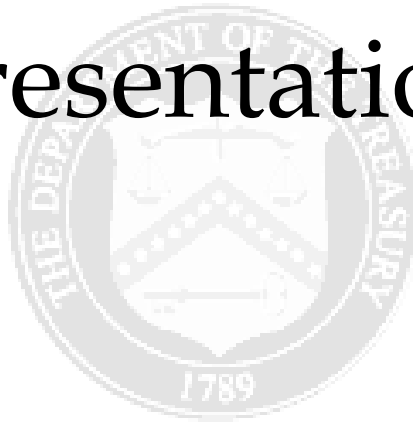


Treasury Presentation to TBAC



Office of Debt Management



Fiscal Year 2023 Q1 Report

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*All sources are from Treasury unless otherwise specified

Section I: Executive Summary



Highlights of Treasury’s February 2023 Quarterly Refunding Presentation to the Treasury Borrowing Advisory Committee (TBAC)

Receipts and Outlays through Q1 FY2023 (without calendar adjustment)

	\$ billions	Change from same period last year (\$ bn)	Change from same period last year (%)	As % of GDP	Change from same period last year (GDP %)
Total Receipts thru Q1 FY2023	\$1,026	-\$26	-3%	15.6%	-1.2%
Total Outlays thru Q1 FY2023	\$1,447	+\$17	+1.2%	22.0%	-0.9%

Treasury’s Projected Net Privately-held Marketable Borrowing for the Next Two Fiscal Quarters*

Treasury OFP Near Term Fiscal Projections	Net Privately Held Marketable Borrowing (\$ billion)	Assumed End-of-Quarter Cash Balance (\$ billion)
Q2 FY2023	932	500 (Mar)
Q3 FY2023	278	550 (Jun)

*These borrowing estimates are based upon current law. The cash balances for the next two quarter-ends assume enactment of a debt limit suspension or increase. Treasury’s cash balance may be lower than assumed depending on several factors, including constraints related to the debt limit. If Treasury’s cash balance for the end of either quarter is lower than assumed, and assuming no changes in the forecast of fiscal activity, Treasury would expect that borrowing would be lower by the corresponding amount(s).

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

Fiscal Year	Primary Dealers Median January 2023 (\$ billion)	OMB 'Mid-Session Review' August 2022 (\$ billion)	CBO 'An Analysis of the President’s 2023 Budget' September 2022 (\$ billion)
2023	1,865	2,087	1,749
2024	1,645	1,722	1,250
2025	1,400	1,460	1,172

**All privately-held net marketable borrowing estimates are “normalized” with details from page 18.

Uncertainty regarding funding needs in FY2023 and FY2024 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.

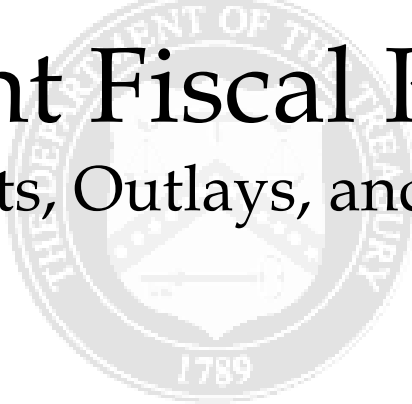
Latest Market Expectations For Treasury Financing In January:

- Primary dealers expected no changes to coupon auction sizes at the February refunding despite the fact dealers increased their aggregate median estimates for privately-held net marketable borrowing by \$300 billion for the FY23-FY25 period in February, relative to their November estimates.
- Given the forecasted funding gap over FY2023 and beyond, all dealers noted that bills could be used to address near term funding gaps because bills as a percentage of debt outstanding was close to the lower bound of the TBAC recommended range of 15 to 20 percent. Most dealers expect that auction sizes may need to eventually rise, but will depend how the borrowing outlook evolves, including with regard to the possibility of a recession and the timing when SOMA redemptions may end.
- Nearly all dealers recommended Treasury keep TIPS issuance stable in the upcoming quarter.

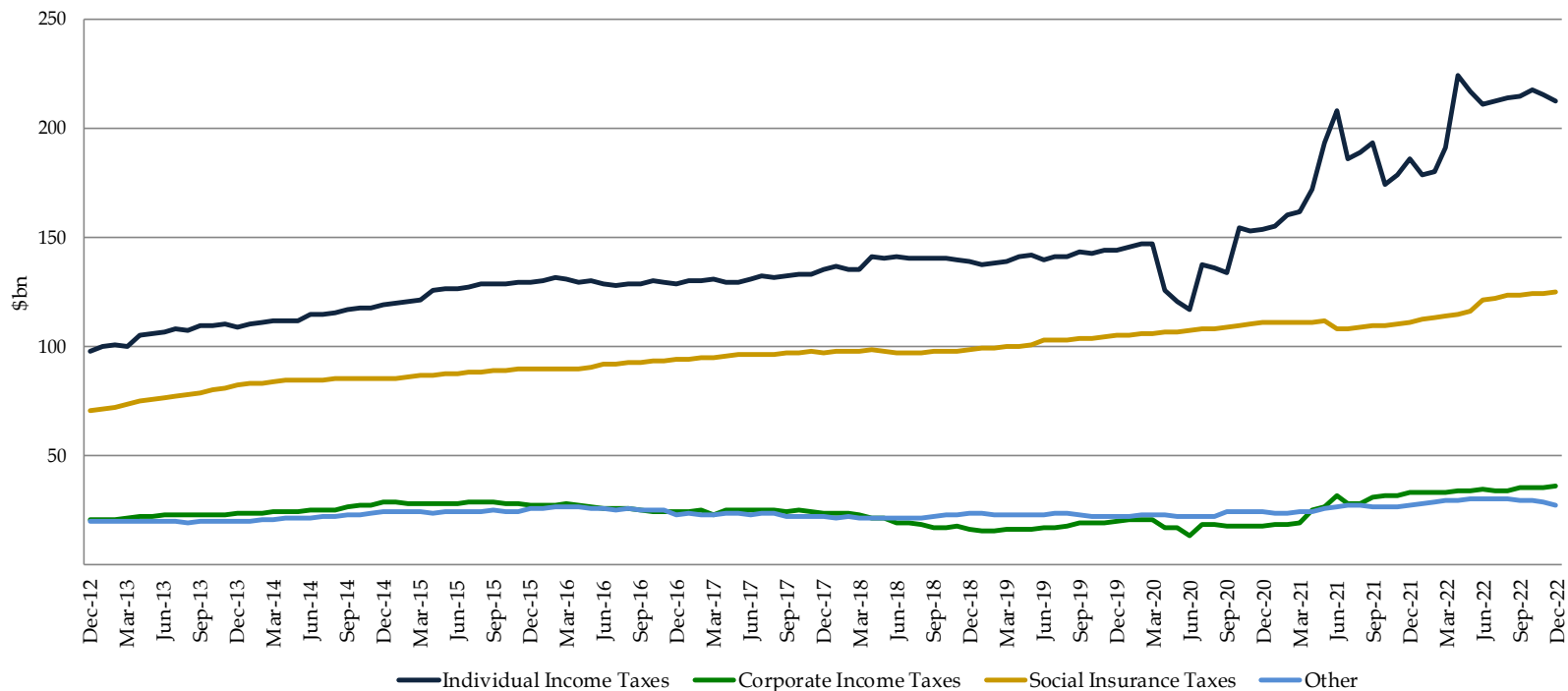
Section II:

Recent Fiscal Results

Receipts, Outlays, and Deficits

The seal of the U.S. Department of the Treasury is faintly visible in the background. It features a central shield with a scale of justice, a sword, and a laurel wreath. The shield is surrounded by a circular border containing the text "THE DEPARTMENT OF THE TREASURY" and the year "1789".

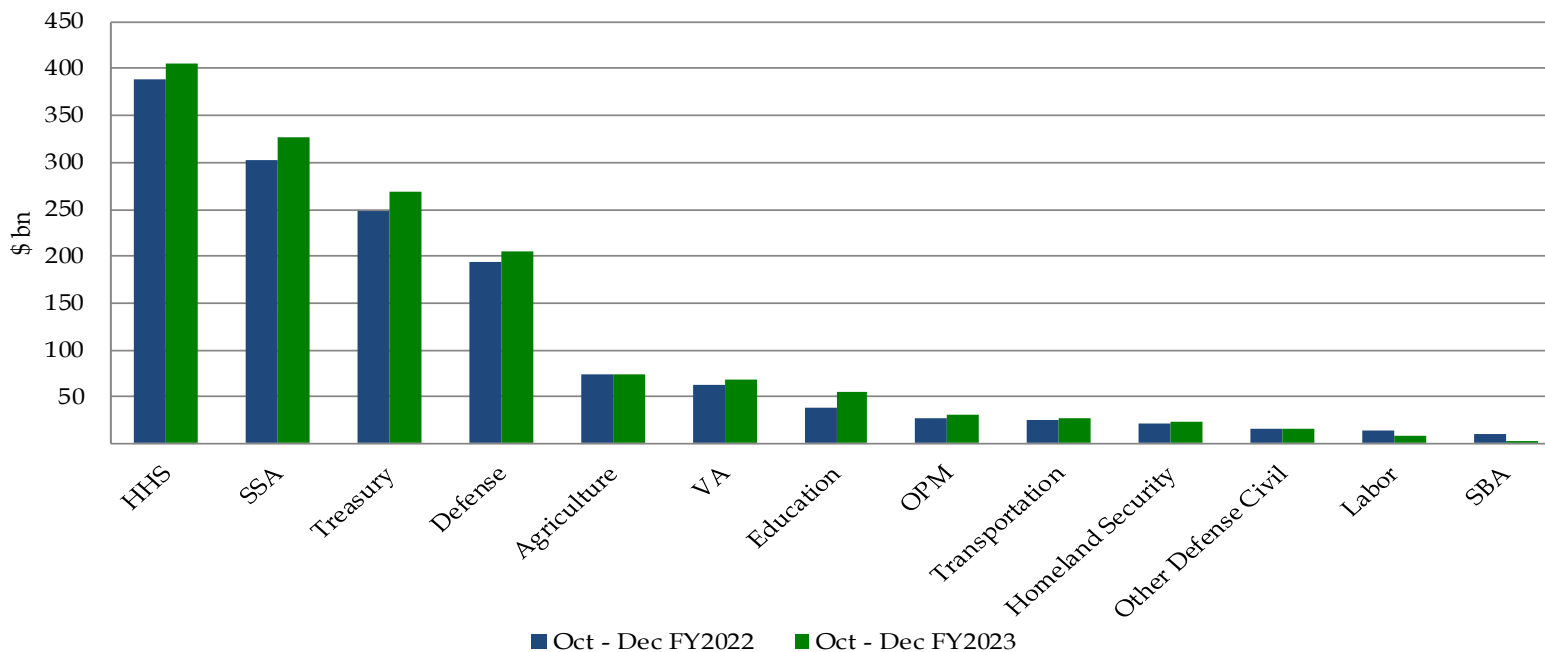
Monthly Receipt Levels (12-Month Moving Average)



Notable Receipt Category	Change from Q1 FY22 to Q1 FY23 (\$ billion)	Change from Q1 FY22 to Q1 FY23 (%)	Comments
Withheld & FICA taxes (calendar adjusted)	+\$7	+1%	Due to higher wages and employment, partially offset by December's lower bonuses.
Non-withheld and SECA taxes	+\$14	+19%	Buoyed by large estimated payments of 2022 tax liability in October.
Individual refunds	-\$21	-68%	A decrease in cash due to elevated IRS processing of refund backlogs.
Gross corporate taxes	+\$4	+3%	Driven by higher corporate profits.
Federal Reserve earnings	-\$26	-98%	Remittances have decreased year-over-year as administered rates moved higher.

Tax receipts for Q4 FY2020 reflect the adjustment of April and June 2020 tax deadlines to July 15th, 2020. 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.

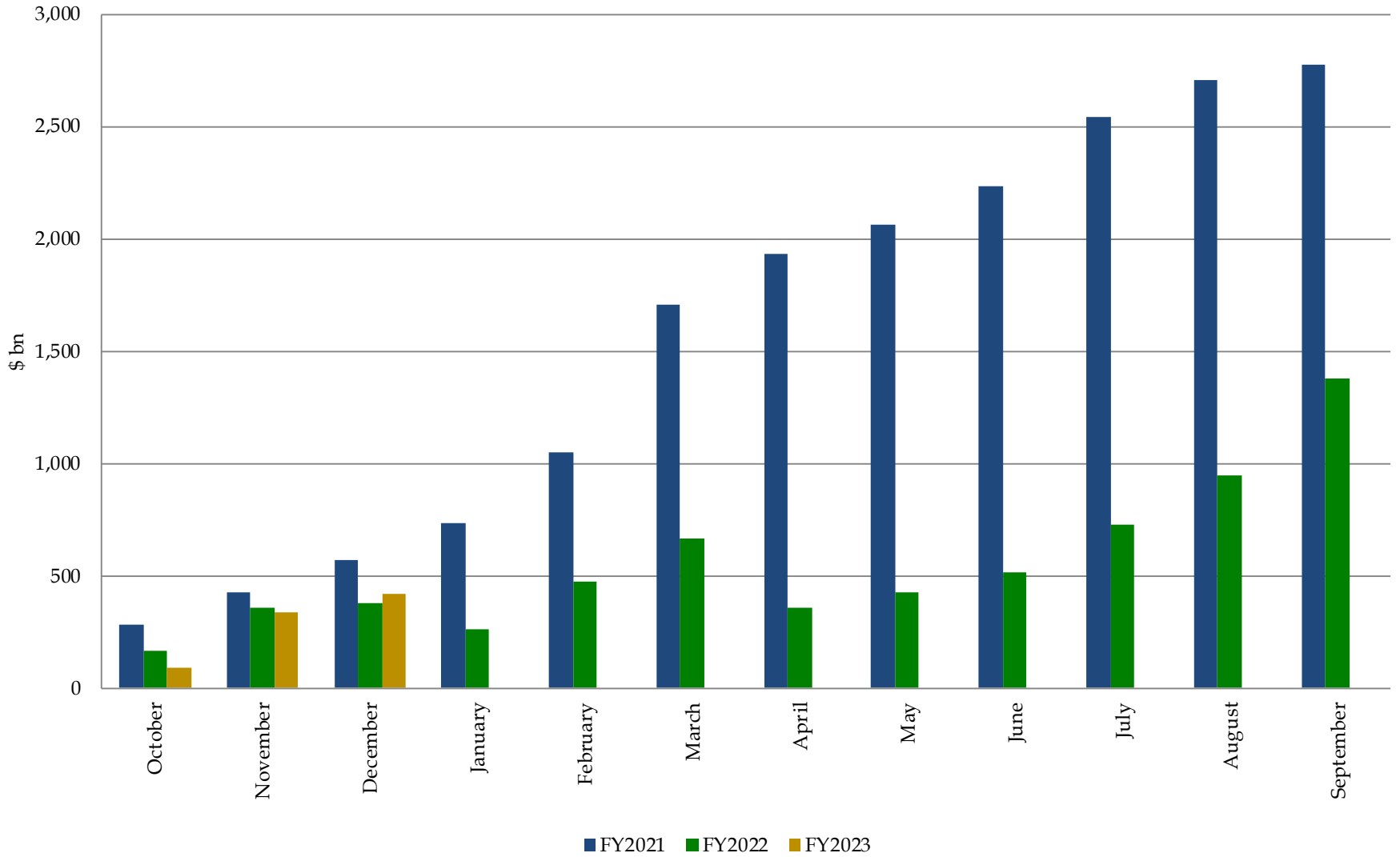
Largest Outlays



Notable Outlays Category	Change from Q1 FY22 to Q1 FY23 (\$ billion)	Change from Q1 FY22 to Q1 FY23 (%)	Comments
Department of Treasury	+\$20	+8%	Driven by higher interest on the public debt of \$57 billion, partially offset by lower tax credits of \$33 billion.
Social Security Administration (calendar adjusted)	+\$25	+8%	Primarily due to the calendar year 2022 cost-of-living adjustment (5.7%) and increased number of beneficiaries.
Department of Education	+\$16	+41%	Due to upward modifications in Federal Direct Student Loans in November of \$11 billion and December of \$7 billion, offset by reduced outlays in the Office of Elementary and Secondary Education (\$3 billion).
Health and Human Services (calendar adjusted)	+\$16	+4%	Due to higher Medicare and Medicaid outlays.
Small Business Administration	-\$10	-95%	Due to Paycheck Protection Program (PPP) and Economic Impact Disaster Loan (EIDL) expenditures that were recognized last year.

All outlays are on 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 as of January 2023:

Primary Dealer Median Estimates January 2023

	<u>CY2023</u>	<u>CY2024</u>	<u>CY2025</u>
	<u>% Change from Q4 to Q4</u>		
GDP			
<i>Real</i>	-0.3	1.5	na
<i>Nominal</i>	3.1	4.0	na
Inflation			
<i>CPI Headline</i>	2.9	2.4	na
<i>CPI Core</i>	3.2	2.6	na
	<u>Fourth Quarter Levels</u>		
Unemployment Rate	4.7	4.9	na
	<u>FY2023</u>	<u>FY2024</u>	<u>FY2025</u>
Deficits (\$bil)	\$1,130	\$1,200	\$1,309

- Most Recent CBO and OMB Estimates:

OMB Estimates August 2022

	<u>CY2023</u>	<u>CY2024</u>	<u>CY2025</u>
	<u>% Change from Q4 to Q4</u>		
GDP			
<i>Real</i>	1.8	2.0	2.0
<i>Nominal</i>	4.4	4.1	4.1
Inflation			
<i>CPI Headline</i>	2.8	2.3	2.3
	<u>Fourth Quarter Levels</u>		
Unemployment Rate	3.8	3.8	3.8
	<u>FY2023</u>	<u>FY2024</u>	<u>FY2025</u>
Deficits (\$bil)	\$1,300	\$1,311	\$1,414

CBO Estimates September 2022

	<u>CY2023</u>	<u>CY2024</u>	<u>CY2025</u>
	<u>% Change from Q4 to Q4</u>		
GDP			
<i>Real</i>	2.2	1.5	1.6
<i>Nominal</i>	4.5	3.6	3.6
Inflation			
<i>CPI Headline</i>	2.7	2.3	2.3
	<u>Fourth Quarter Levels</u>		
Unemployment Rate	3.6	3.8	3.9
	<u>FY2023</u>	<u>FY2024</u>	<u>FY2025</u>
Deficits (\$bil)	\$908	\$921	\$1,145

Note: Economic assumptions for OMB and CBO forecasts were established in June 2022 and March 2022 respectively.

