

# Treasury Presentation to TBAC



# Office of Debt Management



Fiscal Year 2020 Q3 Report

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# Section I: Executive Summary



# Highlights of Treasury's August 2020 Quarterly Refunding Presentation to the Treasury Borrowing Advisory Committee (TBAC)

## Receipts and Outlays through Q3 FY2020

- Through Q3 FY2020, overall receipts totaled \$2,260 billion, reflecting a decrease of \$351 billion (13%) on a calendar-adjusted basis compared to the same period last year due largely to the extension of tax deadlines until July. Decreases in non-withheld income and SECA taxes of \$313 billion (-54%) due to tax extensions, gross corporate taxes of \$77 billion (-38%) due to tax extensions as well as reduced liabilities stemming from law changes and the economic impact of COVID-19, and excise taxes of \$23 billion (-31%) reflecting the fact that Health Insurance Provider fees paid in October 2018 were on moratorium in calendar year 2019 were partially offset by increases in Federal Reserve earnings of \$15 billion (38%) and adjusted withheld and FICA taxes of \$12 billion (1%) due to the strong growth that occurred before April 2020. FYTD 2020 receipts were 14.6% of GDP, compared to 16.4% of GDP in the same period last year.
- Through Q3 FY2020, overall outlays were \$5,004 billion, reflecting an increase of \$1,648 billion (49%) over the comparable period last year. Small Business Administration outlays are \$537 billion higher due to subsidy estimates for the Paycheck Protection Program (PPP) and spending for the Economic Injury Disaster Loan (EIDL) program. Treasury outlays were \$426 billion (73%) higher mainly due to Economic Impact stimulus payments and payments to the Coronavirus Relief Fund & Air Carrier Workers Support Fund stemming from the COVID-19 outbreak. Department of Labor outlays were \$252 billion higher due to increased unemployment costs attributable to the COVID-19 outbreak. Health and Human Services spending was \$226 billion (25%) higher mainly due to relief payments for hospitals as well as advance payments to fee for service Medicare providers, due to the COVID-19 outbreak as well as overall increases to Medicare and Medicaid. FYTD outlays were 32.3% of GDP, compared to 21.1% of GDP for the same period last year.

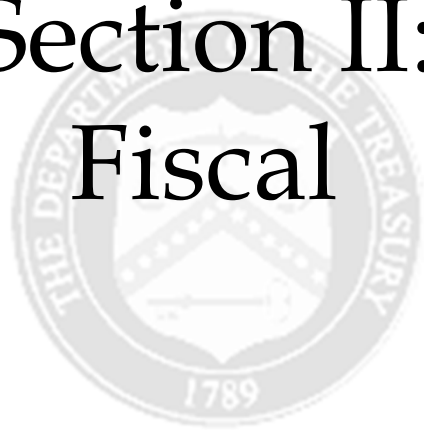
## Projected Net Marketable Borrowing (FY2020)

- Treasury's Office of Fiscal Projections (OFP) currently forecasts a net privately-held marketable borrowing need of \$947 billion for Q4 FY2020, with an end-of-September cash balance of \$800 billion. For Q1 FY2021, OFP forecasts a net privately-held marketable borrowing need of \$1,216 billion assuming end-of-December cash balance of \$800 billion. The aforementioned estimates reflect OFP's assumption of \$1,000 billion in additional stimulus. Privately-held marketable borrowing excludes rollovers (auction "add-ons") of Treasury securities held in the Federal Reserve's 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.

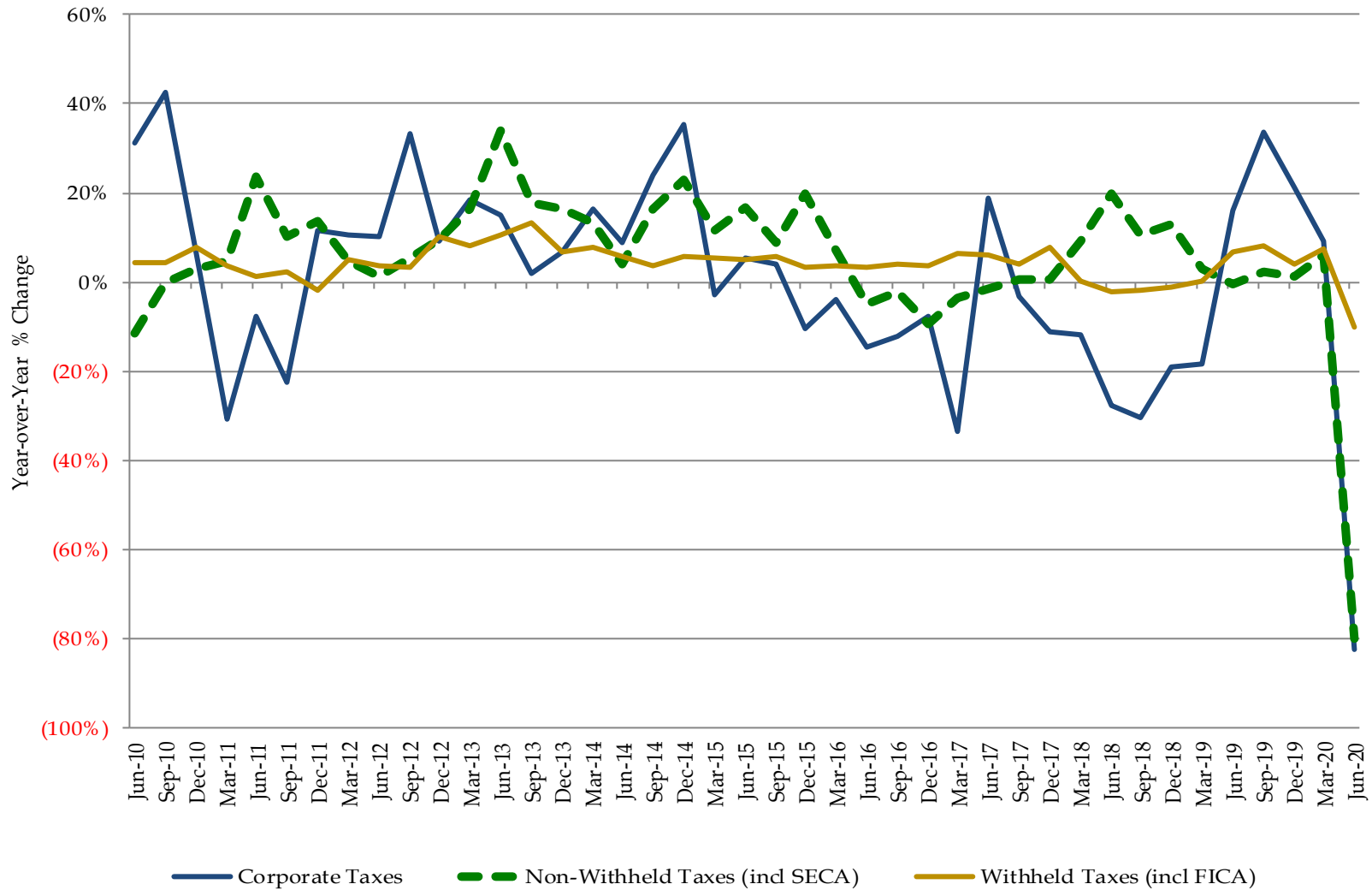
## Demand for Treasury Securities

- Bid-to-cover ratios for all securities were typically within historical ranges over the last quarter.
- High demand for Treasury bills with about \$2.4 trillion of net issuance from 3/31/2020 through 6/30/2020.
- Foreign demand increased.

# Section II: Fiscal



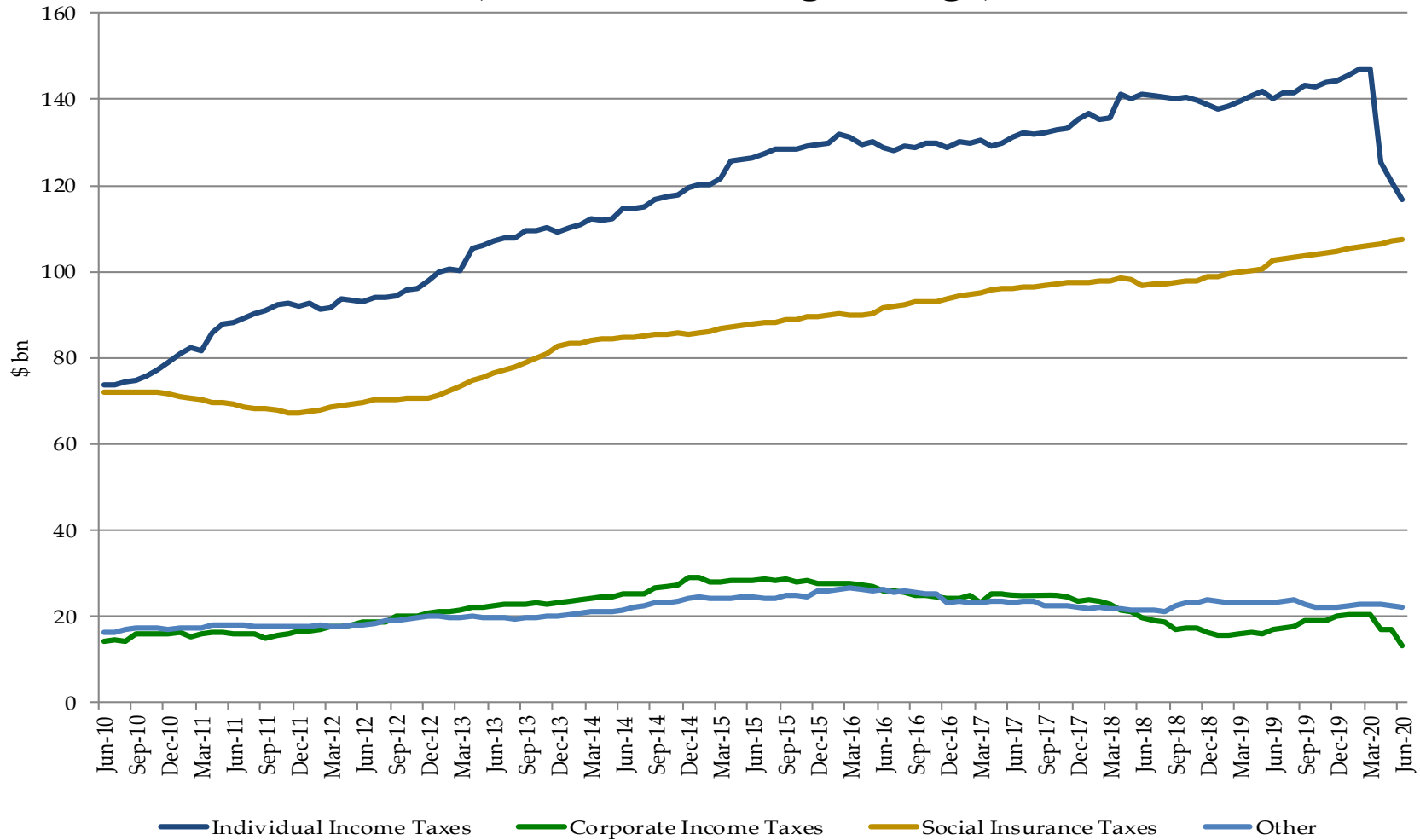
## Quarterly Tax Receipts



Quarterly tax receipts for Q3 FY2020 reflect adjustment of April and June 2020 tax deadlines to July 15<sup>th</sup>, 2020.

Source: United States Department of the Treasury

## Monthly Receipt Levels (12-Month Moving Average)

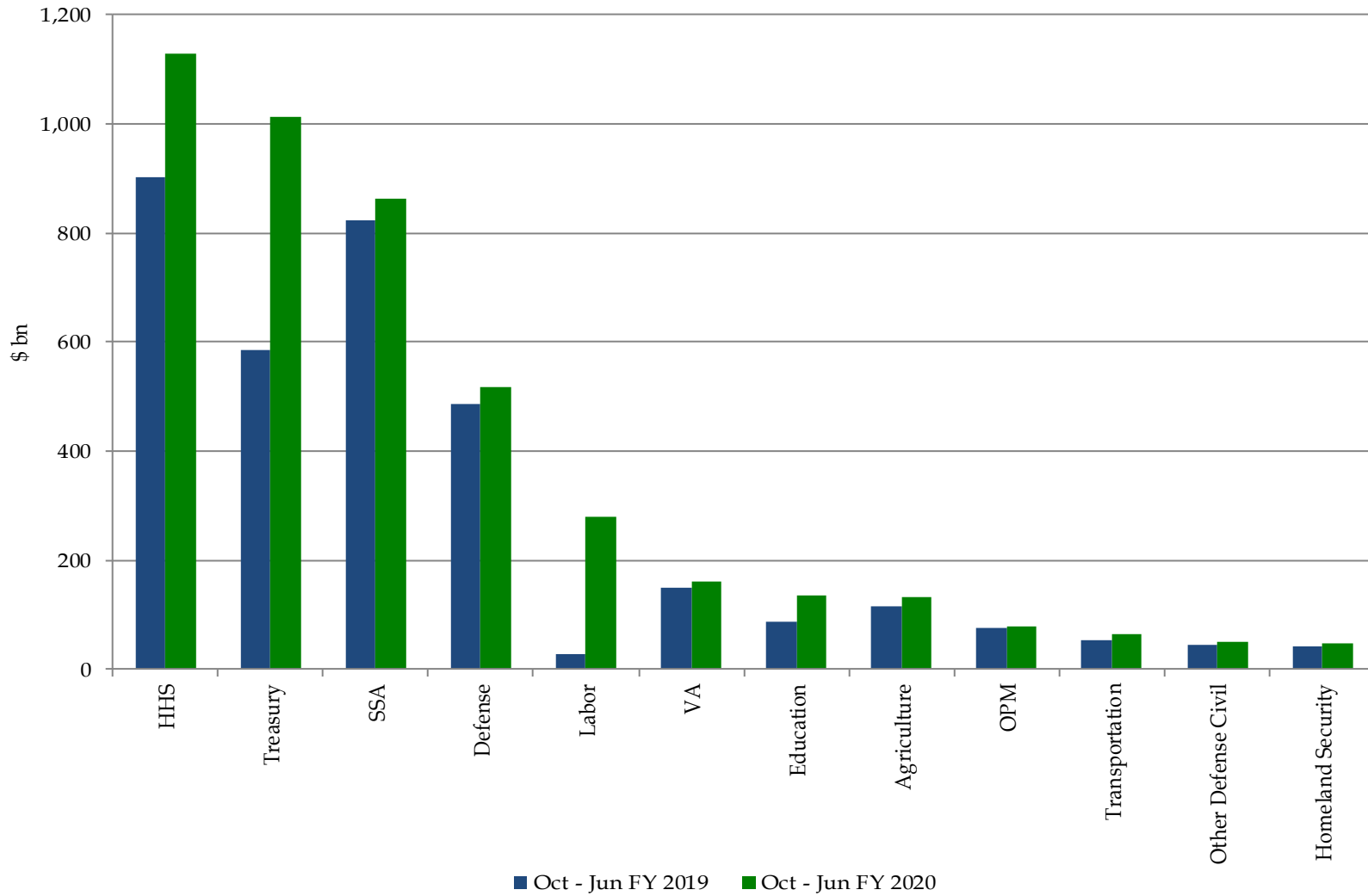


Quarterly tax receipts for Q3 FY2020 reflect adjustment of April and June 2020 tax deadlines to July 15<sup>th</sup>, 2020. Individual Income Taxes include withheld and non-withheld. Social Insurance Taxes include FICA, SECA, RRTA, UTF deposits, FUTA and RUIA. Other includes excise taxes, estate and gift taxes, customs duties and miscellaneous receipts.

