Treasury Presentation to TBAC

Office of Debt Management

Fiscal Year 2015 Q2 Report

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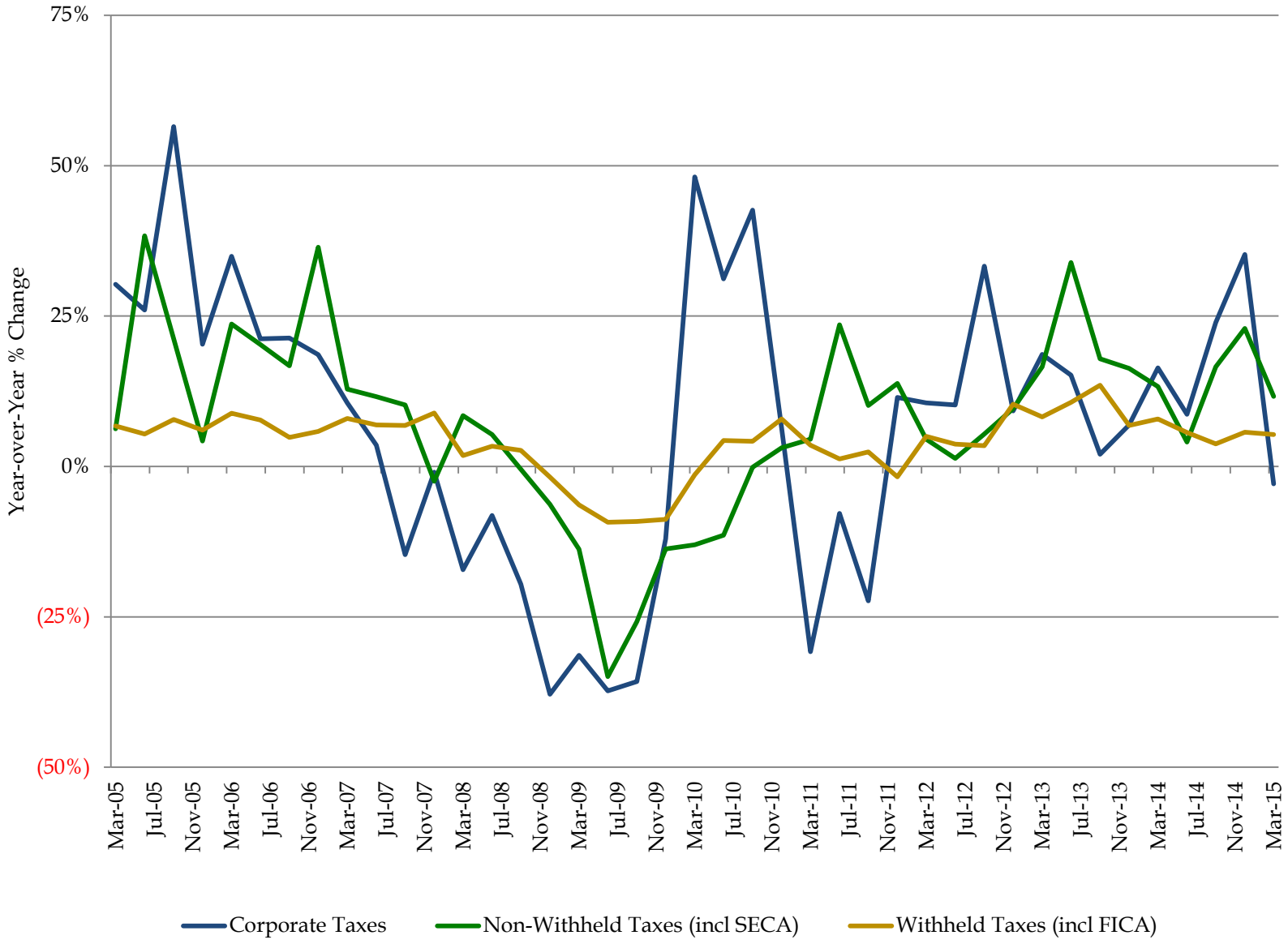
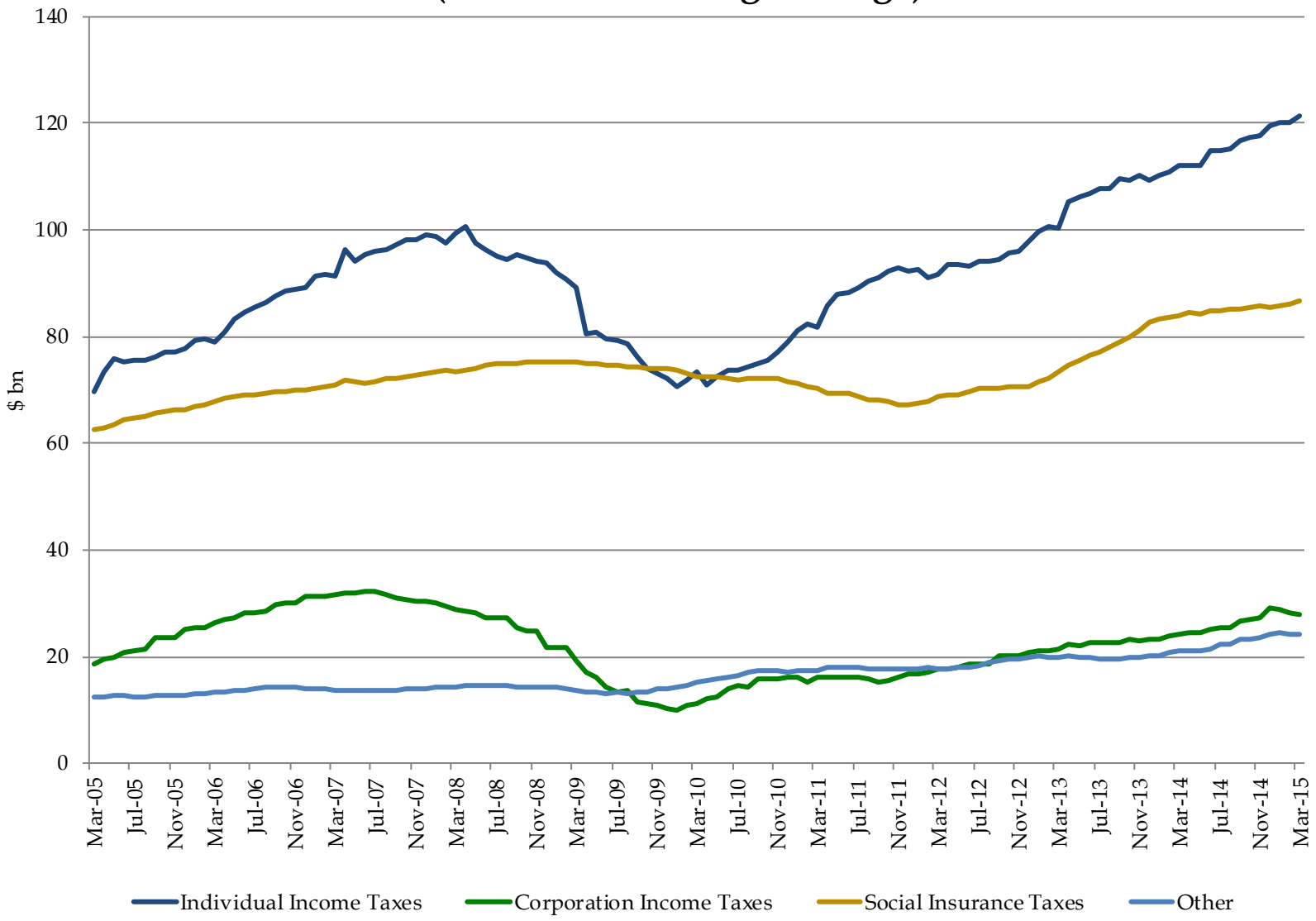
Section I: Fiscal

Quarterly Tax Receipts



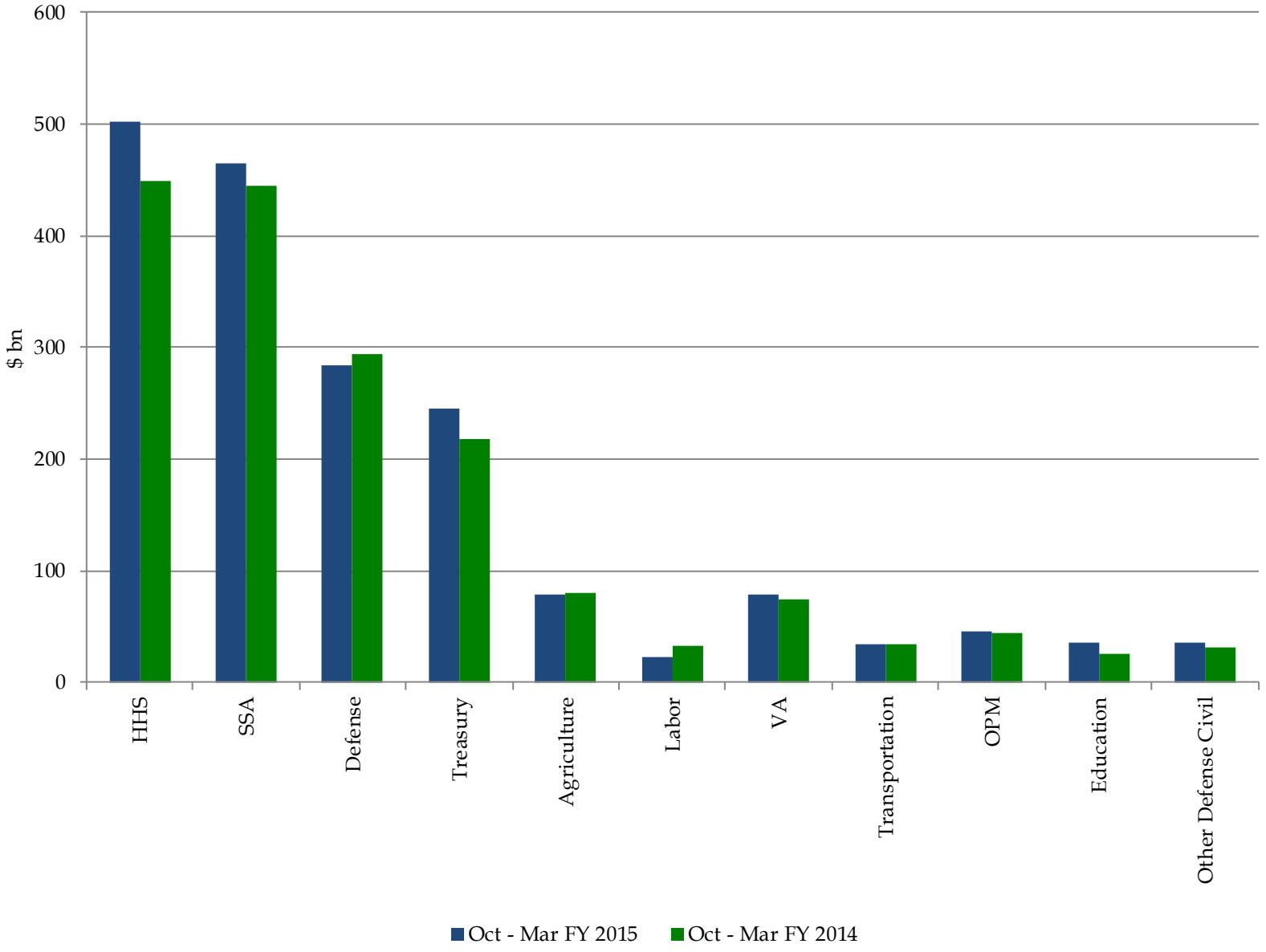
Source: United States Department of the Treasury

Monthly Receipt Levels
(12-Month Moving Average)



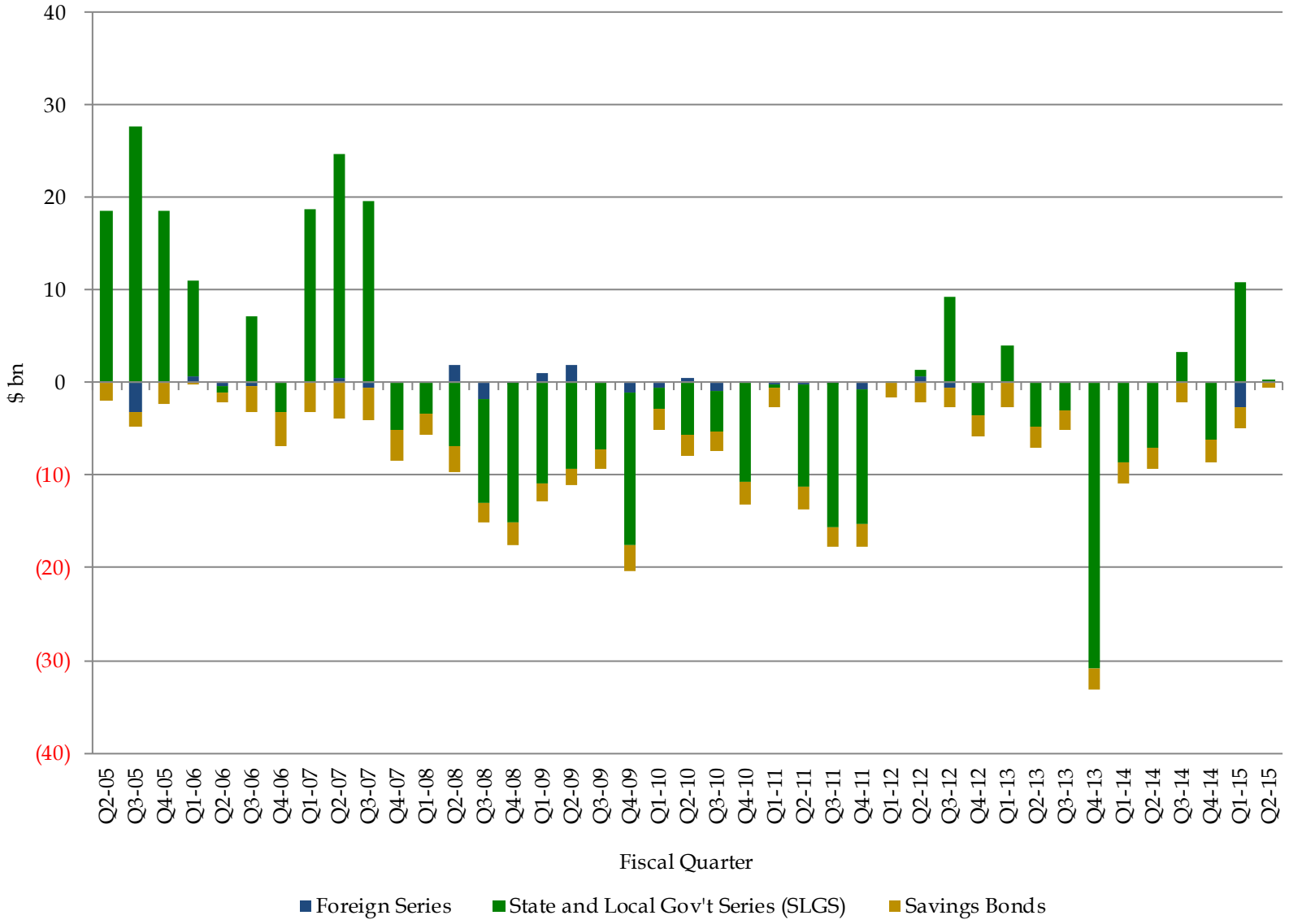
Individual Income Taxes include withheld and non-withheld. Social Insurance Taxes include FICA, SECA, RRTA, UTF deposits, FUTA and RUIA. Other includes excise taxes, estate and gift taxes, customs duties and miscellaneous receipts.
Source: United States Department of the Treasury

Eleven Largest Outlays



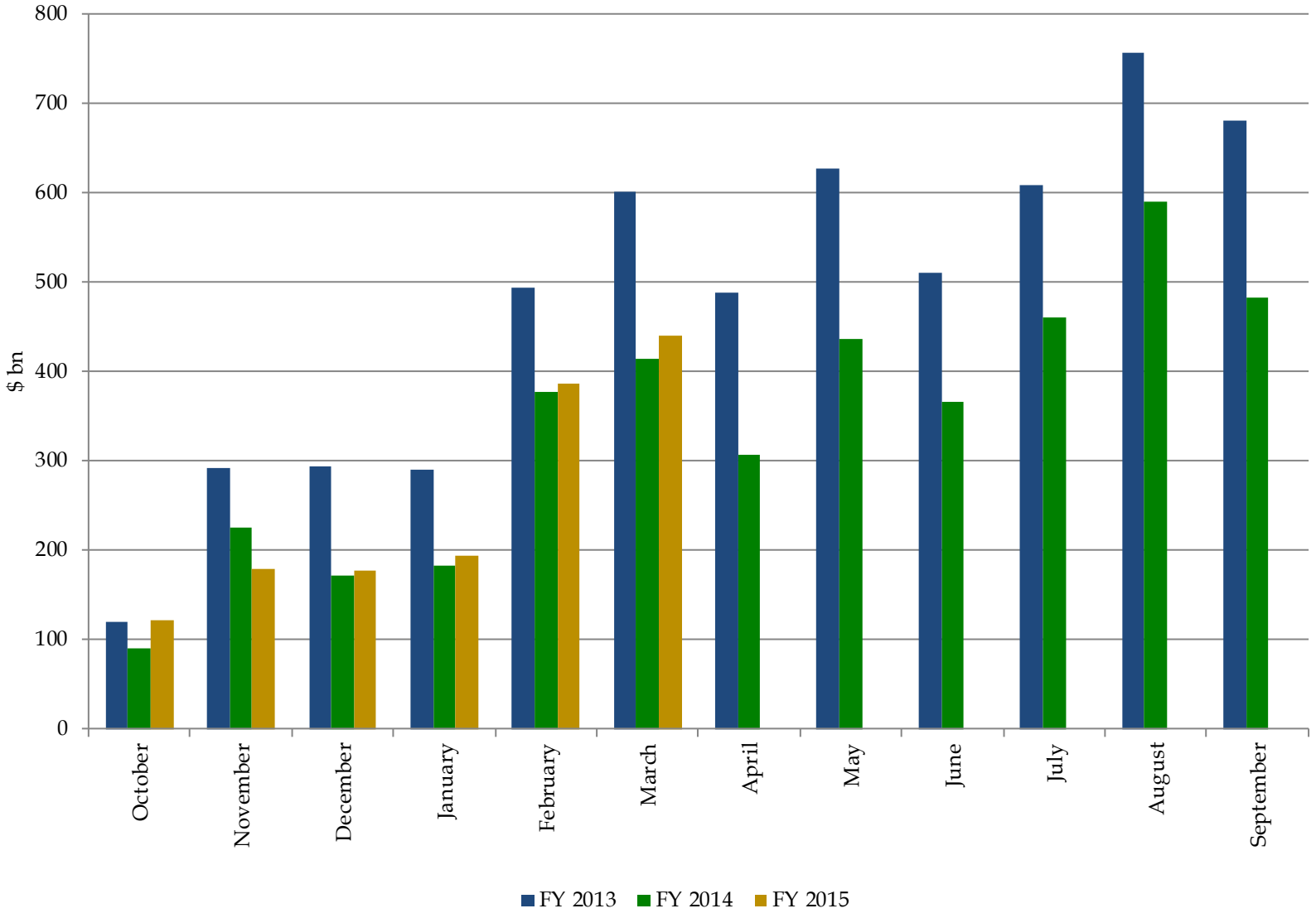
Source: United States Department of the Treasury