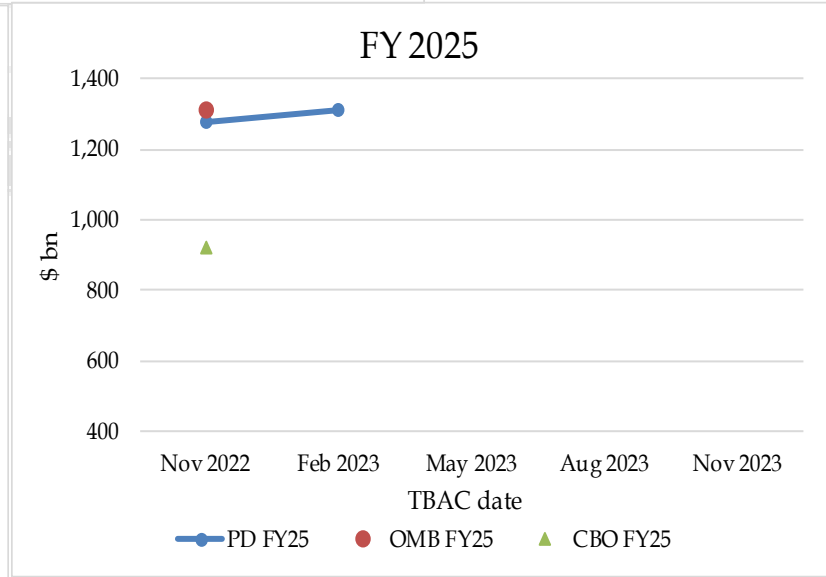
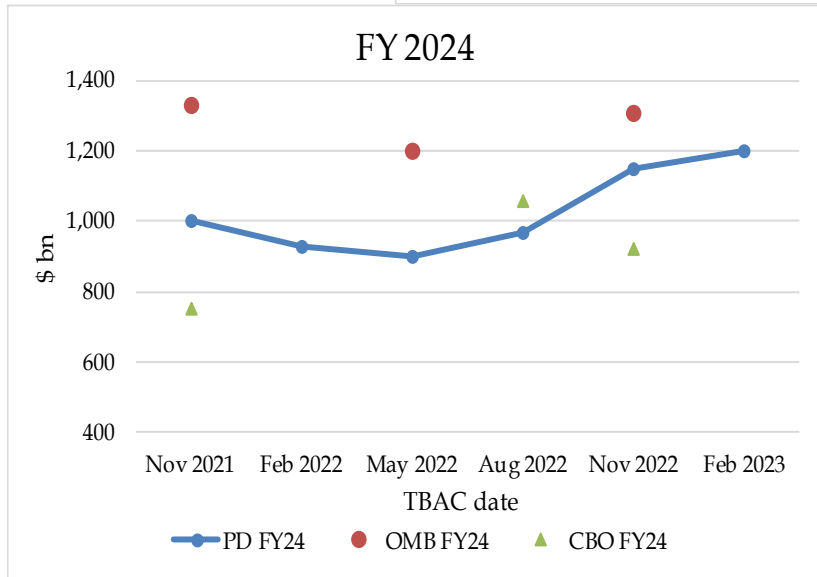
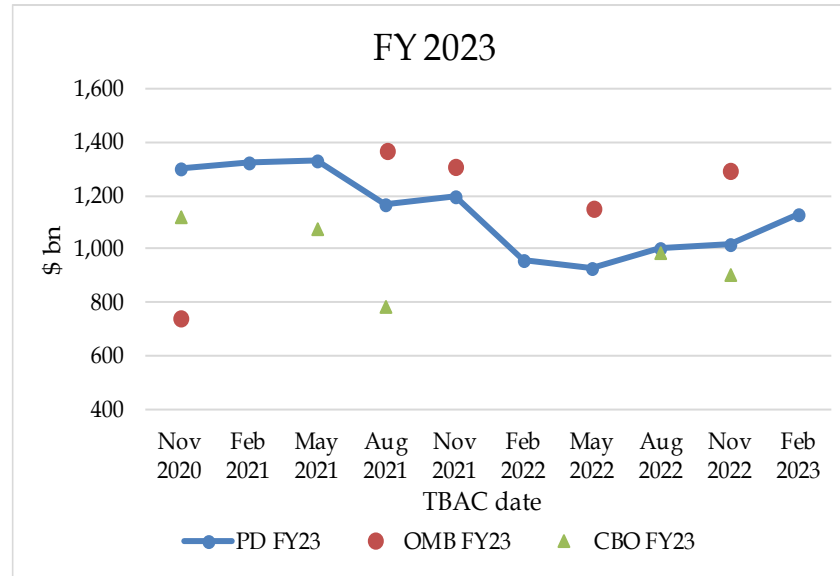
Recent Deficit Forecasts

- Primary dealers increased their deficit estimates in January relative to estimates they provided in October. Their changes reflected forecast adjustments for higher interest costs and a slower economy.
- Dealers generally suggested that risks were asymmetrical to the upside, i.e. risks for higher deficits, and noted a high degree of uncertainty around their estimates.
- The latest OMB and CBO estimates in the table below are provided for reference.

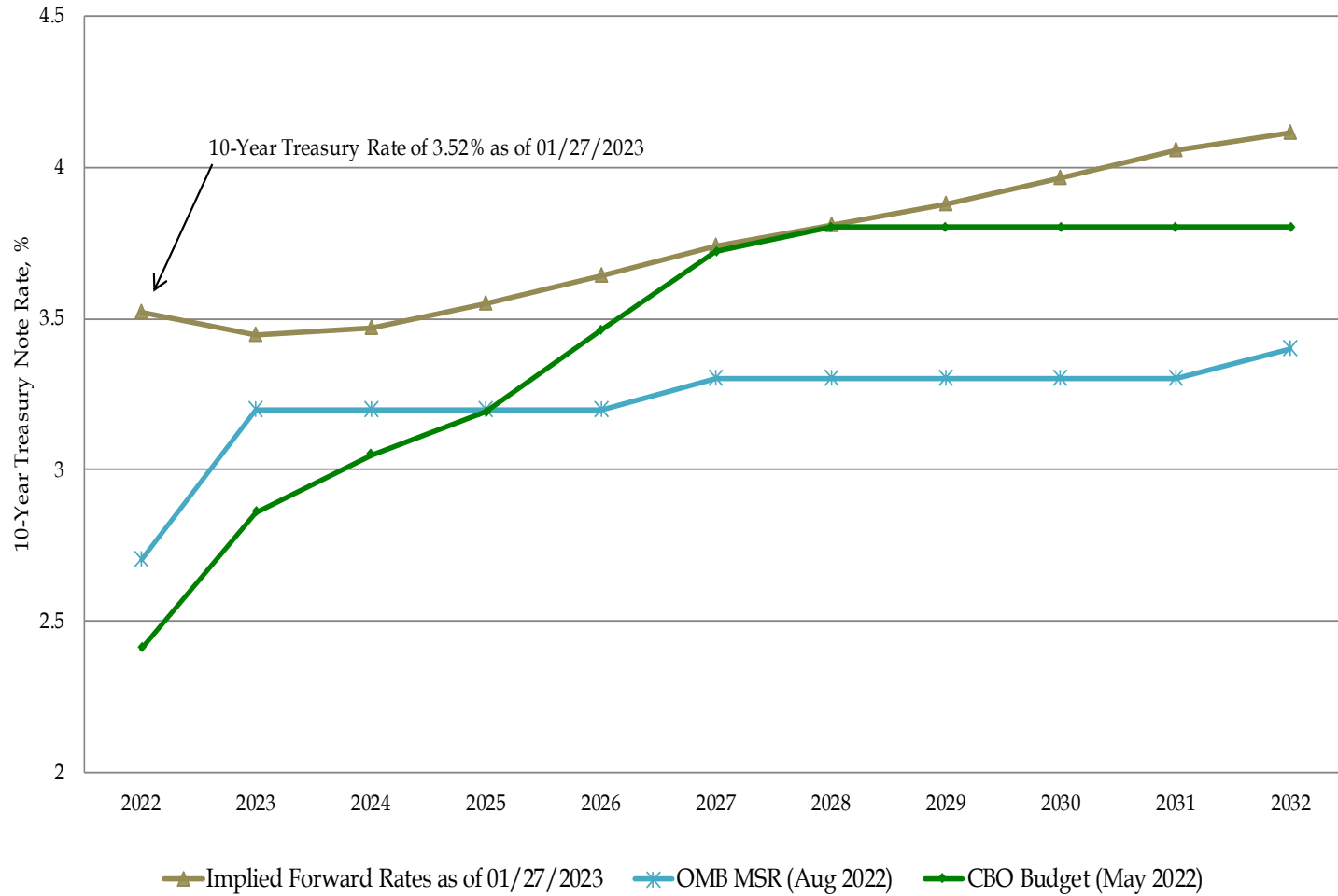
Deficit Estimates (\$ billion)	PD 25th Percentile	Primary Dealers (Median)	PD 75th Percentile	Change from Prior Quarter (Median)	OMB	CBO
FY2023	1,000	1,130	1,250	110	1,300	908
FY2024	1,100	1,200	1,250	50	1,311	921
FY2025	1,200	1,309	1,403	34	1,414	1,145
As of date	Jan-23	Jan-23	Jan-23		Aug-22	Sep-22

- OMB projections are using estimates are from Table S-1 of “Mid-Session Review Budget of The U.S. Government Fiscal Year 2023,” August 2022.
- CBO projections are using estimates are from Table 2 of “An Analysis of the President’s 2023 Budget,” September 2022.


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



Interest Rate Assumptions: 10-Year Treasury Note



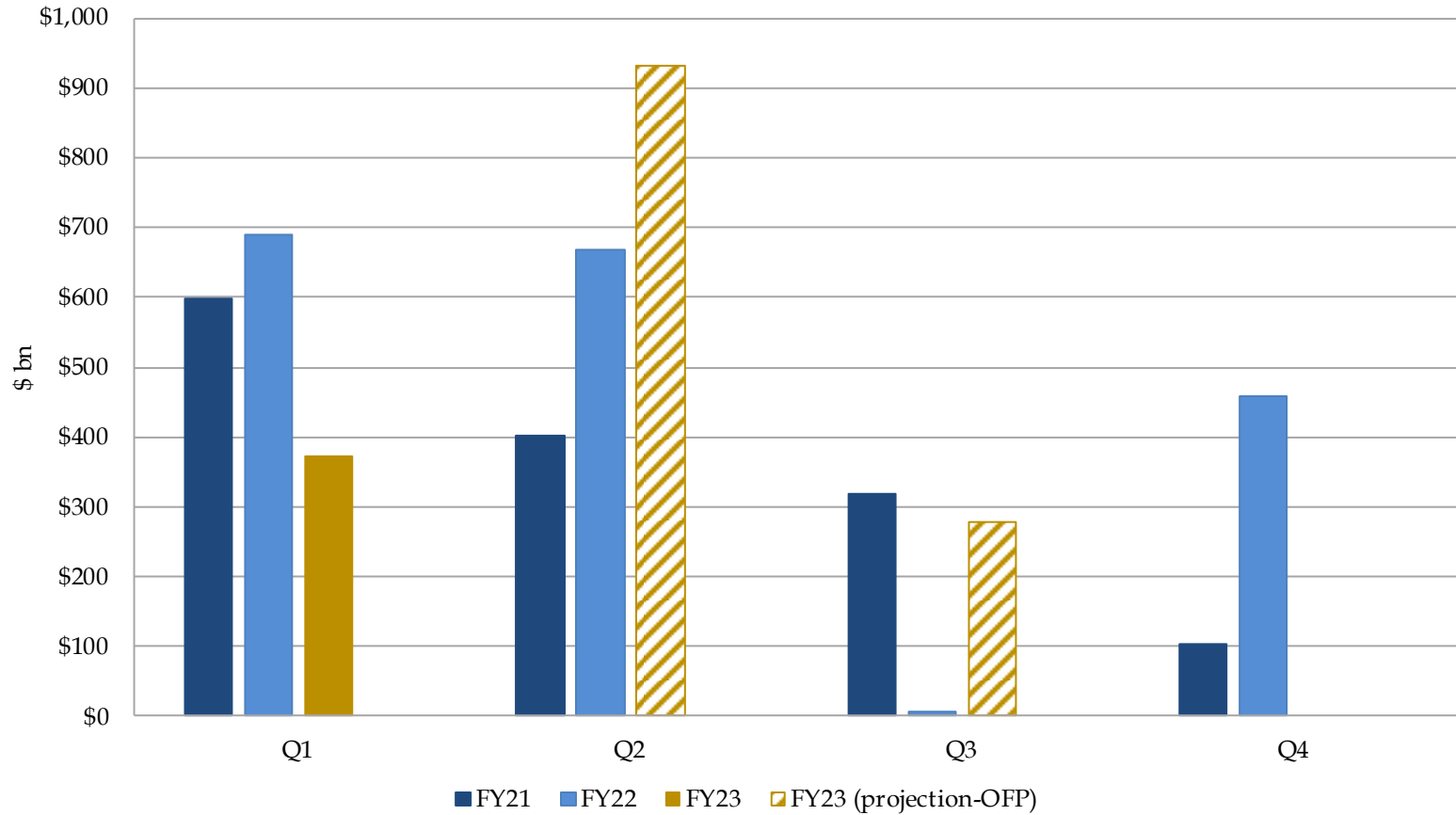
Section IV: Estimated Borrowing Needs and Financing Implications



Assumptions for Financing Section (pages 16 to 20)

- Portfolio and SOMA holdings as of 12/31/2022.
- Estimates assume privately announced issuance sizes and patterns remain constant for nominal coupons, TIPS, and FRNs given the issuance sizes in effect in January 2023, while using total bills outstanding of ~\$3.7 trillion.
- The principal on the TIPS securities was accreted to each projection date based on market ZCIS levels as of 12/31/2022.
- 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 net privately-held 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.
- All estimates assume enactment of a debt limit suspension or increase.

Privately-Held Net Marketable Borrowing Outlook



Implied Bill Funding for Next Two Quarters Based on Recent Borrowing Estimates

Sources of Privately-Held Financing in FY23 Q2

January - March 2023	
Assuming Constant Coupon Issuance Sizes*	
Treasury Announced Net Marketable Borrowing**	932
Net Coupon Issuance	277
Implied Change in Bills	655

Sources of Privately-Held Financing in FY23 Q3

April - June 2023	
Assuming Constant Coupon Issuance Sizes*	
Treasury Announced Net Marketable Borrowing**	278
Net Coupon Issuance	248
Implied Change in Bills	30

Security	January - March 2023 Coupon Issuance			Fiscal Year-to-Date Coupon Issuance			Security	April - June 2023 Coupon Issuance			Fiscal Year-to-Date Coupon Issuance		
	Gross	Maturing	Net	Gross	Maturing	Net		Gross	Maturing	Net	Gross	Maturing	Net
2-Year FRN	68	80	(12)	136	154	(18)	2-Year FRN	68	80	(12)	204	234	(30)
2-Year	168	204	(36)	252	298	(46)	2-Year	126	154	(28)	378	451	(73)
3-Year	120	79	41	240	128	112	3-Year	120	97	23	360	226	134
5-Year	172	73	99	258	98	160	5-Year	129	67	62	387	165	222
7-Year	140	111	29	210	179	31	7-Year	105	68	37	315	246	69
10-Year	99	38	61	198	91	107	10-Year	99	42	57	297	133	164
20-Year	51	0	51	78	0	78	20-Year	39	0	39	117	0	117
30-Year	57	5	52	114	7	107	30-Year	57	0	57	171	7	164
5-Year TIPS	0	0	0	40	0	40	5-Year TIPS	40	42	(2)	80	42	37
10-Year TIPS	32	50	(18)	47	50	(3)	10-Year TIPS	15	0	15	62	50	12
30-Year TIPS	9	0	9	9	0	9	30-Year TIPS	0	0	0	9	0	9
Coupon Subtotal	916	639	277	1,582	1,005	577	Coupon Subtotal	798	550	248	2,380	1,555	825

* Keeping announced issuance sizes and patterns constant for nominal coupons, TIPS, and FRNs based on changes made before the February 2023 refunding.

** Assumes an end-of-March 2023 and end-of-June 2023 cash balances of \$500 billion and \$550 billion respectively versus a beginning-of-January 2023 cash balance of \$447 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>

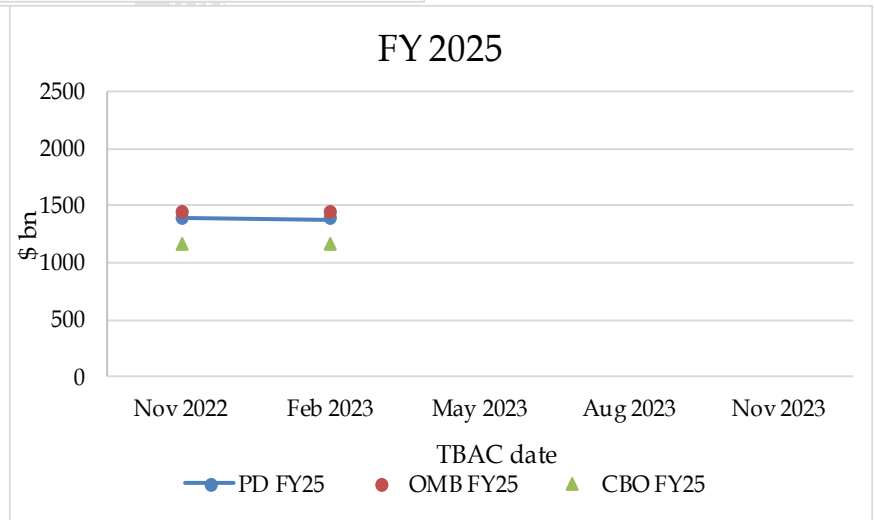
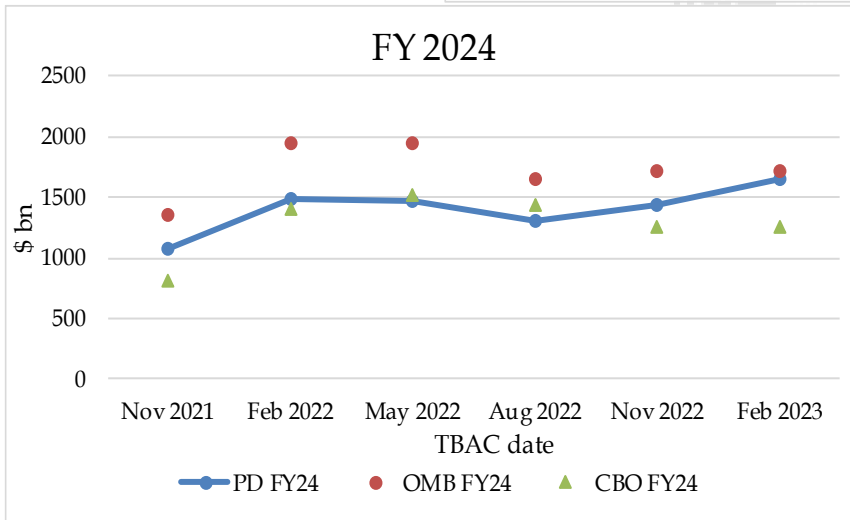
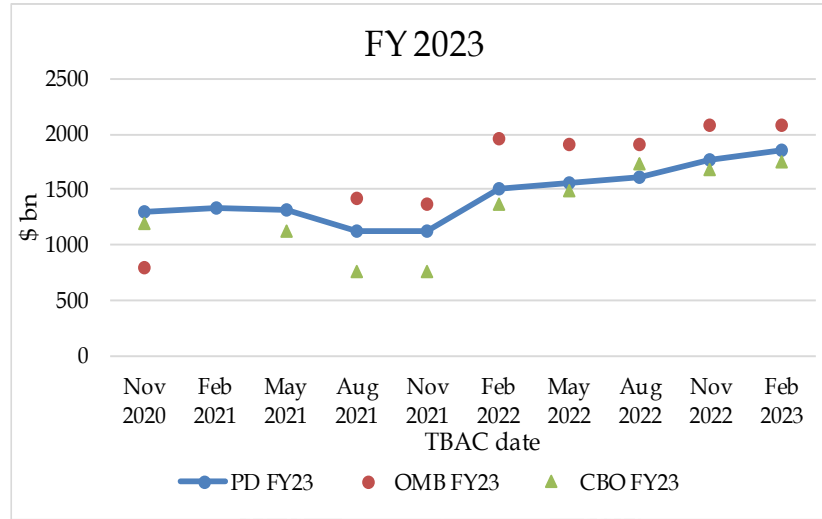
Longer-Term Privately Held Net Marketable Borrowing Estimates and SOMA Redemption Assumptions

FY 2023-2025 Deficits and Privately-Held Net Marketable Borrowing Estimates, in \$ billions

	Primary Dealer			OMB MSR	CBO ¹	CBO ²
	25th	Median	75th			
FY 2023 Deficit	1,000	1,130	1,250	1,300	908	984
FY 2024 Deficit	1,100	1,200	1,250	1,311	921	1,056
FY 2025 Deficit	1,200	1,309	1,403	1,414	1,145	1,318
FY 2023 SOMA Redemption	720	720	720			
FY 2024 SOMA Redemption	90	360	685			
FY 2025 SOMA Redemption	0	0	45			
FY 2023 Privately-Held Net Marketable Borrowing*	1,837	1,865	1,917	2,087	1,749	1,825
FY 2024 Privately-Held Net Marketable Borrowing*	1,394	1,645	1,702	1,722	1,250	1,384
FY 2025 Privately-Held Net Marketable Borrowing*	1,150	1,400	1,448	1,460	1,172	1,344
Estimates as of:		Jan-23		Aug-22	Sep-22	May-22

- *All privately-held net marketable borrowing estimates of are “normalized” using:
 - 1) the median Primary Dealer’s estimates for SOMA redemptions, and
 - 2) assuming OMB’s end of fiscal year 2023 cash balance of \$650 billion, held constant in out years.
- OMB projections are using estimates are from Table S-1 of “Mid-Session Review Budget of The U.S. Government Fiscal Year 2023,” August 2022.
- CBO¹ projections are using estimates are from Table 2 of “An Analysis of the President’s 2023 Budget,” September 2022.
- CBO² projections are using estimates are from Table 1-1 of “The Budget and Economic Outlook: 2022 to 2032,” May 2022.

