07/02/2025	36	10	2,000	18,738	2,000	1,430	28%	100%	9.37	9.37
		05/29/2025	35	3	2,000	17,869	2,000	1,467	9%	100%	8.93	8.93
		04/02/2025	35	7	2,000	12,832	2,000	1,351	20%	100%	6.42	6.42
		02/26/2025	35	14	2,000	8,350	2,000	1,466	40%	100%	4.18	4.18
		01/07/2025	36	4	2,000	10,301	2,000	1,392	11%	100%	5.15	5.15
		11/20/2024	34	14	2,000	5,065	2,000	1,442	41%	100%	2.53	2.53
		09/24/2024	35	13	2,000	9,702	2,000	1,546	37%	100%	4.85	4.85
		08/15/2024	34	9	2,000	6,452	2,000	1,614	26%	100%	3.23	3.23
		06/05/2024	20	20	2,000	3,851	2,000	1,540	100%	100%	1.93	1.93

Security Type	Bucket	Date	Issues (count)	Accepted (count)	Max to be Redeemed ($mn)	Offered ($mn)	Accepted ($mn, par)	Accepted ($mn, market value)	% Count Accepted	% Filled	Offer-to-Max	Offer-to-Cover
TIPS	[1Y,7.5Y]	07/16/2025	25	6	500	2,526	500	474	24%	100%	5.05	5.05
		05/21/2025	25	9	500	2,885	500	482	36%	100%	5.77	5.77
		04/08/2025	25	6	500	3,245	500	473	24%	100%	6.49	6.49
		02/20/2025	25	8	500	4,026	500	477	32%	100%	8.05	8.05
		01/09/2025	26	8	500	2,478	500	453	31%	100%	4.96	4.96
		11/06/2024	26	6	500	847	170	160	23%	34%	1.69	4.98
		10/02/2024	26	7	500	1,384	235	247	27%	47%	2.77	5.89
		08/21/2024	26	8	500	2,281	351	333	31%	70%	4.56	6.50
		06/11/2024	20	5	500	4,005	500	484	25%	100%	8.01	8.01
	(7.5Y,30Y]	06/25/2025	19	8	500	2,005	500	380	42%	100%	4.01	4.01
		05/01/2025	19	8	500	887	179	151	42%	36%	1.77	4.96
		03/26/2025	19	8	500	2,028	407	274	42%	81%	4.06	4.98
		01/28/2025	17	10	500	1,616	500	395	59%	100%	3.23	3.23
		12/17/2024	18	11	500	1,494	500	426	61%	100%	2.99	2.99
		10/23/2024	18	12	500	977	323	272	67%	65%	1.95	3.02
		09/17/2024	18	9	500	881	153	138	50%	31%	1.76	5.76
		07/10/2024	14	5	500	728	53	42	36%	11%	1.46	13.74

Treasury Liquidity Support Buyback WAM by Quarter

Quarter	Par Amt Accepted ($B)	Market Value Accepted ($B)	WAM (mos)
2Q24	8.4	7.5	102
3Q24	16.1	13.9	136
4Q24	20.2	17.9	100
1Q25	25.1	21.8	107
2Q25	20.7	17.7	120
3Q25*	3.8	3.1	173
Total	**94.2**	**81.9**	

* 3Q25 to date through 7/22/25

Source: U.S. Treasury Department, Presenter's calculations