Source: United States Department of the Treasury

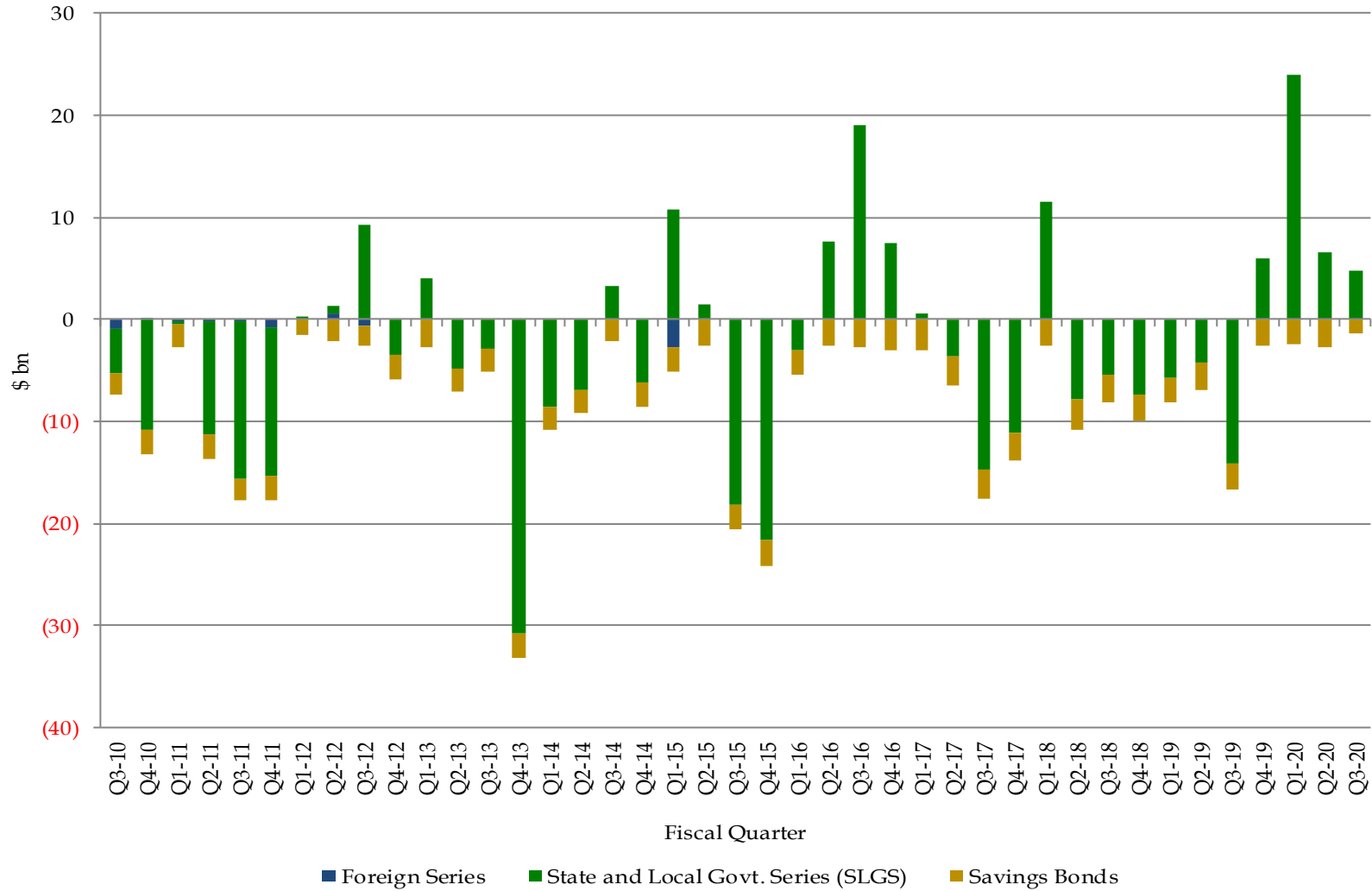


## Largest Outlays



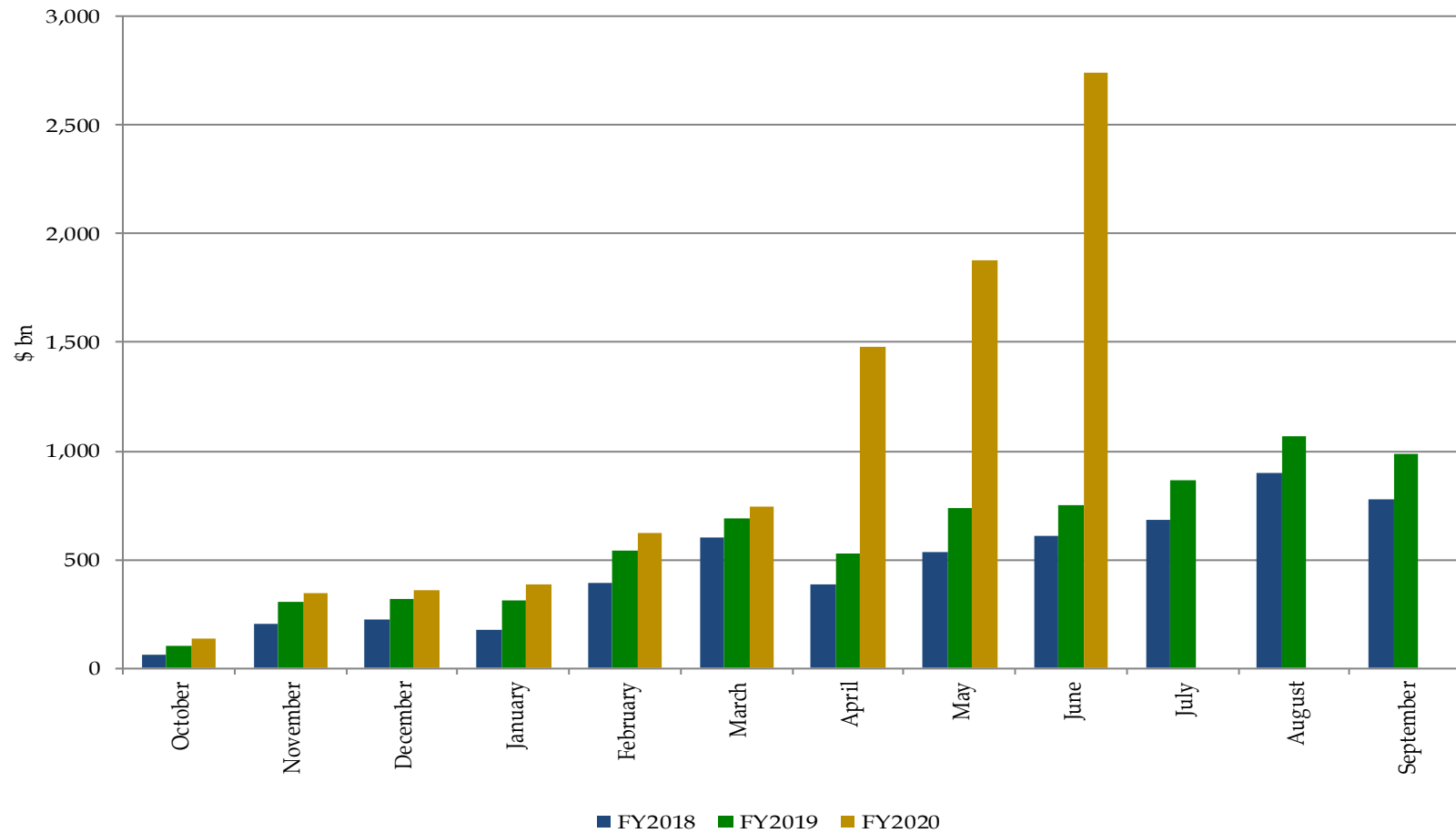
Source: United States Department of the Treasury

## Treasury Net Privately-Held Nonmarketable Borrowing



Source: United States Department of the Treasury

## Cumulative Budget Deficits by Fiscal Year



Source: United States Department of the Treasury

### **FY 2020-2022 Deficits and Privately-Held Net Marketable Borrowing Estimates, in \$ billions**

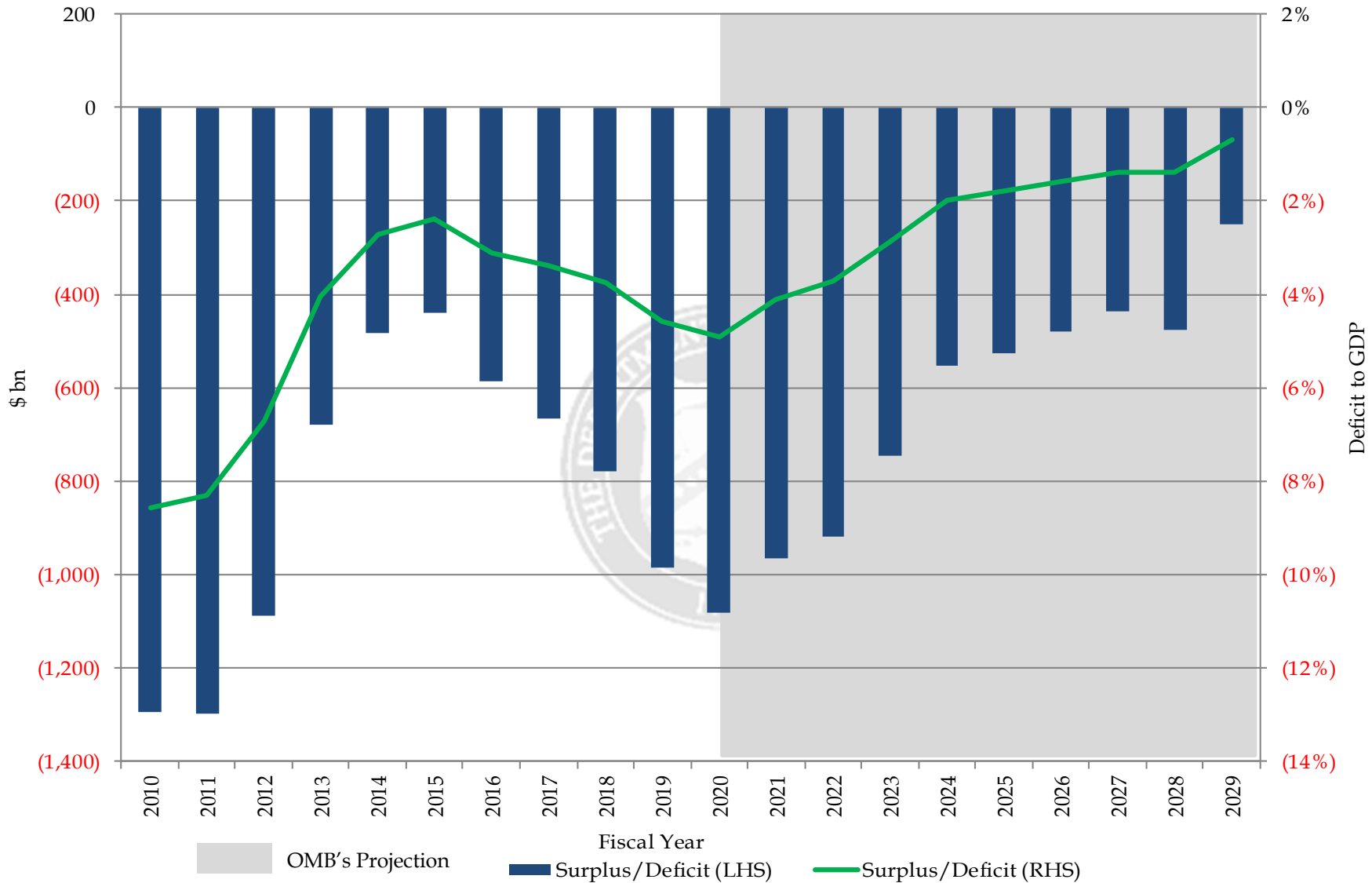
	Primary Dealers <sup>1</sup>	OFFP <sup>2</sup>	CBO <sup>3</sup>
FY2020 Deficit Estimate	3,950		3,700
FY2021 Deficit Estimate	2,500		2,100
FY2022 Deficit Estimate	1,500		
FY2020 Deficit Estimate Range	2,950-5,000		
FY2021 Deficit Estimate Range	1,965-3,500		
FY2022 Deficit Estimate Range	1,100-2,500		
FY2020 Privately-Held Net Marketable Borrowing Estimate	4,250	4,508	
FY2021 Privately-Held Net Marketable Borrowing Estimate	2,213		
FY2022 Privately-Held Net Marketable Borrowing Estimate	1,500		
FY2020 Privately-Held Net Marketable Borrowing Range	3,120-5,600		
FY2021 Privately-Held Net Marketable Borrowing Range	1,500-3,500		
FY2022 Privately-Held Net Marketable Borrowing Range	700-2,500		
FY2020 Ending Cash Balance	1,200	800	
FY2020 Ending Cash Balance Range	731 - 1,600		
Estimates as of:	Jul-20	Aug-20	Apr-20

<sup>1</sup>Estimates represent the medians from the primary dealer survey in July 2020. FY2020 primary dealer borrowing estimate would be \$3,825 billion if normalized for \$800 billion cash balance.

<sup>2</sup>Treasury's Office of Fiscal Projections (OFFP) borrowing estimates announced on August 3, 2020. Estimates reflect OFFP's assumption of \$1,000 billion in additional stimulus.

<sup>3</sup>CBO FY2020 and FY2021 deficit estimates are from CBO's blog "CBO's Current Projections of Output, Employment, and Interest Rates and a Preliminary Look at Federal Deficits for 2020 and 2021," April 24, 2020 @ <https://www.cbo.gov/publication/56335>.

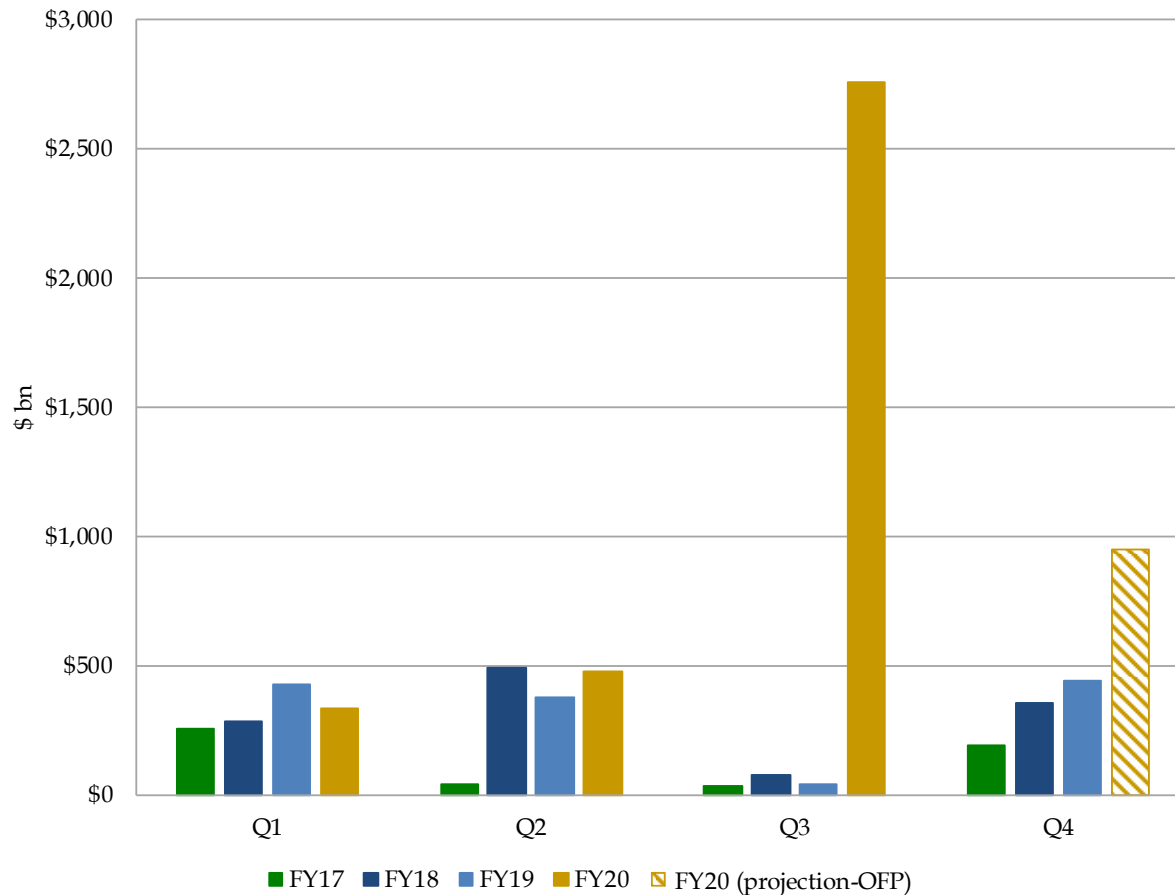
# Budget Surplus/Deficit\*



Projections are from OMB's Table S-10 of "A Budget for America's Future, Fiscal Year 2021," February 2020.

**\*OMB projections reflect pre-CARES Act forecasts and will be updated when new projections become available.**

## Privately-Held Net Marketable Borrowing Outlook\*



\* Privately-held marketable borrowing excludes rollovers (auction “add-ons”) of Treasury securities held in the Federal Reserve’s 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. For FY2020 and FY2021, estimates reflect OFP’s assumption of \$1,000 billion in additional stimulus.

# Section III: Financing



## Assumptions for Financing Section (pages 16 to 21)

- Portfolio and SOMA holdings as of 06/30/2020.
- Estimates assume private announced issuance sizes and patterns remain constant for nominal coupons, TIPS, and FRNs given changes made before the August 2020 refunding, while using total bills outstanding of ~\$5.08 trillion.
- The principal on the TIPS securities was accreted to each projection date based on market ZCIS levels as of 06/30/2020.
- No attempt was made to account for future financing needs.