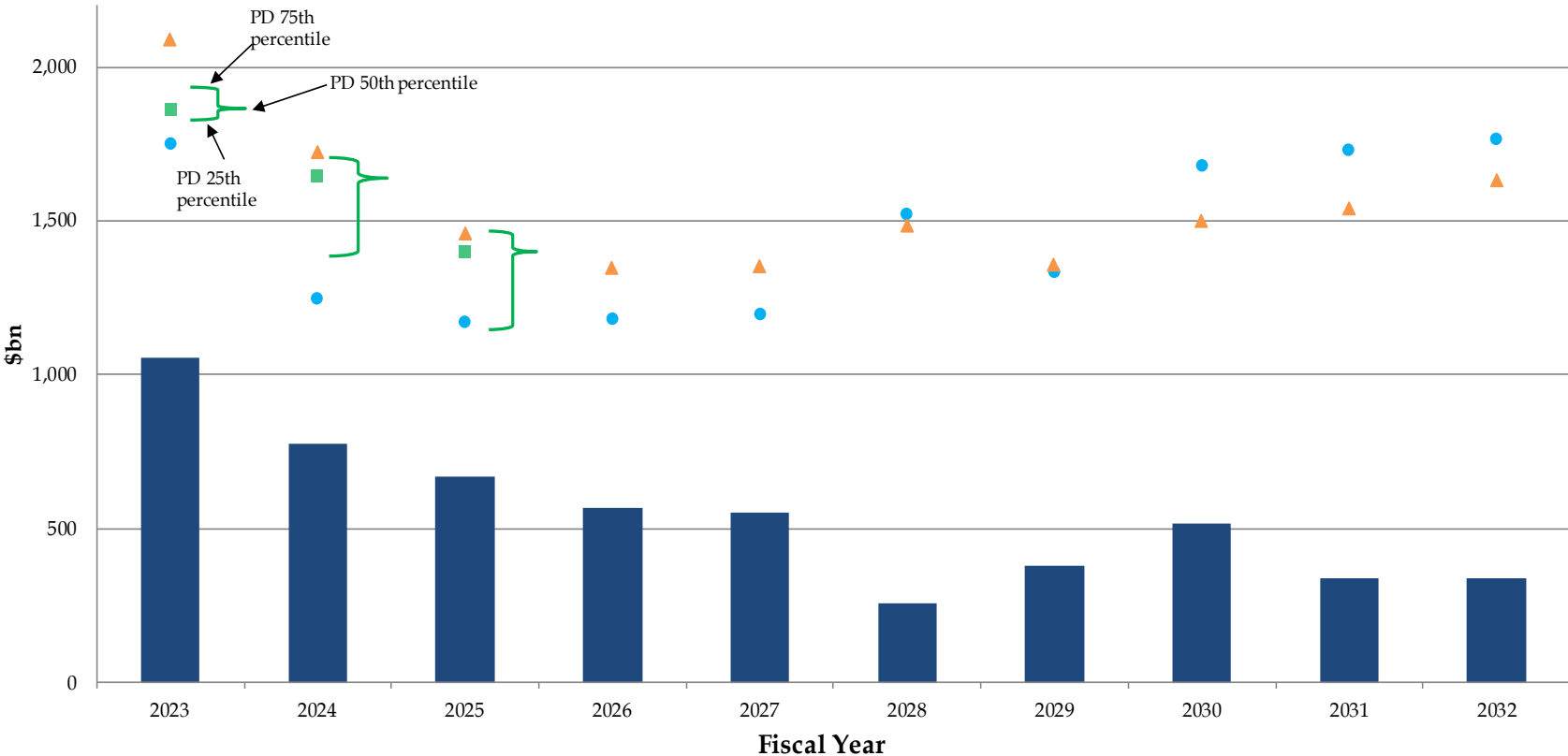
Evolution of Median Primary Dealer, OMB, and CBO Privately-Held Net Marketable Borrowing Estimates*



* 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 borrowings are normalized with the same cash balance changes.

Projected Privately-Held Net Marketable Borrowing

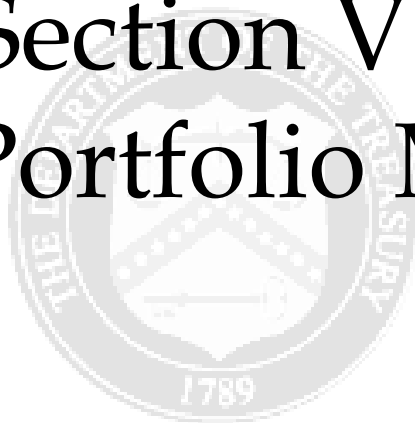
Assuming Private Coupon Issuance & Total Bills Outstanding Remain Constant as of 12/31/2022*



- Projected Privately-Held Net Marketable Borrowing
- Adj Privately-Held Net Borrowing from CBO's 'An Analysis of the President's 2023 Budget', Sep 2022
- ▲ Adj Privately-Held Net Borrowing from OMB MSR, Aug 2022
- PD Survey Privately-Held Net Marketable Borrowing Estimates, Jan 2023
- ┌─┴─┬─┐ PD Survey Privately-Held Marketable Borrowing Estimates at 25th, 50th and 75th Percentile

*Treasury's latest primary dealer survey median/interquartile range estimates can be found on page 18. OMB's borrowing projections are from Table S-1 of "Mid-Session Review Budget of the U.S. Government Fiscal Year 2023," Aug 2022. CBO's borrowing projections are using estimates from Table 2 of CBO's "An Analysis of the President's 2023 Budget," Sept 2022. Both OMB and CBO borrowing estimates are normalized to privately-held net borrowing after adding PD survey median SOMA redemption assumptions for FY23/24/25. In addition, all the PD and CBO privately-held net borrowing estimates are normalized with OMB MSR FY23/FY24/FY25 ending cash balance of \$650 billion.

Section V: Select Portfolio Metrics



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

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

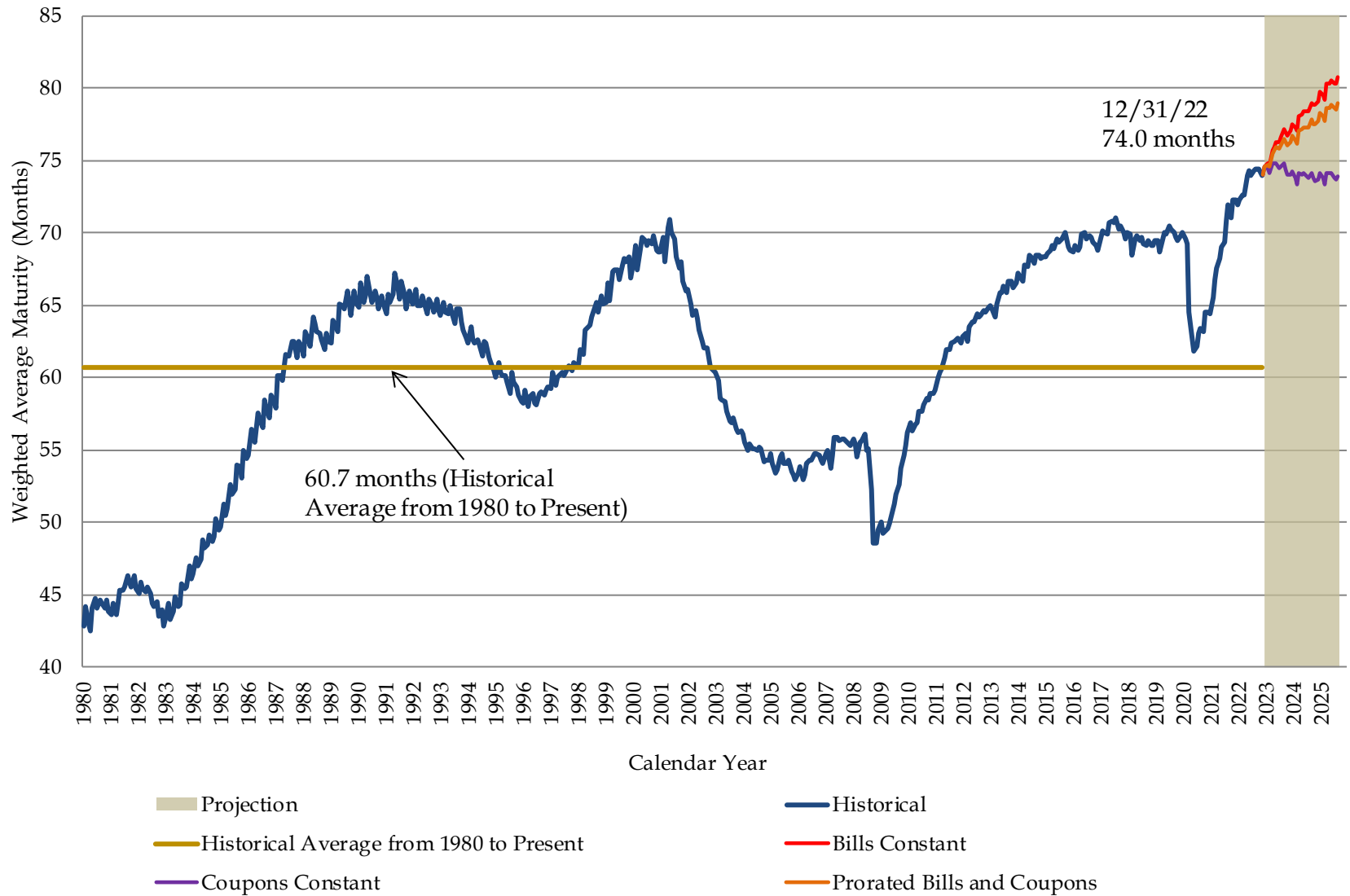
Projections illustrate how various portfolio metrics could evolve under three hypothetical financing scenarios. The scenarios were chosen to illustrate a potential range of portfolio metric outcomes based on hypothetical issuance choices.

The scenarios are:

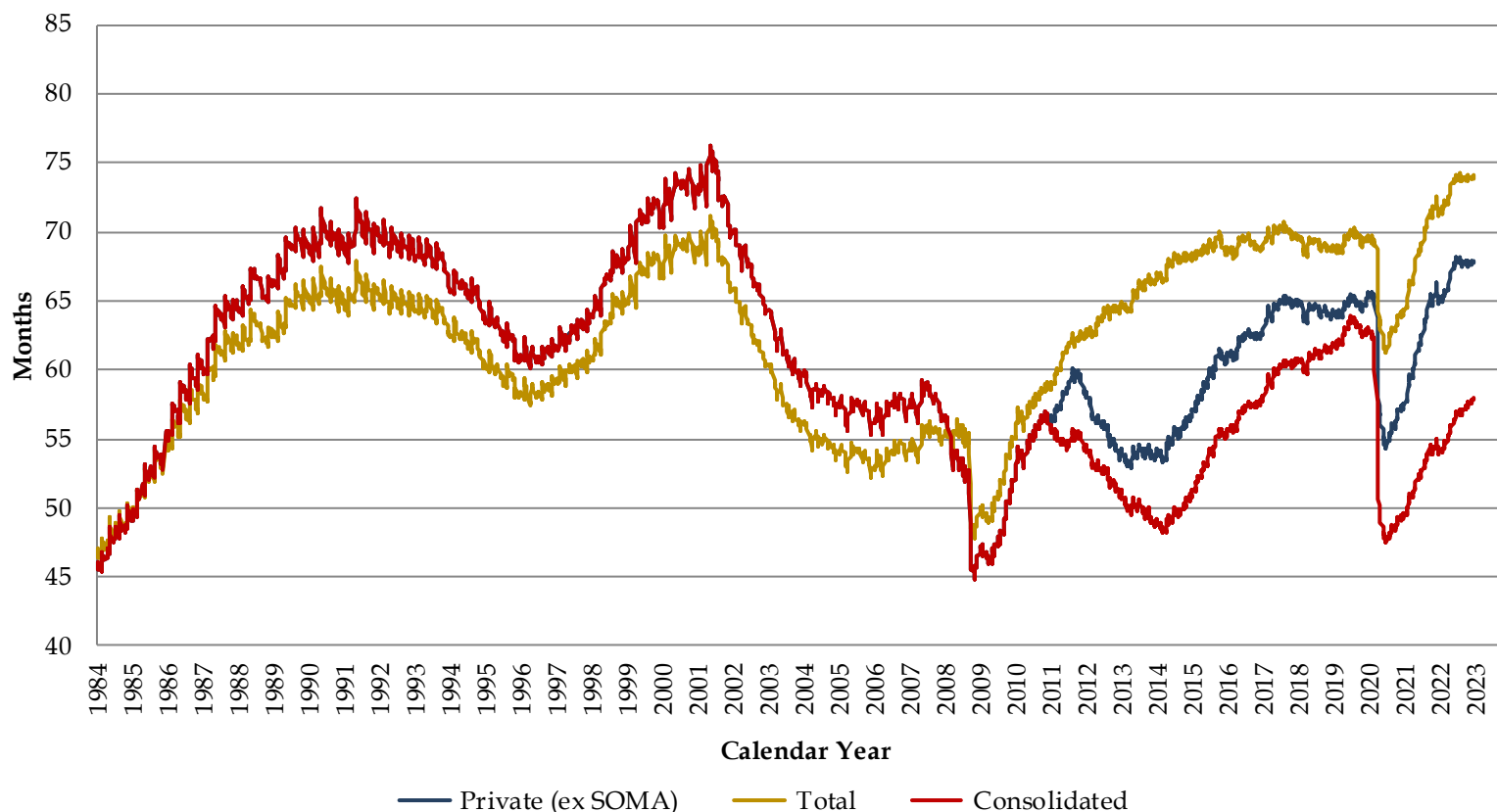
- 1) ***“Coupons Constant”***: Treasury maintains **coupon, FRN, and TIPS auction sizes constant** starting in January 2023 and addresses any changes in financing needs by only increasing or decreasing T-bill auction sizes;
- 2) ***“Bills Constant”***: Treasury maintains **T-bills aggregate supply constant** at \$3.7 trillion as of 12/31/2022 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 15.4% as of 12/31/2022 and addresses any changes in financing needs by pro rata increasing or decreasing coupon, FRN, and TIPS auction sizes.

Net marketable borrowing needs used in the projections section of these charts are proxied using median primary dealer estimates for FY23, FY24, & FY25 (see page 18).

Weighted Average Maturity of Marketable Debt Outstanding



Consolidated WANRR Calculation*

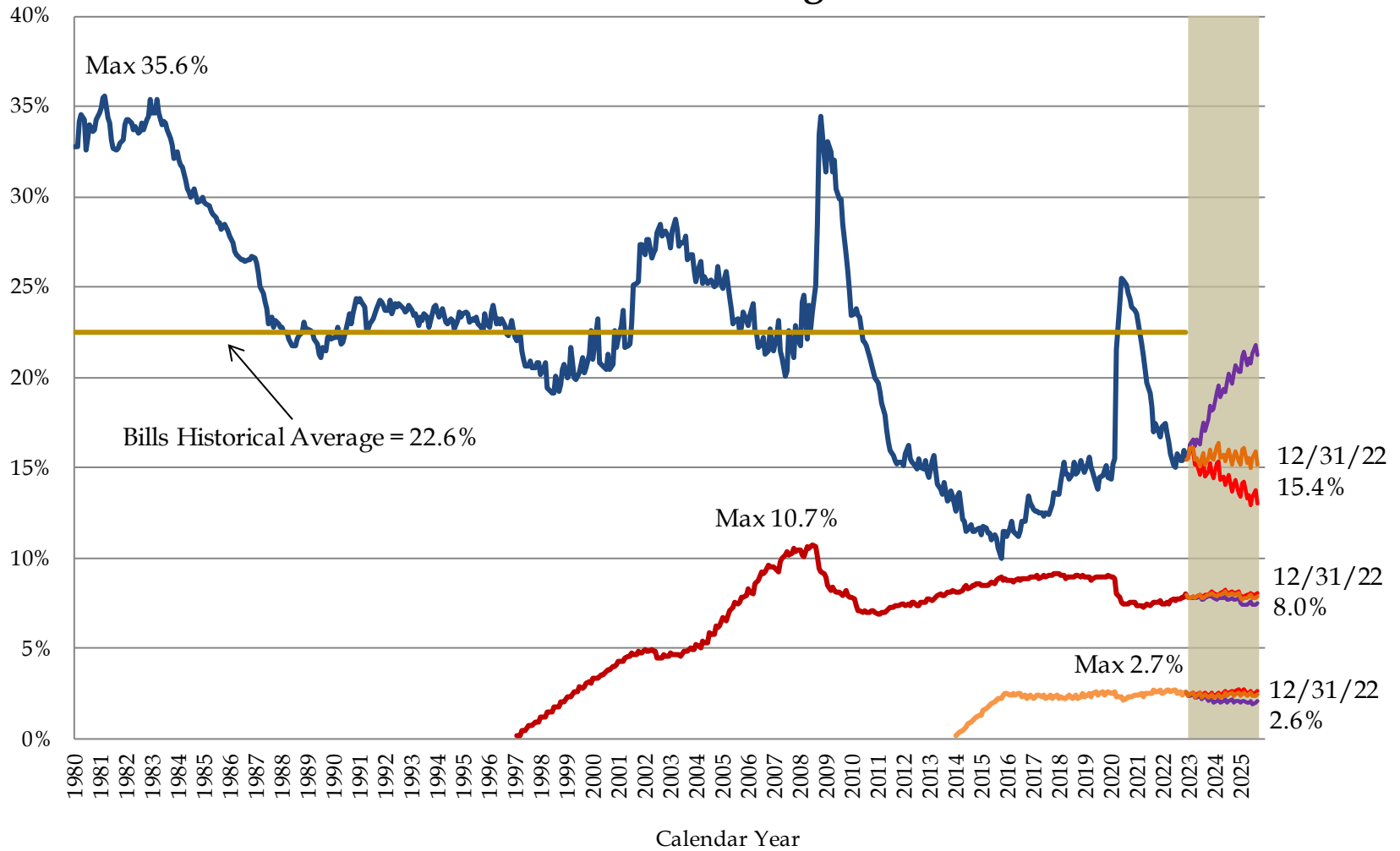


* Weighted Average Next Rate Reset (WANRR) is a “Weighted Average Maturity” metric that attempts to adjust for the floating rate aspect of some Treasury debt. The WANRR is the average time until the outstanding debt’s interest rate is set to a new interest rate. For bills and fixed rate notes and bonds, 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.