Treasury Net Nonmarketable Borrowing



Source: United States Department of the Treasury

Cumulative Budget Deficits by Fiscal Year



Source: United States Department of the Treasury

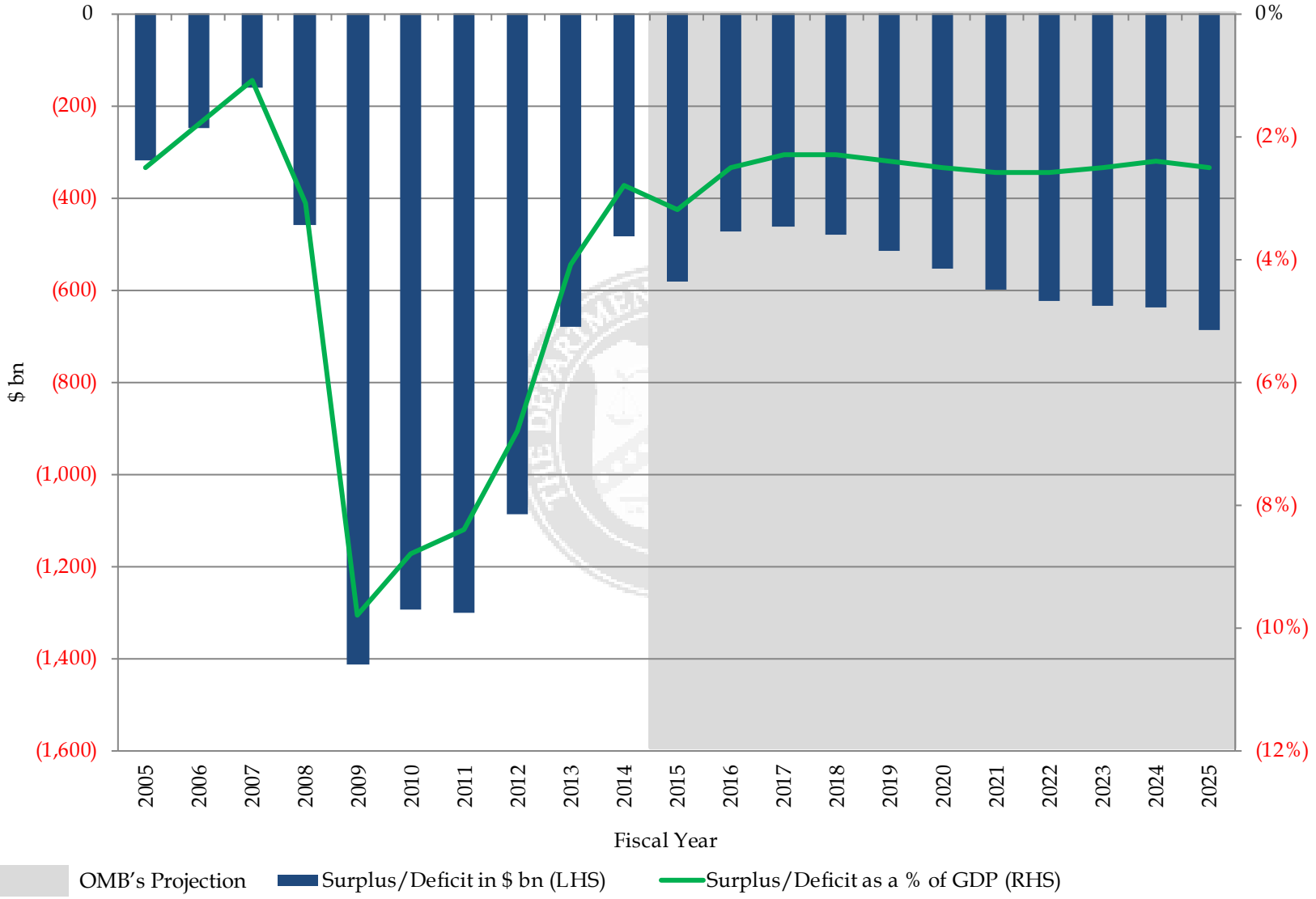
FY 2015-2017 Deficits and Net Marketable Borrowing Estimates

In $ billions

	Primary Dealers[1]	OMB[2]	CBO[3]	OMB MSR[4]
FY 2015 Deficit Estimate	491	583	486	525
FY 2016 Deficit Estimate	500	474	380	525
FY 2017 Deficit Estimate	531	463	401	468
FY 2015 Deficit Range	425-550			
FY 2016 Deficit Range	375-615			
FY 2017 Deficit Range	375-700			
FY 2015 Net Marketable Borrowing Estimate	574	726	595	655
FY 2016 Net Marketable Borrowing Estimate	576	602	469	658
FY 2017 Net Marketable Borrowing Estimate	603	596	488	596
FY 2015 Net Marketable Borrowing Range	490-651			
FY 2016 Net Marketable Borrowing Range	420-717			
FY 2017 Net Marketable Borrowing Range	420-703			
Estimates as of:	Apr-15	Feb-15	Mar-15	Jul-14

[1]Based on primary dealer feedback on April 27, 2015. Estimates above are averages.
[2]Table 1 of OMB's "Fiscal Year 2016 Budget of the US Government"
[3]Table 1 and 3 of "An Analysis of the President's 2016 Budget "
[4]Table S-11 of OMB's "Fiscal Year 2015 MSR"

Budet Surplus/Deficit



Projections are from Table S-1 of OMB's "Fiscal Year 2016 Budget of the US Government"

Section II: Financing

Assumptions for Financing Section (pages 13 to 19)

- Portfolio and SOMA holdings as of 3/31/2015.
- SOMA redemptions until and including June 2021. These assumptions are based on Chairman Bernanke's June 2013 press conference.
- Assumes announced issuance sizes and patterns constant for Nominal Coupons, TIPS, and FRNs as of 3/31/2015, while using an average of ~1.45 trillion of Bills outstanding consistent with Treasury's guidance of the FRN program replacing some Bills issuance.
- The principal on the TIPS securities was accreted to each projection date based on market ZCIS levels as of 3/31/2015.
- No attempt was made to match future financing needs.

Sources of Financing in Fiscal Year 2015 Q2

January - March 2015	
Net Bill Issuance	20
Net Coupon Issuance	121
Subtotal: Net Marketable Borrowing	141
Ending Cash Balance	100
Beginning Cash Balance	223
Subtotal: Change in Cash Balance	(123)
Net Implied Funding for FY 2015 Q2*	265

Security	January - March 2015 Bill Issuance			Fiscal Year-to-Date Bill Issuance		
	Gross	Maturing	Net	Gross	Maturing	Net
4-Week	460	480	(20)	949	944	5
13-Week	326	312	14	638	657	(19)
26-Week	326	309	17	677	608	69
52-Week	75	66	9	150	138	12
CMBs	0	0	0	0	0	0
Bill Subtotal	1,187	1,167	20	2,414	2,347	67

Security	January - March 2015 Coupon Issuance			Fiscal Year-to-Date Coupon Issuance		
	Gross	Maturing	Net	Gross	Maturing	Net
2-Year FRN	41	0	41	82	0	82
2-Year	78	105	(27)	162	210	(48)
3-Year	72	104	(32)	150	204	(54)
5-Year	105	129	(24)	210	258	(48)
7-Year	87	0	87	174	0	174
10-Year	66	34	32	132	60	72
30-Year	42	11	31	84	11	74
5-Year TIPS	0	0	0	16	0	16
10-Year TIPS	28	24	4	41	24	17
30-Year TIPS	9	0	9	16	0	16
Coupon Subtotal	528	407	121	1,067	765	302

Total	1,715	1,574	141	3,481	3,112	369

*Assumes an end-of-March 2015 cash balance of $100 billion versus a beginning-of-January 2015 cash balance of $223 billion. By keeping the cash balance constant, Treasury arrives at the net implied funding number.

Sources of Financing in Fiscal Year 2015 Q3

April - June 2015	
Assuming Constant Coupon and Average Bill Issuance Sizes as of 3/31/2015*	
Net Bill Issuance	(14)
Net Coupon Issuance	138
Subtotal: Net Marketable Borrowing	124
Treasury Announced Estimate: Net Marketable Borrowing**	59
Implied: Decrease in FY 2015 Q3 Net Issuances	(65)

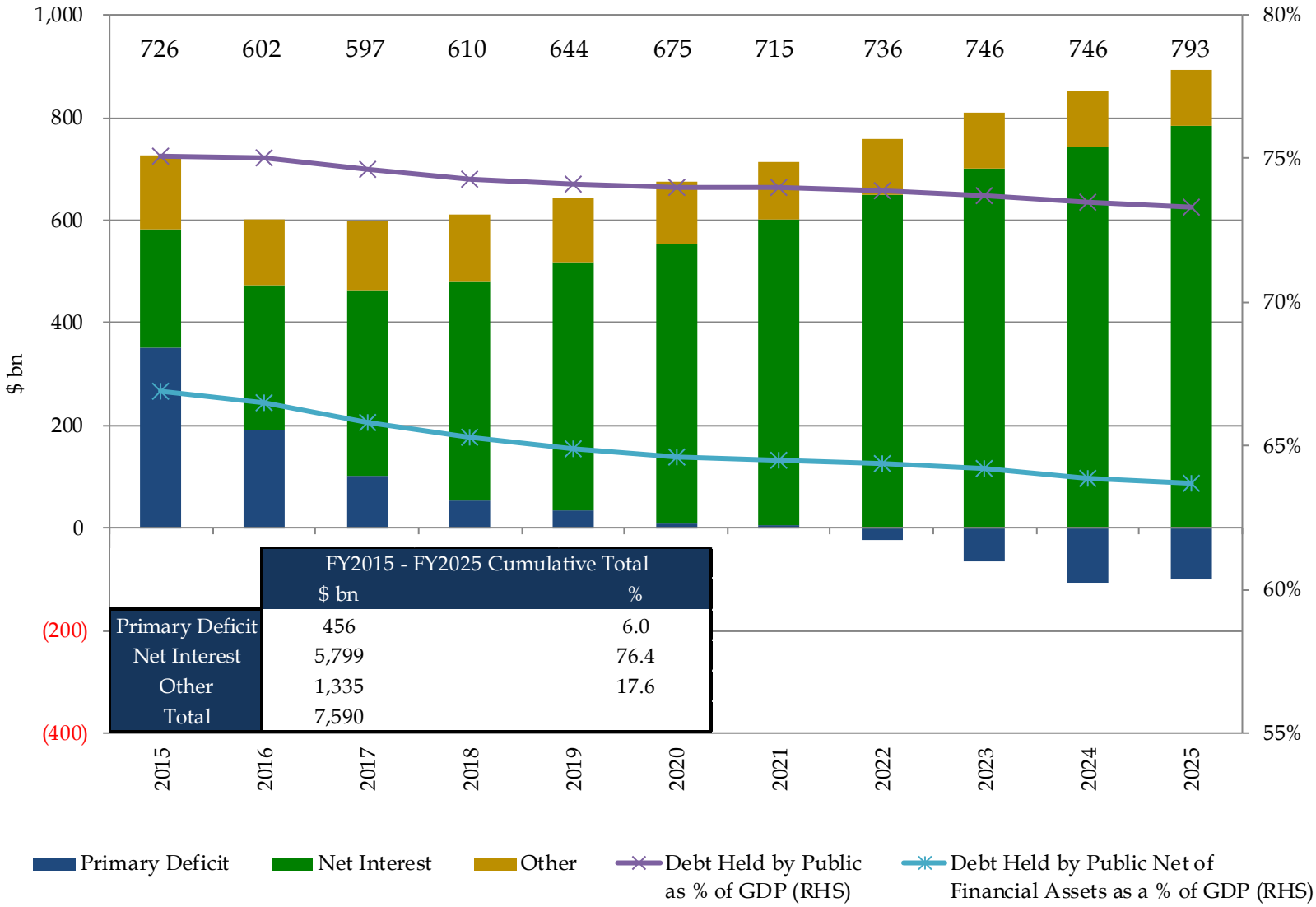
	April - June 2015 Bill Issuance			Fiscal Year-to-Date Bill Issuance		
Security	Gross	Maturing	Net	Gross	Maturing	Net
4-Week	416	438	(22)	1,365	1,382	(17)
13-Week	364	326	38	1,002	983	19
26-Week	325	351	(26)	1,002	959	43
52-Week	96	100	(4)	246	238	8
CMBs	0	0	0	0	0	0
Bill Subtotal	1,201	1,215	(14)	3,615	3,562	53

	April - June 2015 Coupon Issuance			Fiscal Year-to-Date Coupon Issuance		
Security	Gross	Maturing	Net	Gross	Maturing	Net
2-Year FRN	41	0	41	123	0	123
2-Year	78	105	(27)	240	315	(75)
3-Year	72	106	(34)	222	310	(88)
5-Year	105	123	(18)	315	381	(66)
7-Year	87	0	87	261	0	261
10-Year	66	34	32	198	94	104
30-Year	42	0	42	126	11	116
5-Year TIPS	18	23	(5)	34	23	11
10-Year TIPS	13	0	13	54	24	30
30-Year TIPS	7	0	7	23	0	23
Coupon Subtotal	529	391	138	1,596	1,157	439

Total	1,730	1,606	124	5,211	4,719	492

*Keeping announced issuance sizes and patterns constant for Nominal Coupons, TIPS, and FRNs as of 03/31/2015, while using an average of ~1.45 trillion of Bills outstanding consistent with Treasury's guidance of the FRN program replacing some Bills issuance.
**Assumes an end-of-June 2015 cash balance of $260 billion versus a beginning-of-April 2015 cash balance of $100 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

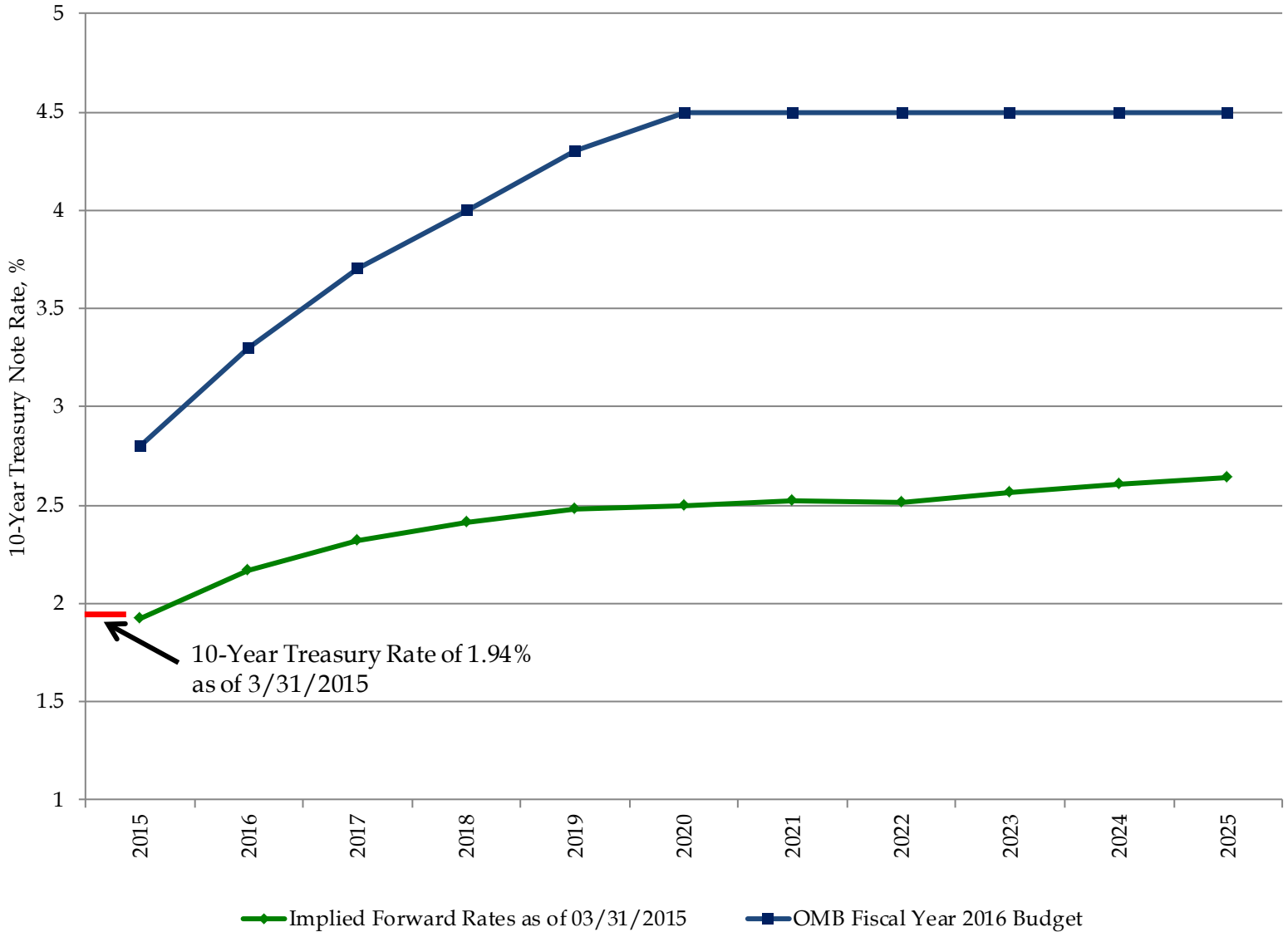
OMB's Projection of Borrowing from the Public



FY2015 - FY2025 Cumulative Total	$ bn	%
Primary Deficit	456	6.0
Net Interest	5,799	76.4
Other	1,335	17.6
Total	7,590	

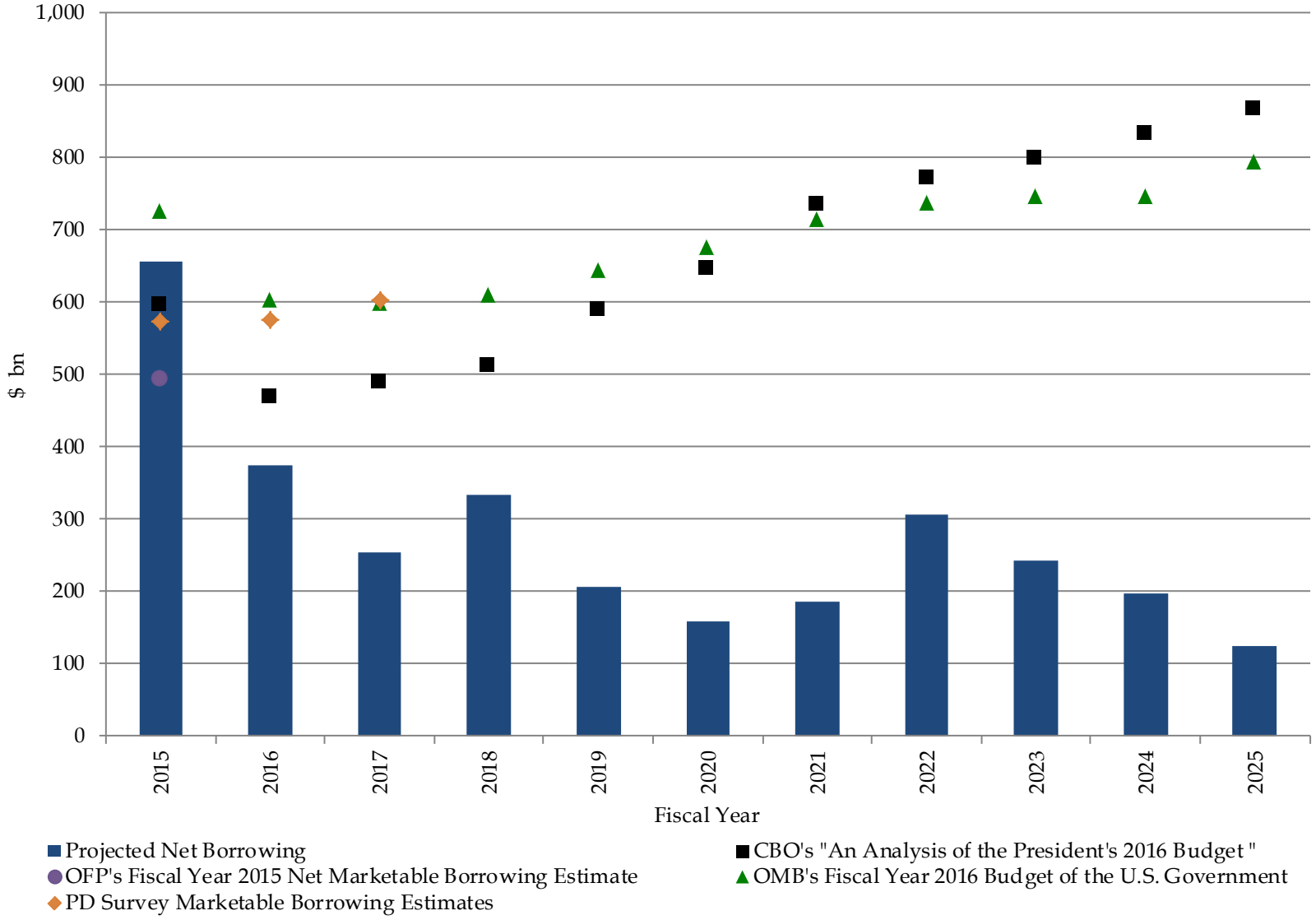
OMB's projections of net borrowing from the public are from Table S-13 of the "Fiscal Year 2016 Budget of the US Government." Data labels at the top represent the change in debt held by the public in $ billions. "Other" represents borrowing from the public to provide direct and guaranteed loans.

Interest Rate Assumptions: 10-Year Treasury Note



OMB's economic assumption of the 10-year Treasury Note rates are from Table S-12 of the "Fiscal Year 2016 Budget of the US Government." The forward rates are the implied 10-year Treasury Note rates on March 31st of that year.