## Sources of Privately-Held Financing in FY20 Q3\*^

April to June 2020	
Net Bill Issuance	2422
Net Coupon Issuance	331
Subtotal: Net Marketable Borrowing	2753
Ending Cash Balance	1722
Beginning Cash Balance	515
Subtotal: Change in Cash Balance	1207
Net Implied Funding for FY20 Q3	1546

Security	April to June 2020 Bill Issuance			Fiscal Year-to-Date Bill Issuance		
	Gross	Maturing	Net	Gross	Maturing	Net
4-Week	1,020	970	50	2,280	2,223	57
8-Week	855	685	170	1,935	1,700	235
13-Week	768	558	210	1,908	1,653	255
26-Week	660	453	207	1,668	1,419	249
52-Week	93	38	55	279	212	67
CMBs						
6-Week	870	525	345	870	525	345
15-Week	485	0	485	485	0	485
17-Week	460	0	460	460	0	460
22-Week	480	0	480	480	0	480
39-Week	70	0	70	70	0	70
Other	125	235	(110)	290	290	0
Bill Subtotal	5,886	3,464	2,422	10,725	8,022	2,703

Security	April to June 2020 Coupon Issuance			Fiscal Year-to-Date Coupon Issuance		
	Gross	Maturing	Net	Gross	Maturing	Net
2-Year FRN	62	49	13	174	135	39
2-Year	132	94	38	372	227	145
3-Year	126	70	56	354	214	140
5-Year	135	101	34	381	336	45
7-Year	114	61	53	306	179	127
10-Year	86	31	55	236	111	125
20-Year	37	0	37	37	0	37
30-Year	58	2	56	160	5	155
5-Year TIPS	32	55	(23)	64	55	9
10-Year TIPS	12	0	12	50	21	29
30-Year TIPS	0	0	0	8	0	8
Coupon Subtotal	794	463	331	2,142	1,284	858

Total	6,680	3,927	2,753	12,867	9,307	3,560
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\*Privately-held marketable borrowing excludes rollovers (auction “add-ons”) of Treasury securities held in the Federal Reserve’s 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.

^An end-of-June 2020 cash balance of \$1,722 billion versus a beginning-of-April 2020 cash balance of \$515 billion. By keeping the cash balance constant, Treasury arrives at the net implied funding number.

## Sources of Privately-Held Financing in FY20 Q4\*

July - September 2020	
Assuming Constant Coupon Issuance Sizes**	
Treasury Announced Net Marketable Borrowing***	947
Net Coupon Issuance	447
Implied Change in Bills	500

Security	July - September 2020 Coupon Issuance			Fiscal Year-to-Date Coupon Issuance		
	Gross	Maturing <sup>^</sup>	Net	Gross	Maturing	Net
2-Year FRN	68	52	16	242	187	55
2-Year	144	93	51	516	321	195
3-Year	138	56	82	492	270	222
5-Year	147	90	57	528	426	102
7-Year	132	60	72	438	239	199
10-Year	90	30	60	326	141	185
20-Year	54	0	54	91	0	91
30-Year	60	5	55	220	10	210
5-Year TIPS	0	0	0	64	55	9
10-Year TIPS	26	33	(7)	76	54	22
30-Year TIPS	7	0	7	15	0	15
Coupon Subtotal	866	419	447	3,008	1,703	1,305

\* Privately-held marketable borrowing excludes rollovers (auction "add-ons") of Treasury securities held in the Federal Reserve's 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.

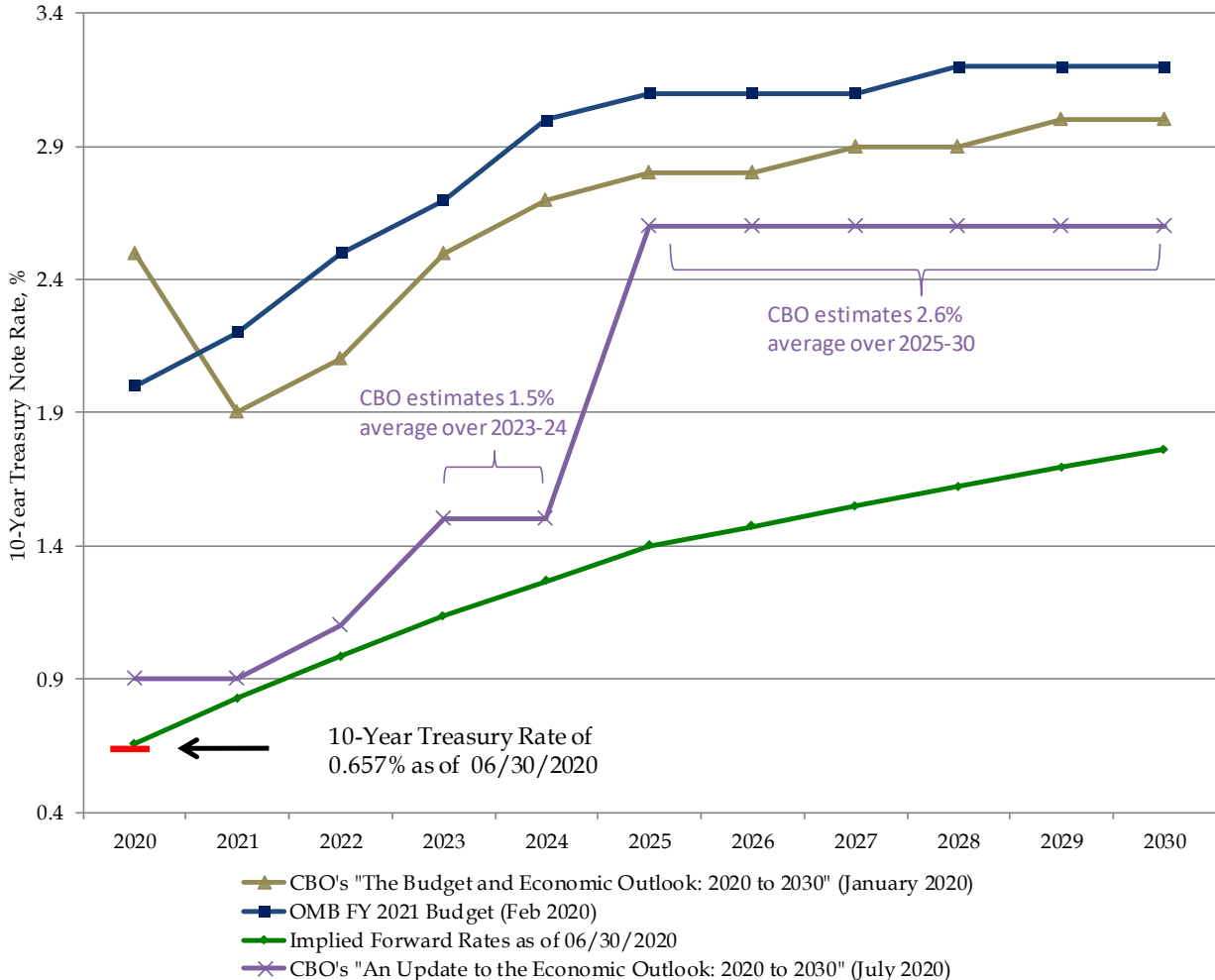
\*\* Keeping announced issuance sizes and patterns constant for nominal coupons, TIPS, and FRNs based on changes made before the August 2020 refunding.

\*\*\* Assumes an end-of-September 2020 cash balance of \$800 billion versus a beginning-of-July 2020 cash balance of \$1,722 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>

<sup>^</sup> Maturing amounts could change based on future Federal Reserve purchases.

### Interest Rate Assumptions: 10-Year Treasury Note\*

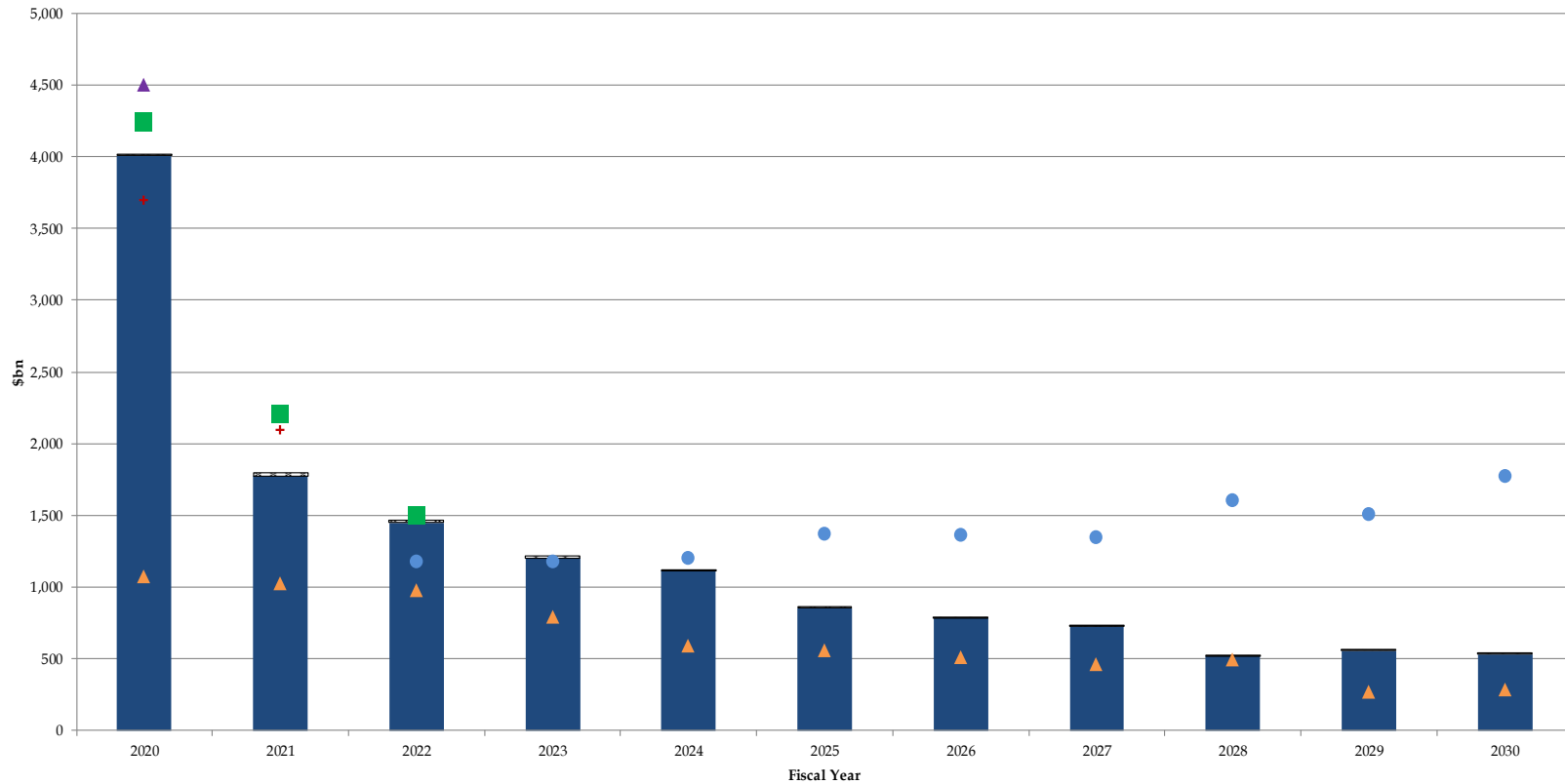


OMB's economic assumption of the 10-Year Treasury note rates reflect the calendar year average from Table S-9 of OMB's "A Budget for America's Future, Fiscal Year 2021," February 2020. CBO's January economic assumption of the 10-Year Treasury note rates reflect the fiscal year average from Table B-2 of CBO's "The Budget and Economic Outlook: 2020 to 2030," January 2020. CBO's July economic assumption of the 10-Year Treasury note rates reflect projections for 2020, 2021, 2022, and averages for the periods 2023-24 and 2025-30. The forward rates are the implied 10-Year Treasury note rates on June 30, 2020.

**\*Both OMB and CBO projections from January and February reflect pre-CARES Act forecasts and will be updated when new projections become available.**

# Projected Privately-Held Net Marketable Borrowing

## Assuming Private Coupon Issuance & Total Bills Outstanding Remain Constant as of 6/30/2020\*



- ☐ Fed Purchases from 7/1/20 to 7/30/20
- ▲ OMB's FY2021 Budget, February 2020
- ▲ OFP's FY2020 Net Marketable Borrowing Estimate, August 2020
- + COVID-19 outbreak adjusted CBO deficit estimates for FY2020 and FY2021, April 2020
- Projected Privately-Held Net Marketable Borrowing
- PD Survey Privately-Held Net Marketable Borrowing Estimates, July 2020
- CBO's "The Budget and Economic Outlook: 2020 to 2030" January 2020 (current law) for FY2021 to FY2030

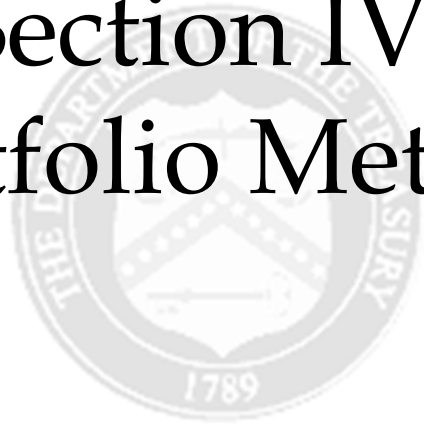
Treasury's latest primary dealer survey median estimates can be found on page 11. FY2020 primary dealer borrowing estimate would be \$3,825 billion if normalized for \$800 billion cash balance. OMB's projections of the change in debt held by the public are from Table S-10 of "A Budget for America's Future, Fiscal Year 2021," February 2020. CBO's current law budget projections of the change in debt held by the public for FY2022 to FY2030 are from 1-2 of CBO's "The Budget and Economic Outlook: 2020 to 2030," January 2020.

\* Privately-held marketable borrowing excludes rollovers (auction "add-ons") of Treasury securities held in the Federal Reserve's System Open Market Account (SOMA) but includes financing required due to SOMA redemptions. No adjustments are made for open-market outright purchases.

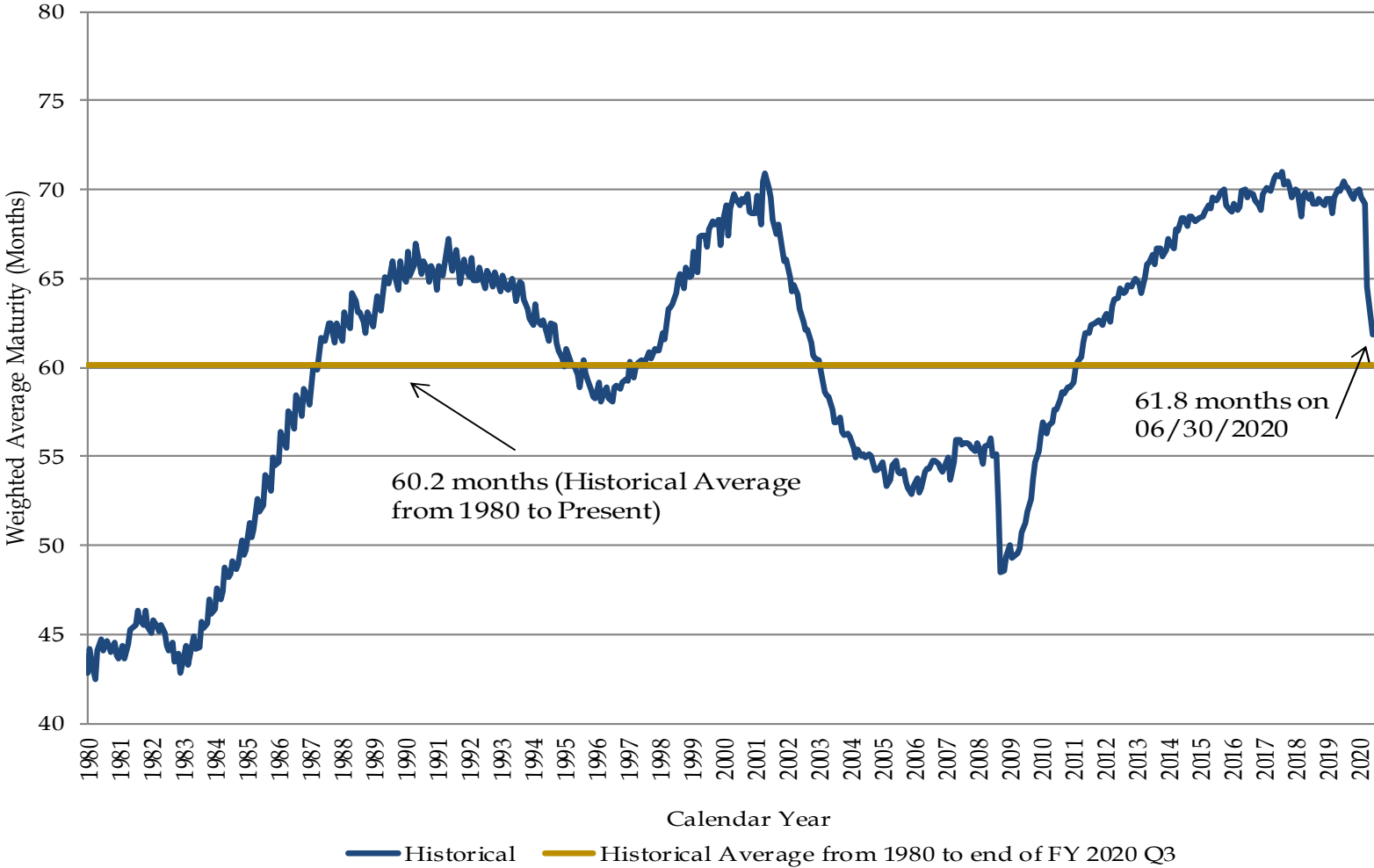
For FY2020 and FY2021, COVID-19 outbreak adjusted CBO projections are deficit estimates, which can be found in CBO's blog "CBO's Current Projections of Output, Employment, and Interest Rates and a Preliminary Look at Federal Deficits for 2020 and 2021," April 24, 2020 @ <https://www.cbo.gov/publication/56335>.