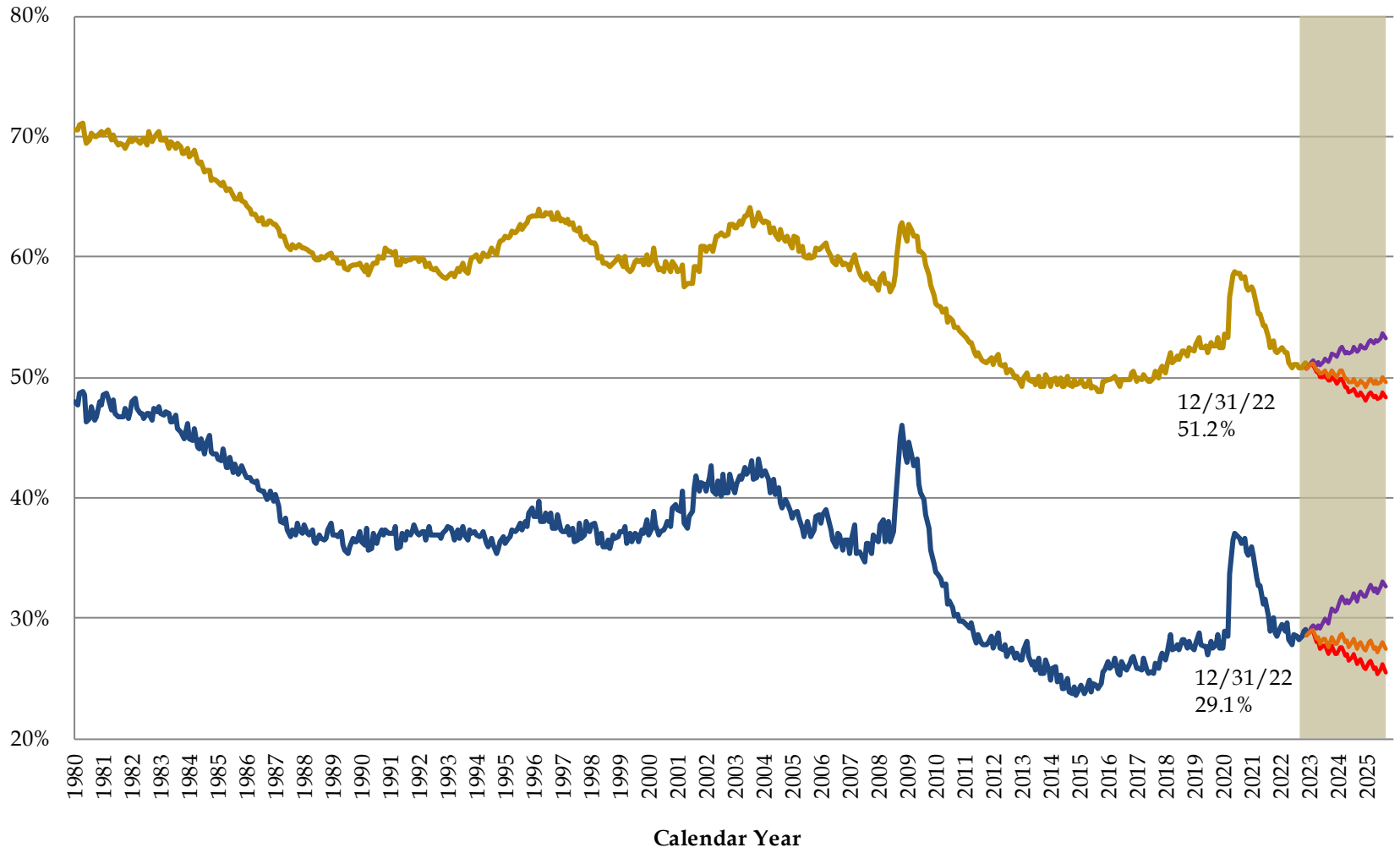
The consolidated outstanding debt is defined as the private amount plus SOMA Treasury securities holdings less currency amount. In this calculation, SOMA Treasury holdings greater than the level of currency outstanding is treated as if it is a daily rate reset.

Bills, TIPS & FRNs Outstanding as a Percent of Marketable Debt Outstanding



Projection
 Bills
 TIPS
 FRNs
 Bills Constant
 Coupons Constant
 Prorated Bills and Coupons

Treasury Maturity Profile

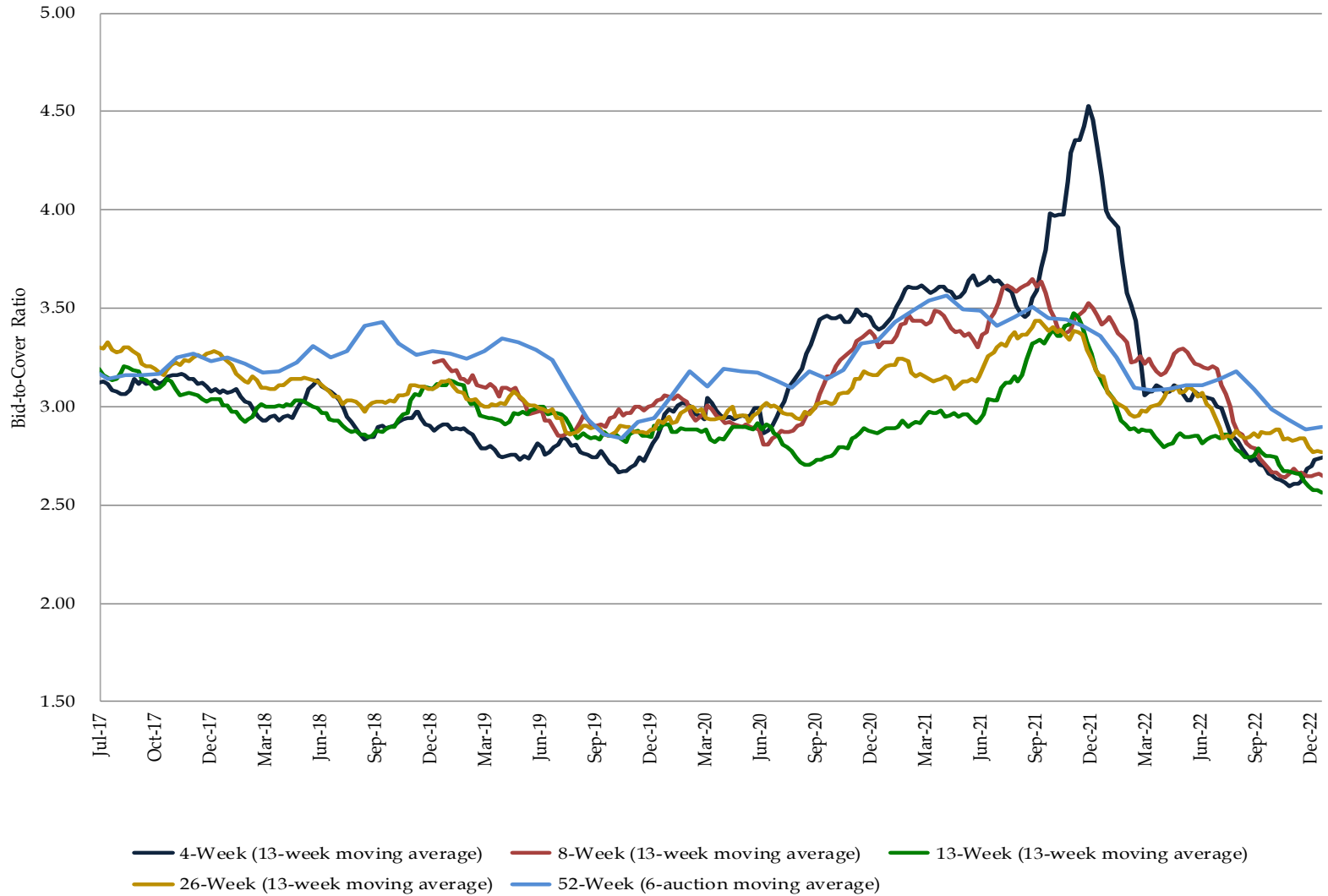


- Projection
- Percent Maturing <=1 Year
- Percent Maturing <=3 Year
- Bills Constant
- Coupons Constant
- Prorated Bills and Coupons

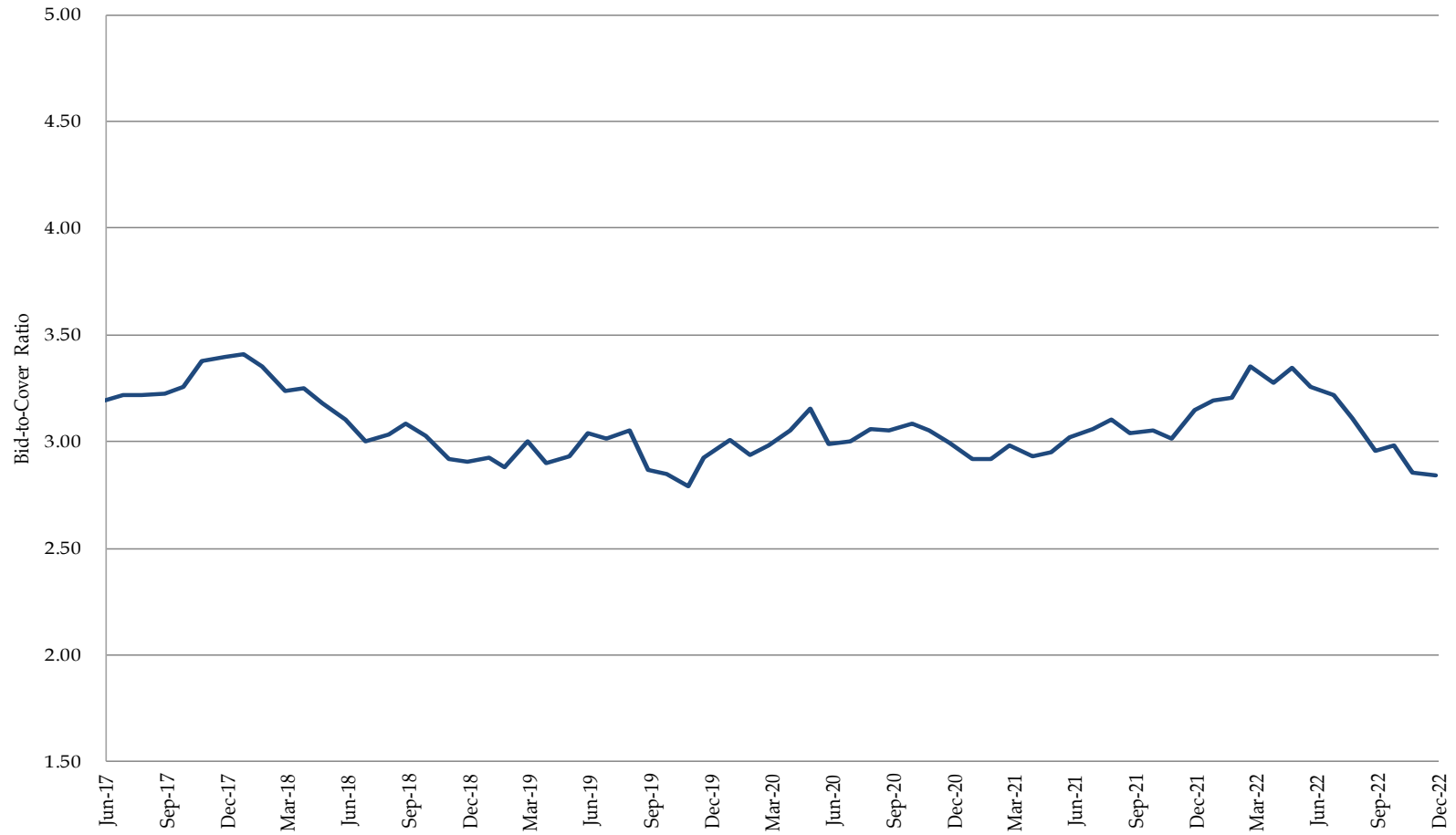
Section VI: Select Demand Metrics

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

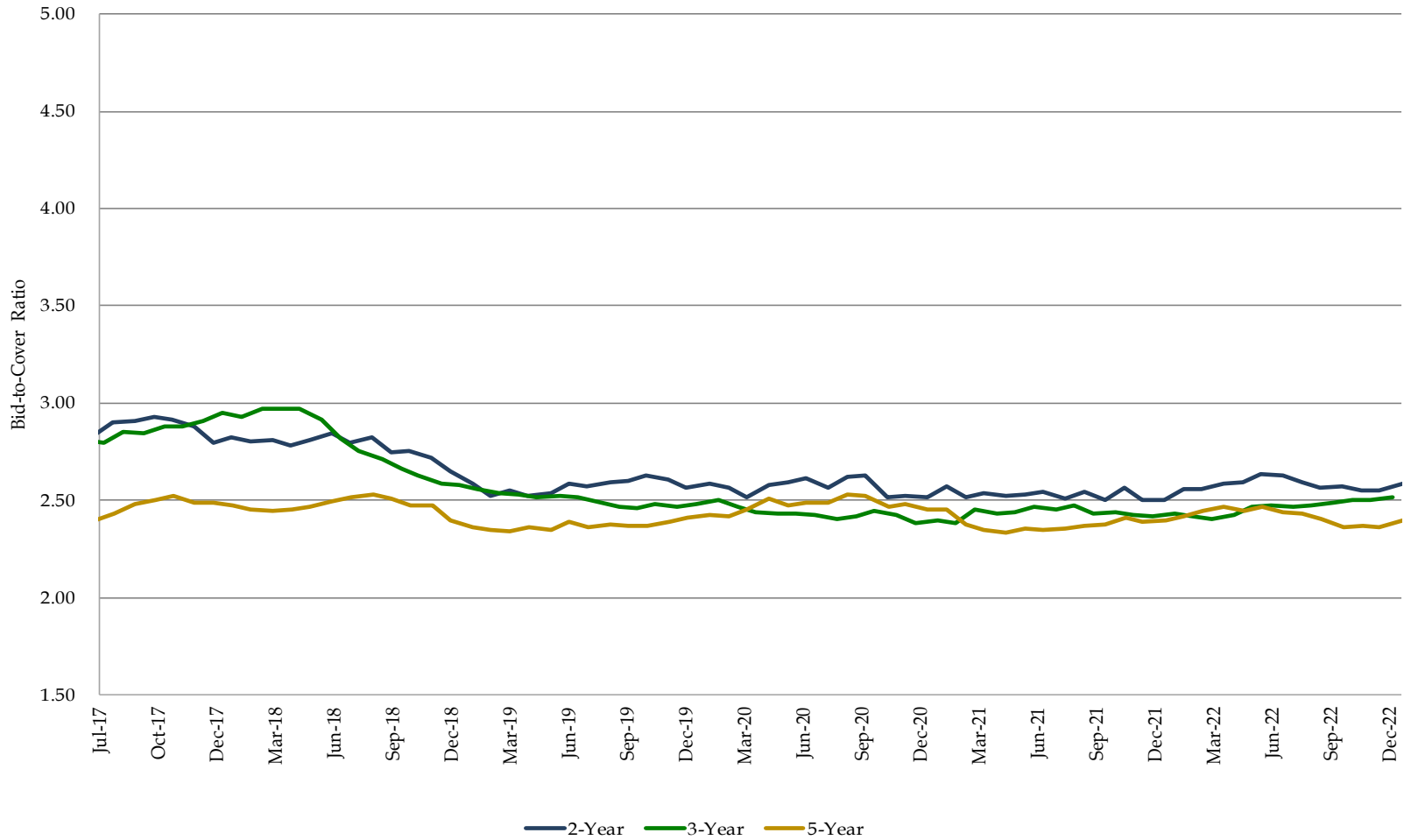
Bid-to-Cover Ratios for Treasury Bills



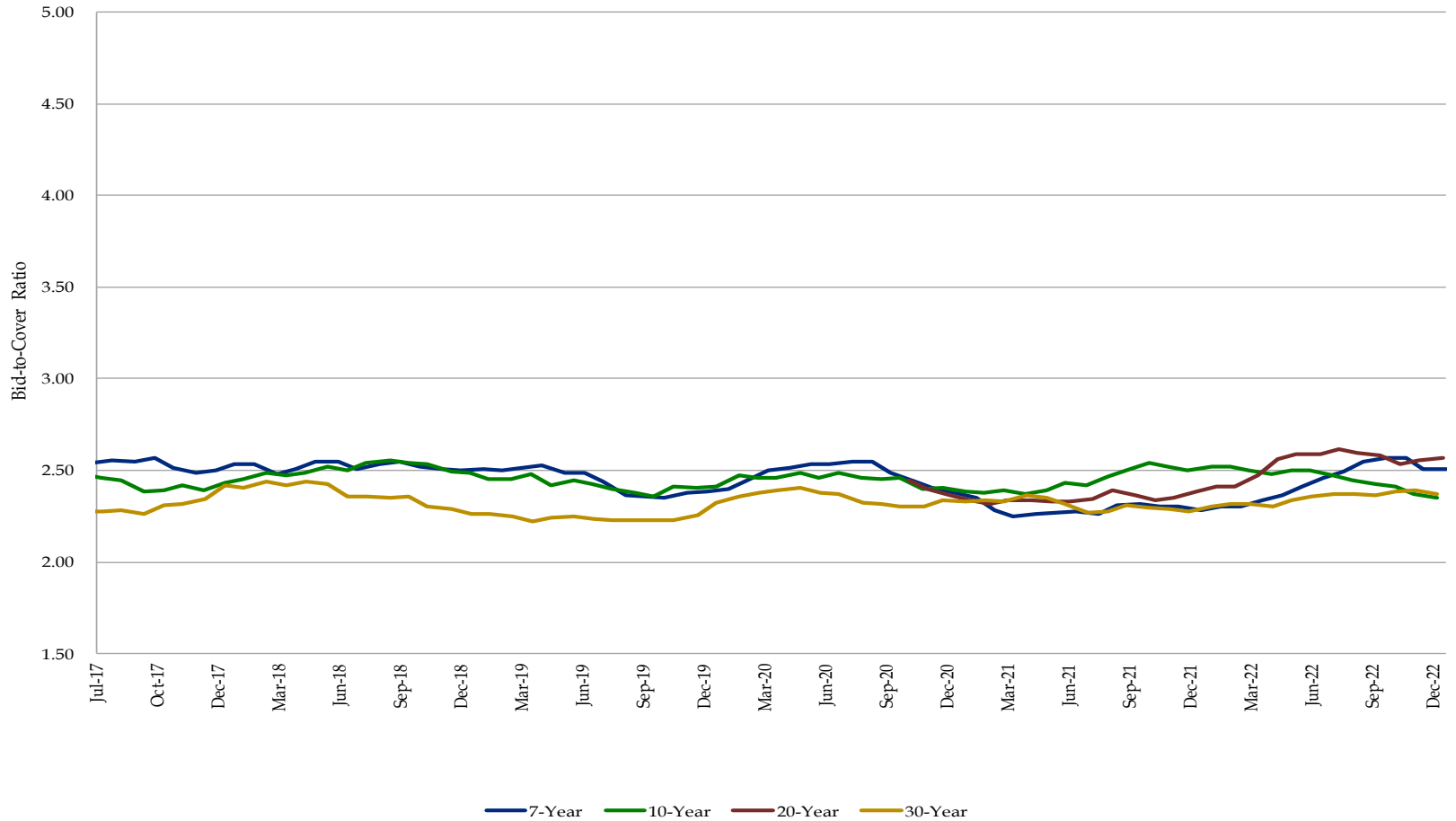
Bid-to-Cover Ratios for FRNs (6-Month Moving Average)