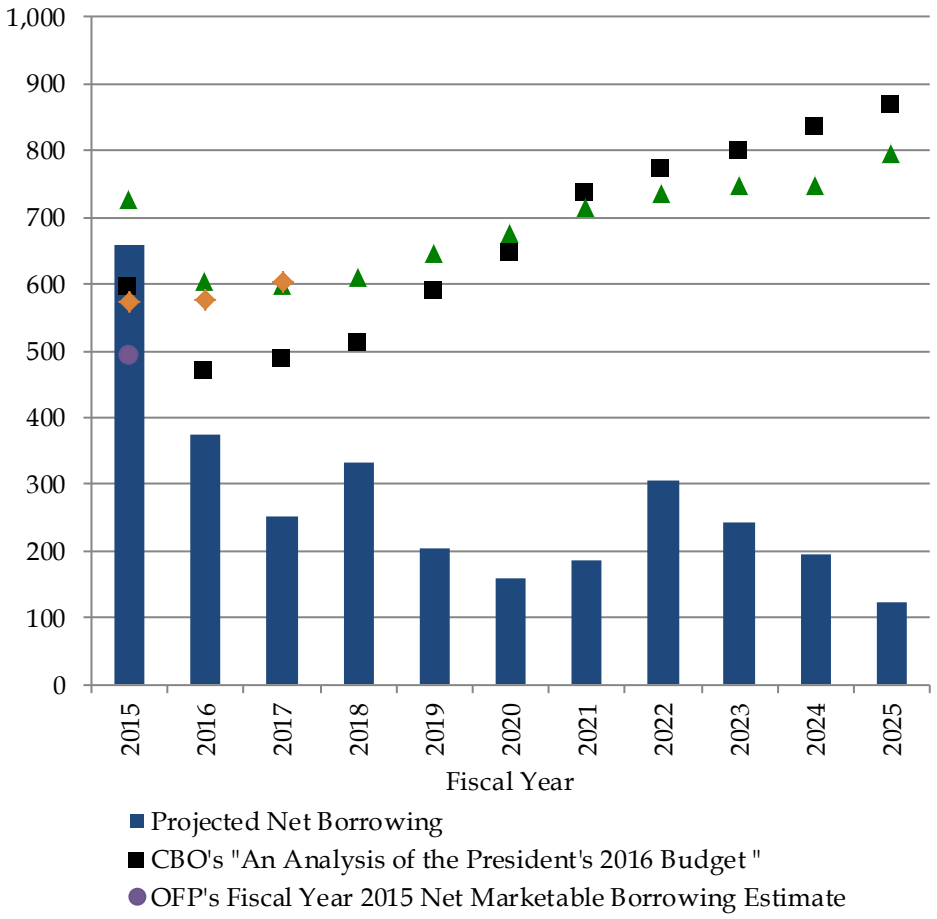
Projected Net Borrowing Assuming Constant Future Issuance



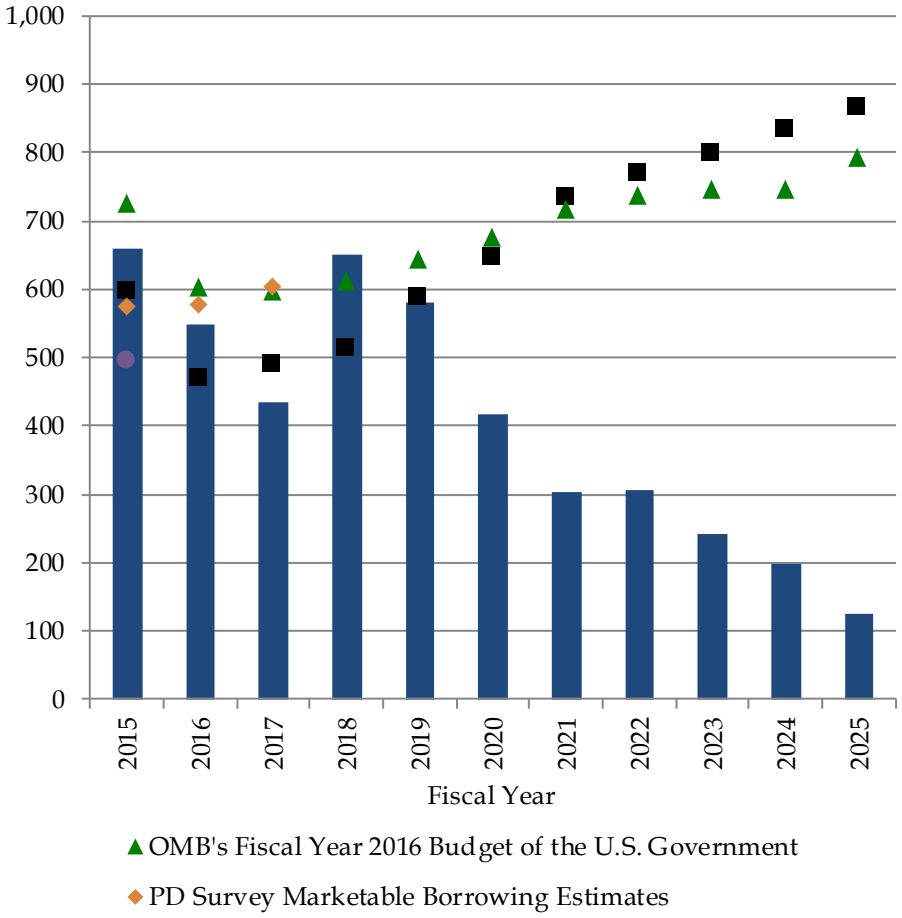
Treasury's primary dealer survey estimates can be found on page 9. OMB's estimates of borrowing from the public are from Table S-13 of the "Fiscal Year 2016 Budget of the US Government." CBO's estimates of the borrowing from the public are from Summary Table 3 of the "CBO: An Analysis of the President's 2016 Budget". See table at the end of this section for details.

Impact of SOMA Actions on Projected Net Borrowing Assuming Future Issuance Remains Constant

Without Fed Reinvestments ($ bn)



With Fed Reinvestments ($ bn)



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Historical Net Marketable Borrowing and Projected Net Borrowing Assuming Future Issuance Remains Constant, $ billions

Fiscal Year	Bills	2/3/5	7/10/30	TIPS	FRN	Historical/Projected Net Borrowing Capacity	OMB's FY 2016 Budget of the U.S. Government	CBO's "An Analysis of the President's 2016 Budget "	April 2015 Primary Dealer Survey
2010	(204)	869	783	35	0	1,483			
2011	(311)	576	751	88	0	1,104			
2012	139	148	738	90	0	1,115			
2013	(86)	86	720	111	0	830			
2014	(119)	(92)	669	88	123	669			
2015	49	(283)	639	88	164	657	726	595	574
2016	(6)	(173)	442	70	41	375	602	469	576
2017	0	(73)	256	71	(0)	253	597	488	603
2018	0	29	238	66	0	333	610	512	
2019	0	35	104	67	0	205	644	588	
2020	0	0	119	40	0	159	675	646	
2021	0	15	157	15	0	187	715	735	
2022	0	72	231	4	0	306	736	770	
2023	0	43	195	3	0	242	746	798	
2024	0	2	192	2	0	197	746	832	
2025	0	(34)	200	(42)	(0)	124	793	865	

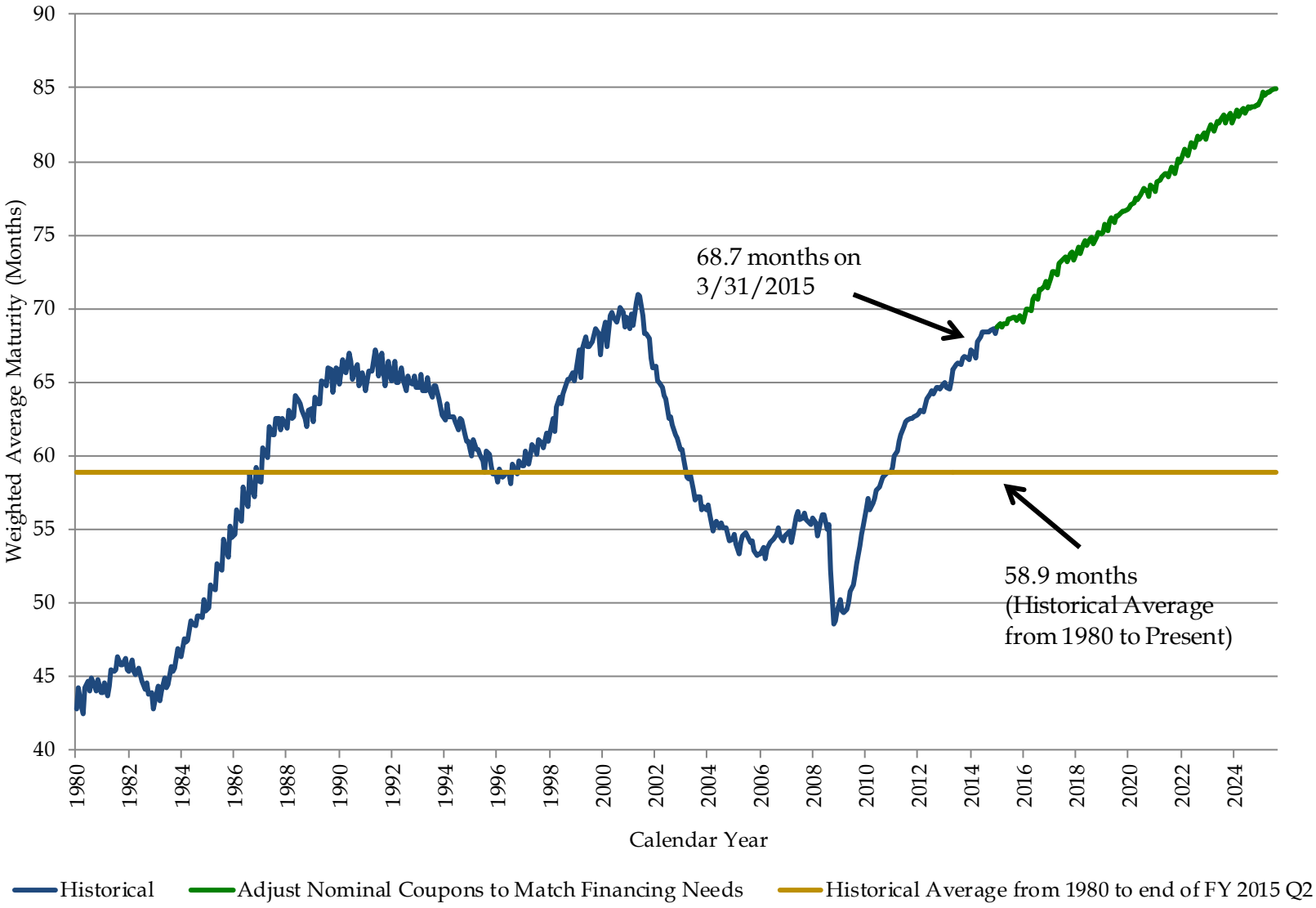
Treasury's primary dealer survey estimates can be found on page 9. OMB's estimates of borrowing from the public are from Table S-13 of the "Fiscal Year 2016 Budget of the US Government." CBO's estimates of the borrowing from the public are from Summary Table 3 of the "CBO: An Analysis of the President's 2016 Budget"

Section III:
Portfolio Metrics

Assumptions for Portfolio Metrics Section (pages 22 to 27) and Appendix

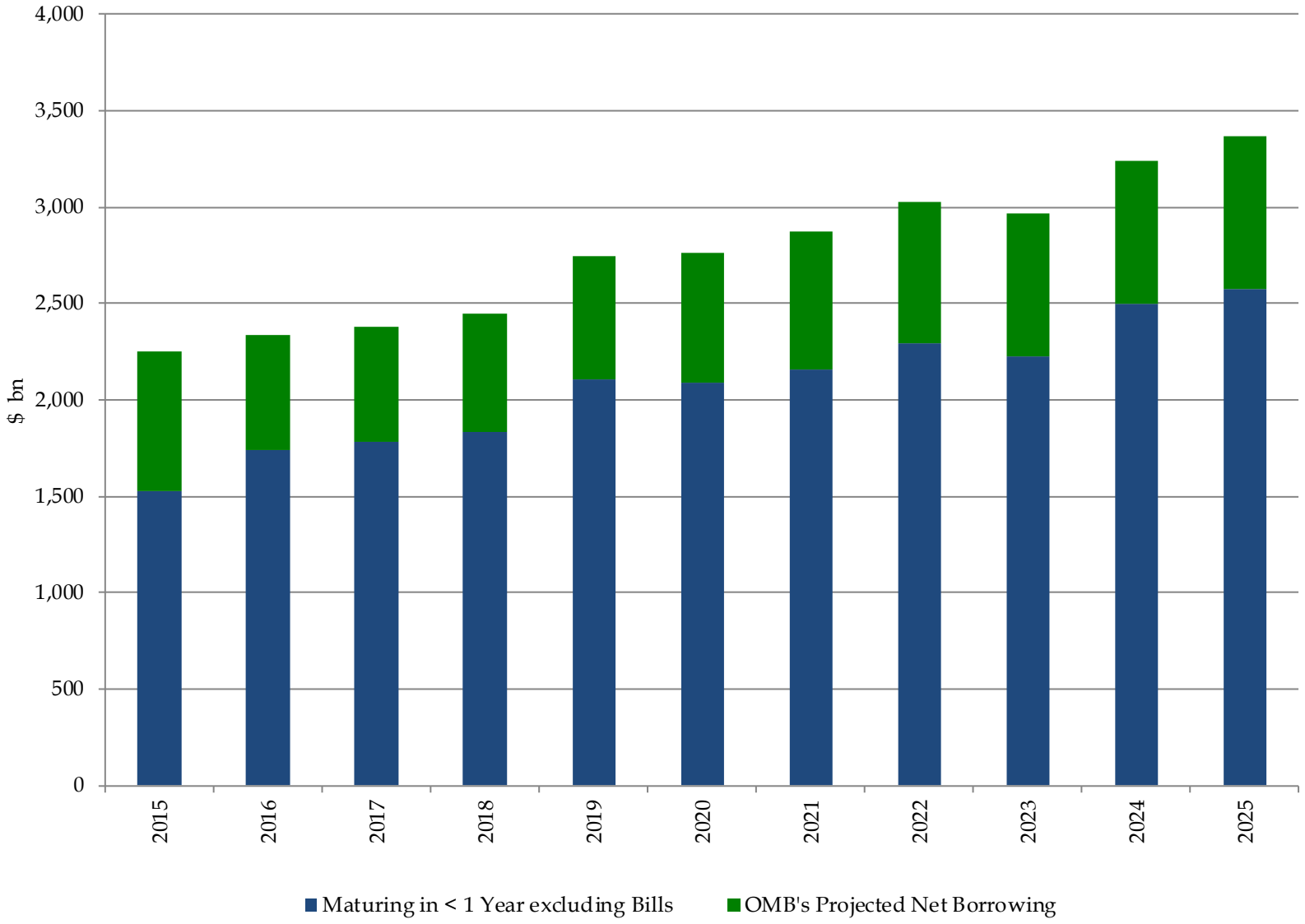
- Portfolio and SOMA holdings as of 3/31/2015.
- SOMA redemptions until and including June 2021. These assumptions are based on Chairman Bernanke's June 2013 press conference.
- To match OMB's projected borrowing from the public for the next 10 years, Nominal Coupon securities (2-, 3-, 5-, 7-, 10-, and 30-year) were adjusted by the same percentage.
- The principal on the TIPS securities was accreted to each projection date based on market ZCIS levels as of 3/31/2015.
- OMB's estimates of borrowing from the public are from Table S-13 of the "Fiscal Year 2016 Budget of the U.S. Government."

Weighted Average Maturity of Marketable Debt Outstanding



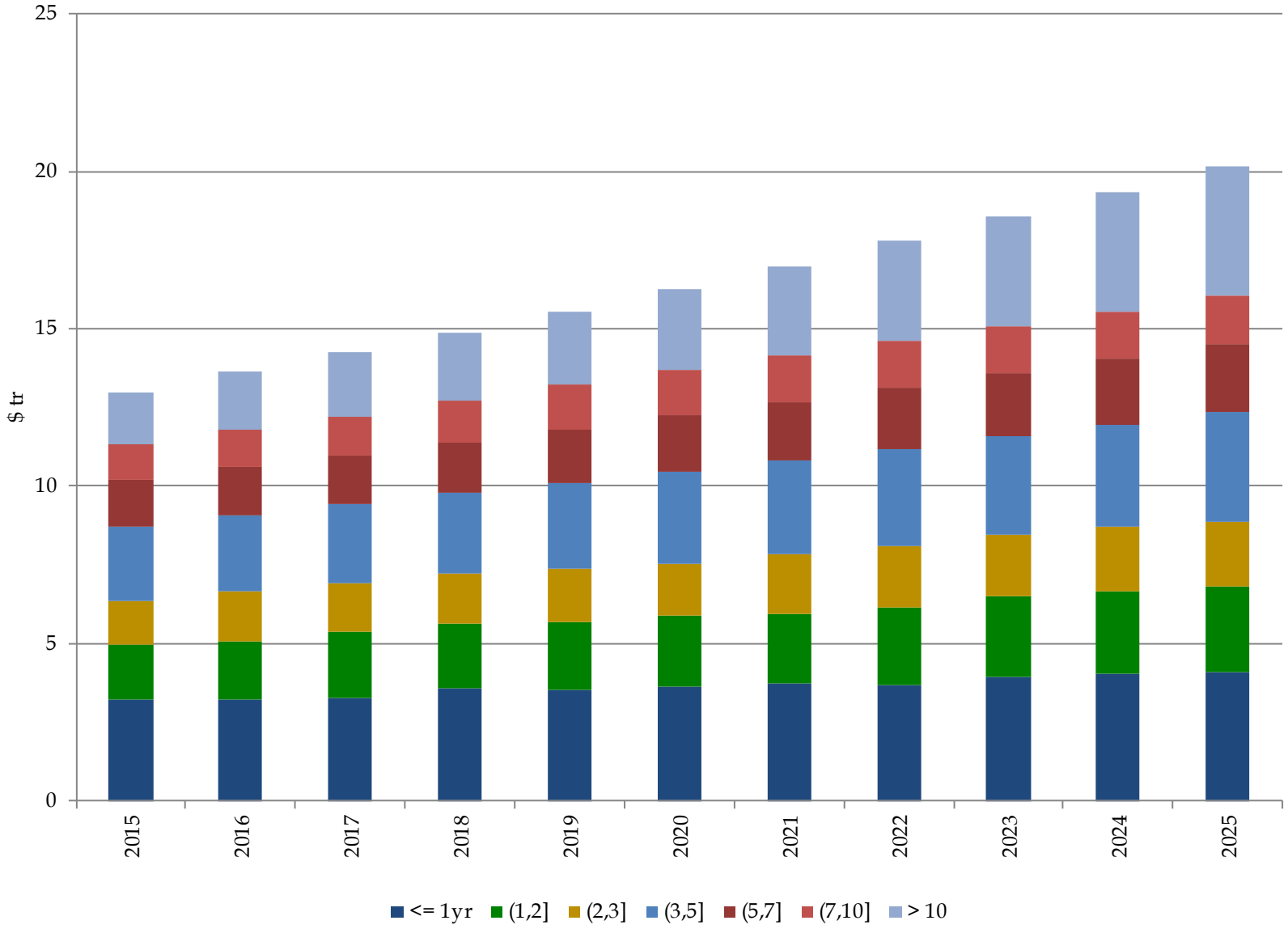
This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the basic trajectory of average maturity absent changes to the mix of securities issued by Treasury.

Projected Gross Borrowing excluding Bills for Fiscal Year



This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the basic trajectory of average maturity absent changes to the mix of securities issued by Treasury.