**Both OMB and CBO projections before April 2020 reflect pre-CARES Act forecasts and will be updated when new projections become available.**

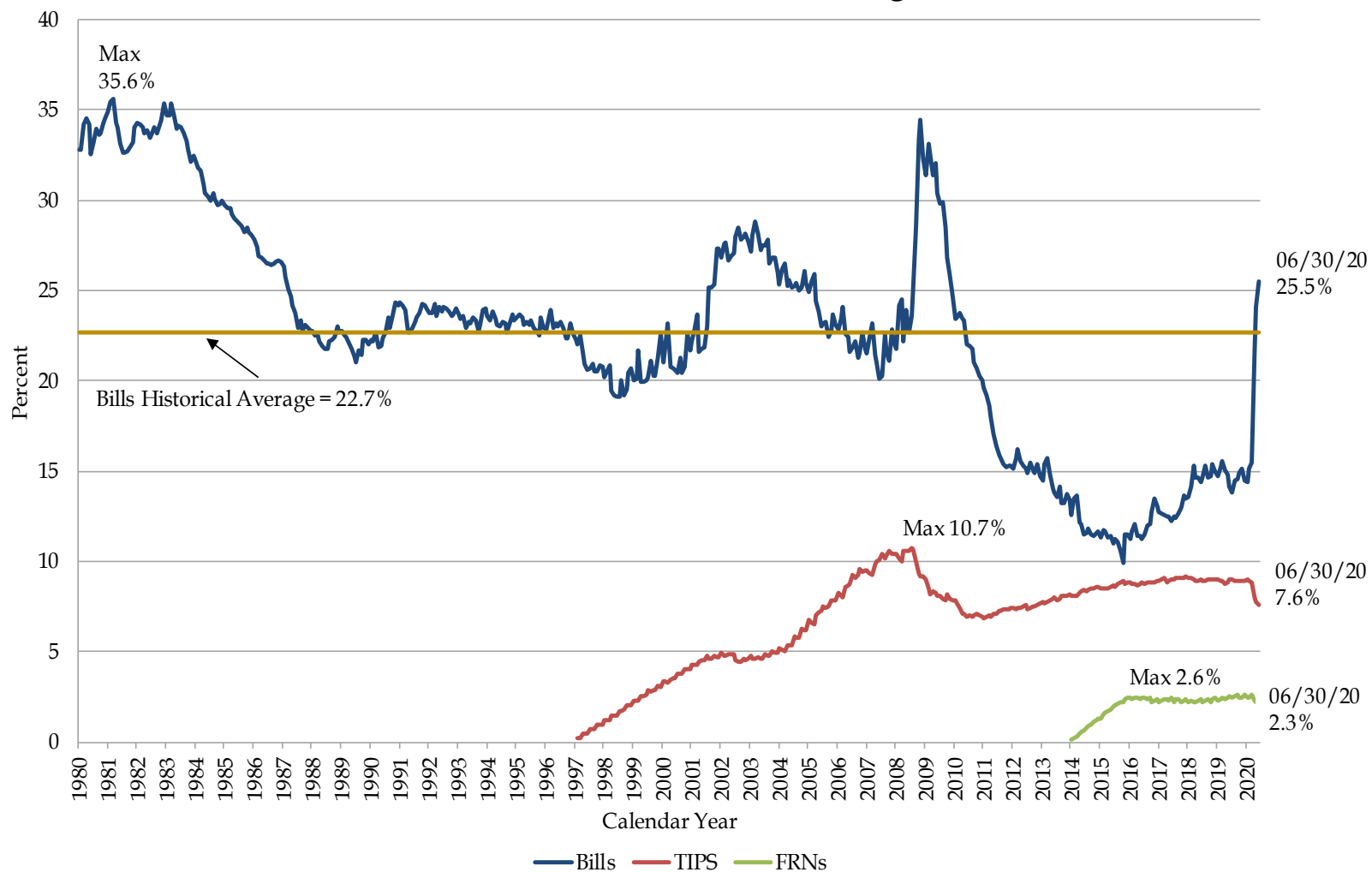
# Section IV: Portfolio Metrics



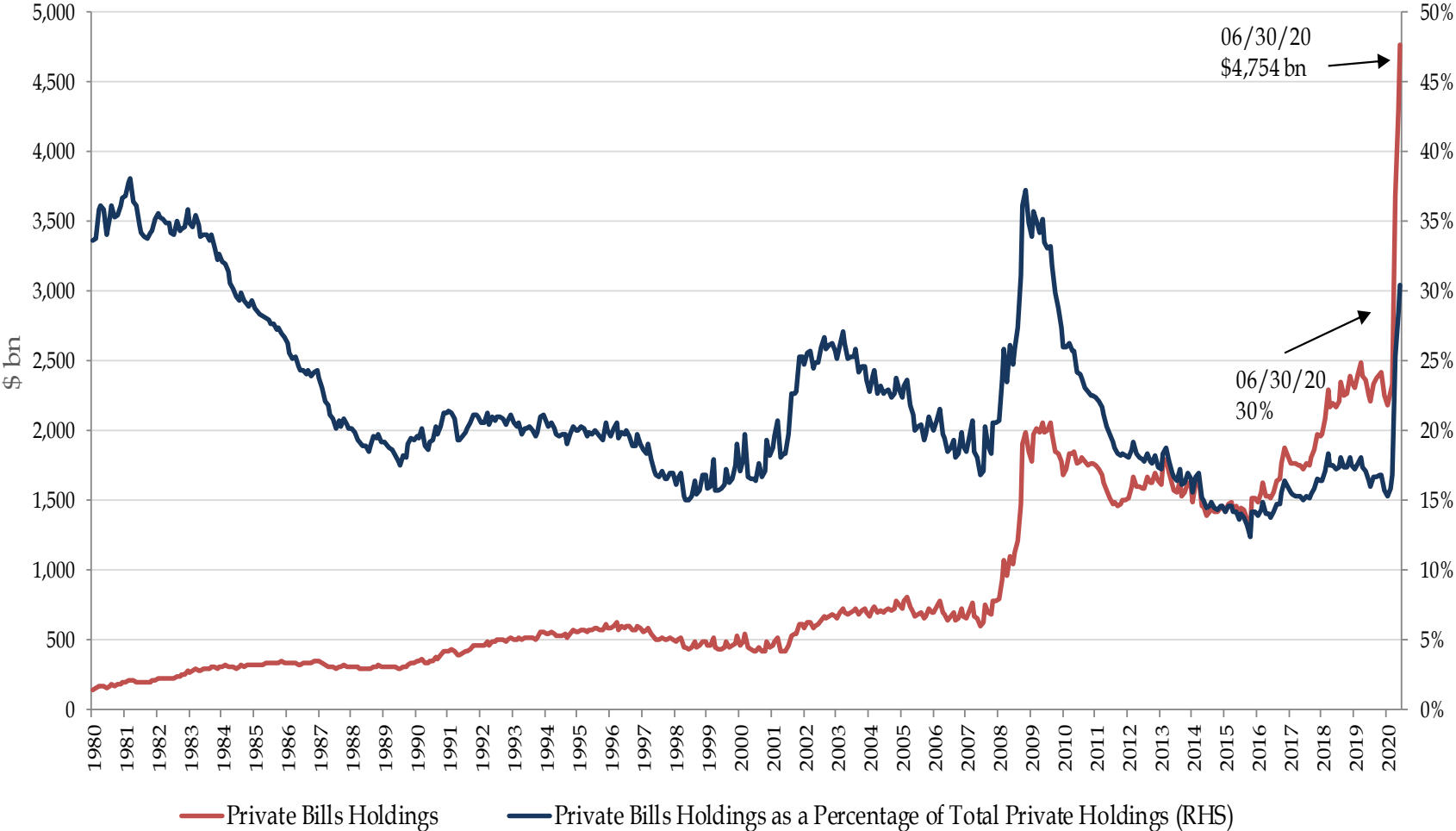
# Historical Weighted Average Maturity of Marketable Debt Outstanding



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

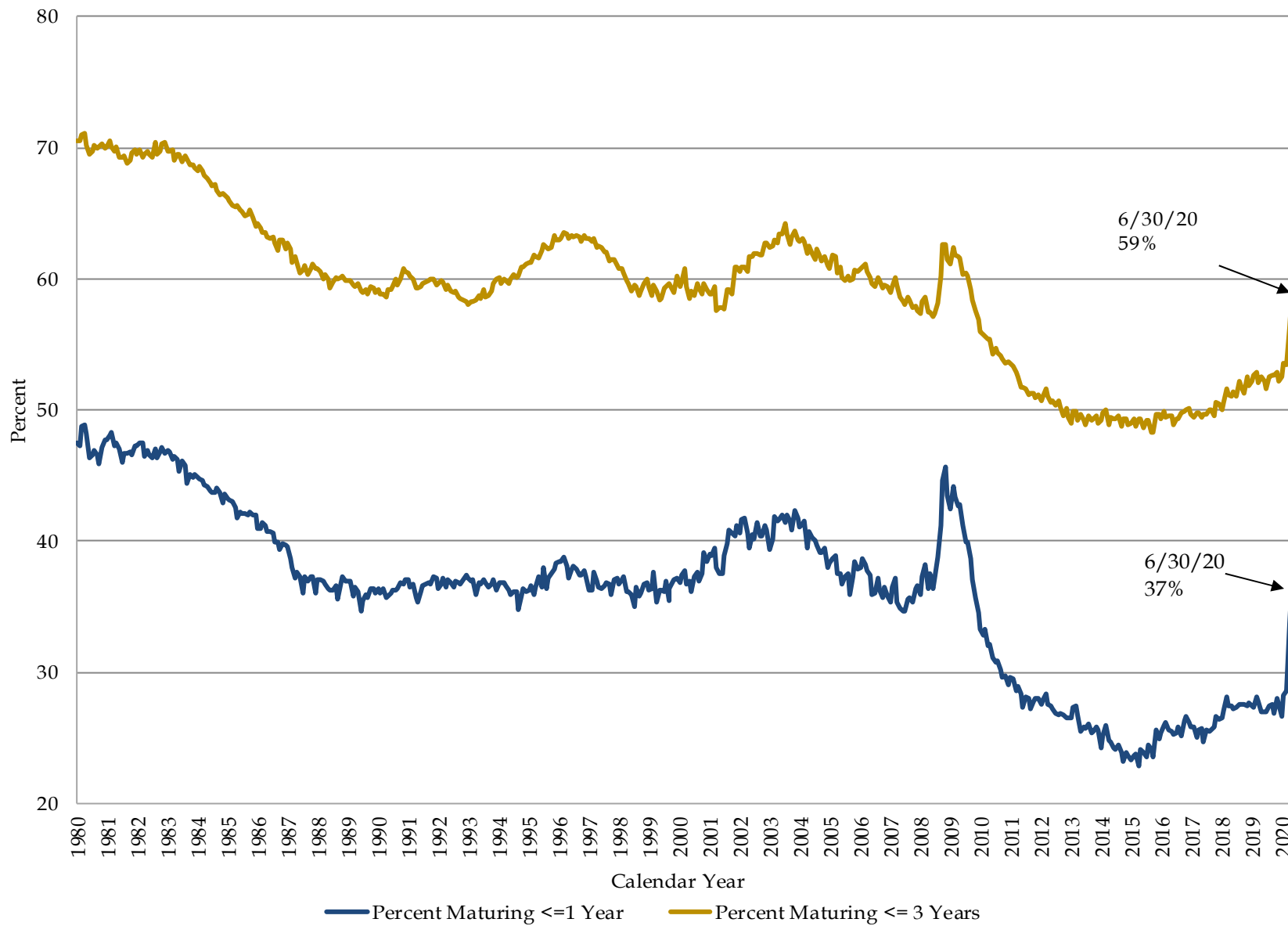


# Private Bills Holdings as a Percentage of Total Private Holdings

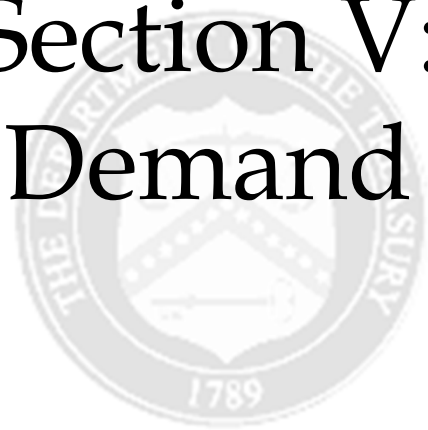




# Treasury Maturity Profile History



# Section V: Demand



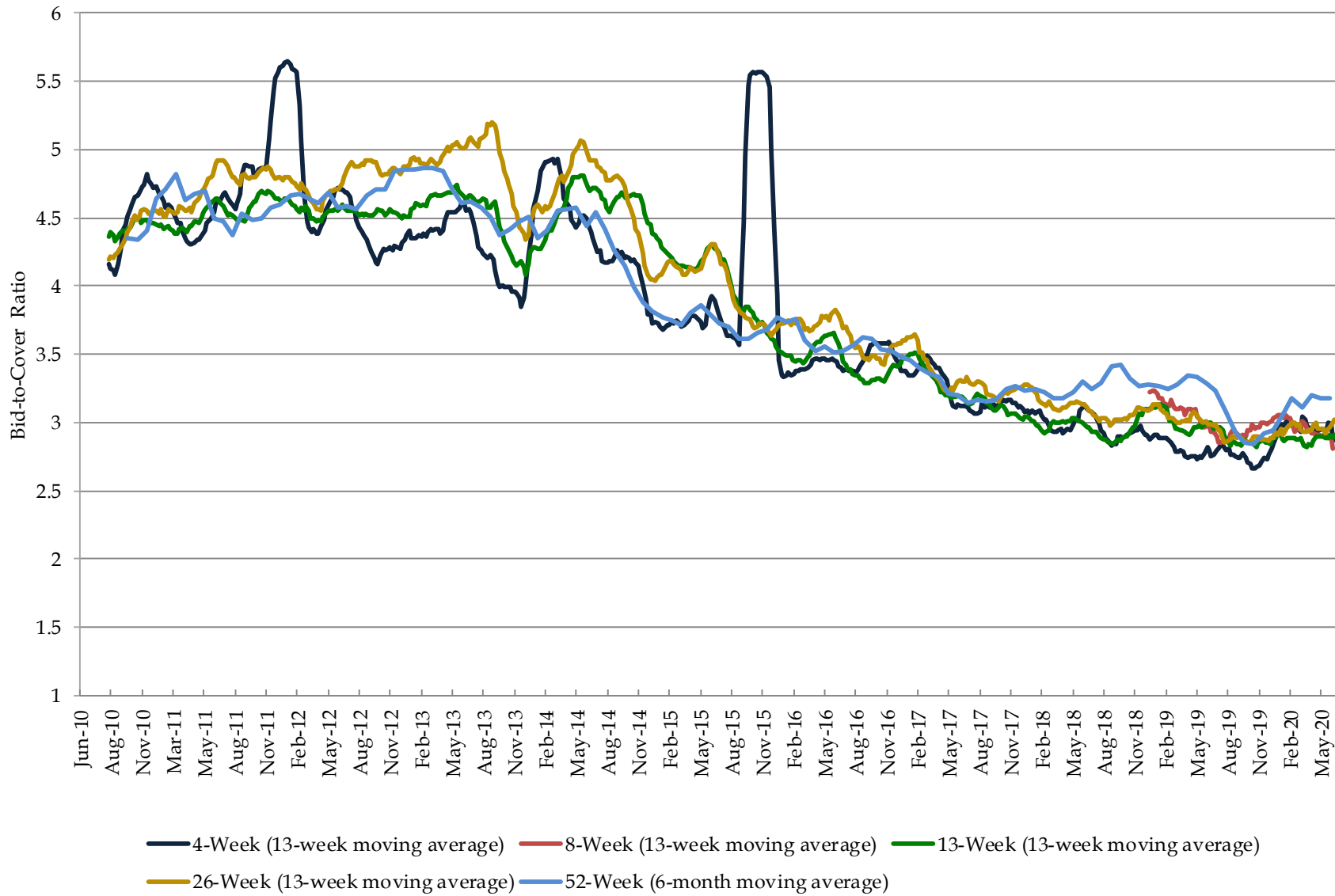
### Summary Statistics for Fiscal Year 2020 Q3 Auctions