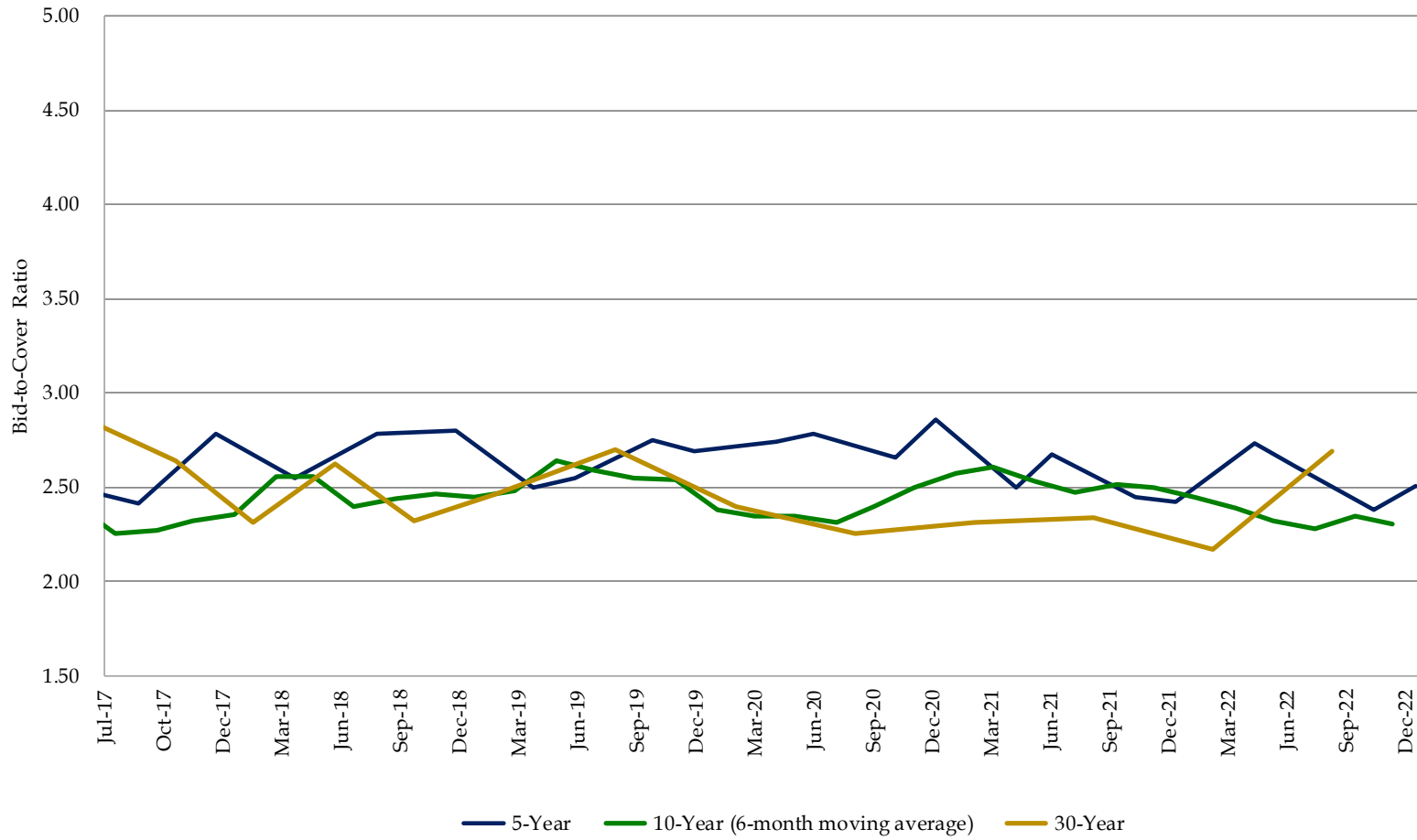
Bid-to-Cover Ratios for 2-, 3-, and 5-Year Nominal Securities (6-Month Moving Average)



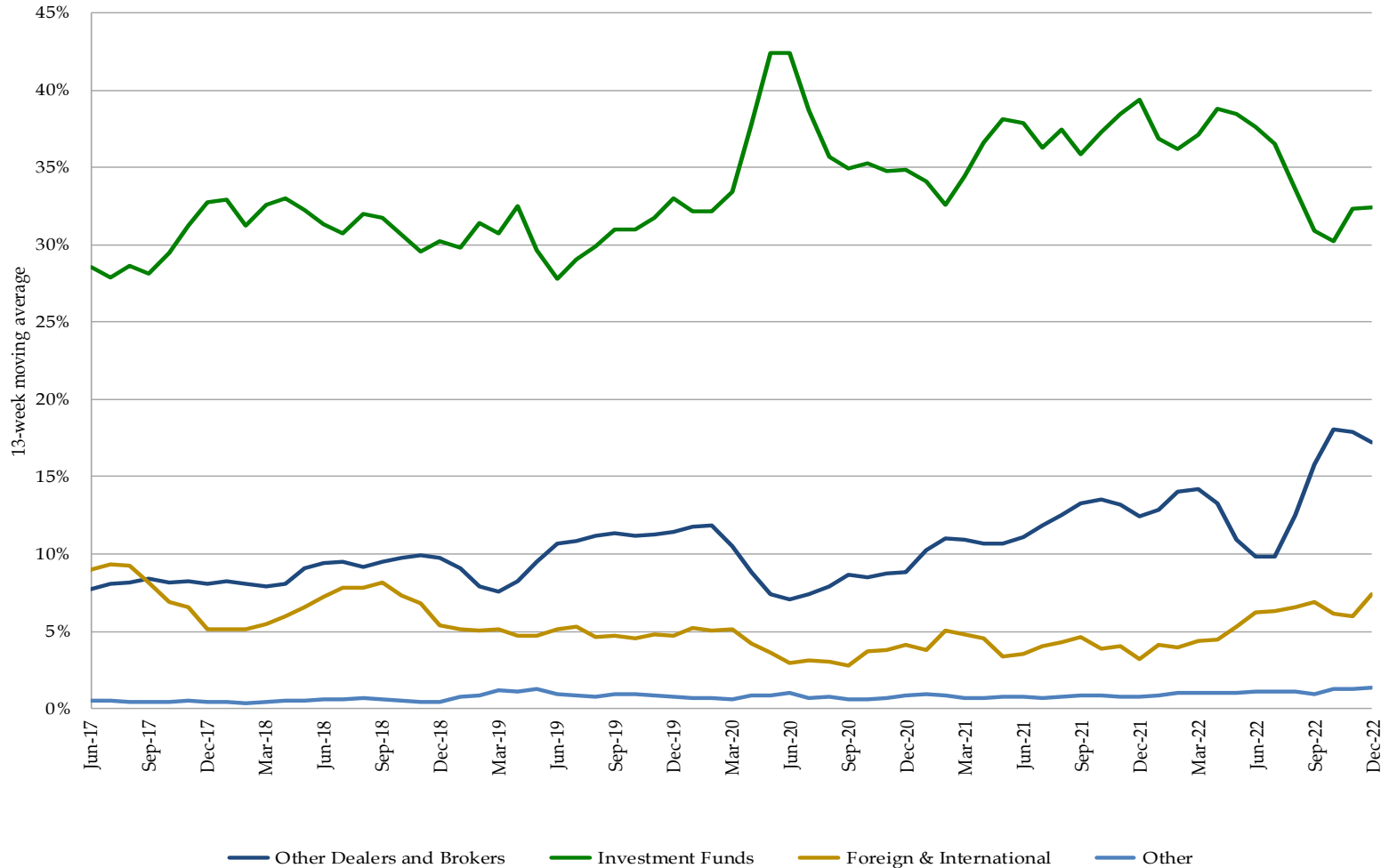
Bid-to-Cover Ratios for 7-, 10-, 20-, and 30-Year Nominal Securities (6-Month Moving Average)



Bid-to-Cover Ratios for TIPS

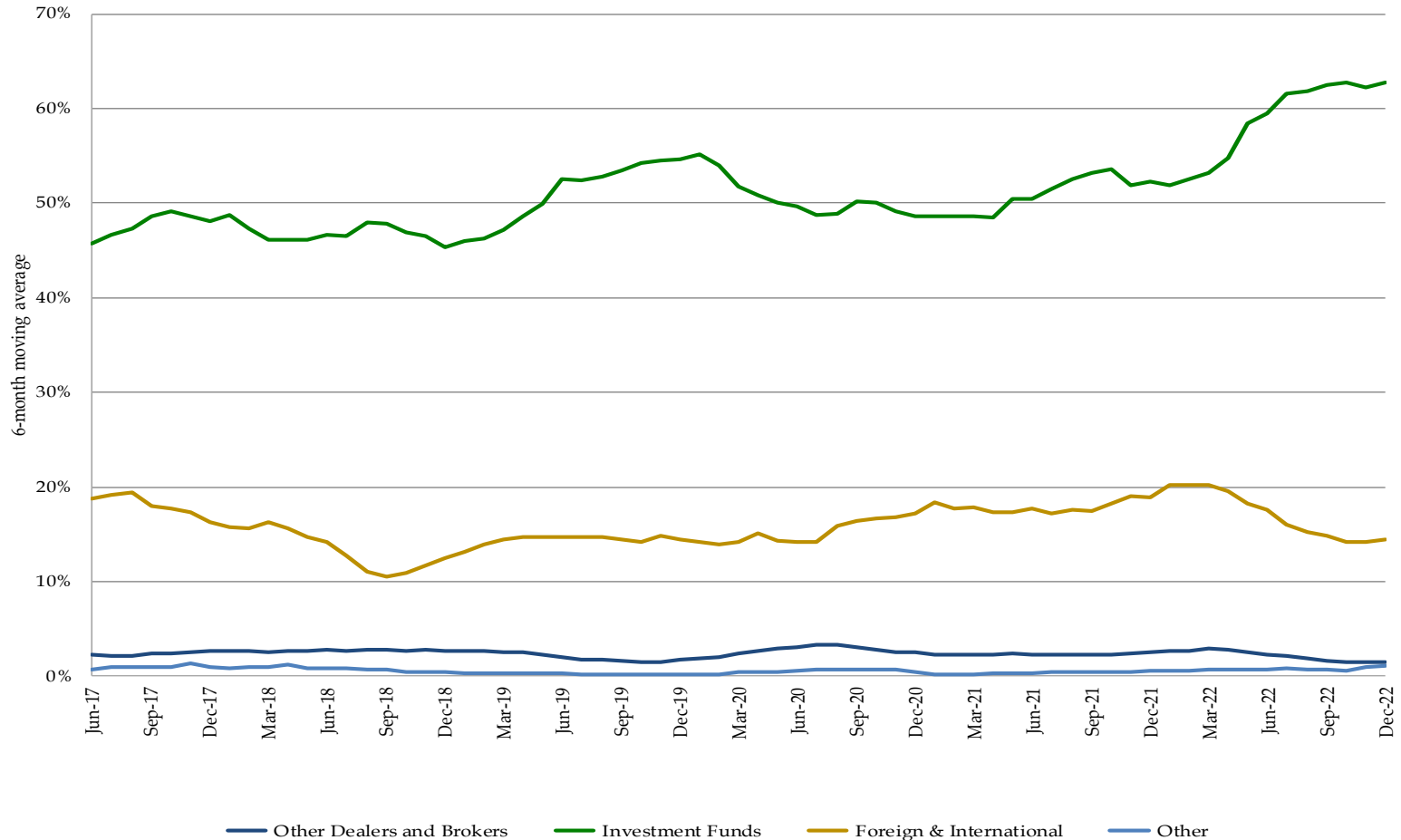


Percent Awarded in Bill Auctions by Investor Class (13-Week Moving Average)



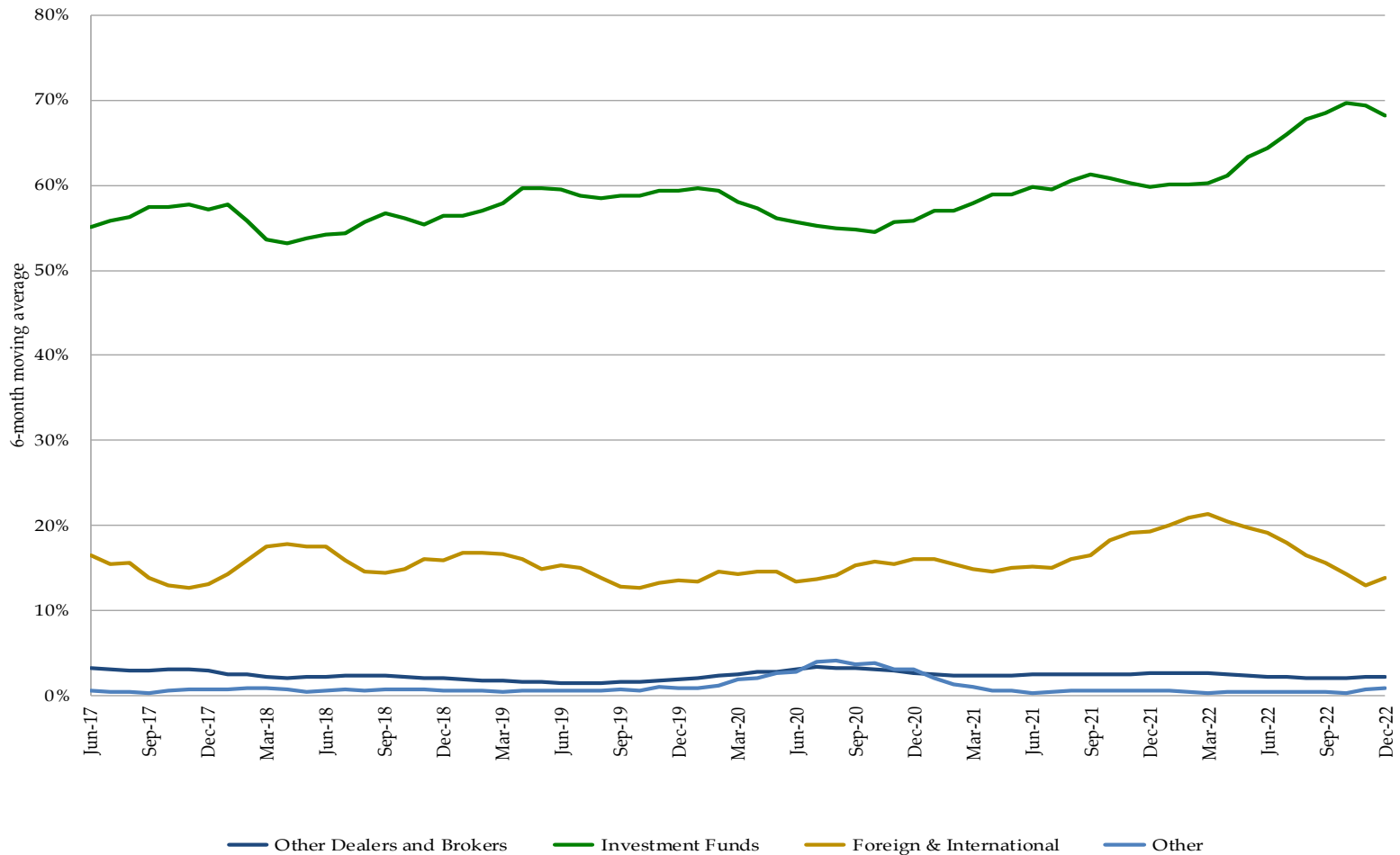
Excludes SOMA add-ons. The “Other” category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