Projected Maturity Profile from end of Fiscal Year



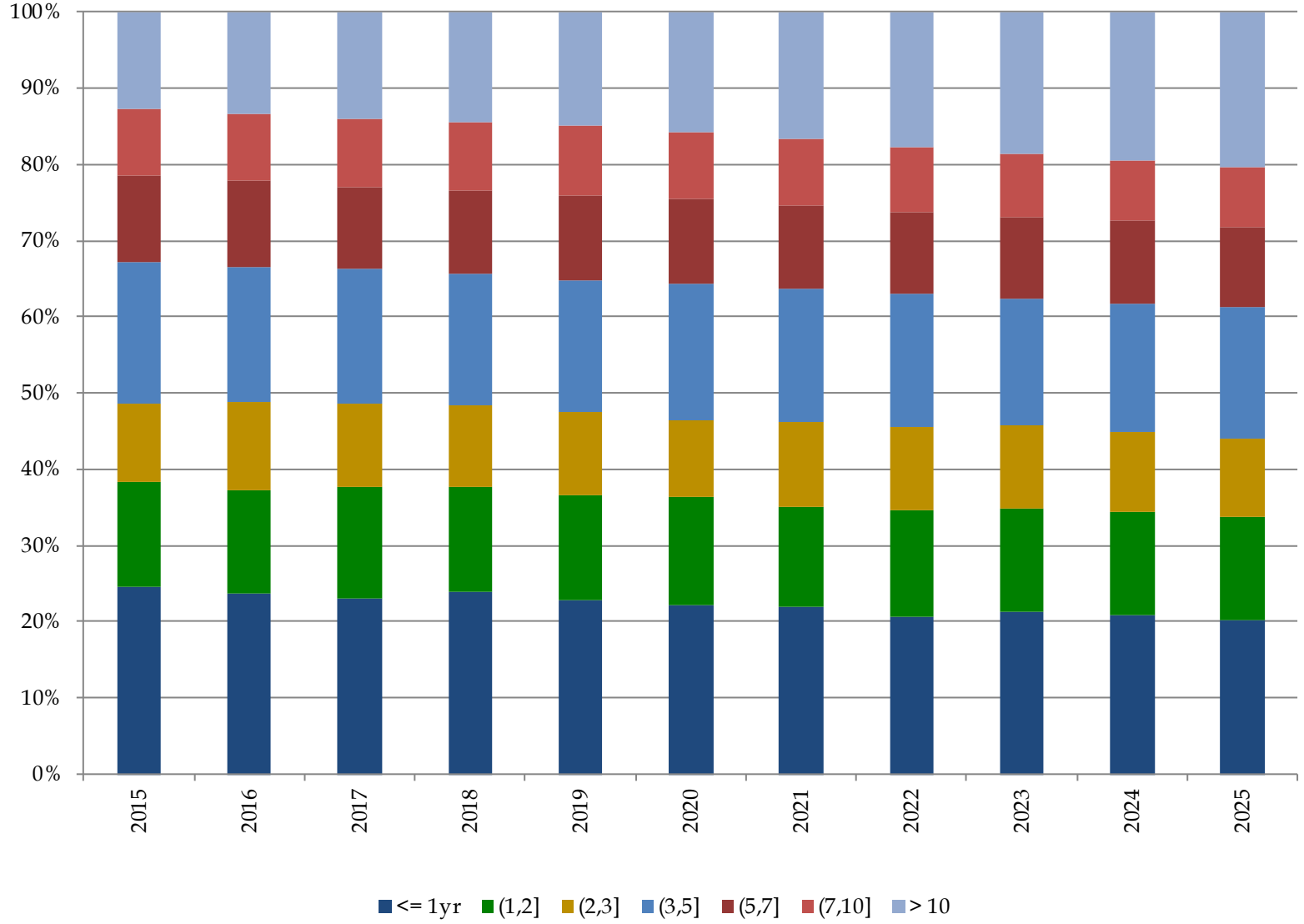
This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the basic trajectory of average maturity absent changes to the mix of securities issued by Treasury. See table on following page for details.

Recent and Projected Maturity Profile, $ billions

End of Fiscal Year	<= 1yr	(1,2]	(2,3]	(3,5]	(5,7]	(7,10]	> 10	Total	(0,5]
2007	1,606	639	341	545	267	480	557	4,434	3,130
2008	2,152	711	280	653	310	499	617	5,222	3,796
2009	2,702	774	663	962	559	643	695	6,998	5,101
2010	2,563	1,141	895	1,273	907	856	853	8,488	5,872
2011	2,620	1,334	980	1,541	1,070	1,053	1,017	9,616	6,476
2012	2,951	1,373	1,104	1,811	1,214	1,108	1,181	10,742	7,239
2013	2,939	1,523	1,242	1,965	1,454	1,136	1,331	11,590	7,669
2014	2,935	1,739	1,319	2,207	1,440	1,113	1,528	12,281	8,199
2015	3,197	1,783	1,345	2,394	1,488	1,126	1,656	12,991	8,720
2016	3,239	1,832	1,563	2,434	1,520	1,196	1,829	13,612	9,067
2017	3,288	2,072	1,552	2,514	1,519	1,273	2,014	14,232	9,426
2018	3,558	2,054	1,589	2,569	1,605	1,326	2,167	14,869	9,771
2019	3,544	2,155	1,697	2,681	1,724	1,403	2,335	15,540	10,078
2020	3,612	2,286	1,654	2,887	1,813	1,413	2,581	16,247	10,439
2021	3,743	2,219	1,890	2,973	1,861	1,465	2,845	16,996	10,826
2022	3,677	2,491	1,944	3,077	1,930	1,493	3,157	17,769	11,189
2023	3,948	2,533	1,995	3,108	1,983	1,512	3,474	18,553	11,584
2024	4,031	2,635	2,028	3,231	2,100	1,533	3,782	19,340	11,925
2025	4,094	2,703	2,066	3,496	2,133	1,557	4,126	20,174	12,358

This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the basic trajectory of average maturity absent changes to the mix of securities issued by Treasury. Portfolio composition by original issuance type and term can be found in the appendix (Page 43).

Projected Maturity Profile from end of Fiscal Year



This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the basic trajectory of average maturity absent changes to the mix of securities issued by Treasury. See table on following page for details.

Recent and Projected Maturity Profile, percent

End of Fiscal Year	<= 1yr	(1,2]	(2,3]	(3,5]	(5,7]	(7,10]	> 10	(0,3]	(0,5]
2007	36.2	14.4	7.7	12.3	6.0	10.8	12.6	58.3	70.6
2008	41.2	13.6	5.4	12.5	5.9	9.6	11.8	60.2	72.7
2009	38.6	11.1	9.5	13.7	8.0	9.2	9.9	59.1	72.9
2010	30.2	13.4	10.5	15.0	10.7	10.1	10.0	54.2	69.2
2011	27.2	13.9	10.2	16.0	11.1	10.9	10.6	51.3	67.3
2012	27.5	12.8	10.3	16.9	11.3	10.3	11.0	50.5	67.4
2013	25.4	13.1	10.7	17.0	12.5	9.8	11.5	49.2	66.2
2014	23.9	14.2	10.7	18.0	11.7	9.1	12.4	48.8	66.8
2015	24.6	13.7	10.4	18.4	11.5	8.7	12.8	48.7	67.1
2016	23.8	13.5	11.5	17.9	11.2	8.8	13.4	48.7	66.6
2017	23.1	14.6	10.9	17.7	10.7	8.9	14.1	48.6	66.2
2018	23.9	13.8	10.7	17.3	10.8	8.9	14.6	48.4	65.7
2019	22.8	13.9	10.9	17.3	11.1	9.0	15.0	47.6	64.8
2020	22.2	14.1	10.2	17.8	11.2	8.7	15.9	46.5	64.3
2021	22.0	13.1	11.1	17.5	10.9	8.6	16.7	46.2	63.7
2022	20.7	14.0	10.9	17.3	10.9	8.4	17.8	45.6	63.0
2023	21.3	13.7	10.8	16.7	10.7	8.2	18.7	45.7	62.4
2024	20.8	13.6	10.5	16.7	10.9	7.9	19.6	45.0	61.7
2025	20.3	13.4	10.2	17.3	10.6	7.7	20.4	43.9	61.3

This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the basic trajectory of average maturity absent changes to the mix of securities issued by Treasury. Portfolio composition by original issuance type and term can be found in the appendix (Page 43).

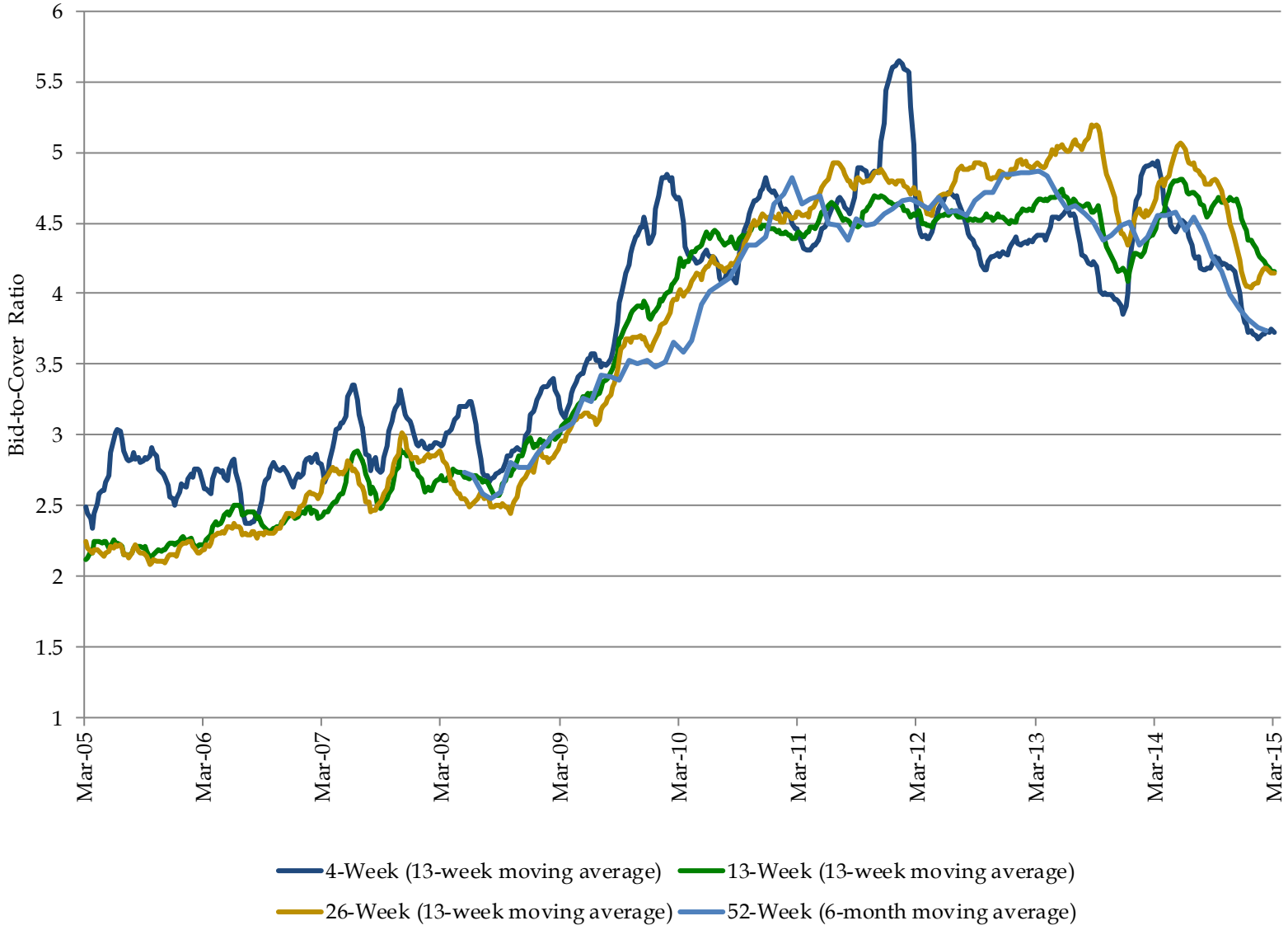
Section IV: Demand

Summary Statistics for Fiscal Year 2015 Q2 Auctions

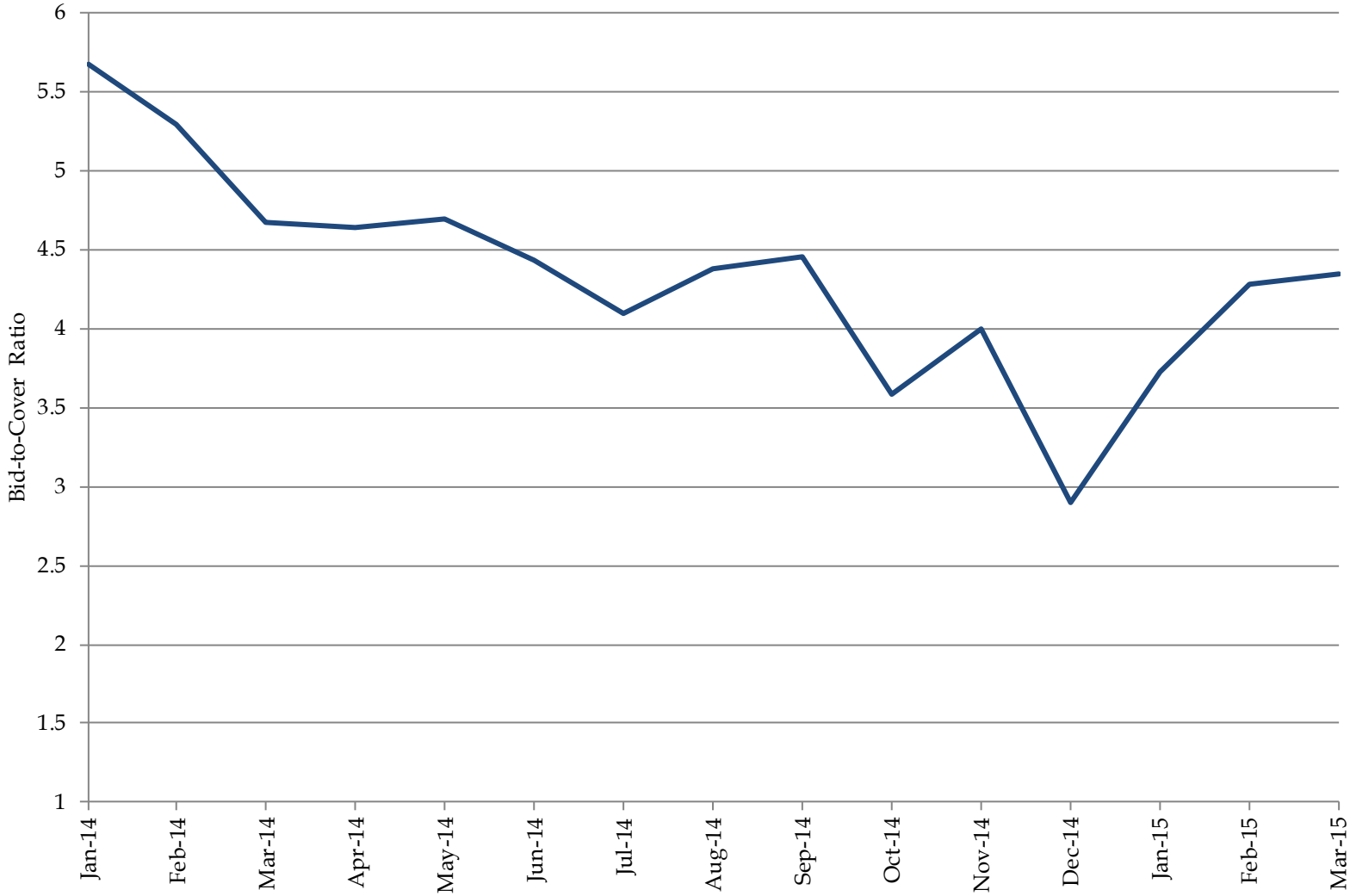
Security Type	Term	Stop Out Rate (%)*	Bid-to-Cover Ratio*	Competitive Awards ($bn)	% Primary Dealer*	% Direct*	% Indirect*	Non-Competitive Awards ($bn)	SOMA Add Ons ($bn)	10-Year Equivalent ($bn)**
Bill	4-Week	0.020	3.7	463.7	70.8	4.8	24.5	3.4	0.0	4.1
Bill	13-Week	0.023	4.1	316.9	70.7	7.9	21.3	5.0	0.0	9.2
Bill	26-Week	0.091	4.1	314.3	57.9	6.4	35.7	4.6	0.0	18.4
Bill	52-Week	0.244	3.8	99.1	51.6	4.0	44.5	0.6	0.0	11.2
Bill	CMBs	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Coupon	2-Year	0.580	3.5	77.2	39.0	13.4	47.5	0.5	0.0	17.4
Coupon	3-Year	1.026	3.3	71.6	41.3	10.0	48.7	0.2	0.0	24.1
Coupon	5-Year	1.385	2.5	104.8	33.1	7.2	59.6	0.1	0.0	56.9
Coupon	7-Year	1.739	2.4	87.0	34.5	12.6	53.0	0.0	0.0	64.4
Coupon	10-Year	2.022	2.6	65.9	33.0	10.8	56.2	0.1	0.0	66.8
Coupon	30-Year	2.557	2.3	42.0	36.3	13.7	50.0	0.0	0.0	98.6
TIPS	5-Year	0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TIPS	10-Year	0.262	2.4	27.9	24.6	6.0	69.4	0.1	0.0	30.9
TIPS	30-Year	0.842	2.4	9.0	27.0	4.0	69.0	0.0	0.0	26.7
FRN	2-Year	0.084	4.1	41.0	40.4	3.1	56.5	0.0	0.0	0.0
Total Bills		0.058	3.9	1194.1	65.8	6.0	28.3	13.6	0.0	42.9
Total Coupons		1.461	2.8	448.4	36.0	10.9	53.1	1.0	0.0	328.2
Total TIPS		0.403	2.4	36.9	25.2	5.5	69.3	0.1	0.0	57.6
Total FRNs		0.084	4.1	41.0	40.4	3.1	56.5	0.0	0.0	0.0

*Weighted averages of Competitive Awards.
**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.