Security Type	Term	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)**
Bill	4-Week	0.117	2.9	1001.2	39.8	2.6	57.6	18.76	46.2	8.7
Bill	8-Week	0.138	2.8	846.3	45.0	3.5	51.4	8.69	38.9	14.6
Bill	13-Week	0.149	2.9	755.4	48.8	4.2	47.0	15.64	70.5	22.2
Bill	26-Week	0.170	3.0	656.6	48.4	4.5	47.2	12.45	61.2	38.6
Bill	52-Week	0.176	3.2	92.2	58.9	7.7	33.4	0.76	11.2	11.0
CMB	6-Week	0.126	2.9	844.8	42.3	3.3	54.5	0.16	0.0	10.4
CMB	15-Week	0.149	3.2	485.0	48.0	1.9	50.1	0.03	0.0	14.7
CMB	17-Week	0.157	3.2	494.8	51.0	4.9	44.2	0.18	0.0	17.1
CMB	22-Week	0.171	3.0	480.0	50.8	3.7	45.5	0.04	0.0	21.5
CMB	39-Week	0.175	3.2	70.0	71.5	6.8	21.7	0.01	0.0	5.5
CMB	Other	0.194	2.9	80.0	49.4	2.1	48.6	0.00	0.0	1.6
Coupon	2-Year	0.199	2.7	131.4	30.0	16.4	53.6	0.62	14.6	31.0
Coupon	3-Year	0.285	2.5	125.8	35.0	10.7	54.3	0.18	23.0	48.1
Coupon	5-Year	0.352	2.5	135.0	24.4	15.5	60.0	0.05	14.9	78.7
Coupon	7-Year	0.529	2.5	114.0	22.3	13.5	64.1	0.02	12.6	92.0
Coupon	10-Year	0.768	2.5	86.0	26.3	12.8	60.9	0.01	17.4	106.5
Coupon	20-Year	1.263	2.6	37.0	23.3	15.5	61.1	0.01	4.4	76.3
Coupon	30-Year	1.372	2.3	58.0	22.8	12.5	64.8	0.01	12.0	184.5
TIPS	5-Year	-0.529	2.8	31.9	14.7	8.5	76.9	0.12	3.5	18.5
TIPS	10-Year	-0.470	2.4	12.0	30.1	7.8	62.1	0.03	0.0	11.9
TIPS	30-Year	0.000	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
FRN	2-Year	0.098	3.1	62.0	45.3	18.9	35.8	0.04	1.9	0.0
Total Bills		0.145	3.0	5806.3	46.4	3.6	50.0	56.72	228.0	165.9
Total Coupons		0.527	2.5	687.1	27.1	13.9	59.0	0.90	98.9	617.0
Total FRN		0.098	3.1	62.0	45.3	18.9	35.8	0.04	1.9	0.0
Total TIPS		-0.513	2.7	43.8	18.9	8.3	72.8	0.15	3.5	30.5

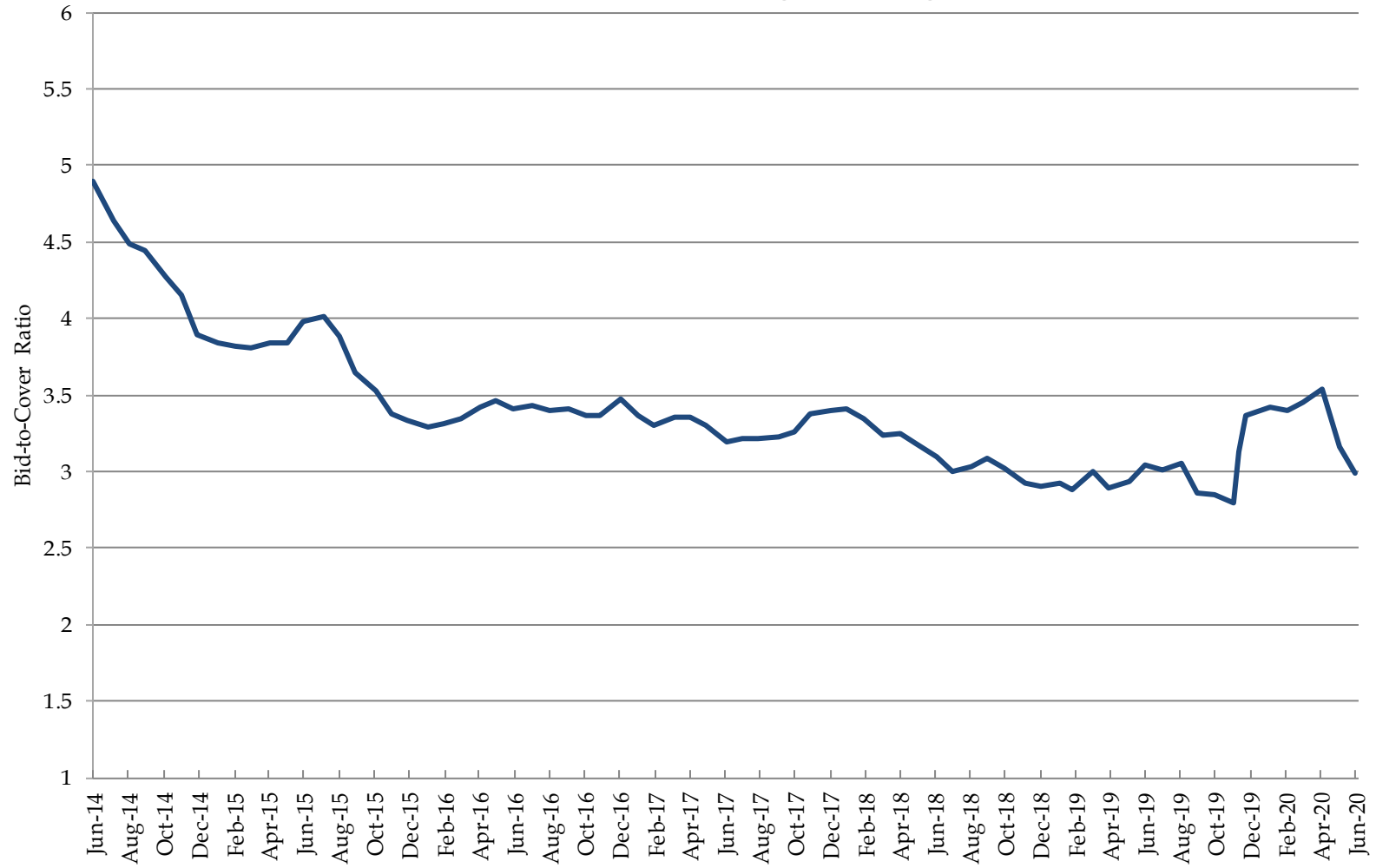
\*Weighted averages of Competitive Awards. FRNs are reported on discount margin basis.

\*\*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.

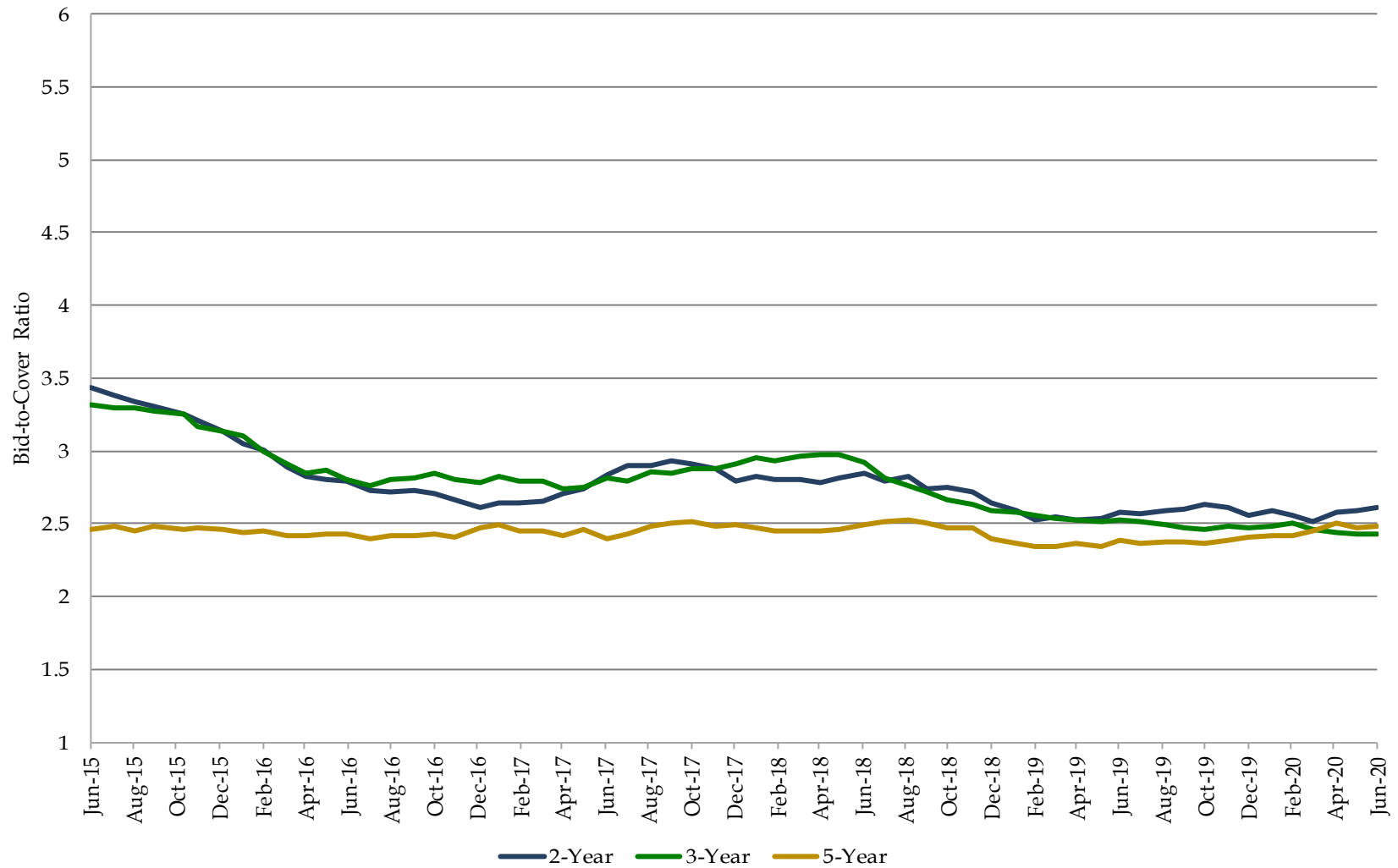
## Bid-to-Cover Ratios for Treasury Bills



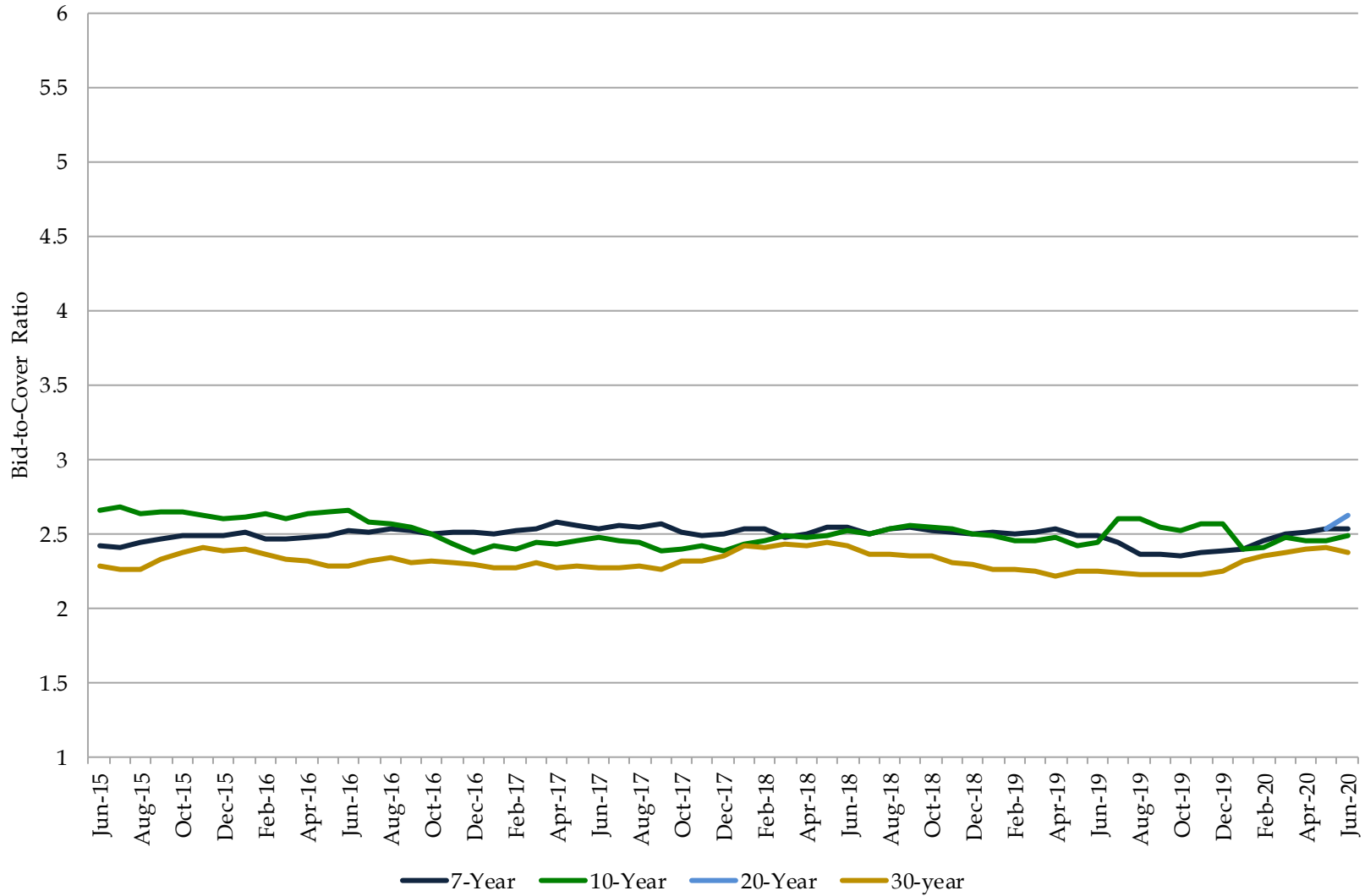
## Bid-to-Cover Ratios for FRNs (6-Month Moving Average)