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



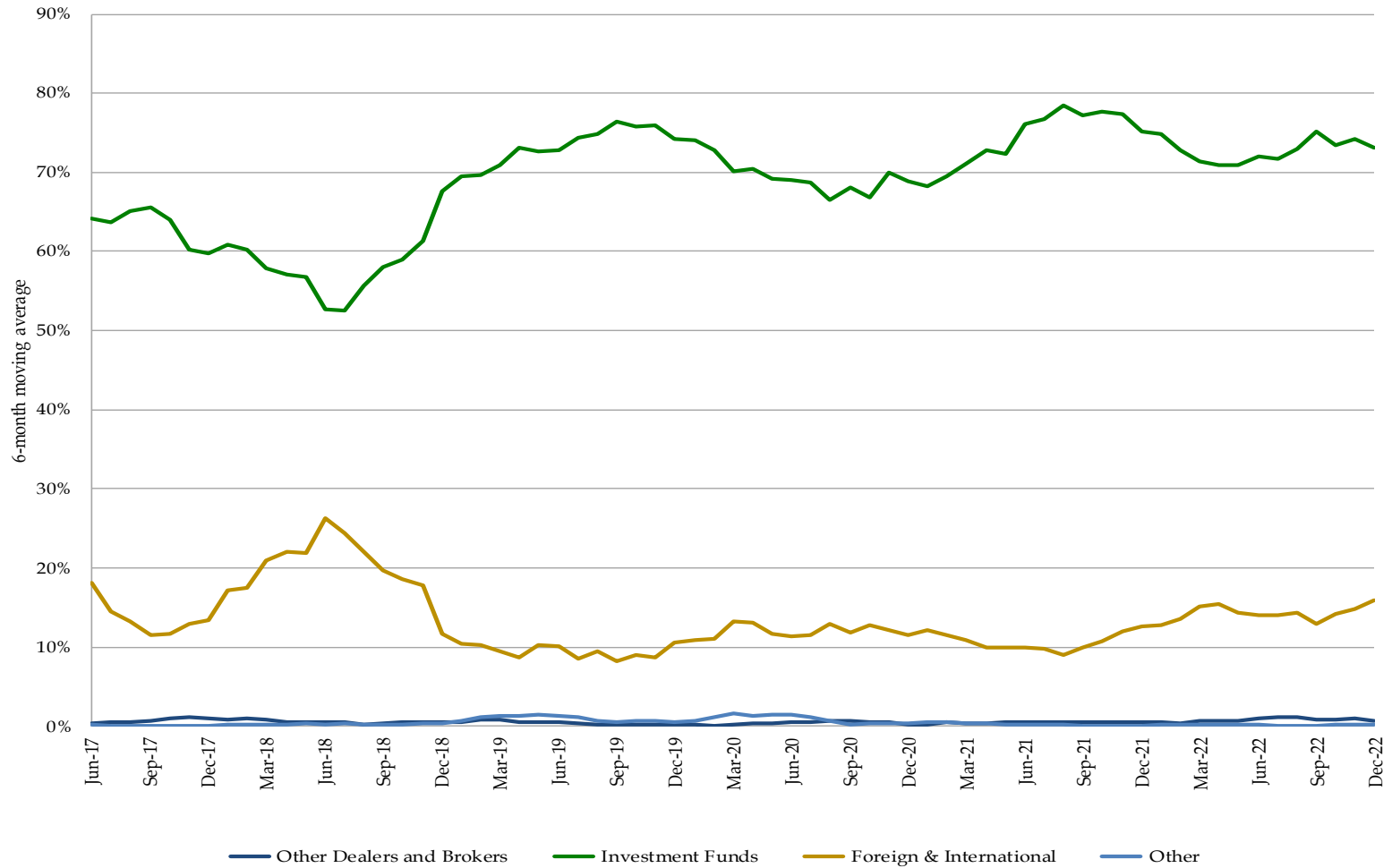
Excludes SOMA add-ons. The “Other” category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

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



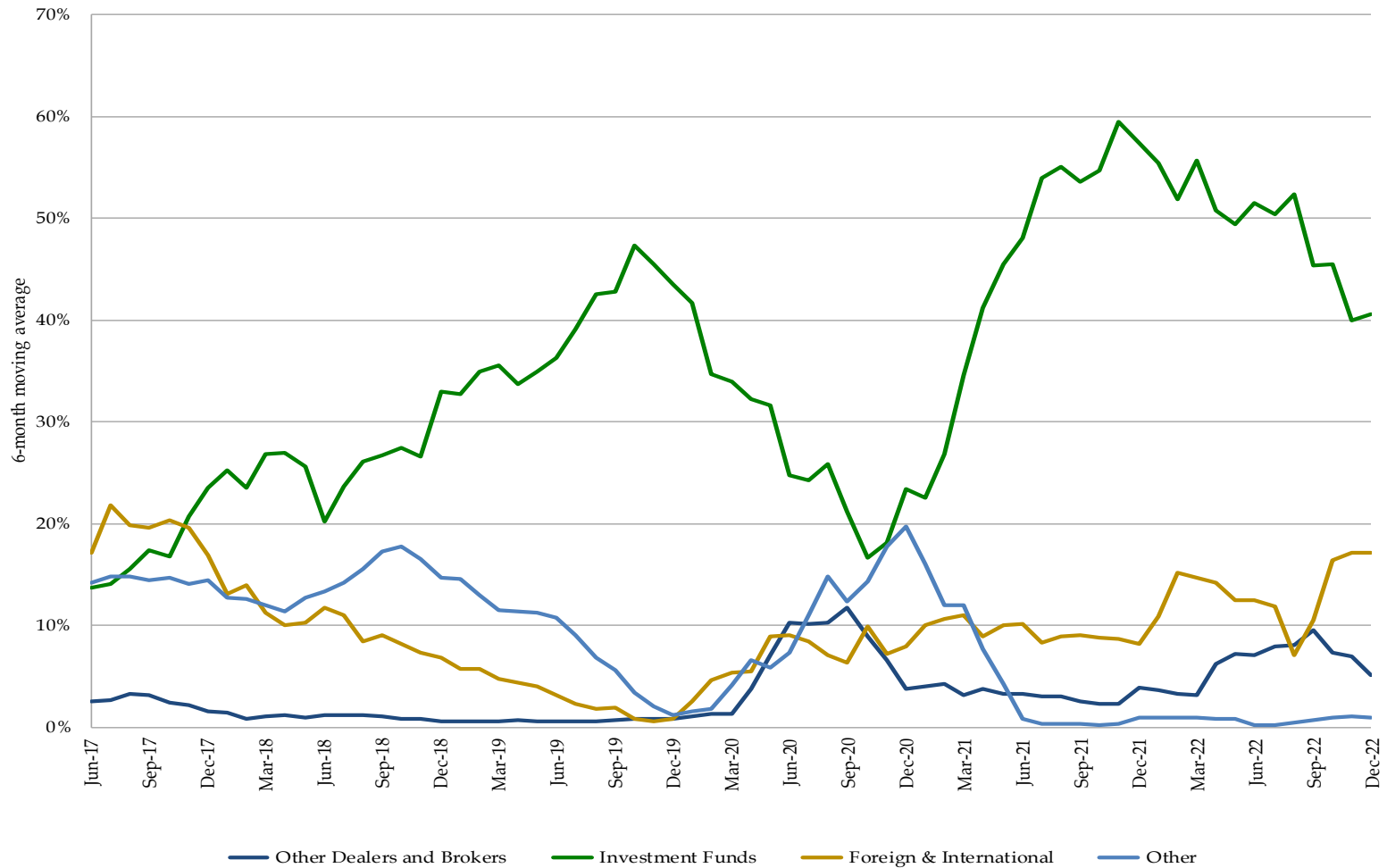
Excludes SOMA add-ons. The “Other” category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

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



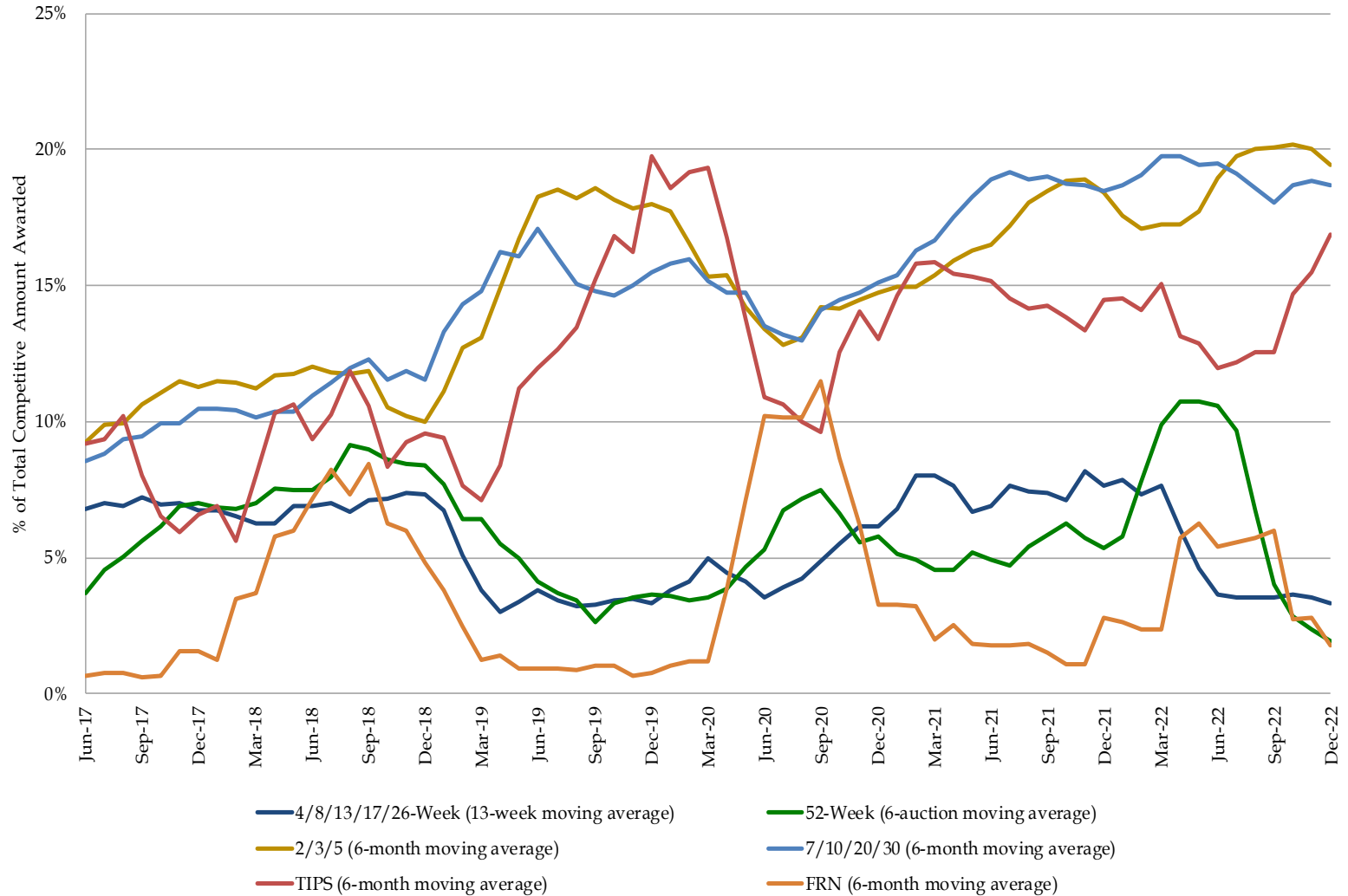
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

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



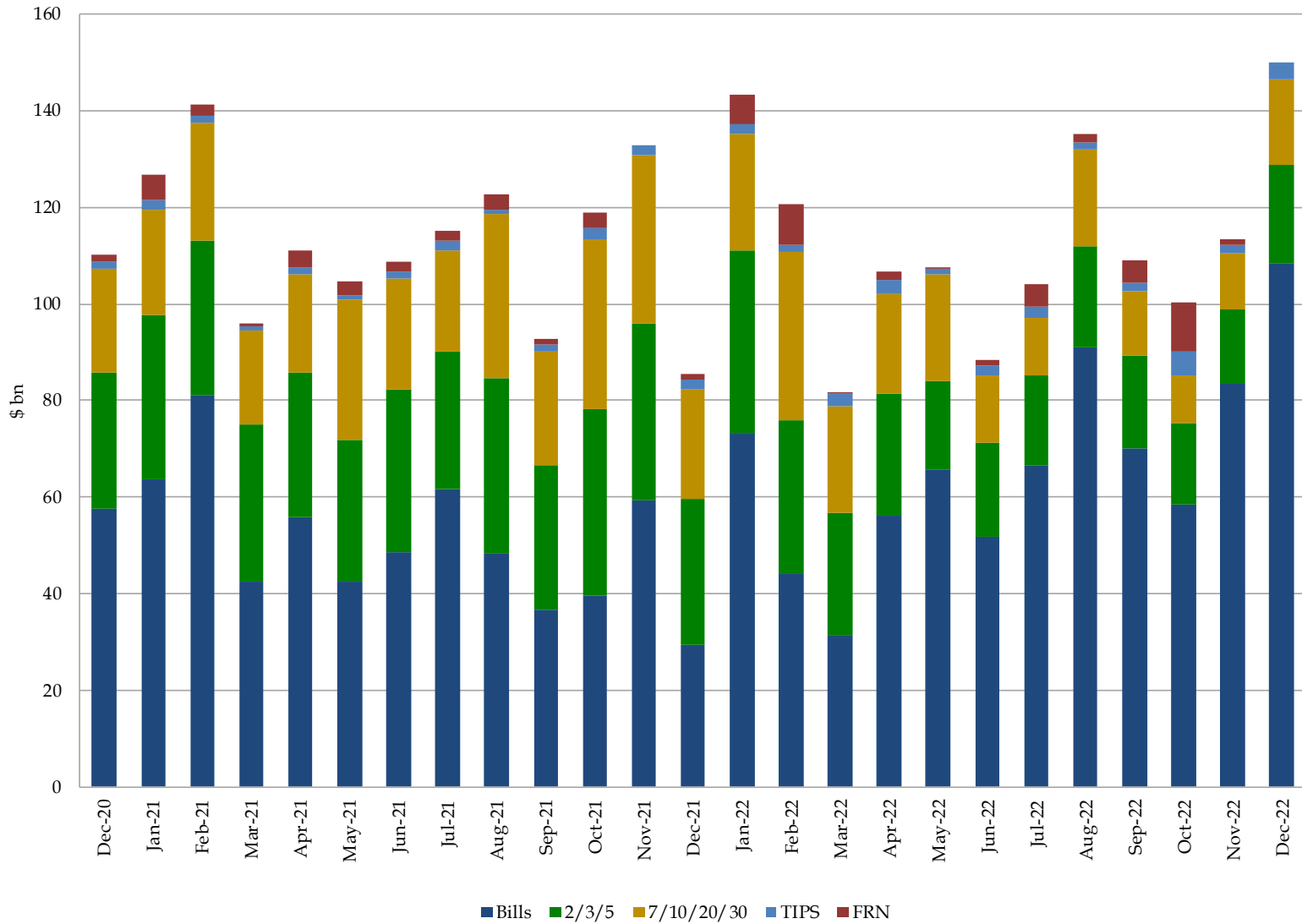
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

Direct Bidder Awards at Auction



Competitive Amount Awarded excludes SOMA add-ons.

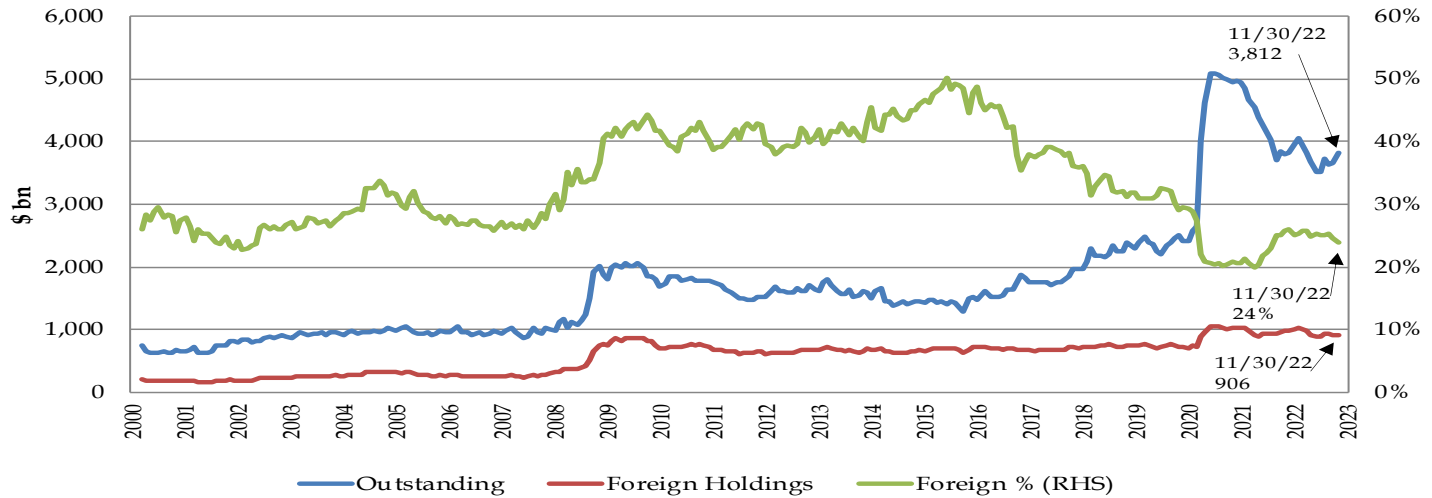
Total Foreign Awards of Treasuries at Auction, \$ billions



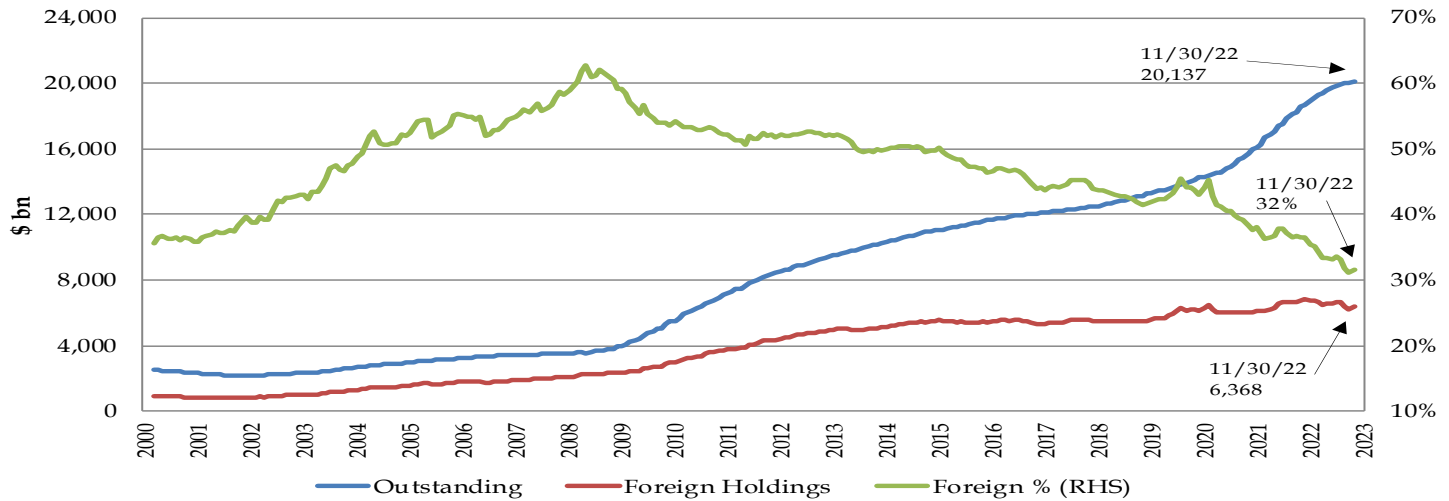
Foreign includes both private sector and official institutions.

Total Foreign Holdings

Bills



Nominal Coupons, TIPS, and FRNs



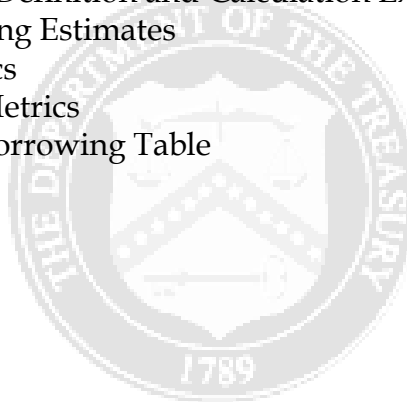
Source: Treasury International Capital (TIC) System as of November 2022.

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.