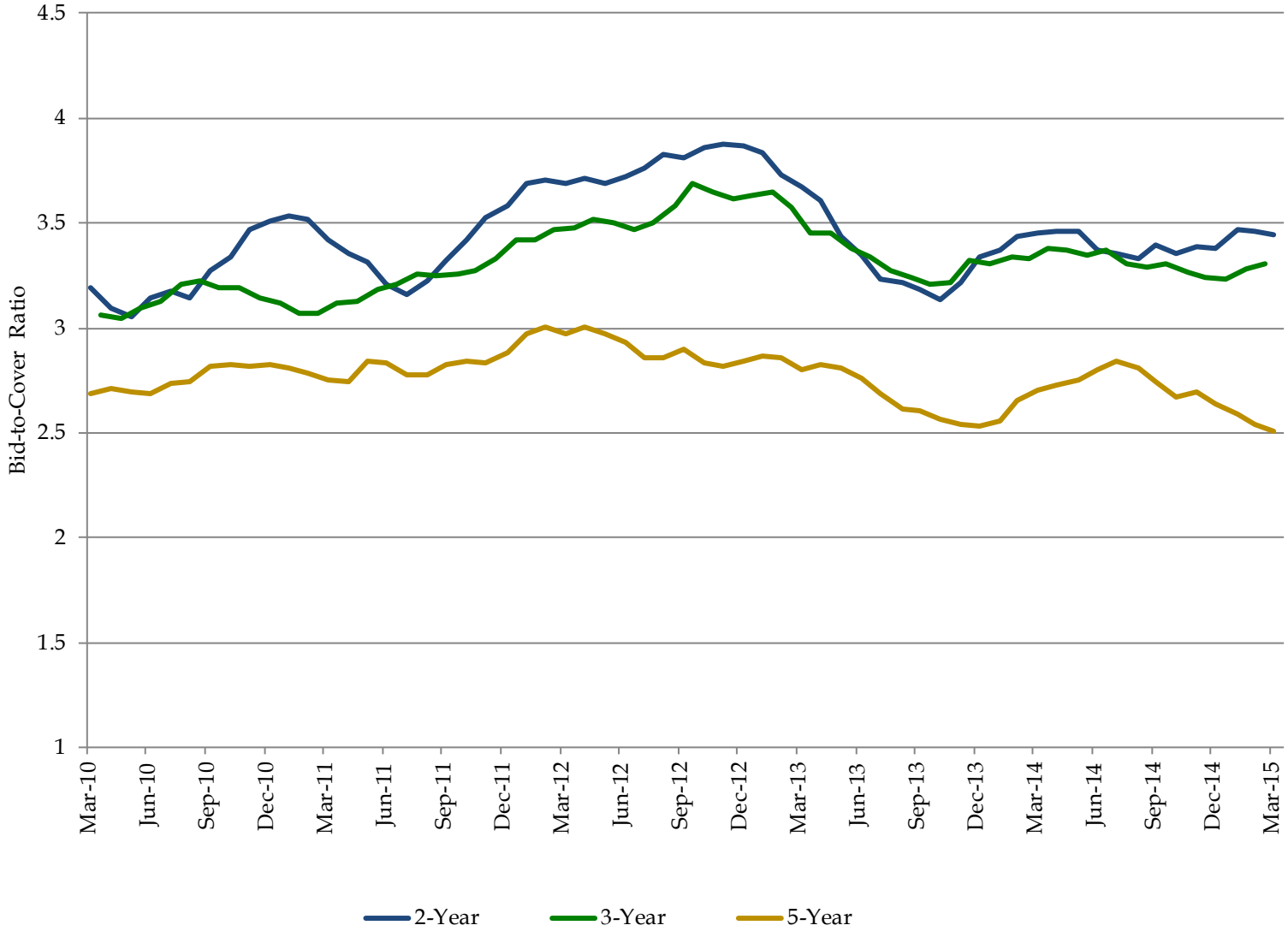
Bid-to-Cover Ratios for Treasury Bills



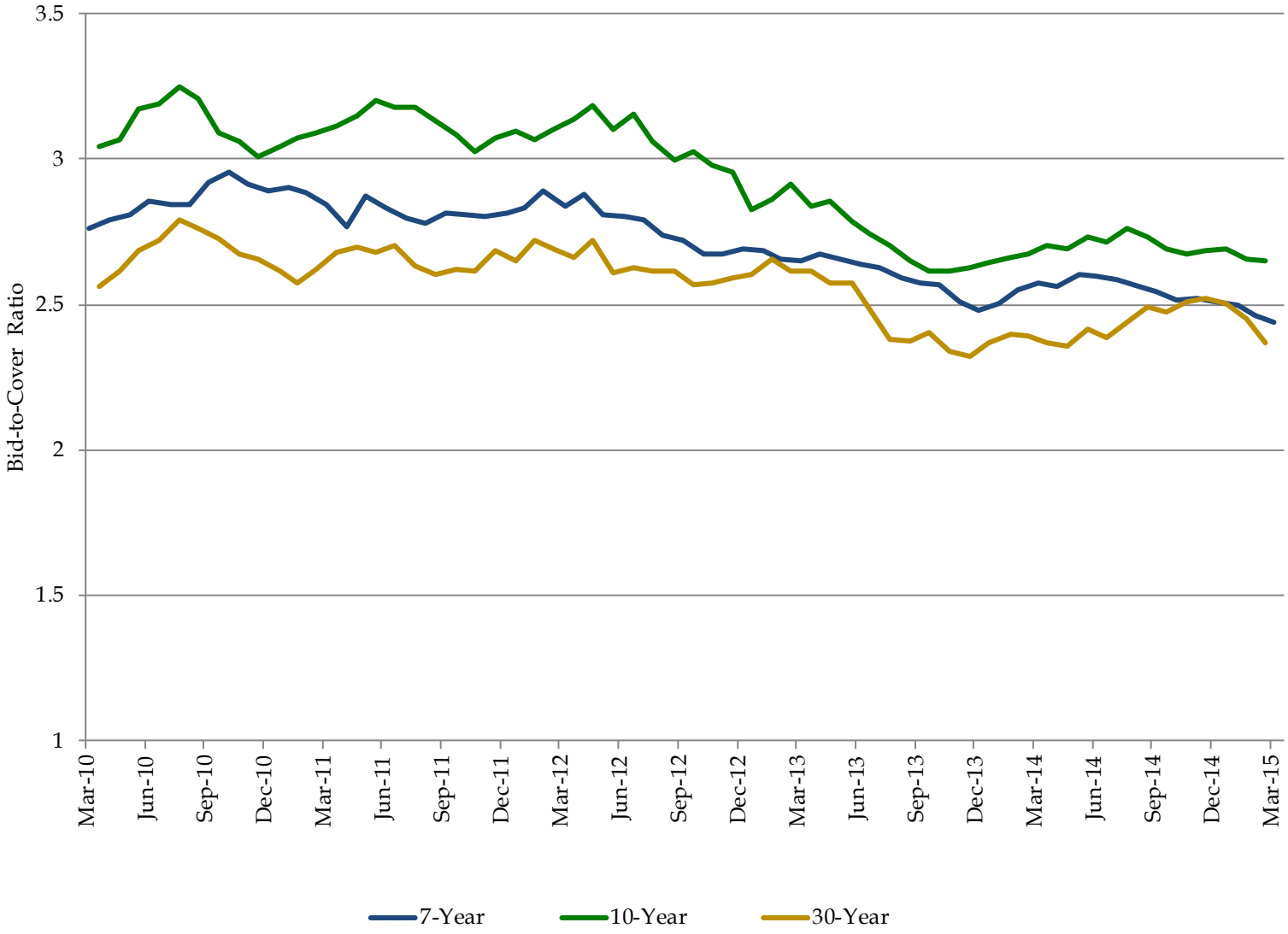
Bid-to-Cover Ratios for FRNs



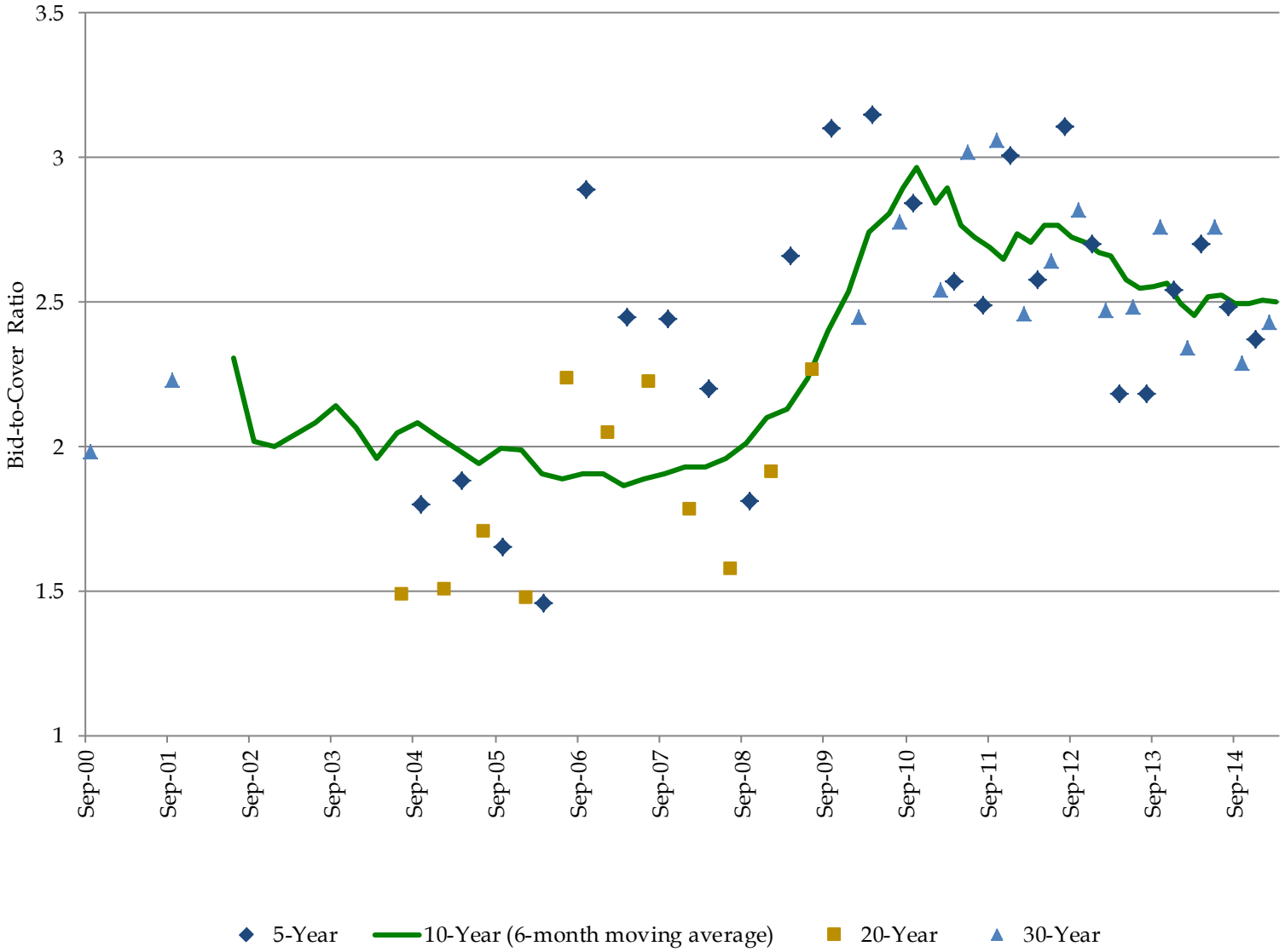
Bid-to-Cover Ratios for 2-, 3-, and 5-Year Nominal Securities (6-Month Moving Average)



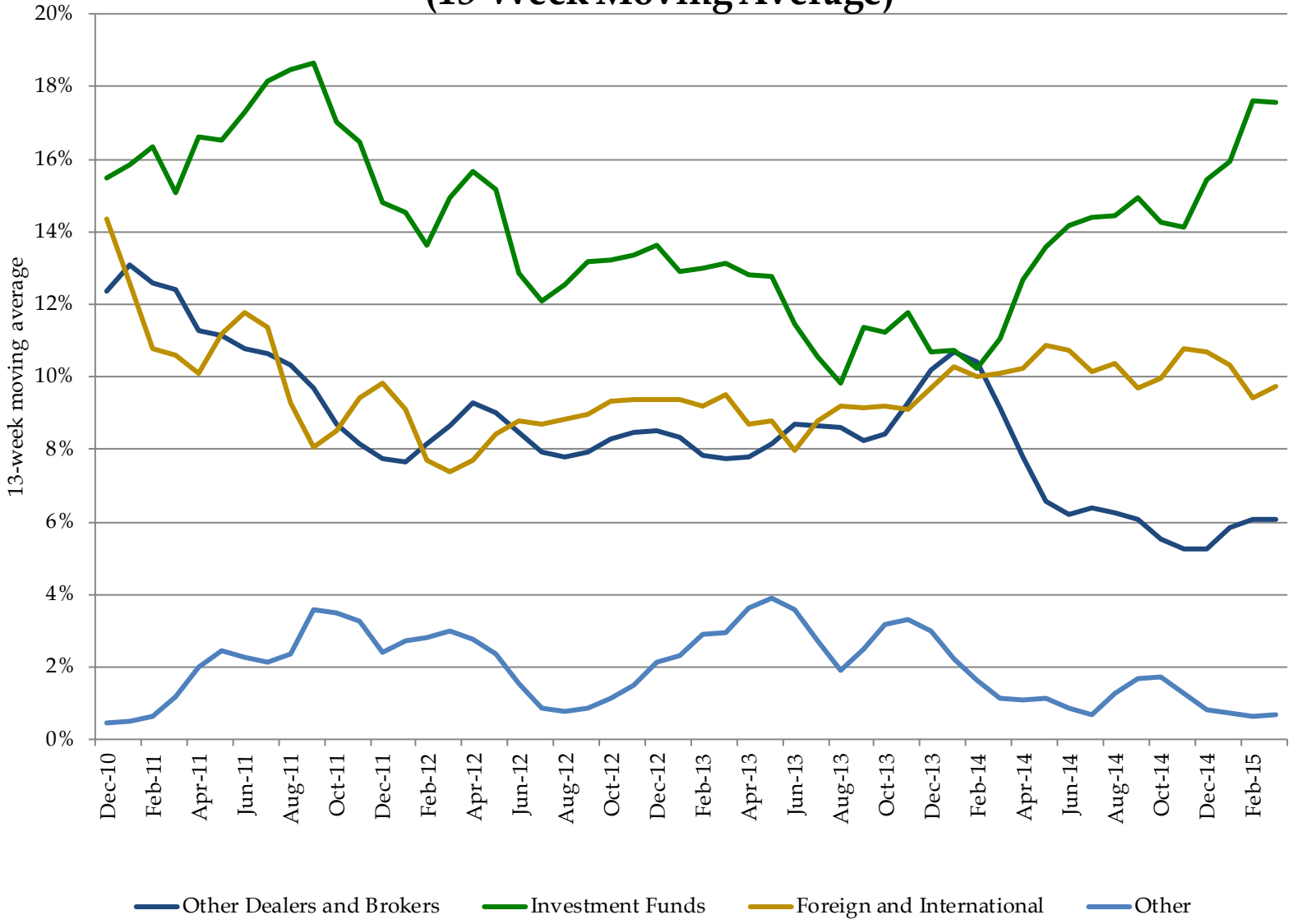
Bid-to-Cover Ratios for 7-, 10-, and 30-Year Nominal Securities (6-Month Moving Average)



Bid-to-Cover Ratios for TIPS

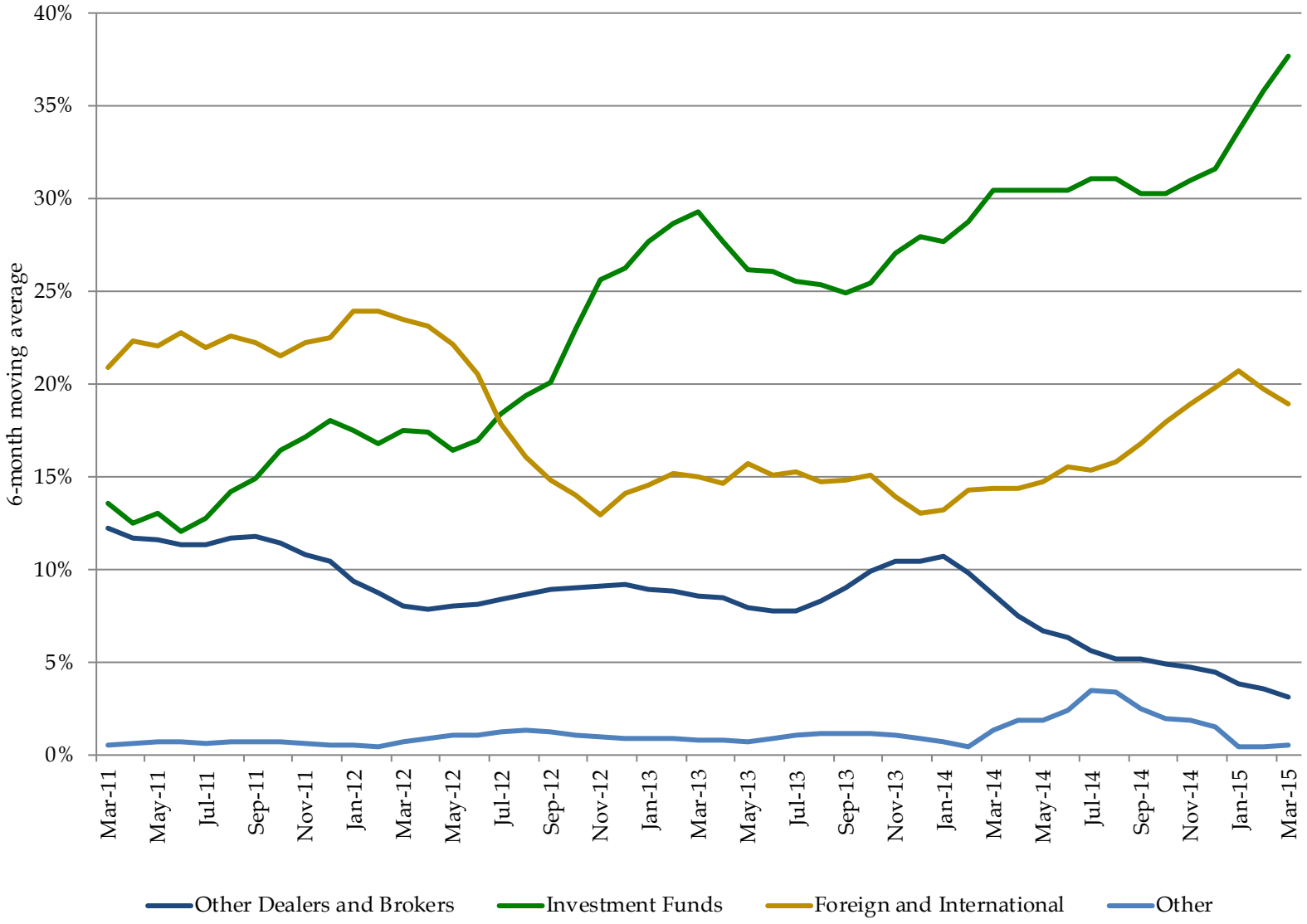


Percent Awarded in Bill Auctions by Investor Class (13-Week Moving Average)



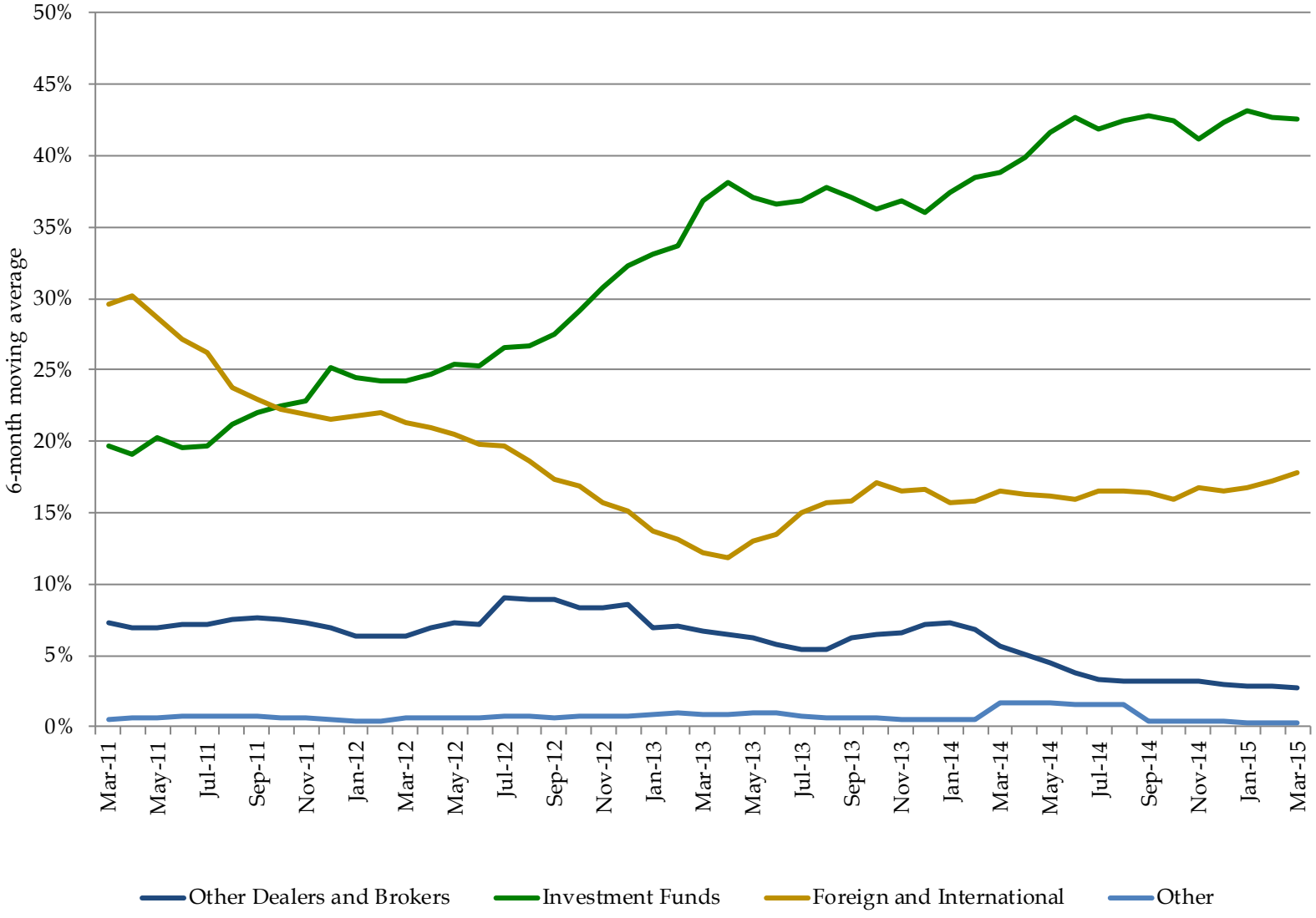
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance.