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

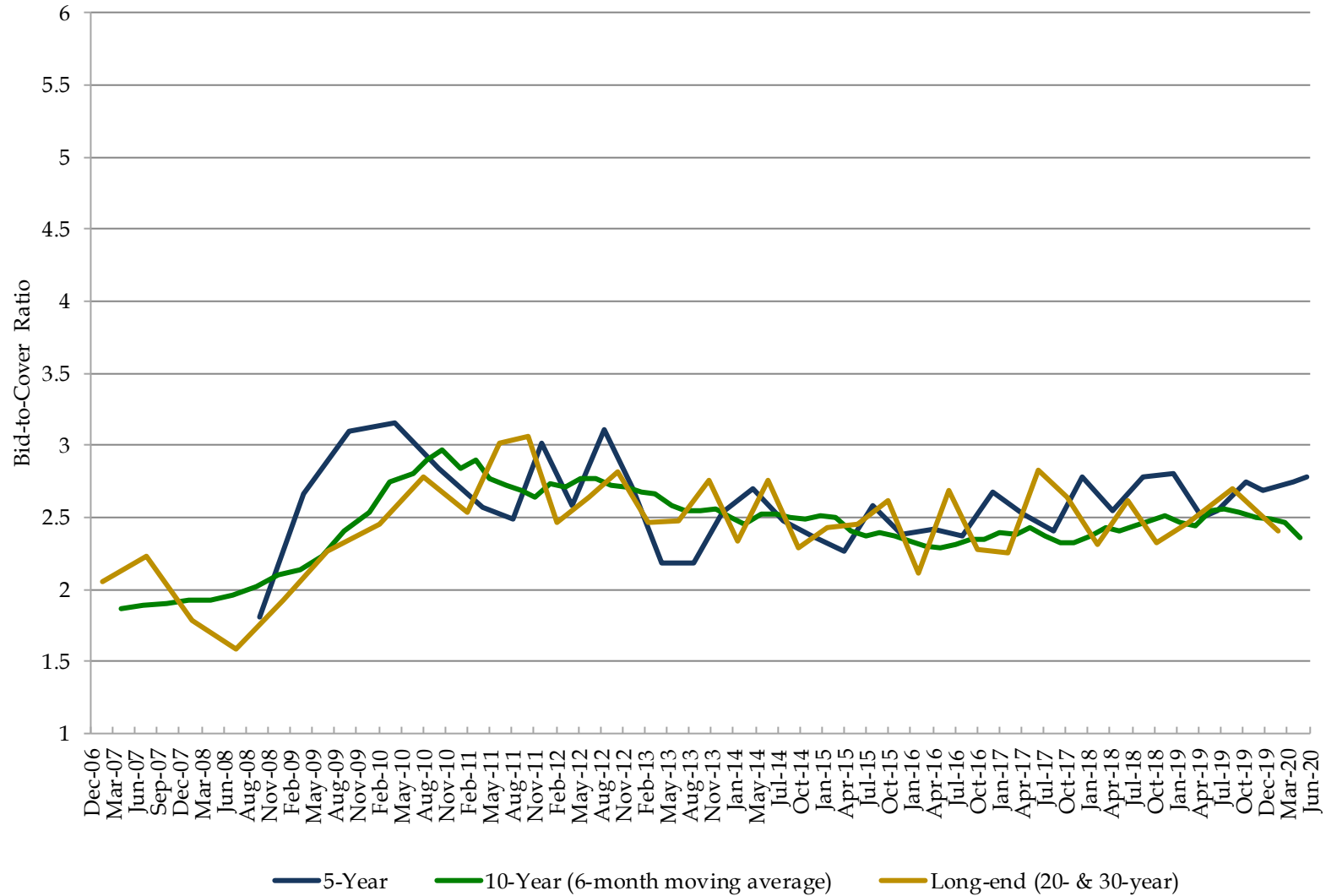


## Bid-to-Cover Ratios for 7-, 10-, 20-, and 30-Year Nominal Securities (6-Month Moving Average)\*



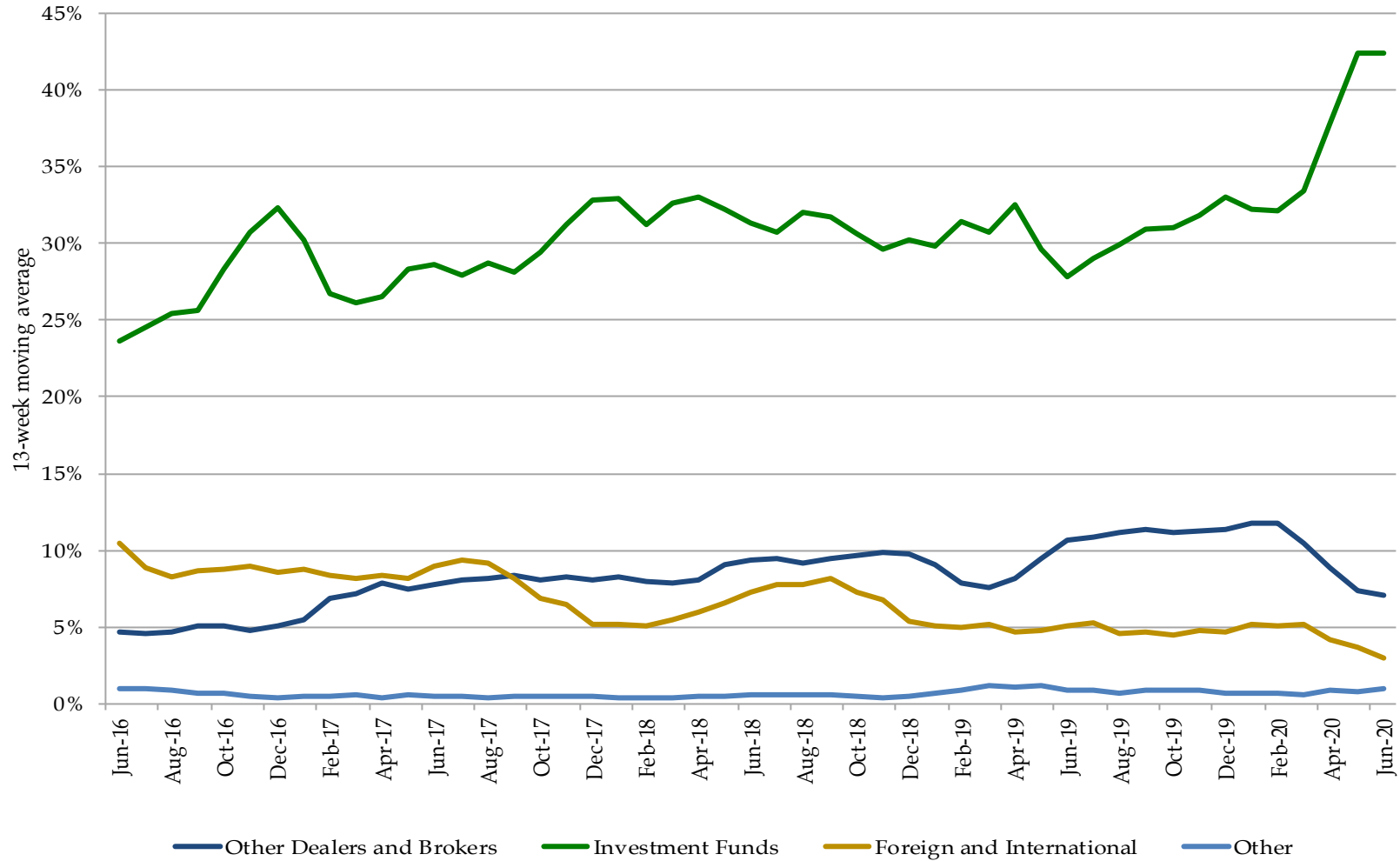
\* 20-Year bid-to-cover ratio reflects actuals instead of moving average.

# Bid-to-Cover Ratios for TIPS



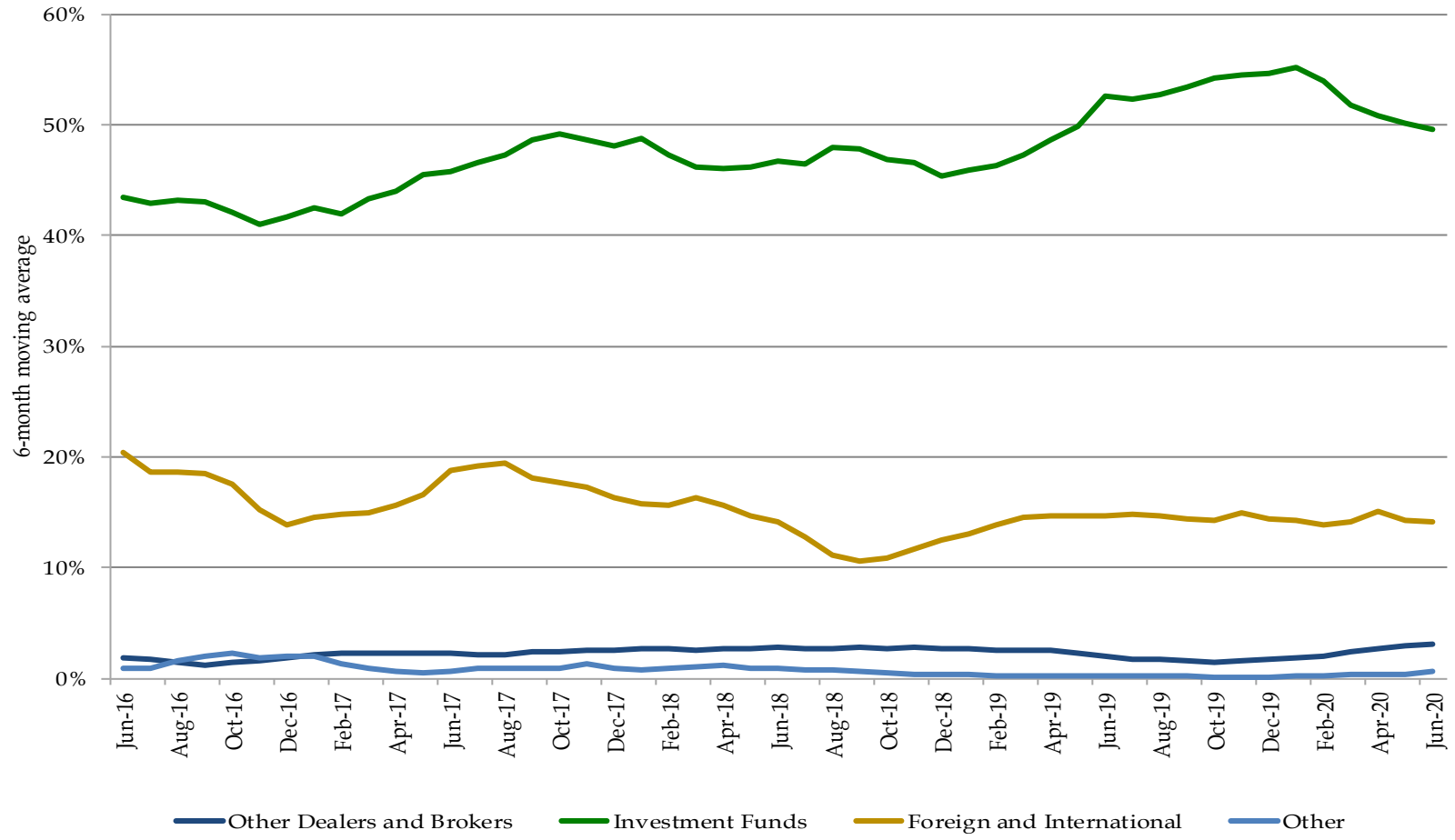


## Percent Awarded in Bill Auctions by Investor Class (13-Week Moving Average)



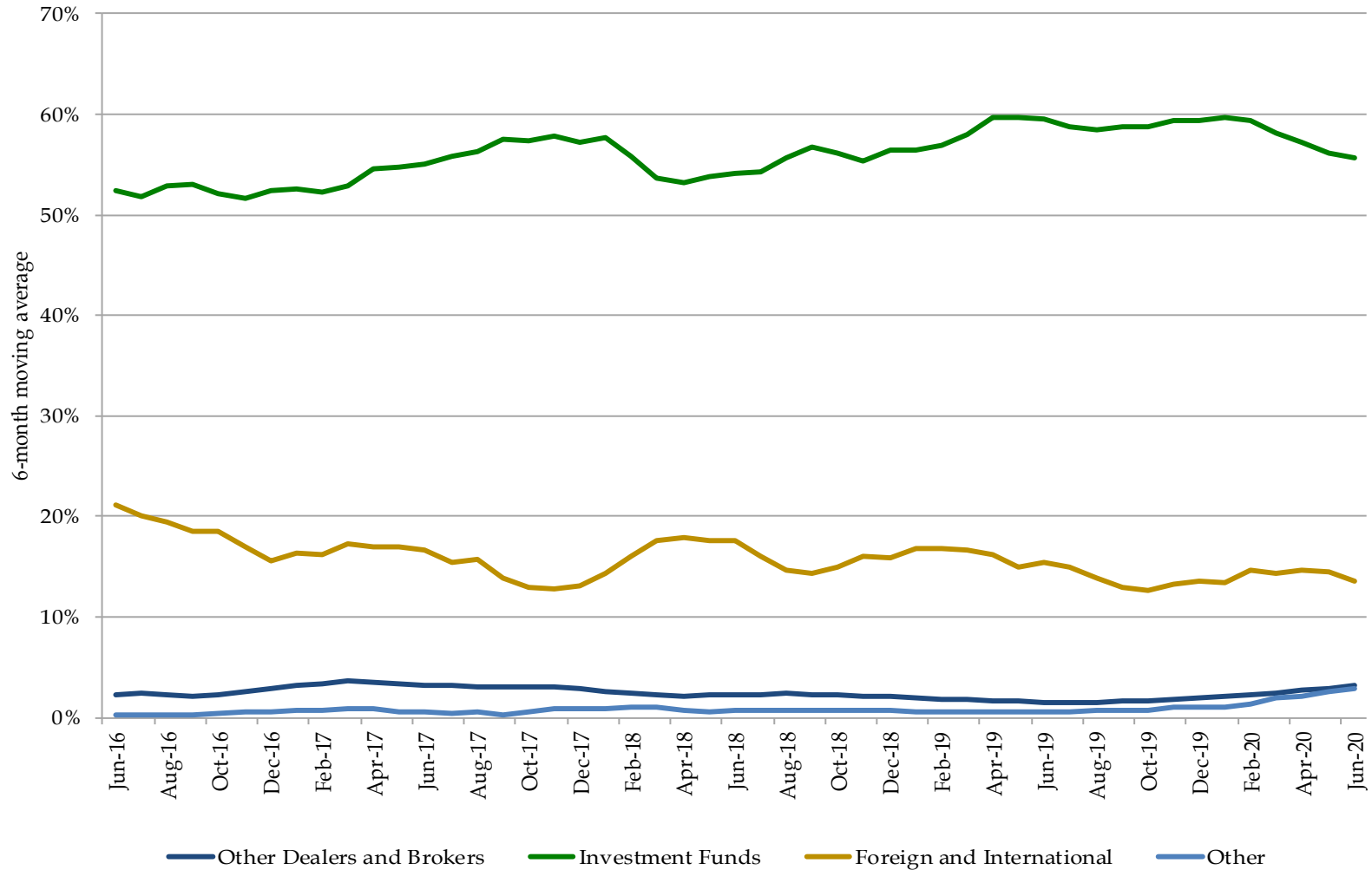
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

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



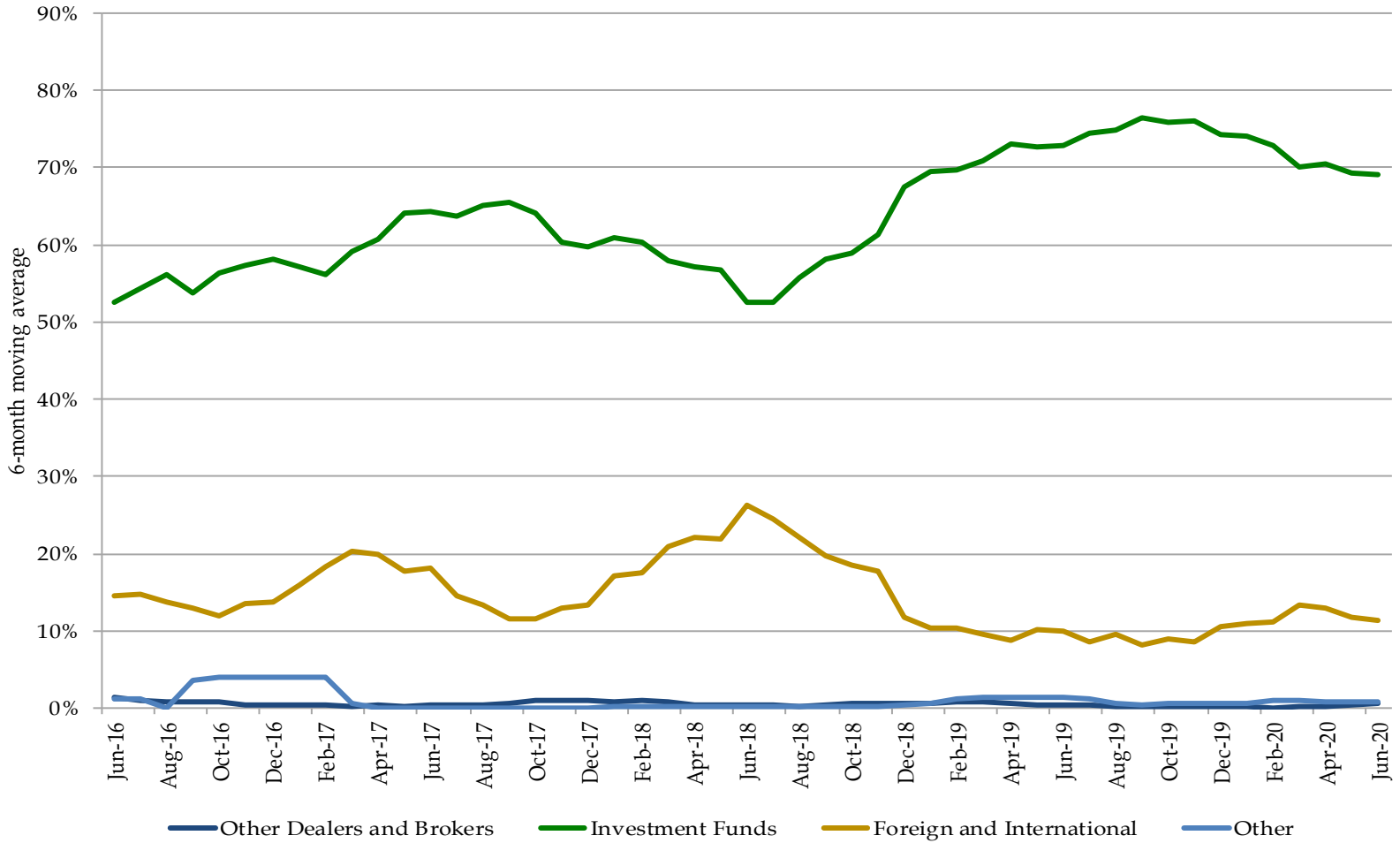
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