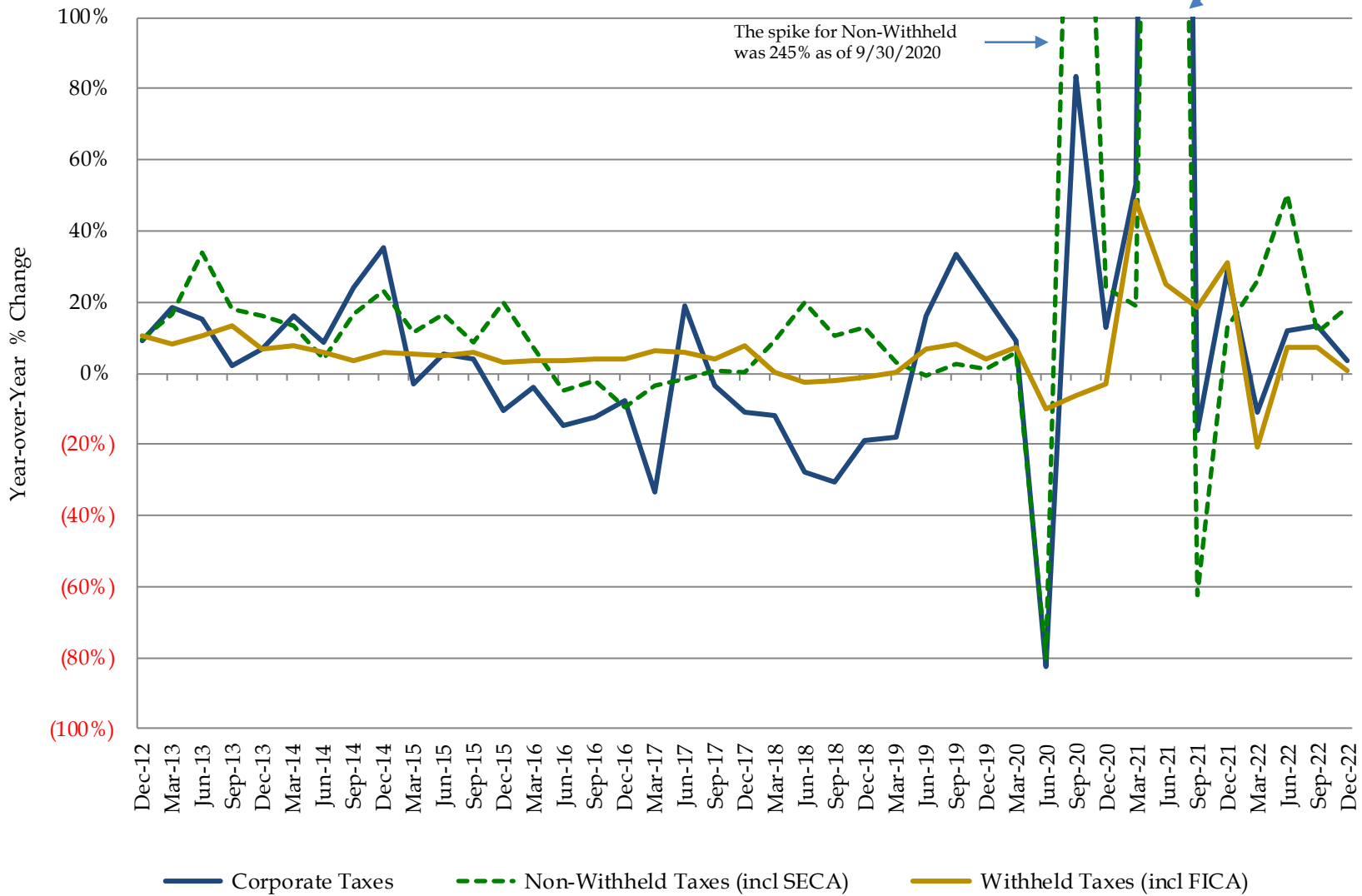
VII. Appendix

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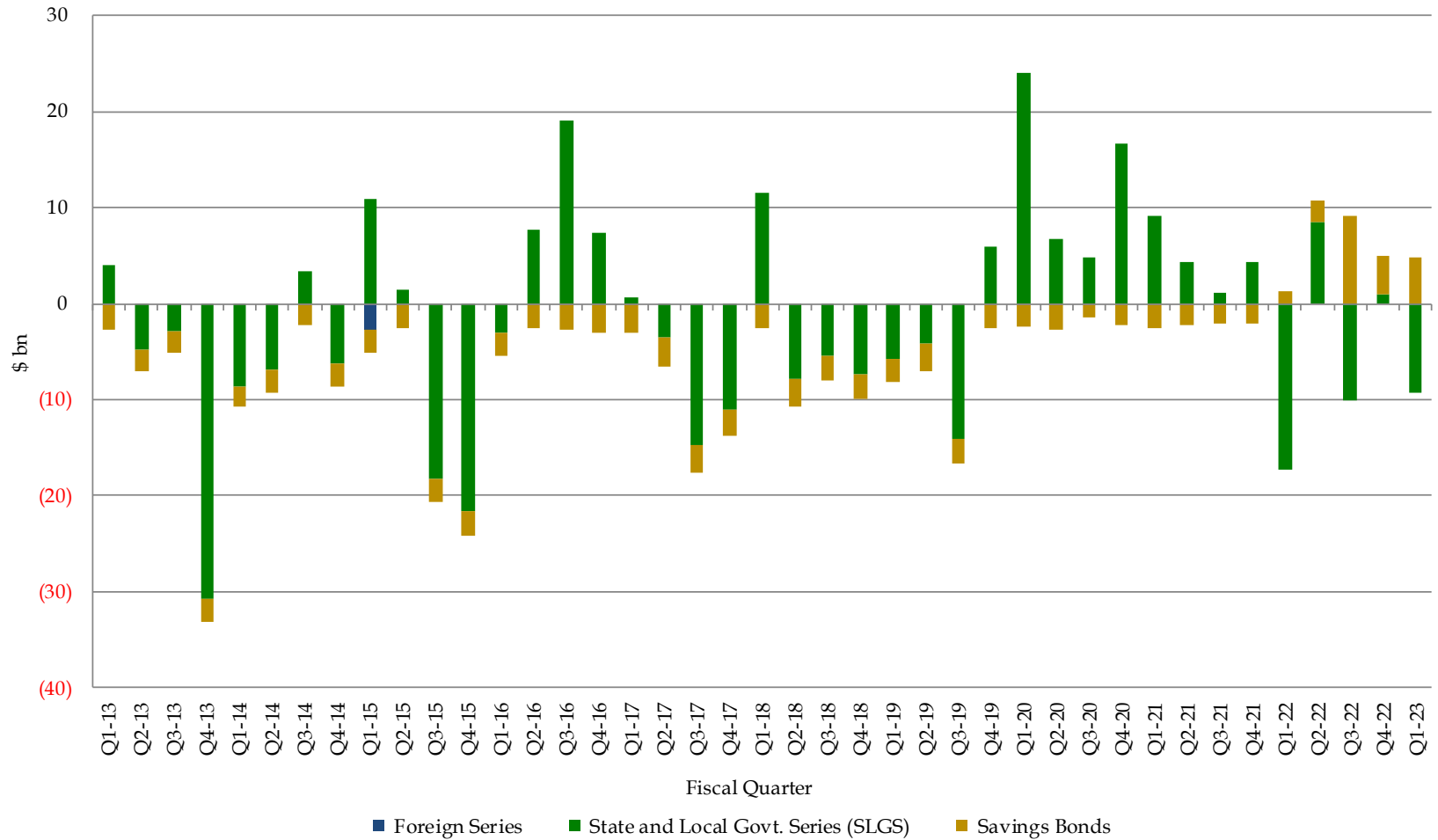


Quarterly Tax Receipts

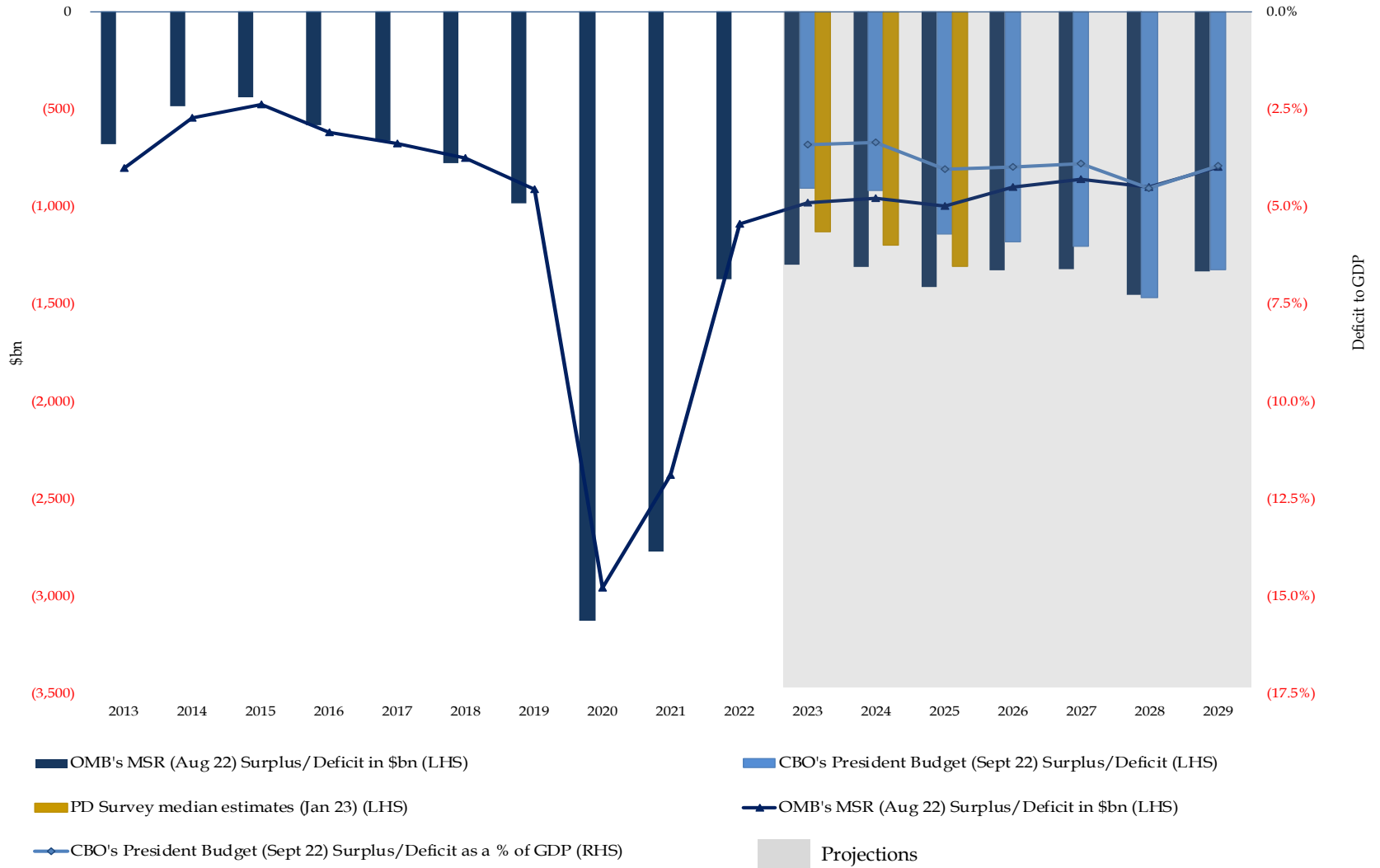


Quarterly tax receipts for Q4 FY2020 reflect the adjustment of April and June 2020 tax deadlines to July 15th, 2020.

Treasury Net Nonmarketable Borrowing



Budget Surplus/Deficit*



*OMB's projections are from OMB's Table S-1 of "Mid-Session Review Budget of The U.S. Government Fiscal Year 2023," Aug 2022. CBO's deficit projections are using estimates from CBO's Table 2 of "An Analysis of the President's 2023 Budget," Sept 2022.

Sources of Privately-Held Financing in FY23 Q1

October - December 2022	
Net Bill Issuance	73
Net Coupon Issuance	300
Subtotal: Net Marketable Borrowing	373
Ending Cash Balance	447
Beginning Cash Balance	636
Subtotal: Change in Cash Balance	(189)
Net Implied Funding for FY23 Q1*	562

Security	October - December 2022 Bill Issuance			Fiscal Year-to-Date Bill Issuance		
	Gross	Maturing	Net	Gross	Maturing	Net
4-Week	720	740	(20)	720	740	(20)
8-Week	645	630	15	645	630	15
13-Week	720	690	30	720	690	30
17-Week	330	0	330	330	0	330
26-Week	582	567	15	582	567	15
52-Week	136	136	(0)	136	136	(0)
CMBs						
17-Week	93	390	(297)	93	390	(297)
CMBs	40	40	0	40	40	0
Bill Subtotal	3,689	3,329	73	3,402	3,329	73

Security	October - December 2022 Coupon Issuance			Fiscal Year-to-Date Coupon Issuance		
	Gross	Maturing	Net	Gross	Maturing	Net
2-Year FRN	68	74	(6)	68	74	(6)
2-Year	84	94	(10)	84	94	(10)
3-Year	120	49	71	120	49	71
5-Year	86	26	60	86	26	60
7-Year	70	67	3	70	67	3
10-Year	99	53	46	99	53	46
20-Year	27	0	27	27	0	27
30-Year	57	2	55	57	2	55
5-Year TIPS	40	0	40	40	0	40
10-Year TIPS	15	0	15	15	0	15
30-Year TIPS	0	0	0	0	0	0
Coupon Subtotal	666	366	300	666	366	300

Total	4,355	3,695	373	4,068	3,695	373
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*By adjusting the change in cash balance, Treasury arrives at the net implied funding number.

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 2023-2025 Deficits and Privately-Held Net Marketable Borrowing Estimates*, in \$ billions

	Primary Dealer			OMB MSR	CBO ¹	CBO ²	
	25th	Median	75th				
FY 2023 Deficit	1,000	1,130	1,250	1,300	908	984	
FY 2024 Deficit	1,100	1,200	1,250	1,311	921	1,056	
FY 2025 Deficit	1,200	1,309	1,403	1,414	1,145	1,318	
FY 2023 Change in Cash Balance	-223	-136	14	14	-71	-71	
FY 2024 Change in Cash Balance	0	30	198	0	0	0	
FY 2025 Change in Cash Balance	0	0	21	0	0	0	
FY 2023 Total Net Marketable Borrowing				1,367	944	1,020	
FY 2024 Total Net Marketable Borrowing				1,362	890	1,024	
FY 2025 Total Net Marketable Borrowing				1,460	1,172	1,344	
FY 2023 SOMA Redemption	720	720	720				
FY 2024 SOMA Redemption	90	360	685				
FY 2025 SOMA Redemption	0	0	45				
FY 2023 Privately-Held Net Marketable Borrowing**	1,837	1,865	1,917	2,087	1,749	1,825	
FY 2024 Privately-Held Net Marketable Borrowing**	1,394	1,645	1,702	1,722	1,250	1,384	
FY 2025 Privately-Held Net Marketable Borrowing**	1,150	1,400	1,448	1,460	1,172	1,344	
Estimates as of:				Jan-23	Aug-22	Sep-22	May-22

¹ Estimates represent the medians/interquartile ranges from the primary dealer survey in January 2023.

² OMB projections are using estimates are from Table S-1 of "Mid-Session Review Budget of The U.S. Government Fiscal Year 2023," August 2022.

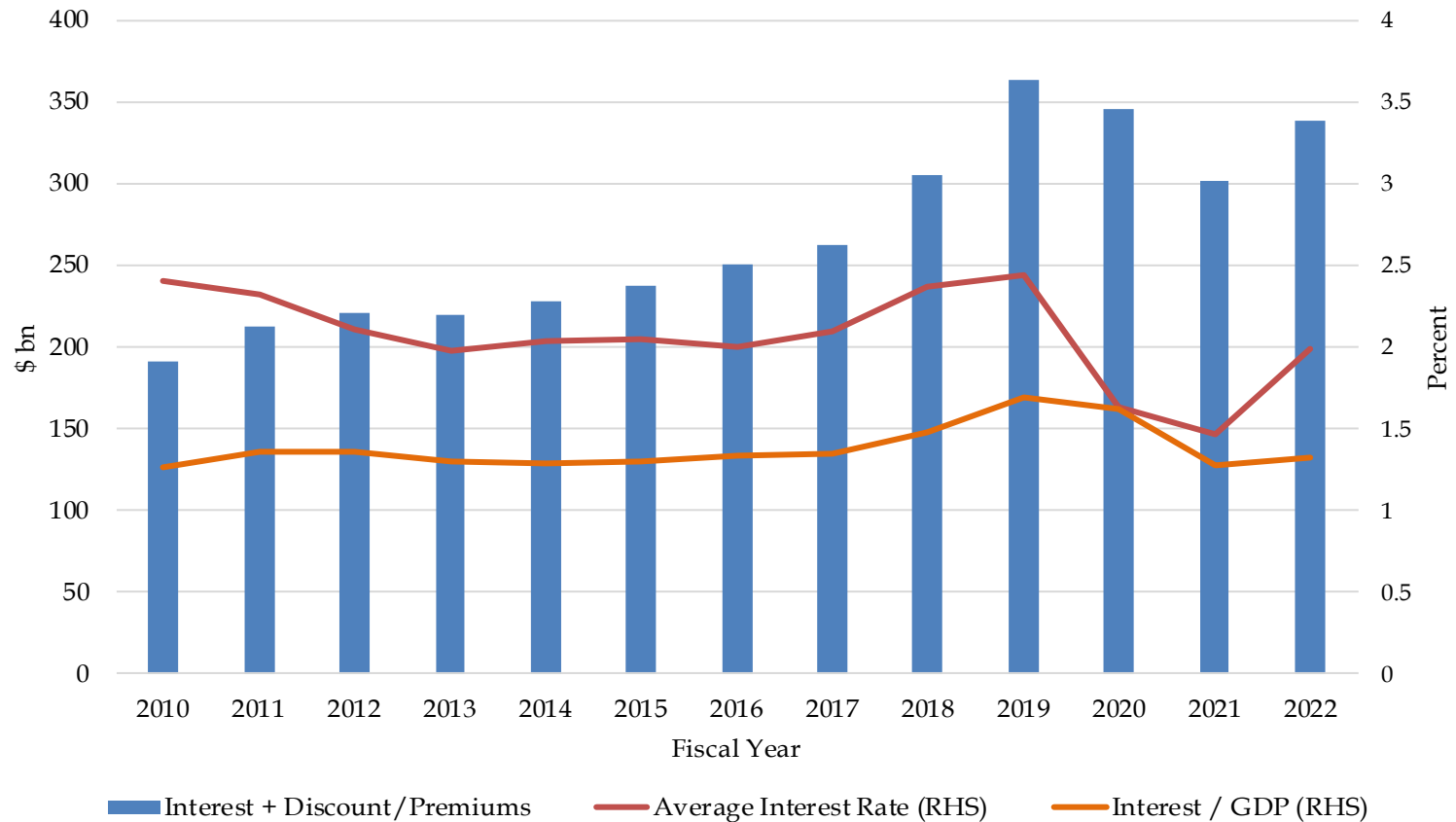
³ CBO projections are using estimates are from Table 2 of "An Analysis of the President's 2023 Budget," September 2022.