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



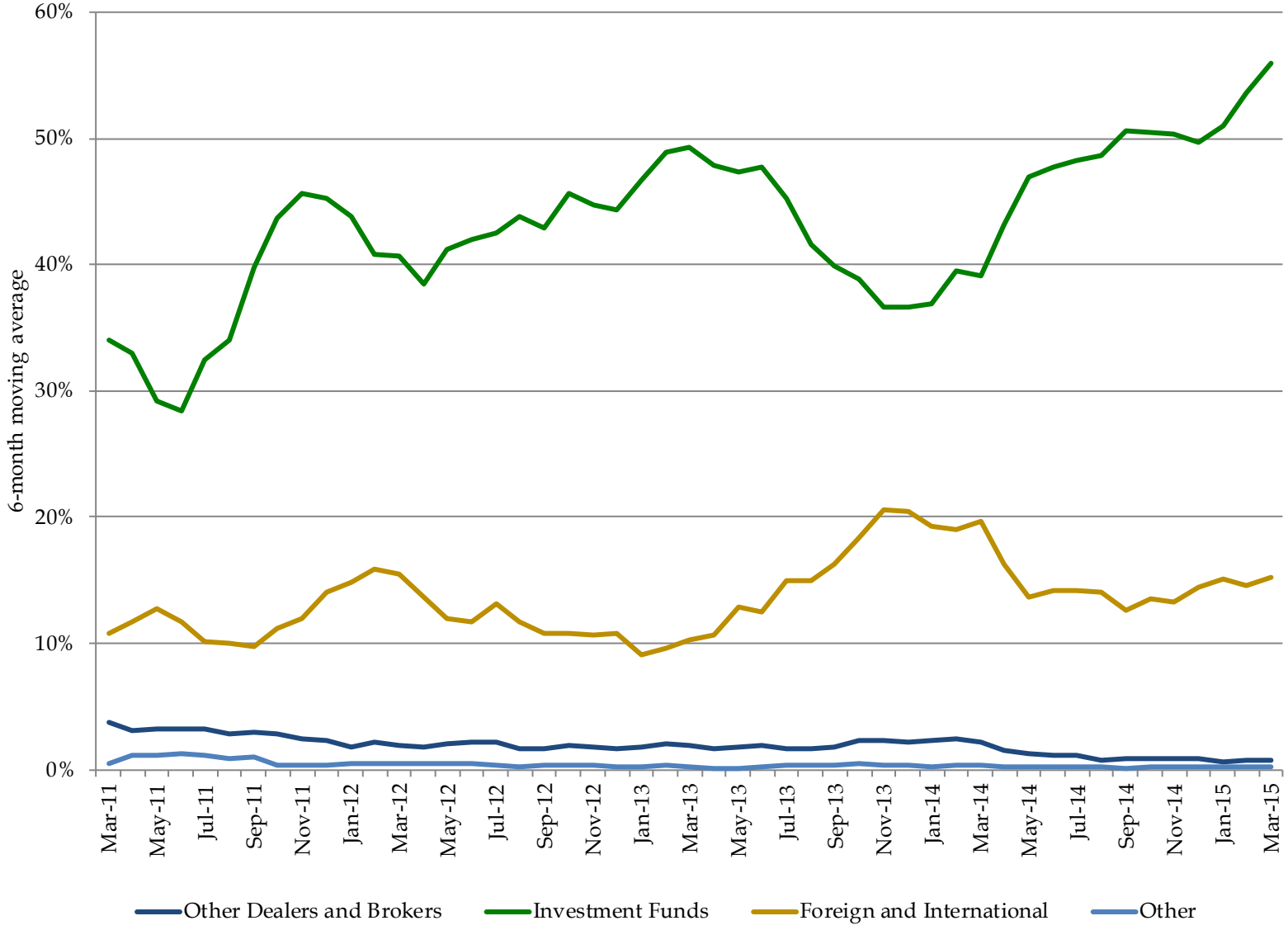
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance.

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



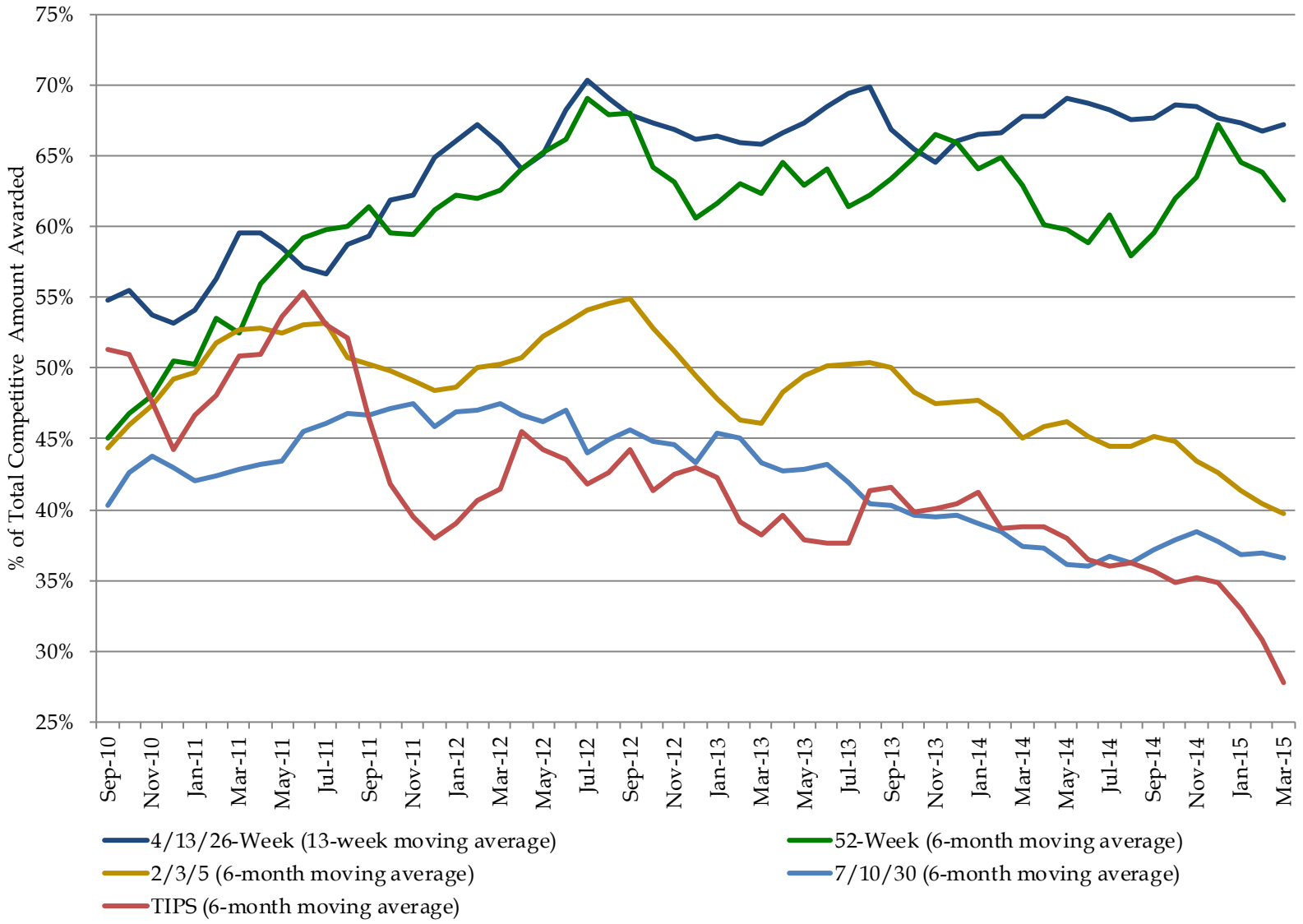
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance.

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



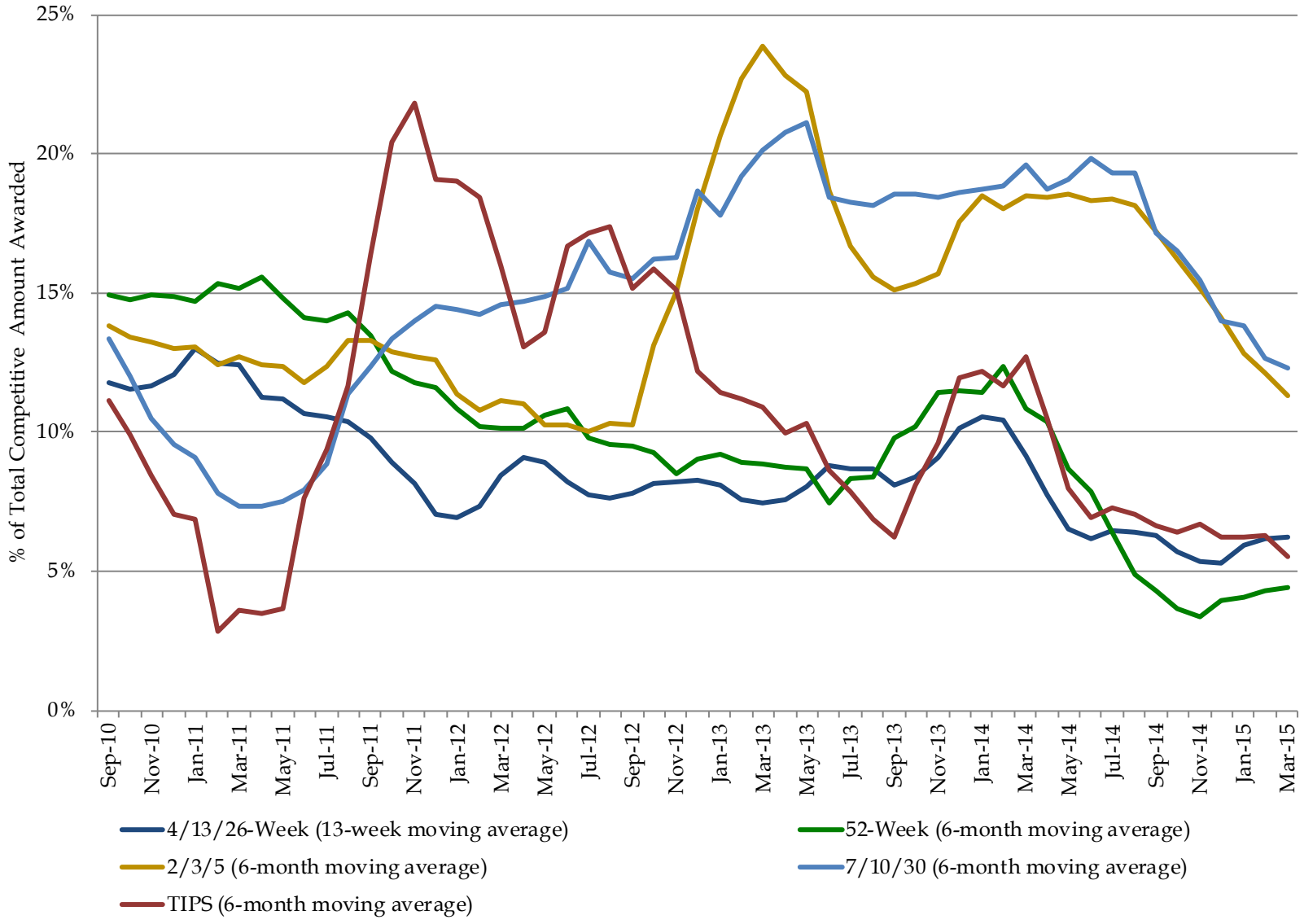
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance.

Primary Dealer Awards at Auction



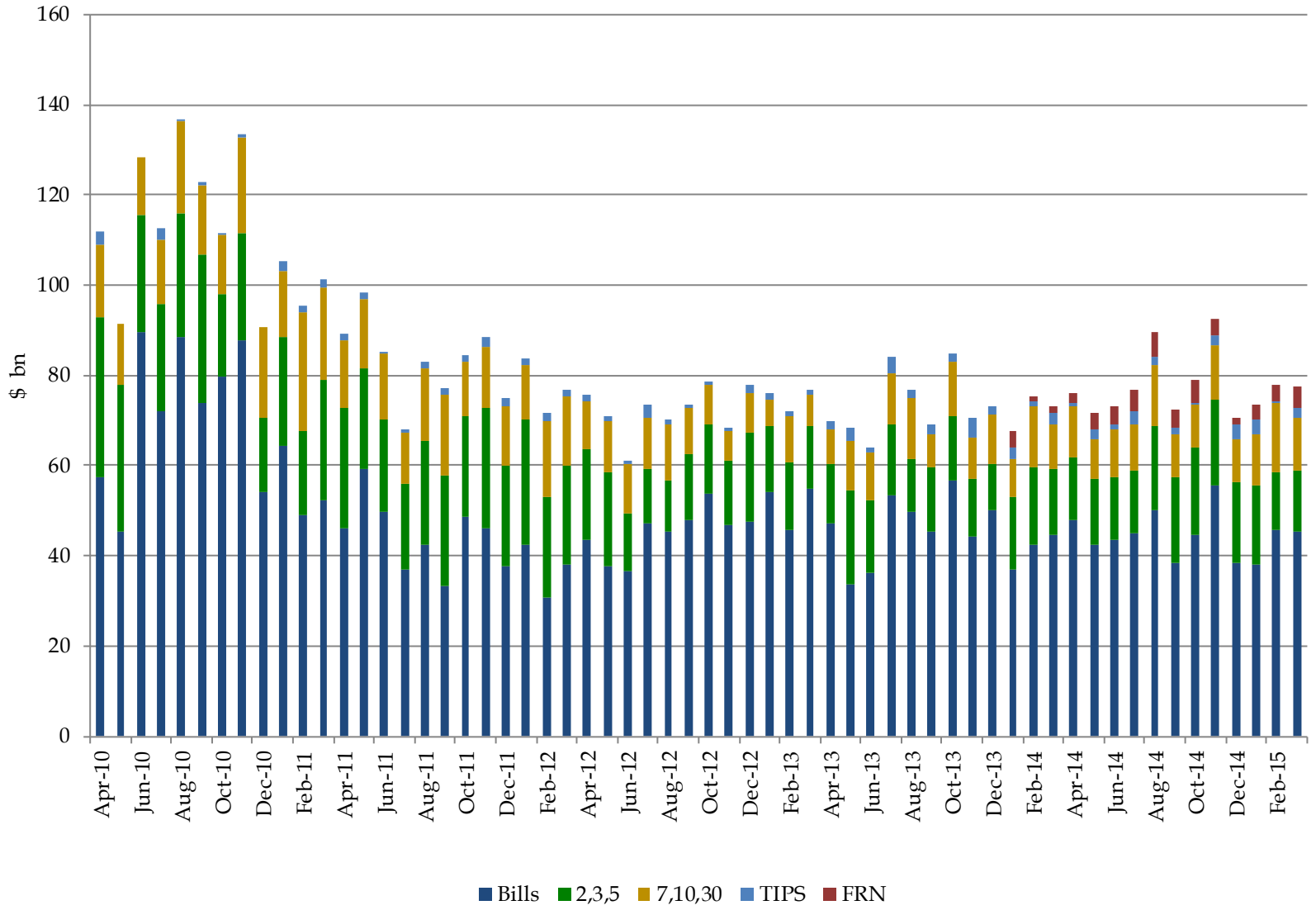
Excludes SOMA add-ons.

Direct Bidder Awards at Auction



Excludes SOMA add-ons.

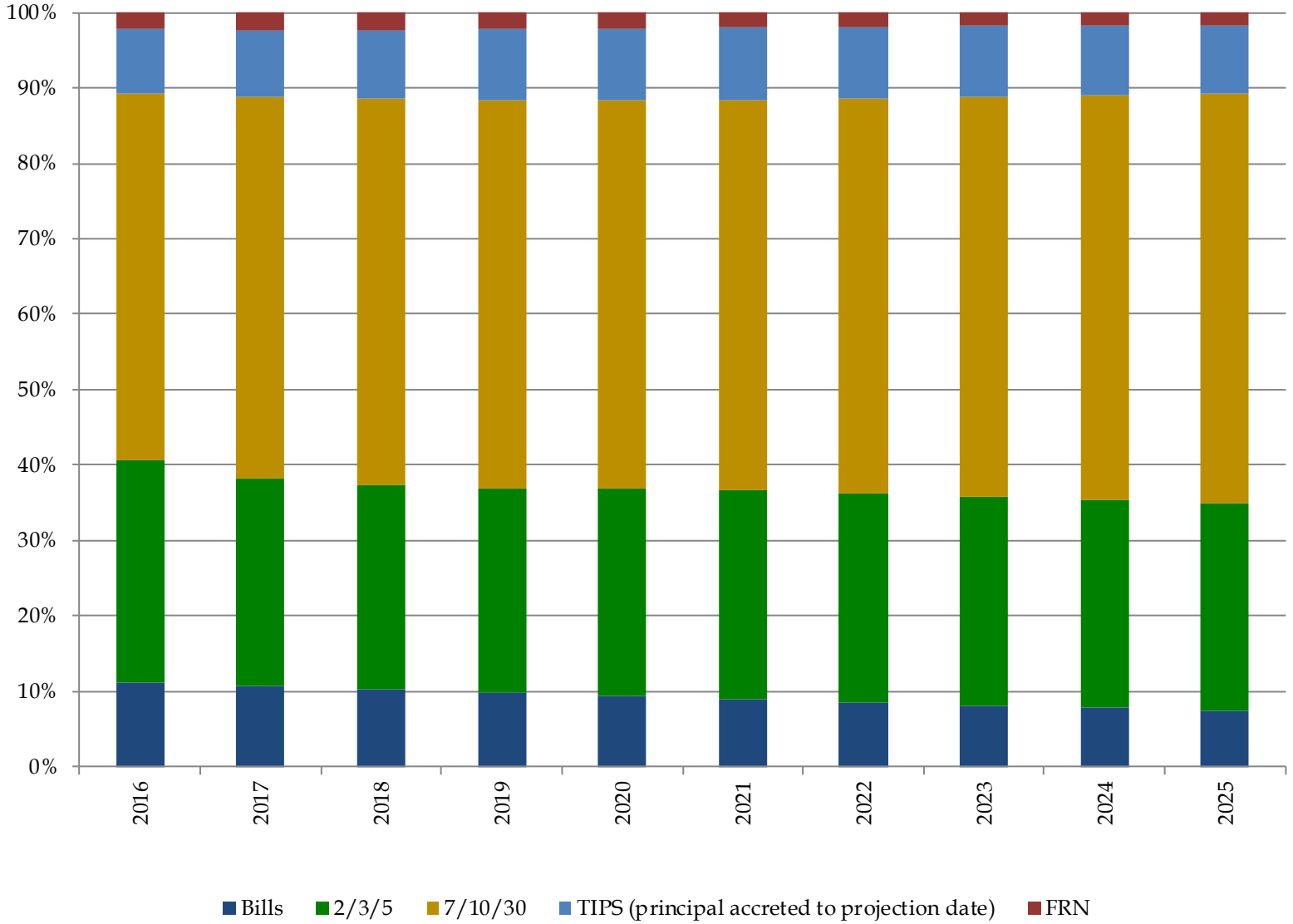
Total Foreign Awards of Treasuries at Auction, $ billions



Foreign includes both private sector and official institutions.

Appendix

Projected Portfolio Composition by Issuance Type, Percent



This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the basic trajectory of average maturity absent changes to the mix of securities issued by Treasury. See table on following page for details.

Recent and Projected Portfolio Composition by Issuance Type, Percent

End of Fiscal Year	Bills	2-, 3-, 5-Year Nominal Coupons	7-, 10-, 30-Year Nominal Coupons	Total Nominal Coupons	TIPS (principal accreted to projection date)	FRN
2007	21.6	38.9	29.2	68.1	10.3	0.0
2008	28.5	34.5	26.9	61.4	10.0	0.0
2009	28.5	36.2	27.4	63.6	7.9	0.0
2010	21.1	40.1	31.8	71.9	7.0	0.0
2011	15.4	41.4	35.9	77.3	7.3	0.0
2012	15.0	38.4	39.0	77.4	7.5	0.0
2013	13.2	35.8	43.0	78.7	8.1	0.0
2014	11.5	33.0	46.0	79.0	8.5	1.0
2015	11.2	29.3	48.6	78.0	8.6	2.2
2016	10.7	27.6	50.4	78.0	8.9	2.4
2017	10.2	27.2	51.1	78.3	9.1	2.3
2018	9.8	27.1	51.5	78.6	9.4	2.2
2019	9.4	27.5	51.5	79.0	9.6	2.1
2020	8.9	27.7	51.8	79.4	9.6	2.0
2021	8.6	27.8	52.3	80.1	9.5	1.9
2022	8.2	27.6	53.0	80.7	9.3	1.8
2023	7.8	27.6	53.7	81.3	9.1	1.8
2024	7.5	27.5	54.4	81.8	9.0	1.7
2025	7.2	27.3	55.3	82.6	8.6	1.6

This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the basic trajectory of average maturity absent changes to the mix of securities issued by Treasury.