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



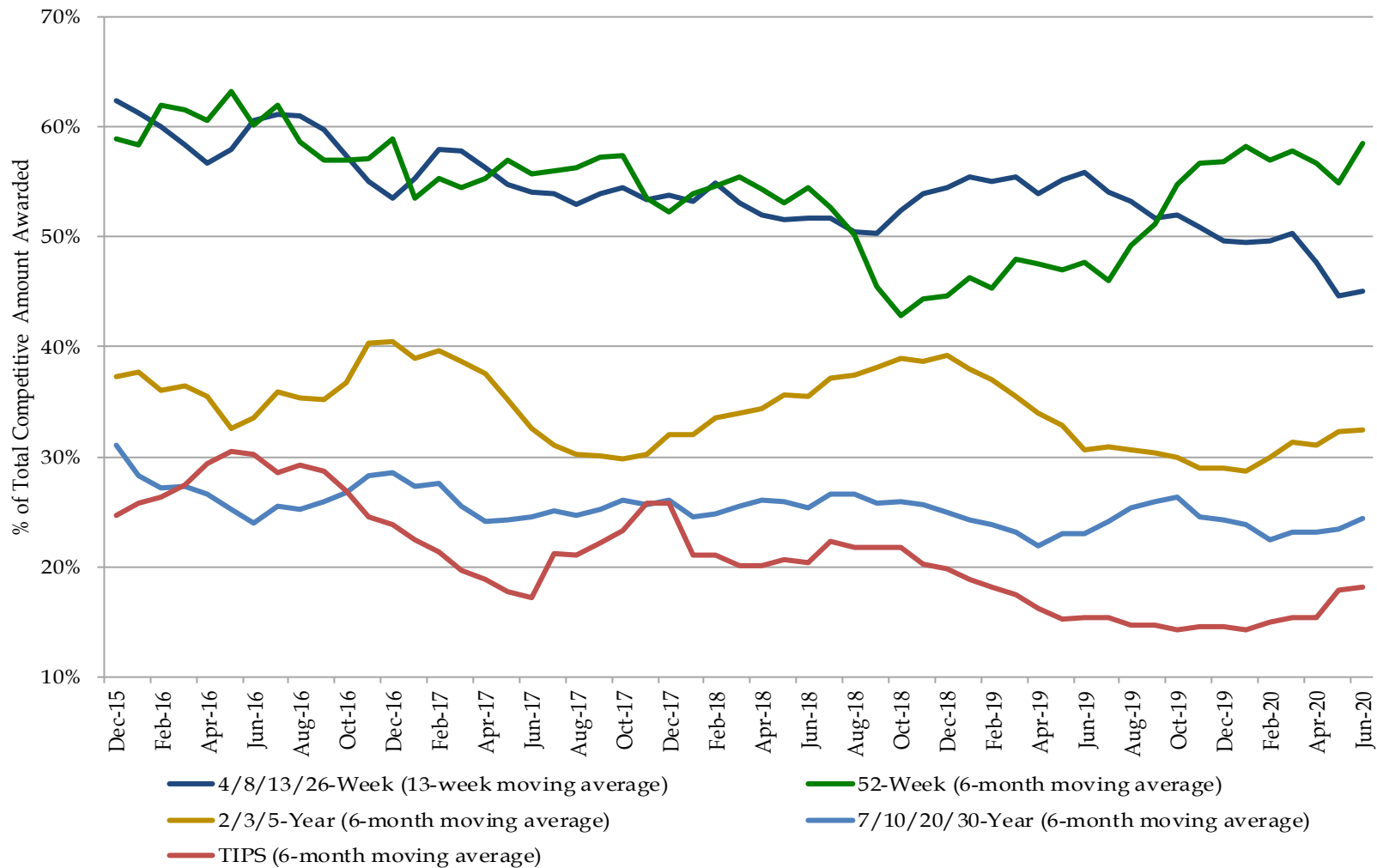
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

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



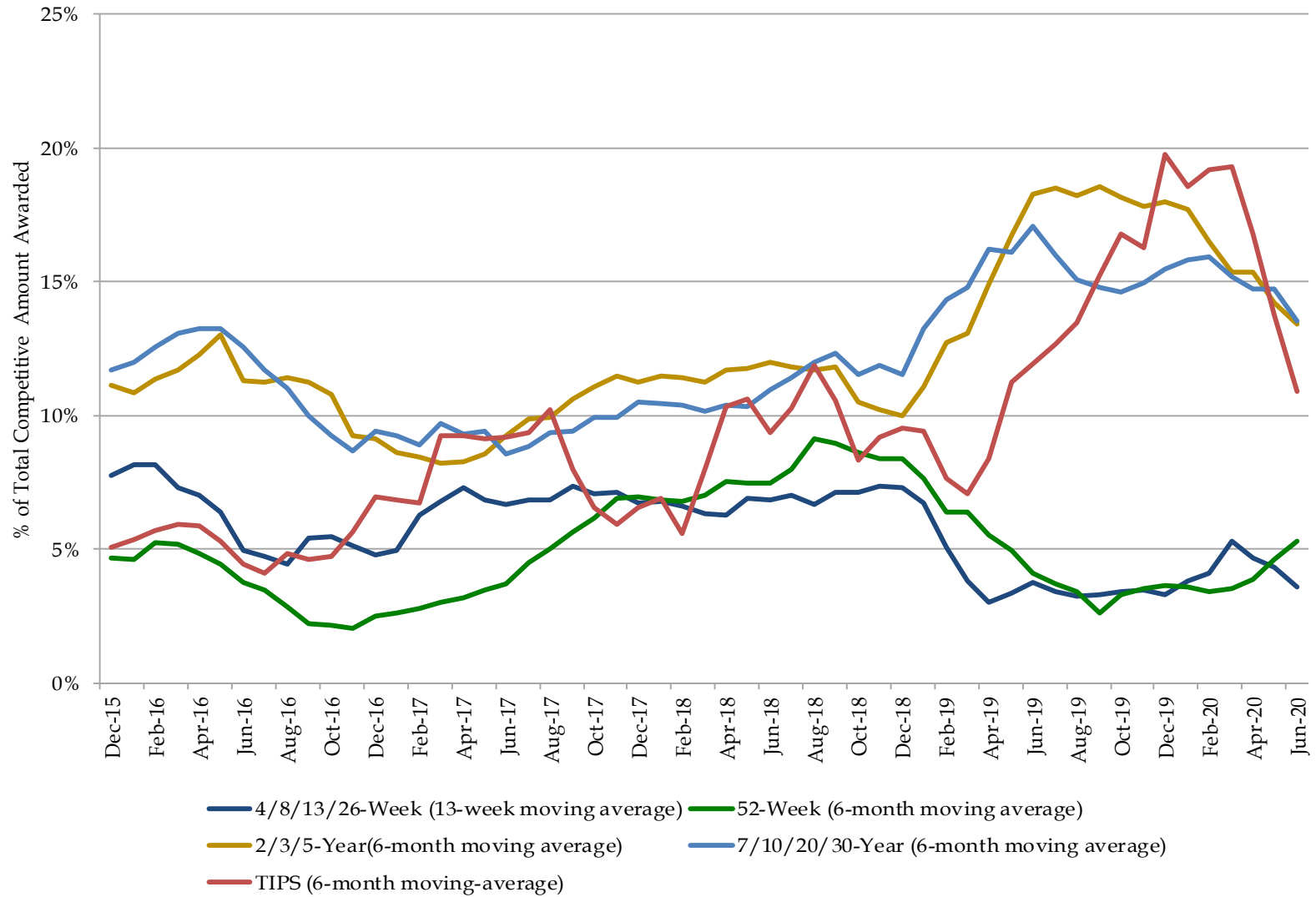
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 5%, which include Depository Institutions, Individuals, Pension and Insurance.

## Primary Dealer Awards at Auction



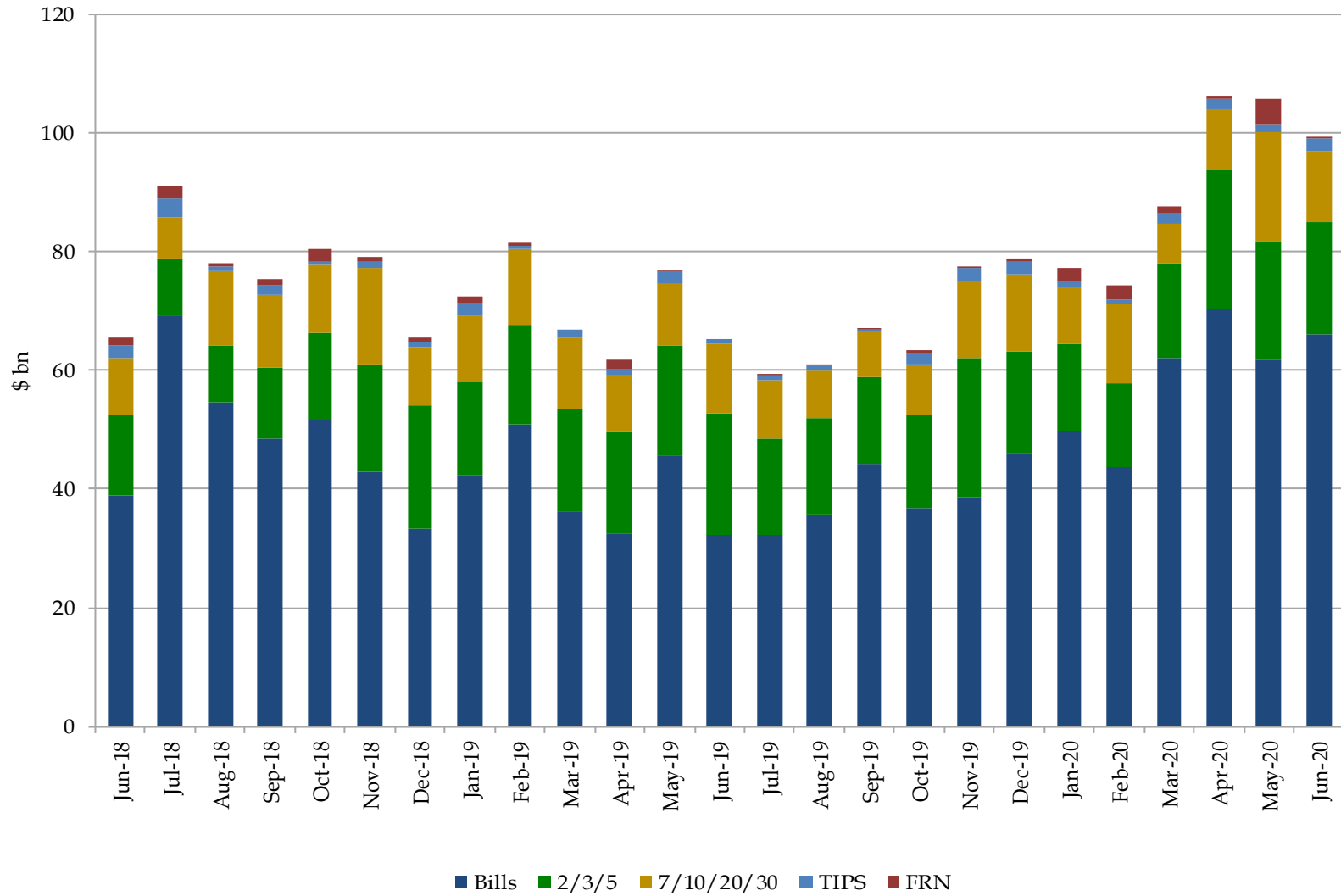
Competitive Amount Awarded excludes SOMA add-ons.

## Direct Bidder Awards at Auction



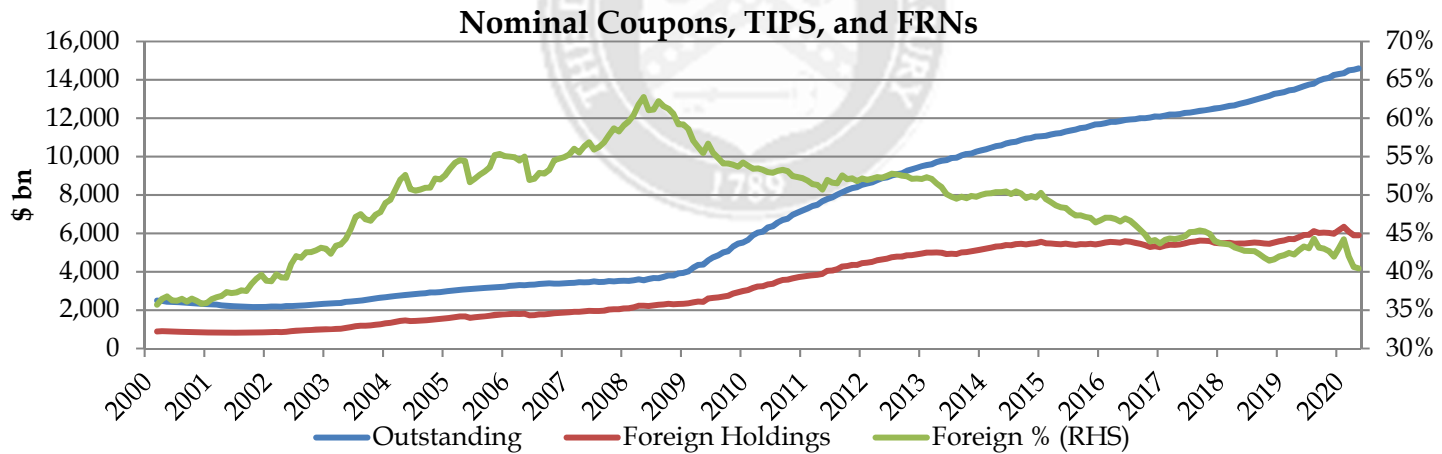
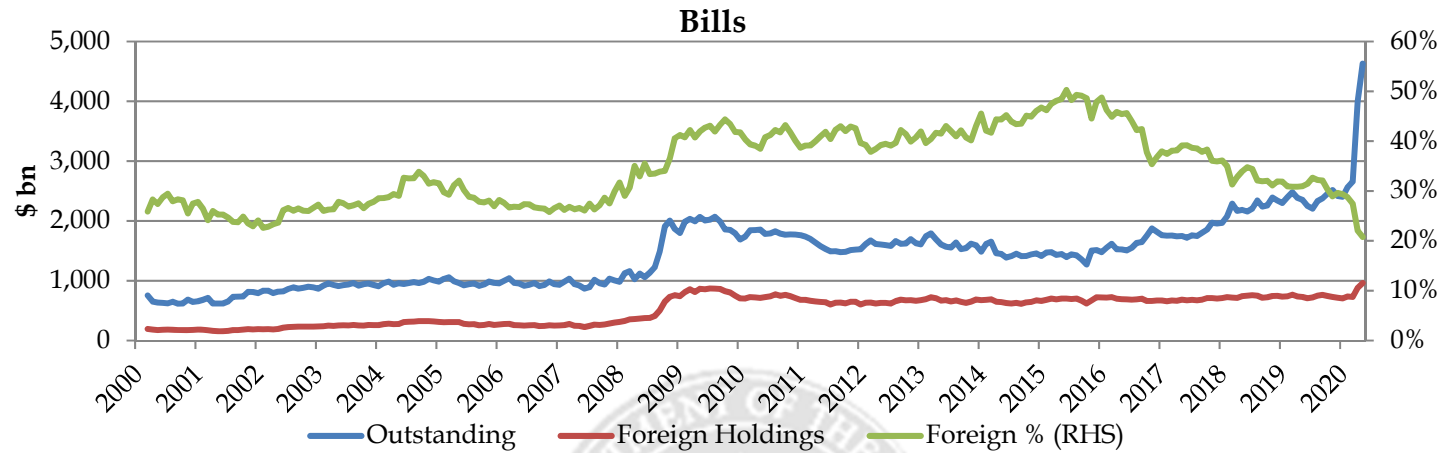
Competitive Amount Awarded excludes SOMA add-ons.

## 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.

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.



# Appendix

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 chevron with stars. The shield is set within a circular border containing the text "THE DEPARTMENT OF THE TREASURY" and the year "1789".

**Projected Privately-Held Net Marketable Borrowing  
Assuming Private Coupon Issuance & Total Bills Outstanding  
Remain Constant as of 6/30/2020\***

Fiscal Year	Bills	2/3/5	7/10/20/30	TIPS	FRN	Historical/Projected Net Borrowing Capacity
2015	(53)	(282)	642	88	164	558
2016	289	(107)	515	58	41	795
2017	155	(66)	378	51	(0)	519
2018	438	197	493	45	23	1,196
2019	137	498	534	51	59	1,280
2020	2,703	519	685	46	55	4,008
2021	0	816	866	44	50	1,777
2022	0	506	882	27	32	1,447
2023	0	447	734	23	0	1,204
2024	0	282	796	35	0	1,113
2025	0	79	799	(25)	0	853
2026	0	0	788	(5)	0	783
2027	0	0	732	(1)	0	731
2028	0	0	537	(18)	0	518
2029	0	0	565	(11)	0	555
2030	0	0	532	(1)	0	531

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.

\*Privately-held marketable borrowing excludes rollovers (auction “add-ons”) of Treasury securities held in the Federal Reserve’s System Open Market Account (SOMA) but includes financing required due to SOMA redemptions.