⁴ CBO projections are using estimates are from Table 1-1 of "The Budget and Economic Outlook: 2022 to 2032," May 2022.

*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 net privately-held marketable borrowing but, all else equal, when the securities mature and assuming the Fed does not redeem any maturing securities, would increase the amount of cash raised for a given privately-held auction size by increasing the SOMA "add-on" amount.

**Both OMB and CBO borrowing estimates are normalized to privately-held net borrowing after adding PD survey median SOMA redemption assumptions for FY23/24/25. In addition, all the PD and CBO privately-held net borrowing estimates are normalized with OMB MSR FY23/FY24/FY25 ending cash balance of \$650 billion.

Historical Marketable Treasury Debt Service Cost



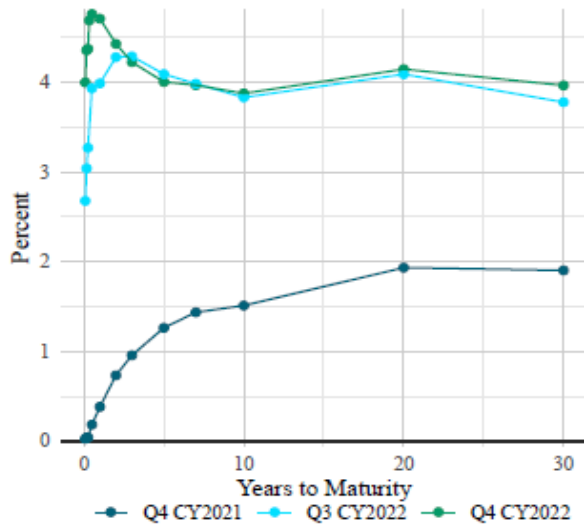
Source: <https://fiscaldata.treasury.gov/datasets>

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

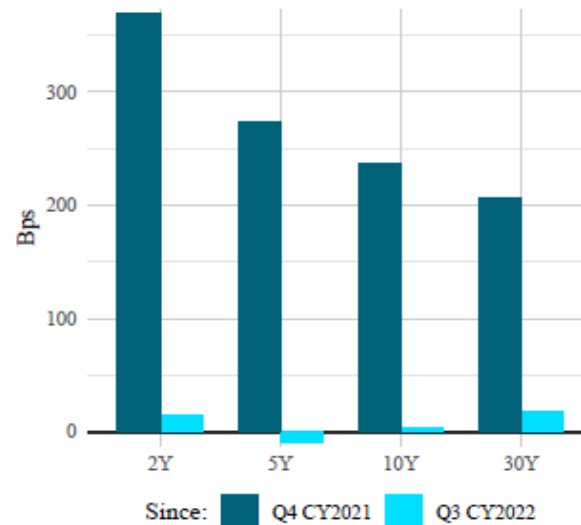
Treasury Nominal Yield Curve

As of the end of specified quarters



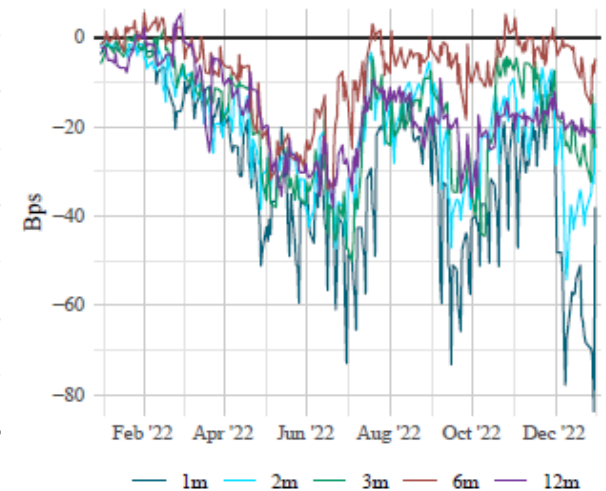
Change in Select Tenors

Through the end of Q4 CY2022



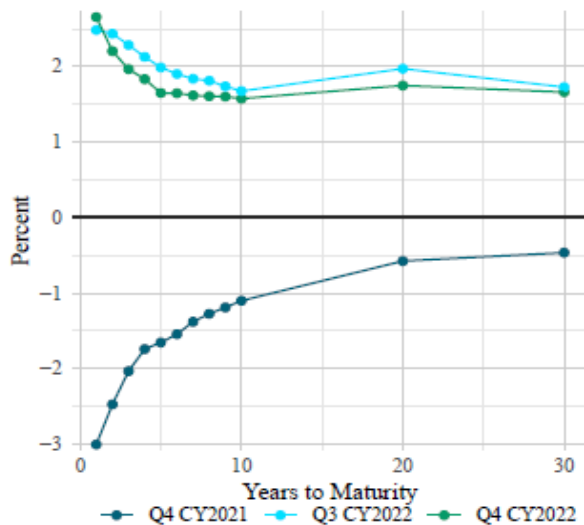
Bills-SOFR OIS spreads

Through the end of Q4 CY2022



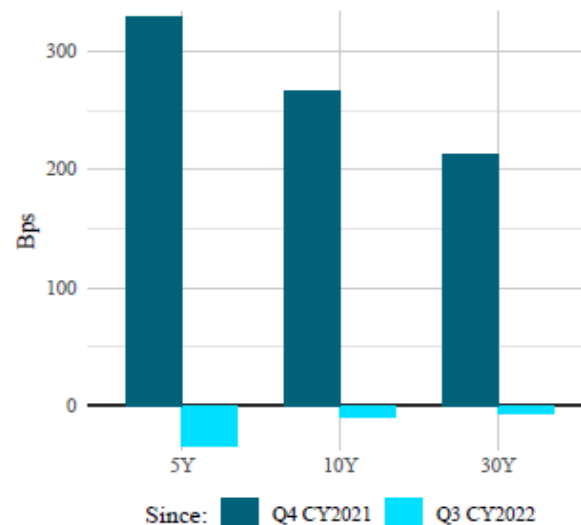
Treasury Real Yield Curve

As of the end of specified quarters



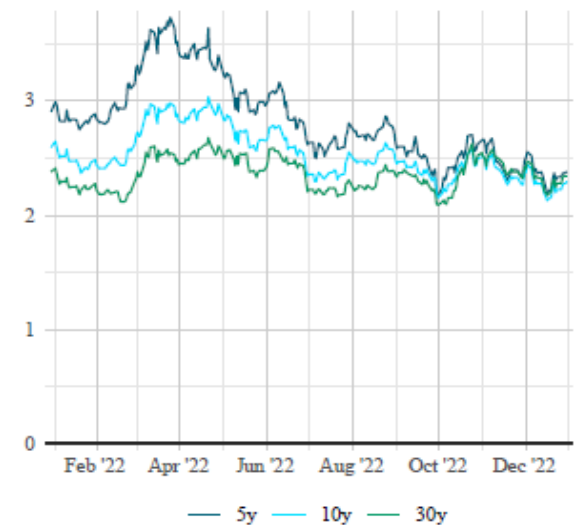
Change in Select Tenors

Through the end of Q4 CY2022



Breakevens

Through the end of Q4 CY2022



**Projected Privately-Held Net Marketable Borrowing
Assuming Private Coupon Issuance & Total Bills Outstanding
Remain Constant as of 12/31/2022***

Fiscal Year	Bills	2/3/5	7/10/20/30	TIPS	FRN	Historical/Projected Net Borrowing Capacity
2018	438	197	493	45	23	1,196
2019	137	498	534	51	59	1,280
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	73	307	668	50	(42)	1,056
2024	0	28	682	75	(10)	776
2025	0	(47)	704	10	0	667
2026	0	(160)	700	28	0	568
2027	0	(40)	583	10	0	553
2028	0	0	271	(12)	0	259
2029	0	0	386	(6)	0	381
2030	0	0	507	9	0	516
2031	0	0	339	(3)	0	337
2032	0	0	363	(27)	0	336

*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	10/11/2022	2.920	2.75	48.2	44.1	1.5	54.5	1.8	2.2	0.5
4-Week	10/18/2022	3.250	2.50	58.2	42.1	1.5	56.4	1.8	2.7	0.6
4-Week	10/25/2022	3.430	2.35	63.0	52.0	1.2	46.8	2.0	2.0	0.6
4-Week	11/1/2022	3.600	2.48	62.1	42.1	1.6	56.3	2.9	2.2	0.6
4-Week	11/8/2022	3.620	2.53	62.4	44.5	0.8	54.7	2.6	1.8	0.6
4-Week	11/15/2022	3.580	2.65	62.5	33.3	9.8	56.8	2.5	2.2	0.6
4-Week	11/22/2022	3.795	2.54	62.9	37.5	1.4	61.1	2.1	1.9	0.6
4-Week	11/29/2022	3.970	2.55	53.1	39.9	4.7	55.4	1.9	1.8	0.5
4-Week	12/6/2022	3.950	3.43	41.8	41.8	2.4	55.8	3.2	1.2	0.4
4-Week	12/13/2022	3.650	3.19	42.4	29.6	0.0	70.4	2.6	1.5	0.4
4-Week	12/20/2022	3.780	3.16	42.6	24.7	1.9	73.4	2.4	1.2	0.4
4-Week	12/27/2022	3.610	2.88	42.9	29.5	0.8	69.7	2.1	1.2	0.4
4-Week	1/3/2023	3.830	2.64	43.0	46.2	1.6	52.2	2.0	0.9	0.4
8-Week	10/11/2022	3.230	2.53	44.0	58.7	2.2	39.2	1.0	1.9	0.8
8-Week	10/18/2022	3.480	2.48	48.9	41.3	1.3	57.4	1.1	2.2	0.9
8-Week	10/25/2022	3.690	2.49	53.9	43.8	1.3	54.9	1.1	1.7	1.0
8-Week	11/1/2022	3.820	2.67	53.3	45.2	2.1	52.7	1.7	1.8	1.0
8-Week	11/8/2022	3.880	2.75	54.0	36.7	1.0	62.3	1.0	1.5	1.0
8-Week	11/15/2022	3.850	2.68	53.8	38.6	1.3	60.2	1.2	1.9	1.0
8-Week	11/22/2022	4.020	2.46	54.0	44.8	1.2	53.9	1.0	1.6	1.0
8-Week	11/29/2022	4.120	2.81	48.9	32.1	1.8	66.1	1.1	1.6	1.0
8-Week	12/6/2022	4.080	2.76	43.7	36.2	1.7	62.1	1.3	1.2	0.9
8-Week	12/13/2022	3.940	2.94	44.0	27.0	0.0	73.0	1.0	1.5	0.9
8-Week	12/20/2022	4.060	2.72	43.7	38.5	2.6	58.9	1.3	1.2	0.9
8-Week	12/27/2022	3.985	2.68	44.2	34.4	1.4	64.2	0.8	1.2	0.9
8-Week	1/3/2023	4.250	2.41	44.2	52.5	1.9	45.5	0.8	0.9	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	10/6/2022	3.340	2.56	51.6	42.3	4.2	53.5	2.4	6.8	1.7
13-Week	10/13/2022	3.510	2.39	54.5	55.6	3.3	41.1	2.5	6.0	1.8
13-Week	10/20/2022	3.820	2.49	55.4	47.4	3.3	49.3	1.6	6.5	1.8
13-Week	10/27/2022	4.000	2.56	54.3	39.4	12.0	48.6	2.7	6.4	1.8
13-Week	11/3/2022	4.070	2.60	55.2	34.8	7.2	57.9	1.8	8.8	1.9
13-Week	11/10/2022	4.120	2.72	54.2	45.3	5.2	49.5	2.8	6.9	1.9
13-Week	11/17/2022	4.155	2.63	54.8	39.0	6.1	54.9	2.2	7.8	1.9
13-Week	11/25/2022	4.220	2.64	51.6	42.6	4.7	52.7	2.4	6.3	1.8
13-Week	12/1/2022	4.285	2.56	52.3	50.7	2.2	47.1	1.7	6.9	1.8
13-Week	12/8/2022	4.270	2.67	52.2	38.5	5.0	56.5	1.8	4.6	1.8
13-Week	12/15/2022	4.270	2.51	52.0	49.9	4.2	45.9	2.0	4.7	1.8
13-Week	12/22/2022	4.290	2.57	52.0	38.6	2.7	58.7	2.0	1.8	1.7
13-Week	12/29/2022	4.350	2.38	52.2	59.4	3.0	37.6	1.8	7.1	1.8
17-Week	10/25/2022	4.140	2.93	32.8	34.7	9.5	55.7	0.2	1.0	1.3
17-Week	11/1/2022	4.180	2.92	32.2	37.8	1.7	60.5	0.8	1.1	1.3
17-Week	11/8/2022	4.280	3.14	32.8	32.0	2.2	65.7	0.2	0.9	1.3
17-Week	11/15/2022	4.300	3.21	32.6	36.5	1.5	62.0	0.4	1.1	1.3
17-Week	11/22/2022	4.320	3.15	32.7	47.5	3.0	49.5	0.3	1.0	1.3
17-Week	11/29/2022	4.400	3.24	32.6	34.1	2.3	63.6	0.4	1.1	1.3
17-Week	12/6/2022	4.430	3.10	32.7	40.5	1.8	57.6	0.3	0.9	1.3
17-Week	12/13/2022	4.400	2.66	32.7	48.6	1.5	49.8	0.3	1.1	1.3
17-Week	12/20/2022	4.440	2.96	32.7	33.1	1.8	65.1	0.3	0.9	1.3
17-Week	12/27/2022	4.425	3.00	32.2	29.5	1.9	68.6	0.8	0.9	1.3
17-Week	1/3/2023	4.550	2.88	31.7	43.0	1.9	55.1	1.3	0.7	1.3

*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	10/6/2022	3.850	2.62	39.5	50.3	3.2	46.5	2.5	5.3	2.7
26-Week	10/13/2022	4.030	2.86	42.2	45.6	2.2	52.2	2.8	4.7	2.9
26-Week	10/20/2022	4.245	2.66	42.9	46.5	3.4	50.2	2.1	5.1	2.9
26-Week	10/27/2022	4.390	2.56	42.1	48.3	18.6	33.1	2.9	5.0	2.9
26-Week	11/3/2022	4.440	2.95	43.1	43.6	5.7	50.8	1.9	7.0	3.0
26-Week	11/10/2022	4.490	2.89	42.4	38.2	2.6	59.3	2.6	5.4	2.9
26-Week	11/17/2022	4.440	2.86	42.8	33.1	2.9	64.0	2.2	6.1	3.0
26-Week	11/25/2022	4.520	3.03	42.6	30.6	2.6	66.8	2.4	5.2	3.0
26-Week	12/1/2022	4.550	2.90	43.2	38.7	9.5	51.7	1.8	5.7	3.0
26-Week	12/8/2022	4.570	2.57	43.1	51.2	3.9	44.9	1.9	3.8	2.9
26-Week	12/15/2022	4.630	2.66	43.0	46.2	7.9	45.9	2.0	3.9	2.9
26-Week	12/22/2022	4.550	2.86	42.2	34.9	3.2	61.9	2.8	1.5	2.8
26-Week	12/29/2022	4.600	2.56	42.0	56.0	3.4	40.6	3.0	6.0	3.1
52-Week	10/6/2022	3.955	2.68	32.3	37.8	3.5	58.7	1.7	4.3	4.4
52-Week	11/3/2022	4.505	2.83	32.3	32.7	0.7	66.6	1.7	5.3	4.6
52-Week	12/1/2022	4.555	2.83	32.3	34.3	0.3	65.3	1.7	4.3	4.6
52-Week	12/29/2022	4.515	3.24	32.0	35.8	0.1	64.2	2.0	4.5	4.7
17-Week CMB	10/11/2022	3.700	3.19	29.9	36.7	2.5	60.7	0.1	0.0	1.1
17-Week CMB	10/18/2022	3.890	3.23	32.9	33.8	1.9	64.3	0.1	0.0	1.2
CMB	11/22/2022	3.800	2.38	40.0	79.9	4.5	15.6	0.0	0.0	0.2

*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	10/31/2022	4.460	2.59	40.5	24.2	25.3	50.5	1.5	0.0	9.5
2-Year	11/30/2022	4.505	2.64	40.9	20.6	22.4	57.0	1.1	4.6	10.8
2-Year	1/3/2023	4.373	2.71	41.1	19.1	18.7	62.2	0.9	0.0	9.8
3-Year	10/17/2022	4.318	2.57	39.5	27.0	19.6	53.4	0.5	0.0	13.2
3-Year	11/15/2022	4.605	2.57	39.4	20.8	17.0	62.2	0.6	14.0	17.9
3-Year	12/15/2022	4.093	2.55	39.5	17.9	20.4	61.7	0.5	0.0	13.8
5-Year	10/31/2022	4.192	2.48	42.8	16.5	15.6	68.0	0.2	0.0	22.9
5-Year	11/30/2022	3.974	2.39	42.9	15.1	18.7	66.2	0.1	4.7	26.3
5-Year	1/3/2023	3.973	2.46	42.9	16.9	18.6	64.5	0.1	0.0	23.9
7-Year	10/31/2022	4.027	2.43	35.0	14.1	22.7	63.2	0.0	0.0	25.1
7-Year	11/30/2022	3.890	2.33	35.0	21.4	16.8	61.9	0.0	3.8	28.9
7-Year	1/3/2023	3.921	2.45	34.9	15.8	16.2	68.1	0.1	0.0	26.3
10-Year	10/17/2022	3.930	2.34	32.0	19.7	23.5	56.8	0.0	0.0	31.9
10-Year	11/15/2022	4.140	2.23	34.9	24.4	18.1	57.5	0.1	12.3	46.1
10-Year	12/15/2022	3.625	2.31	32.0	21.9	18.7	59.4	0.0	0.0	32.0
20-Year	10/31/2022	4.395	2.50	12.0	16.4	19.9	63.7	0.0	0.0	19.6
20-Year	11/30/2022	4.072	2.64	14.9	9.2	15.4	75.3	0.1	1.6	27.7
20-Year	1/3/2023	3.935	2.68	11.9	8.7	19.0	72.3	0.1	0.0	20.0
30-Year	10/17/2022	3.930	2.39	18.0	12.2	18.7	69.1	0.0	0.0	39.5
30-Year	11/15/2022	4.080	2.42	21.0	9.7	20.4	69.9	0.0	7.4	58.9
30-Year	12/15/2022	3.513	2.25	18.0	15.3	23.1	61.6	0.0	0.0	39.8
2-Year FRN	10/31/2022	0.140	2.65	24.0	25.9	1.5	72.6	0.0	0.0	0.0
2-Year FRN	11/25/2022	0.220	2.45	21.9	51.7	4.7	43.6	0.1	0.0	0.0
2-Year FRN	12/30/2022	0.239	3.40	22.0	38.4	0.9	60.7	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	12/30/2022	1.504	2.51	18.8	8.1	17.8	74.1	0.2	0.0	10.6
5-Year TIPS	10/31/2022	1.732	2.38	20.7	7.7	17.0	75.3	0.3	0.0	11.7
10-Year TIPS	11/30/2022	1.485	2.25	15.0	9.5	16.1	74.4	0.0	1.6	18.6

*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.