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	1/8/2015	0.010	3.77	29.74	82.54	3.70	13.76	0.26	0.00	0.26
4-Week	1/15/2015	0.015	3.84	29.74	77.36	5.49	17.15	0.26	0.00	0.26
4-Week	1/22/2015	0.005	3.74	29.73	77.38	1.83	20.79	0.27	0.00	0.26
4-Week	1/29/2015	0.020	3.78	28.80	76.58	4.42	19.00	0.21	0.00	0.27
4-Week	2/5/2015	0.020	3.79	39.60	70.47	4.83	24.70	0.30	0.00	0.35
4-Week	2/12/2015	0.015	3.95	39.74	70.26	6.38	23.36	0.26	0.00	0.36
4-Week	2/19/2015	0.010	3.75	39.75	68.46	4.87	26.67	0.25	0.00	0.34
4-Week	2/26/2015	0.015	3.68	38.79	59.36	5.39	35.25	0.25	0.00	0.34
4-Week	3/5/2015	0.005	4.05	29.71	65.48	7.03	27.48	0.30	0.00	0.25
4-Week	3/12/2015	0.015	3.43	39.71	78.52	6.06	15.42	0.29	0.00	0.34
4-Week	3/19/2015	0.050	3.57	39.76	76.05	3.05	20.89	0.24	0.00	0.34
4-Week	3/26/2015	0.020	3.45	38.94	65.81	4.02	30.17	0.23	0.00	0.34
4-Week	4/2/2015	0.050	3.39	39.74	57.86	4.42	37.73	0.26	0.00	0.34
13-Week	1/8/2015	0.030	4.15	23.63	79.47	6.89	13.64	0.37	0.00	0.69
13-Week	1/15/2015	0.025	4.25	23.33	67.53	9.63	22.84	0.47	0.00	0.69
13-Week	1/22/2015	0.025	4.31	23.63	74.07	12.45	13.48	0.37	0.00	0.69
13-Week	1/29/2015	0.020	4.46	22.62	65.90	11.64	22.46	0.38	0.00	0.69
13-Week	2/5/2015	0.015	4.13	25.45	74.41	6.88	18.71	0.35	0.00	0.75
13-Week	2/12/2015	0.020	4.44	25.50	59.53	1.10	39.37	0.40	0.00	0.75
13-Week	2/19/2015	0.015	4.13	25.51	77.96	8.55	13.49	0.39	0.00	0.73
13-Week	2/26/2015	0.020	4.21	24.70	70.78	5.82	23.39	0.35	0.00	0.73
13-Week	3/5/2015	0.015	4.3	25.45	64.53	7.86	27.60	0.35	0.00	0.72
13-Week	3/12/2015	0.015	4.18	25.63	74.15	6.91	18.94	0.37	0.00	0.72
13-Week	3/19/2015	0.040	3.69	25.53	70.89	7.41	21.69	0.37	0.00	0.72
13-Week	3/26/2015	0.020	3.78	22.71	71.96	13.58	14.45	0.39	0.00	0.66
13-Week	4/2/2015	0.035	3.9	23.26	67.92	5.79	26.28	0.39	0.00	0.67
26-Week	1/8/2015	0.110	4.57	23.25	57.76	5.61	36.63	0.35	0.00	1.37
26-Week	1/15/2015	0.085	4.22	23.47	46.57	7.34	46.09	0.36	0.00	1.37
26-Week	1/22/2015	0.075	4.18	23.26	59.28	8.08	32.64	0.46	0.00	1.37
26-Week	1/29/2015	0.075	4.26	22.75	61.31	12.27	26.42	0.37	0.00	1.38
26-Week	2/5/2015	0.065	4.2	25.02	58.21	9.28	32.50	0.36	0.00	1.49
26-Week	2/12/2015	0.085	4.43	25.03	47.71	4.96	47.33	0.40	0.00	1.50
26-Week	2/19/2015	0.065	4.39	25.13	51.79	5.52	42.70	0.42	0.00	1.45
26-Week	2/26/2015	0.065	4.22	24.71	56.74	6.26	37.00	0.32	0.00	1.45
26-Week	3/5/2015	0.075	4.16	25.33	61.79	2.59	35.62	0.29	0.00	1.43
26-Week	3/12/2015	0.095	3.96	25.29	61.35	5.69	32.95	0.34	0.00	1.44
26-Week	3/19/2015	0.145	3.59	25.42	67.23	4.29	28.48	0.30	0.00	1.44
26-Week	3/26/2015	0.105	3.72	22.82	56.66	6.04	37.30	0.36	0.00	1.33
26-Week	4/2/2015	0.135	3.66	22.80	66.82	5.32	27.85	0.30	0.00	1.34
52-Week	1/8/2015	0.250	3.84	24.80	52.02	3.89	44.09	0.12	0.00	2.83
52-Week	2/5/2015	0.205	3.81	24.74	56.26	4.58	39.17	0.18	0.00	2.85
52-Week	3/5/2015	0.260	3.91	24.77	47.98	3.08	48.94	0.16	0.00	2.77
52-Week	4/2/2015	0.260	3.71	24.83	49.95	4.42	45.63	0.17	0.00	2.79

*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 FRN	2/2/2015	0.084	3.72	14.99	46.00	6.94	47.06	0.01	0.00	0.00
2-Year FRN	2/27/2015	0.084	4.28	12.99	49.87	1.92	48.21	0.01	0.00	0.00
2-Year FRN	3/27/2015	0.085	4.34	12.99	24.48	0.00	75.52	0.01	0.00	0.00
2-Year	2/2/2015	0.540	3.74	25.73	42.60	8.75	48.65	0.17	0.00	5.88
2-Year	3/2/2015	0.603	3.45	25.73	38.52	13.27	48.21	0.17	0.00	5.72
2-Year	3/31/2015	0.598	3.46	25.74	35.99	18.31	45.70	0.16	0.00	5.79
3-Year	1/15/2015	0.926	3.33	23.95	39.38	14.84	45.78	0.05	0.00	8.07
3-Year	2/17/2015	1.050	3.34	23.84	43.94	7.16	48.90	0.06	0.00	8.12
3-Year	3/16/2015	1.104	3.33	23.81	40.53	8.04	51.42	0.09	0.00	7.90
5-Year	2/2/2015	1.288	2.49	34.96	27.45	9.49	63.07	0.04	0.00	19.30
5-Year	3/2/2015	1.480	2.54	34.94	32.43	7.49	60.08	0.06	0.00	18.70
5-Year	3/31/2015	1.387	2.35	34.86	39.59	4.72	55.69	0.04	0.00	18.90
7-Year	2/2/2015	1.590	2.5	28.98	29.04	14.89	56.07	0.01	0.00	21.90
7-Year	3/2/2015	1.834	2.37	28.99	37.15	10.54	52.32	0.01	0.00	21.14
7-Year	3/31/2015	1.792	2.32	28.99	37.19	12.30	50.51	0.01	0.00	21.35
10-Year	1/15/2015	1.930	2.61	20.99	40.79	9.19	50.02	0.01	0.00	20.98
10-Year	2/17/2015	2.000	2.62	23.96	27.79	12.70	59.51	0.04	0.00	24.90
10-Year	3/16/2015	2.139	2.65	20.98	31.19	10.20	58.61	0.02	0.00	20.96
30-Year	1/15/2015	2.430	2.32	13.00	37.40	13.69	48.91	0.00	0.00	29.88
30-Year	2/17/2015	2.560	2.26	15.98	35.15	15.45	49.40	0.02	0.00	38.55
30-Year	3/16/2015	2.681	2.18	12.99	36.56	11.56	51.88	0.01	0.00	30.15

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)*
10-Year TIPS	1/30/2015	0.315	2.39	14.95	25.85	10.20	63.95	0.05	0.00	16.82
10-Year TIPS	3/31/2015	0.200	2.43	12.99	23.21	1.08	75.71	0.01	0.00	14.05
30-Year TIPS	2/27/2015	0.842	2.43	8.98	27.00	3.96	69.04	0.02	0.00	26.72

*Weighted averages of Competitive Awards.
**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.

Office of Debt Management

Treasury Debt Management Strategy

Overview

- Treasury may borrow on the credit of the United States Government amounts necessary for expenditures authorized by law and may issue securities for the amounts borrowed.

- Treasury debt issuance principles have been "least cost over time" and "regular and predictable."

- Since 2009, Treasury has issued more longer-term debt consistent with these principles. WAM has extended from 48 months to nearly 69 months.

- The principles are not changing; however, as has been discussed by TBAC, WAM is one of several measures to quantify the achievement of the debt issuance objectives.

Debt Management Principles and Objectives

- Principles can be explained by:
  - Fund at the least cost to the taxpayer
  - Maintain a predictable issuance to support liquidity

- Additional possible objectives might include:
  - Support market functioning
  - Avoid sharp swings in interest expense
  - Maintain a manageable pattern of debt maturity

Least *Expected* Cost Over Time and Regular and Predictable

Least Cost

- Interest expense is important, as the President's 2016 Budget forecasts that the U.S. government will reach primary surplus in 2022.
- For a given amount of debt issuance, the expected relative cost—over time—of issuing at different points on the curve matter.
- Further analysis of expected cost of issuance across a range of maturities is warranted.

Regular and Predictable

- Being "regular and predictable" argues against being opportunistic.
- Issuance experience, complemented by surveys of the primary dealers, informs Treasury's view on the speed of any adjustment.
  - Greater liquidity reduces Treasury's funding costs over the long run.
  - However, limiting the speed of adjustment of issuance implies slowly adjusting to shifts in expected cost.

Market Functioning

- A liquid, efficient market for Treasury securities is central to the financial system.
- Historically, a liquid market garners a liquidity premium for a security, which leads to greater cost savings.
- The private sector uses Treasury securities as a benchmark for issuance.
- A minimum level of issuance can help to maintain a liquid market at all points on the curve.

Survey Results Help Inform Market Functioning Considerations of Issuance Decisions

"All else equal, what is the maximum change in monthly coupon auction size (+/- X $billions) that can be implemented over a single quarter without causing "significant yield deviations?"

"All else equal, what is your definition, in basis points, of a "significant yield deviation?"

	Maximum change (+/-) per quarter in auction size		**Estimate of a significant yield deviation**
Maturity	Mean ($ billion)	Maturity	Mean (basis points)
2-year	5	2-year	4.1
3-year	5	3-year	4.4
5-year	3	5-year	5.2
7-year	3	7-year	5.2
10-year	4	10-year	6.4
30-year	2	30-year	7.4

* Survey conducted on 03/19/2015. http://www.treasury.gov/resource-center/data-chart-center/quarterly-refunding/Pages/dealer-agenda-survey.aspx

Survey Results (cont.)

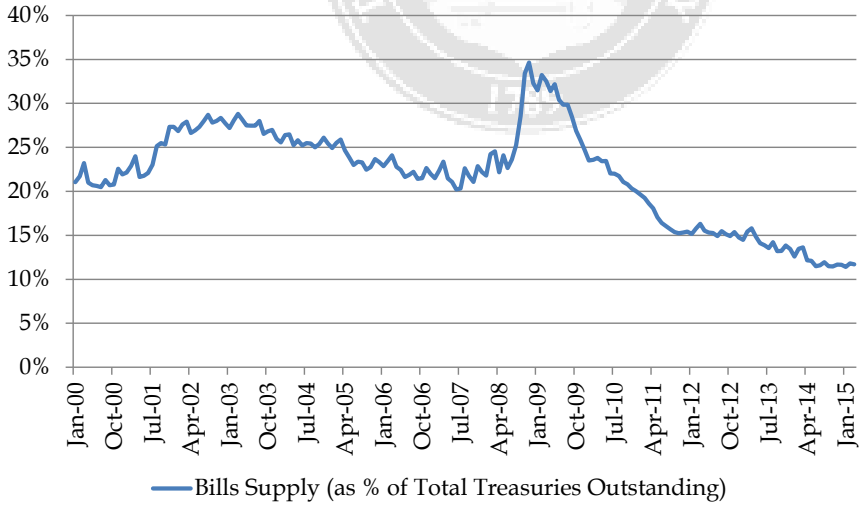
"All else equal, what is the minimum auction size needed to maintain benchmark liquidity? Specifically, what is the smallest auction size (weekly for bills, monthly for coupons) necessary to support "on-the-run" issue liquidity in the secondary market?"

	Minimum auction size needed to maintain benchmark liquidity	
Maturity	Mean ($ billion)	Current ($ billion)
2-year	20	26
3-year	20	24
5-year	26	35
7-year	22	29
10-year	18	21
30-year	11	13

* Survey conducted on 03/19/2015. http://www.treasury.gov/resource-center/data-chart-center/quarterly-refunding/Pages/dealer-agenda-survey.aspx

Treasury bills

- Market functioning is an especially important consideration for the Treasury bill market. Bills are an important safe and liquid asset for the financial system.
  - Treasury bills as a proportion of total debt outstanding have fallen to multi-decade lows.
  - Demand for bills is likely to grow significantly in the year ahead.
- Increasing bill issuance could improve market functioning and lower interest cost for the taxpayer.



Notes and Bonds

- The overall strategy of issuing longer-term debt is not changing.
- With historically low rates, longer-term debt could save interest expense over time.
- Longer-term debt could also be seen as insuring against higher interest rates in the future.
- A cost-benefit analysis should inform issuance and the benefits of the strategy can be communicated in the context of objectives instead of simply by WAM.

Charge #1

Treasury bill supply as a percentage of the total Treasury debt outstanding is currently about 11%, a multi-decade low. At the same time, with $1.4 trillion in Treasury bills outstanding, the total volume of Treasury bills outstanding remains near historically high levels. What are the drivers of potential demand for high-quality, short-dated securities? Given these considerations, should the Treasury either increase or decrease Treasury bill issuance in the coming year?

Introduction

Current developments in market structure, regulations, and policy have the potential to change significantly the supply and demand in the market for short-end, high-quality assets where Treasury Bills are centric.

US Treasury Bills are critical to the financial ecosystem, as they are the closest substitute to cash given strong liquidity, no credit risk, and minimal duration risk.

What makes T-bills special?

T-bills are considered the safest short-term assets available to all investors. They are particularly important to those who

- do not have access to currency in large denominations,
- do not have access to reserves at the central banks (only banks do),
- do not have access to Reverse Repo with the Fed (as do banks, dealers, MFs, and FX reserve managers),
- are too large for insured deposits.

- T-bills are highly liquid compared to other non-insured deposit short term assets.
- Demand for T-bills and short -term High Quality Liquid Assets (HQLA) has increased due to capital and Dodd-Frank related regulations.
- T-bills are generally able to maintain their liquidity. While other markets may be more challenged as a result of leverage ratio constraints, making it more difficult to make markets or maintain a large balance sheet, T-bills appear to have been immune to such issues .

	Who Can Access What?					
	T-Bills	**Short TSY Coupons**	**Commercial Paper**	**Tri-Party Repo**	**Fed RRP**	**Fed Account earning IOER**
MMMF	X	X	X	X	X	
Asset Managers	X	X	X	X		
Corporates	X	X	X	X		
Municipalities	X	X	X			
Banks	X	X	X	X	X	X
Broker/Dealers	X	X	X	X	X	
Size ($bn)*	1,458	1,404	1,014	1,495**	397	2,503***

Sources: SIFMA, Federal Reserve, US Treasury

*As of December 31, 2014 unless otherwise noted

** Excludes Fed RRP, as of December 9, 2014

***Excess reserves

T-bill substitutes

Short Coupons

- Price discovery challenges – no weekly new issues, only monthly maturities, smaller sizes , and less liquidity

Repo

- Best substitute for T-bills ,as they trade at a discount
- Deep and liquid market for overnights, but subject to seasonal balance sheet constraints
- Mature daily (or on a specific day) rather than waiting for Thursday T-bill settlement

Treasury FRNs

- WAL issues for 2a7 funds until they roll down the curve
- Awkward index to hedge

Agency D/Ns & Short coupons

- Excludes Treasury-only investors
- Market shrinking as Agency balance sheets are reduced

Outstanding Short-End Supply ($bn)

	Dec-07	Dec-10	Dec-14
T-Bills	1,004	1,773	1,458
Treasury Coupons <1y	616	835	1,404
Agency Debt <1y	834	565	629
Total S.T. HQLA (ex reserves)	**2,453**	**3,172**	**3,491**
Financial CP	815	530	530
Non-Fin CP	163	128	261
ABCP	803	379	224
Total CP	**1,781**	**1,037**	**1,014**
TSY Repo (Tri-Party)[1]	1,135	616	679
Non-TSY Repo (Tri-Party)[1]	667	1,083	960
Total Repo	**1,802**	**1,699**	**1,639**
Short IG Corp coupons	149	147	285
Total	**6,185**	**6,056**	**6,428**

Sources: SIFMA, Federal Reserve, ICI, Credit Suisse Liquid US Corp Index+

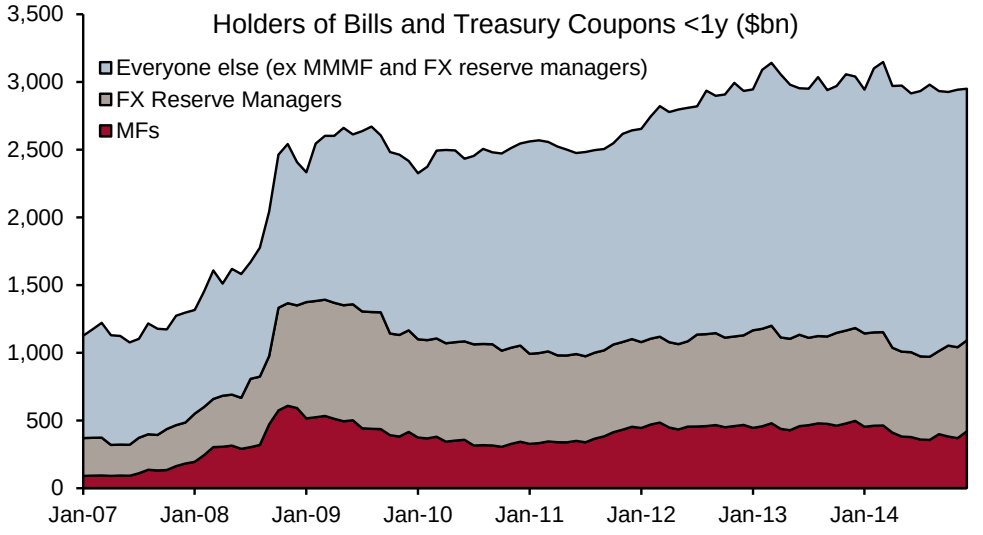
[1] 2007 is estimated

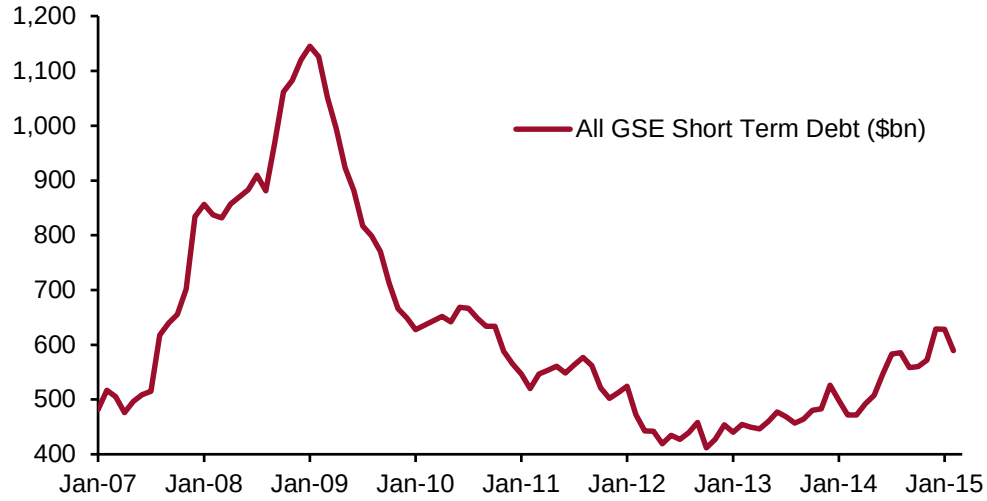
Short-end, high-quality asset supply has remained stable post-crisis

Aggregate amounts of short-end, high-quality assets have remained relatively stable since 2012.

Short-end senior agency debt has fallen to pre-crisis levels, and although it has climbed from recent lows , it is not expected to grow significantly as a result of operational constraints.

T-bills outstanding have fallen by over 25% from the 2009 peak, but Treasury coupons within one year have risen dramatically.





Sources: US Treasury Department, ICI, Federal Reserve, Company reports

Regulatory Changes Impacting Demand for T-Bills

- Money Fund Reforms
  - Investors are reassessing Prime funds as a liquidity vehicle, with estimates of a $300 billion reallocation from Prime to Government funds.
  - Funds are in the process of announcing changes to structure, most notably with Fidelity re-classifying certain Prime funds as Government funds,
- Changes in Bank Capital Rules – Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR)
  - Banks have to hold more high-quality liquid assets (HQLA) and/or shorter-duration assets while extending the maturity of their borrowing.
  - This increases demand for a while, decreasing supply of short-term HQLA.
- Leverage Ratios
  - Smaller balance sheets on the whole diminish borrowing in repo.
- Dodd-Frank – More HQLA Needed for Collateral Posting
  - Bills receive favorable haircut treatment; therefore, they are generally the preferred security for margin posting.

2a7 money reform

- Money funds by definition and rule own short-duration assets
- Bills and short coupons fulfill requirements for assets that offer daily and weekly liquidity

2010 Reforms

- Reduced weighted-average maturity from 90 to 60 days.
- Created weighted-average life maximum of 120 days.
- Mandated that 10% of assets must offer daily liquidity and 30% weekly liquidity.