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	4/7/2020	0.090	3.00	79.1	43.6	1.7	54.6	0.9	3.9	0.7
4-Week	4/14/2020	0.190	2.84	88.6	25.7	4.8	69.5	1.4	3.9	0.8
4-Week	4/21/2020	0.150	2.90	88.4	36.9	4.2	58.8	1.6	4.3	0.8
4-Week	4/28/2020	0.090	2.92	88.1	37.3	2.6	60.1	1.9	3.9	0.8
4-Week	5/5/2020	0.095	2.75	88.1	37.5	1.5	61.0	1.9	3.8	0.8
4-Week	5/12/2020	0.095	2.87	78.7	35.4	1.0	63.6	1.3	3.4	0.7
4-Week	5/19/2020	0.090	2.93	78.5	41.1	1.4	57.5	1.5	3.4	0.7
4-Week	5/26/2020	0.090	2.75	78.6	45.8	2.5	51.7	1.4	2.7	0.7
4-Week	6/2/2020	0.130	2.55	78.6	45.6	3.1	51.3	1.4	3.6	0.7
4-Week	6/9/2020	0.125	2.77	78.9	44.3	2.5	53.2	1.1	3.5	0.7
4-Week	6/16/2020	0.130	2.99	68.5	39.5	2.9	57.6	1.5	3.6	0.6
4-Week	6/23/2020	0.125	2.89	58.5	44.6	4.6	50.8	1.5	3.0	0.5
4-Week	6/30/2020	0.110	3.07	48.8	45.4	0.9	53.8	1.2	3.3	0.4
8-Week	4/7/2020	0.095	2.85	59.8	43.6	1.4	55.0	0.2	2.9	1.0
8-Week	4/14/2020	0.290	2.56	69.0	53.2	7.1	39.8	1.0	3.1	1.2
8-Week	4/21/2020	0.150	3.03	69.4	32.4	2.6	65.0	0.6	3.3	1.2
8-Week	4/28/2020	0.120	2.53	69.6	55.8	3.2	41.0	0.4	3.0	1.2
8-Week	5/5/2020	0.095	3.07	68.8	38.6	1.6	59.8	1.2	3.0	1.2
8-Week	5/12/2020	0.110	2.89	69.3	35.5	1.2	63.3	0.7	3.0	1.2
8-Week	5/19/2020	0.110	2.90	69.5	41.5	1.8	56.8	0.5	3.0	1.2
8-Week	5/26/2020	0.105	2.65	69.3	50.7	2.7	46.6	0.7	2.4	1.1
8-Week	6/2/2020	0.135	2.87	68.8	34.9	0.9	64.1	1.2	3.1	1.2
8-Week	6/9/2020	0.145	2.60	69.7	53.7	3.2	43.1	0.3	3.0	1.2
8-Week	6/16/2020	0.155	2.86	59.7	41.8	11.6	46.6	0.3	3.1	1.0
8-Week	6/23/2020	0.135	2.92	54.5	41.6	7.5	51.0	0.5	2.7	0.9
8-Week	6/30/2020	0.140	2.72	48.9	67.6	2.7	29.7	1.1	3.3	0.9

\*Weighted averages of competitive awards.

\*\*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	4/9/2020	0.125	2.82	52.5	41.6	1.3	57.1	1.5	4.9	1.6
13-Week	4/16/2020	0.280	3.10	56.0	49.7	7.2	43.1	1.0	5.0	1.7
13-Week	4/23/2020	0.125	2.93	56.1	50.6	3.9	45.5	0.9	6.0	1.7
13-Week	4/30/2020	0.120	3.04	55.3	48.6	2.2	49.2	1.7	3.8	1.7
13-Week	5/7/2020	0.110	3.00	58.8	48.8	1.4	49.8	1.2	5.6	1.8
13-Week	5/14/2020	0.125	2.97	62.0	40.1	3.2	56.7	1.0	5.9	1.9
13-Week	5/21/2020	0.130	2.91	61.7	48.9	4.9	46.2	1.3	8.5	1.8
13-Week	5/28/2020	0.130	2.88	61.3	45.7	2.4	51.9	1.7	5.2	1.7
13-Week	6/4/2020	0.150	2.94	62.2	45.3	2.3	52.3	0.8	5.5	1.8
13-Week	6/11/2020	0.170	2.71	62.1	53.8	7.4	38.9	0.9	3.9	1.7
13-Week	6/18/2020	0.175	2.96	58.7	43.7	12.1	44.2	1.3	7.2	1.7
13-Week	6/25/2020	0.155	2.69	55.3	60.5	3.7	35.8	1.7	2.2	1.5
13-Week	7/2/2020	0.150	2.86	53.3	59.2	1.7	39.1	0.7	7.0	1.6
26-Week	4/9/2020	0.160	3.08	43.8	42.1	1.4	56.6	1.2	4.1	2.7
26-Week	4/16/2020	0.290	3.08	47.0	53.7	1.1	45.2	1.0	4.2	2.8
26-Week	4/23/2020	0.145	3.17	47.1	44.1	2.3	53.7	0.9	5.1	2.9
26-Week	4/30/2020	0.150	3.25	46.6	48.2	2.1	49.7	1.4	3.2	2.8
26-Week	5/7/2020	0.130	2.99	50.0	45.9	6.3	47.7	1.0	4.7	3.0
26-Week	5/14/2020	0.155	2.97	53.2	41.9	5.7	52.4	0.8	5.0	3.2
26-Week	5/21/2020	0.150	3.13	53.1	45.9	10.9	43.2	0.9	7.2	3.1
26-Week	5/28/2020	0.160	3.00	52.6	48.3	6.9	44.7	1.4	4.4	3.0
26-Week	6/4/2020	0.170	2.72	53.4	65.5	5.4	29.1	0.6	4.7	3.0
26-Week	6/11/2020	0.185	3.01	53.4	44.3	4.1	51.6	0.6	3.3	3.0
26-Week	6/18/2020	0.185	2.93	53.3	53.2	4.3	42.6	0.7	6.4	3.1
26-Week	6/25/2020	0.175	2.94	52.6	51.0	3.8	45.2	1.4	2.1	2.9
26-Week	7/2/2020	0.165	2.99	50.5	43.3	2.4	54.3	0.5	6.6	3.0
52-Week	4/23/2020	0.165	3.38	27.7	49.4	7.8	42.8	0.3	3.0	3.4
52-Week	5/21/2020	0.160	3.30	30.8	48.6	9.4	42.0	0.2	4.2	3.6
52-Week	6/18/2020	0.200	2.91	33.8	76.0	6.0	17.9	0.2	4.1	4.0

\*Weighted averages of competitive awards.

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

Bills (cont.)											
Issue	Term	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)**
CMB	6-Week	4/3/2020	0.080	3.07	45.0	49.9	1.9	48.2	0.0	0.0	0.5
CMB	6-Week	4/8/2020	0.095	3.15	60.0	37.4	0.6	62.1	0.0	0.0	0.8
CMB	6-Week	4/9/2020	0.160	2.65	45.0	49.0	5.4	45.5	0.0	0.0	0.5
CMB	6-Week	4/15/2020	0.190	3.12	65.0	27.7	9.0	63.3	0.0	0.0	0.8
CMB	6-Week	4/22/2020	0.120	2.89	65.0	42.7	0.4	56.8	0.0	0.0	0.8
CMB	6-Week	4/29/2020	0.085	3.22	55.0	43.0	0.7	56.3	0.0	0.0	0.7
CMB	6-Week	5/7/2020	0.115	2.74	65.0	40.2	1.7	58.1	0.0	0.0	0.8
CMB	6-Week	5/14/2020	0.110	2.93	65.0	42.6	3.5	54.0	0.0	0.0	0.8
CMB	6-Week	5/21/2020	0.105	2.90	65.0	38.1	1.6	60.3	0.0	0.0	0.8
CMB	6-Week	5/28/2020	0.120	2.83	65.0	38.4	1.0	60.6	0.0	0.0	0.8
CMB	6-Week	6/4/2020	0.135	2.83	65.0	41.6	2.8	55.6	0.0	0.0	0.8
CMB	6-Week	6/11/2020	0.165	2.70	60.0	47.1	10.8	42.2	0.0	0.0	0.7
CMB	6-Week	6/18/2020	0.150	2.82	50.0	56.5	2.1	41.4	0.0	0.0	0.6
CMB	6-Week	6/25/2020	0.125	3.20	40.0	44.7	4.7	50.6	0.0	0.0	0.5
CMB	6-Week	7/2/2020	0.130	3.27	35.0	45.4	3.2	51.4	0.0	0.0	0.4
CMB	15-Week	4/3/2020	0.125	3.06	40.0	45.0	0.5	54.5	0.0	0.0	1.2
CMB	15-Week	4/9/2020	0.200	2.79	40.0	36.2	1.6	62.1	0.0	0.0	1.2
CMB	15-Week	4/16/2020	0.165	3.32	30.0	49.4	1.7	48.9	0.0	0.0	0.9
CMB	15-Week	4/23/2020	0.105	3.10	30.0	52.7	1.6	45.6	0.0	0.0	0.9
CMB	15-Week	4/30/2020	0.115	3.05	30.0	50.3	1.8	47.9	0.0	0.0	0.9
CMB	15-Week	5/5/2020	0.115	3.35	30.0	57.5	1.8	40.6	0.0	0.0	0.9
CMB	15-Week	5/12/2020	0.125	3.00	30.0	49.4	3.5	47.1	0.0	0.0	0.9
CMB	15-Week	5/19/2020	0.140	3.51	35.0	53.6	2.5	43.9	0.0	0.0	1.1
CMB	15-Week	5/26/2020	0.140	3.04	40.0	51.6	2.4	46.0	0.0	0.0	1.2
CMB	15-Week	6/2/2020	0.165	3.06	40.0	36.3	1.2	62.5	0.0	0.0	1.2
CMB	15-Week	6/9/2020	0.170	3.25	40.0	40.2	1.0	58.8	0.0	0.0	1.2
CMB	15-Week	6/16/2020	0.180	3.50	35.0	53.7	1.4	44.9	0.0	0.0	1.0
CMB	15-Week	6/23/2020	0.170	3.25	35.0	47.6	1.7	50.7	0.0	0.0	1.0
CMB	15-Week	6/30/2020	0.150	3.35	30.0	56.7	5.1	38.2	0.0	0.0	0.9

\*Weighted averages of competitive awards.

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

Bills (cont.)											
Issue	Term	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)**
CMB	17-Week	4/2/2020	0.130	2.99	40.0	42.0	1.6	56.4	0.0	0.0	1.4
CMB	17-Week	4/9/2020	0.180	2.74	40.0	47.9	2.2	49.9	0.0	0.0	1.4
CMB	17-Week	4/16/2020	0.220	4.13	25.0	47.2	19.8	33.0	0.0	0.0	0.9
CMB	17-Week	4/23/2020	0.110	3.51	25.0	56.1	13.4	30.6	0.0	0.0	0.9
CMB	17-Week	4/30/2020	0.110	3.50	25.0	52.0	2.7	45.3	0.0	0.0	0.9
CMB	17-Week	5/7/2020	0.130	3.38	30.0	48.1	1.5	50.4	0.0	0.0	1.1
CMB	17-Week	5/14/2020	0.145	3.38	35.0	44.4	3.0	52.6	0.0	0.0	1.2
CMB	17-Week	5/21/2020	0.140	3.10	40.0	57.0	3.5	39.5	0.0	0.0	1.3
CMB	17-Week	5/28/2020	0.170	2.75	40.0	67.6	2.8	29.7	0.0	0.0	1.3
CMB	17-Week	6/4/2020	0.165	3.10	40.0	44.5	6.9	48.6	0.0	0.0	1.3
CMB	17-Week	6/11/2020	0.185	3.30	40.0	44.4	10.9	44.7	0.0	0.0	1.4
CMB	17-Week	6/18/2020	0.180	3.37	40.0	57.5	1.9	40.6	0.0	0.0	1.4
CMB	17-Week	6/25/2020	0.155	3.33	40.0	51.1	2.1	46.7	0.0	0.0	1.4
CMB	17-Week	7/2/2020	0.155	3.17	35.0	53.3	2.4	44.3	0.0	0.0	1.2
CMB	22-Week	4/7/2020	0.150	2.90	40.0	49.2	1.3	49.6	0.0	0.0	1.8
CMB	22-Week	4/14/2020	0.250	2.60	40.0	55.0	1.6	43.4	0.0	0.0	1.8
CMB	22-Week	4/21/2020	0.190	3.14	30.0	49.5	8.9	41.6	0.0	0.0	1.4
CMB	22-Week	4/28/2020	0.135	3.08	30.0	54.5	2.1	43.4	0.0	0.0	1.4
CMB	22-Week	5/5/2020	0.140	2.90	30.0	55.7	3.7	40.6	0.0	0.0	1.4
CMB	22-Week	5/12/2020	0.150	2.91	35.0	58.8	2.1	39.2	0.0	0.0	1.6
CMB	22-Week	5/19/2020	0.155	2.97	40.0	51.8	10.1	38.1	0.0	0.0	1.8
CMB	22-Week	5/26/2020	0.150	2.93	40.0	57.5	6.0	36.5	0.0	0.0	1.7
CMB	22-Week	6/2/2020	0.170	3.16	40.0	39.3	3.7	57.0	0.0	0.0	1.7
CMB	22-Week	6/9/2020	0.180	3.11	40.0	39.8	3.9	56.4	0.0	0.0	1.7
CMB	22-Week	6/16/2020	0.190	2.95	40.0	51.8	1.2	47.1	0.0	0.0	1.8
CMB	22-Week	6/23/2020	0.185	3.22	40.0	49.6	1.5	48.8	0.0	0.0	1.8
CMB	22-Week	6/30/2020	0.165	3.22	35.0	50.6	2.9	46.6	0.0	0.0	1.5
CMB	39-Week	4/30/2020	0.165	2.98	25.0	67.5	4.8	27.7	0.0	0.0	2.0
CMB	39-Week	5/28/2020	0.180	3.17	25.0	75.5	7.4	17.1	0.0	0.0	1.9
CMB	39-Week	6/25/2020	0.180	3.53	20.0	71.7	8.3	20.0	0.0	0.0	1.6
CMB	CMBs	4/8/2020	0.135	2.71	45.0	52.9	0.9	46.2	0.0	0.0	0.9
CMB	CMBs	4/15/2020	0.270	3.22	35.0	44.8	3.6	51.6	0.0	0.0	0.7

\*Weighted averages of competitive awards.

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

Nominal Coupons										
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	4/30/2020	0.229	3.10	41.8	26.4	17.8	55.8	0.2	3.6	10.0
2-Year	6/1/2020	0.178	2.68	43.8	32.1	14.8	53.1	0.2	4.6	10.1
2-Year	6/30/2020	0.193	2.46	45.8	31.2	16.7	52.0	0.2	6.3	10.9
3-Year	4/15/2020	0.348	2.27	39.9	40.5	4.1	55.4	0.1	0.1	13.0
3-Year	5/15/2020	0.230	2.54	42.0	32.6	13.1	54.4	0.0	22.2	21.2
3-Year	6/15/2020	0.280	2.55	44.0	32.2	14.5	53.3	0.0	0.6	13.9
5-Year	4/30/2020	0.394	2.74	43.0	19.4	20.2	60.4	0.0	3.7	25.4
5-Year	6/1/2020	0.334	2.28	45.0	31.8	10.8	57.3	0.0	4.7	25.6
5-Year	6/30/2020	0.330	2.58	47.0	22.0	15.8	62.3	0.0	6.4	27.7
7-Year	4/30/2020	0.525	2.56	35.0	21.3	12.3	66.4	0.0	3.0	28.6
7-Year	6/1/2020	0.553	2.55	38.0	24.0	12.4	63.6	0.0	4.0	29.9
7-Year	6/30/2020	0.511	2.49	41.0	21.7	15.7	62.6	0.0	5.6	33.5
10-Year	4/15/2020	0.782	2.43	25.0	27.6	13.2	59.2	0.0	0.1	25.0
10-Year	5/15/2020	0.700	2.69	32.0	20.5	13.3	66.1	0.0	16.9	52.1
10-Year	6/15/2020	0.832	2.26	29.0	31.5	11.8	56.7	0.0	0.4	29.4
20-Year	6/1/2020	1.220	2.53	20.0	24.6	14.7	60.7	0.0	2.1	40.7
20-Year	6/30/2020	1.314	2.63	17.0	21.9	16.5	61.6	0.0	2.3	35.7
30-Year	4/15/2020	1.325	2.35	17.0	22.6	11.0	66.4	0.0	0.1	42.8
30-Year	5/15/2020	1.342	2.30	22.0	21.4	12.9	65.7	0.0	11.6	92.1
30-Year	6/15/2020	1.450	2.30	19.0	24.5	13.3	62.2	0.0	0.3	49.5
2-Year FRN	4/30/2020	0.114	3.02	22.0	31.5	17.1	51.4	0.0	1.9	0.0
2-Year FRN	5/29/2020	0.098	3.12	20.0	46.1	20.2	33.7	0.0	0.0	0.0
2-Year FRN	6/26/2020	0.080	3.16	20.0	59.6	19.6	20.8	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	4/30/2020	(0.320)	2.74	16.9	14.3	3.0	82.7	0.1	1.5	10.0
5-Year TIPS	6/30/2020	(0.766)	2.78	15.0	15.1	14.6	70.3	0.0	2.1	8.5
10-Year TIPS	5/29/2020	(0.470)	2.39	12.0	30.1	7.8	62.1	0.0	0.0	11.9

\*Weighted averages of competitive awards. 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.