2014 Reforms (October 2016 Implementation)

- Floating (out to fourth decimal) NAV for prime institutional funds
- Potential imposition of “gates” or “fees” on all prime funds

MMMF Asset Distribution as of March 31, 2015

$bn	T-Bills	TSY Short Coupons	Agency Debt	Treasury Repo	Agency Repo	Other	Total
TSY 2a7	177	175	3	136	2	1	494
Govt 2a7	7	14	246	93	96	2	459
Prime 2a7	32	53	84	163	49	1121	1502
Total	216	242	332	393	147	1124	2455

Source: Crane Data

Implication – Increased demand for shorter-maturity and short-duration Treasury assets, while prime funds no longer offer a true liquidity vehicle. With some funds preemptively announcing a re-designation of prime funds as government-only, combined with expected investor reallocation ahead of implementation, analysts estimate up to $300 billion of potential prime-to-government flows in the near future.

Capital rules

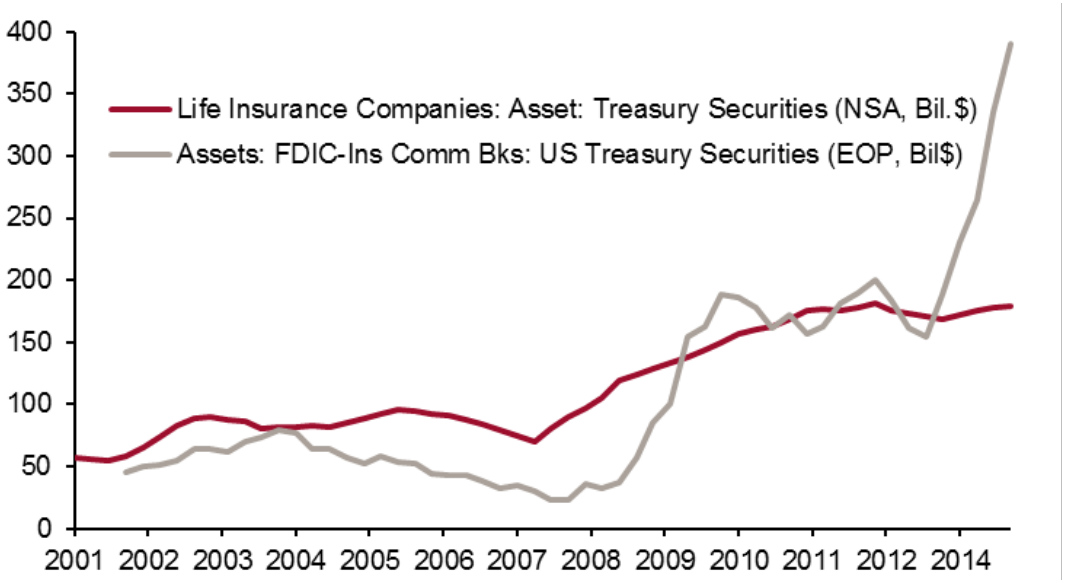
Bank holdings of Treasuries have increased over $200 billion since 2012 as result of regulatory developments.

Under various rules, banks are required to hold additional HQLA.

- Liquidity coverage ratio (LCR) requires large banks to hold HQLA equal to 30 days of peak cumulative cash outflow.
- Under LCR rules, Treasuries receive no haircut, while other assets (Agency MBS) have >15% haircuts.
- Net stable funding ratio (NSFR) rules will incentivize holding Treasury securities and shorter-term assets.

On the liabilities side, the LCR and NSFR encourage banks to extend the maturity profile of funding.

- Banks funding less short-term.
- Banks actively discouraging large, non-operational deposits.



Sources: Federal Reserve, FDIC

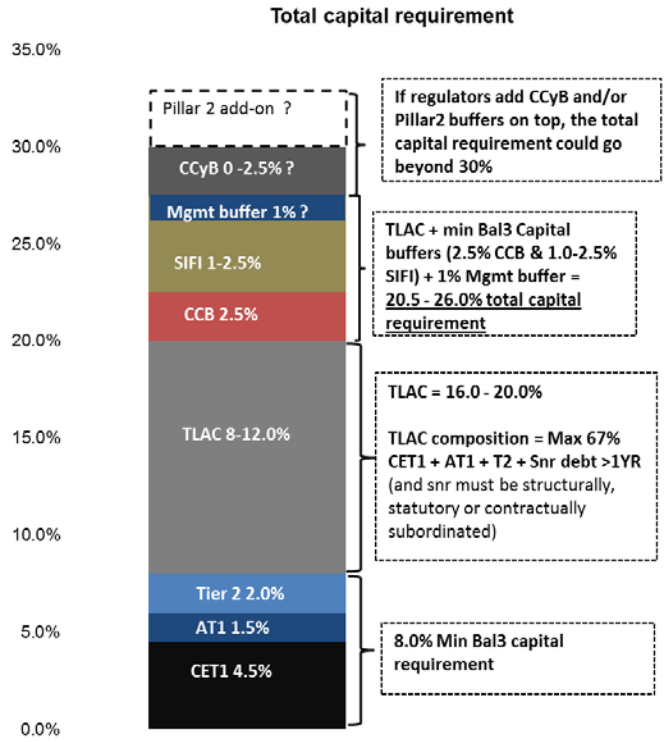
Capital and leverage ratios

Bank capital rules have caused firms to reduce leverage throughout the system.

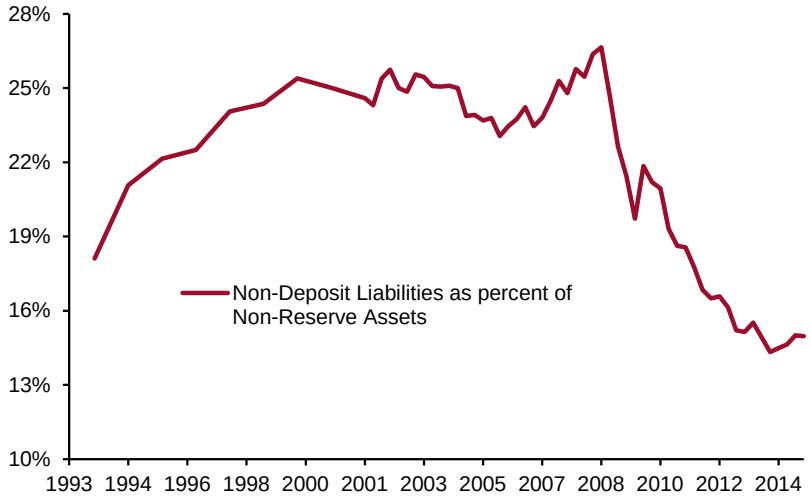
- Balance sheet reduction has often come with reduced repo books.
- The easiest means for financial firms to increase ratios is to shrink assets and corresponding liabilities.

Balance sheet reduction has been broad based – causing a reduction in liabilities that were instruments available to investors.

- Deposits as a share of liabilities has increased given their favorable treatment.
- Bank non-deposit liabilities have declined significantly as a source of funding non-reserve assets.



Sources: Credit Suisse



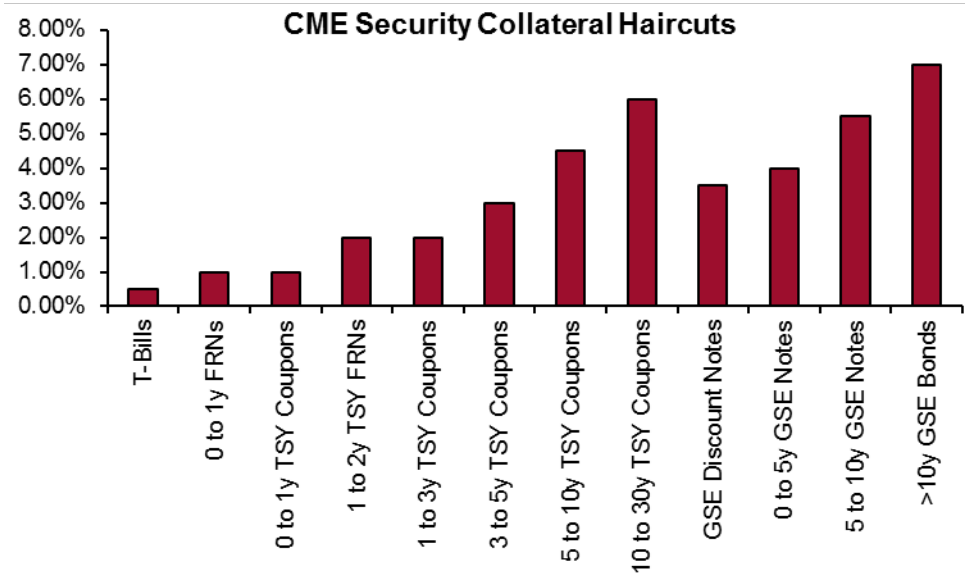
Sources: FDIC

Dodd-Frank impacts

Dodd-Frank/Central Clearing

- T-bills receive the most favorable treatment of securities for posting, with haircuts for T-bills 0.5% at CME, compared to 2% for 1- to 3-year Treasury securities.

It was estimated in the Q2 2013 TBAC discussion that as a result of the pro-cyclical demand for high-quality collateral (HQC), a stressed scenario could result in incremental demand from clearing, bilateral margining, and flight to quality flows that approaches $10 trillion.



Sources: http://www.cmegroup.com/clearing/financial-and-collateral-management/#Tbills

Incremental HQC Demand[1]	=	1. Prudential Regulation	+	2. Market Regulation (Derivative Clearing)	+	3. Market Regulation (Bilateral Margin)	+	4. Economic Environment / Uncertainty
		Increased prudential liquidity requirements		Increased IM requirements for cleared derivatives		Increased IM requirements for non-cleared derivatives		Cyclical HQC investment demand (FTQ flows)
		$1.0-2.5tt[2]		• $0.8-2.0tt (normal)[3] • $1.8-4.6tt (stressed)[3]		• $0.8-1.2tt (normal)[4] • $1.8-4.1tt (stressed)[4]		Varies (multi-$trillions)
Total "phased-in" potential incremental HQC demand (*normal market conditions*):								$2.6-5.7tt
Total "phased-in" potential incremental HQC demand (*stressed market conditions*): Flows								$4.6-11.2tt + FTQ

Source: Q2 2013 TBAC

Additional Market Developments Impacting Bill Supply and Demand

- Trajectory of deficits/ fiscal policy
  - The budget outlook is positive for the next several years.
  - The Treasury could fund much of the expected deficit through T-bills without changing coupon sizes, as they remain regular and predictable.
- Increasing cash balances
  - The Treasury could inexpensively fund increased cash balances by issuing a modest amount of T-bills.
  - Demand for short-term Treasuries should remain robust; therefore, adding a new maturity should not be disruptive.
  - A new short-term maturity could help increase front-end liquidity by creating a shorter-term primary market to “prove the level” where T-bills are trading.

Deficits could largely be addressed by adjusting T-bill issuance

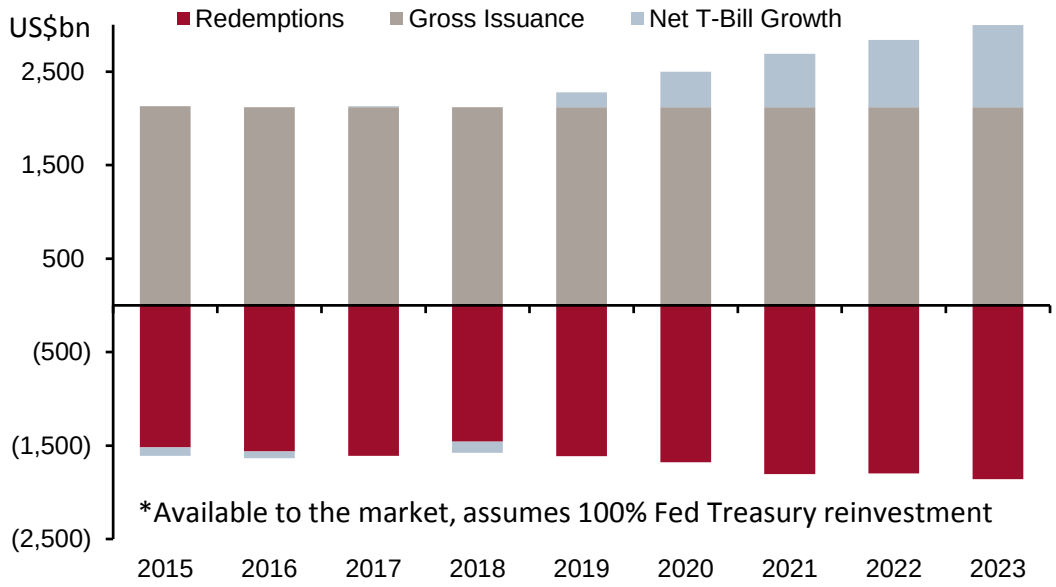
Deficits should begin to rise after FY 2016, particularly in FY 2019.

Bills should be used in their traditional function as stabilizer.

Ultimately, coupon issuance might also need to be increased, but if the Fed continues to reinvest, this would be far into the future.

The entirety of the incremental deficit could be financed by increased T-bill issuance to the public (provided that the Fed reinvests 100%).

As deficits rise and if the roll-off of SOMA Treasury holdings is low, T-bills as a portion of the market can grow during the first few years.



Source: US Treasury, estimates after March 2015

Treasury increasing cash balances could be funded through increase in bills

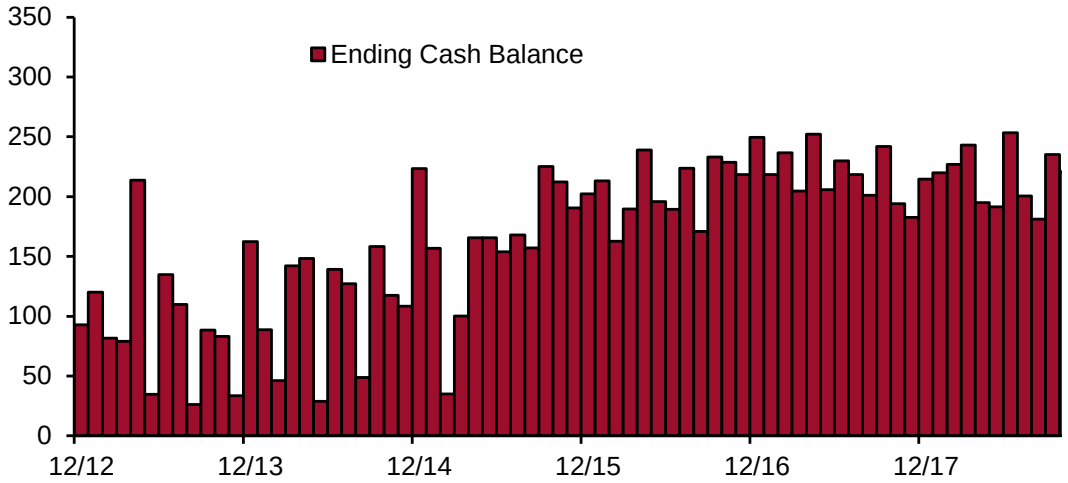
Current coupon and FRN issuance levels over the next two years could fund a significant portion of cash balance increase.

Should the Treasury wish to increase cash balance beyond coupons, there is scope to increase T-bill issuance.

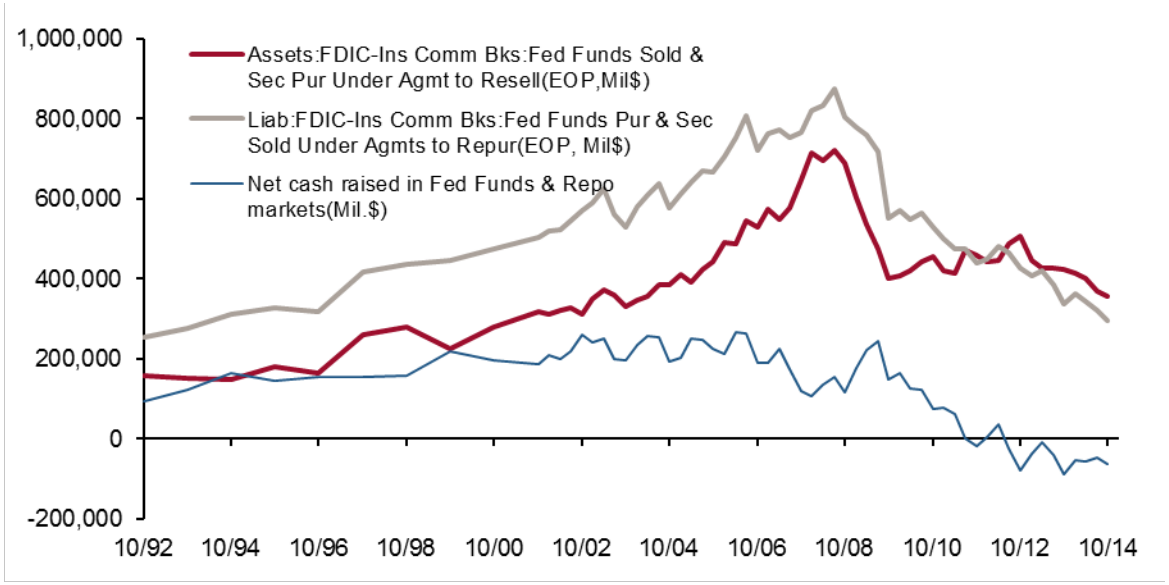
Creation of a 1- or 2-week and an 8-week bill could generate several hundred billion that could be rolled.

Banks are now net lenders into cash markets as regulations force them to borrow term and less wholesale, meaning funds need more front-end collateral.

The Treasury could increase cash balance to the $200 billion to $250 billion range without adjusting coupon issuance.



Source: US Treasury, estimates after March 2015



Source: FDIC

Federal Reserve Rate Normalization and Reverse Repo Facility

- System Open Market Account (SOMA) Treasury Securities During "Normalization"
  - Fed may not roll off any SOMA Treasury securities.
  - Should the FOMC decide to allow Treasury securities to roll off, the Treasury would have to increase issuance to the market in relatively short order, likely requiring increased coupon sizes while also driving T-bill supply higher.
- Reverse Repo Facility a Useful Tool for Front-End Liquidity
  - This facility allows non-dealer short-end market participants to access the SOMA collateral pool.
  - It creates short-term supply on demand, helping financial stability beyond its monetary policy uses.

The elephant in the room is monetary, fiscal interactions

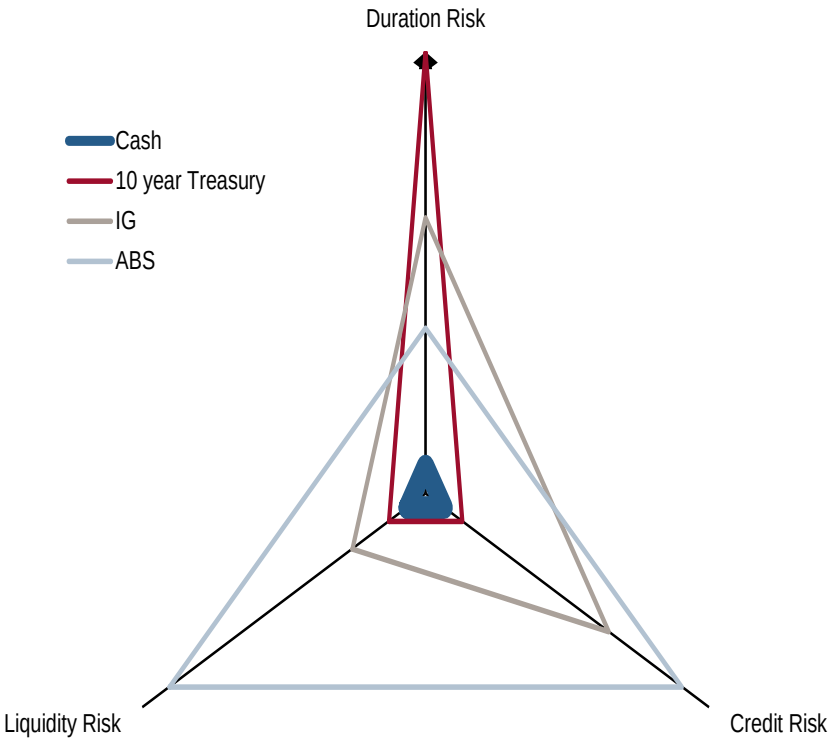
Reserves, Fed's RRP facility, dealer and tri-party repo, and T-bills are substitutes. They are money or have high moneyness.

- The supply of these assets depends on policy choices and elasticities influenced by regulation and monetary policy.

If the RRP facility grows to be large, money market government funds should grow substantially.

- This is the end result of a transition from high repo to high reserve balances to large government money market funds holding T-bills or RRP.
- RRP supply should have a major impact on the demand for bills. RRP also should help re-shape the system in a way that might guarantee strong T-bill demand in the future, especially if the Fed shrinks its balance sheet.

Moneyness = Low Duration, Liquidity, and Credit Risk



Source: the BLOOMBERG PROFESSIONAL™ service

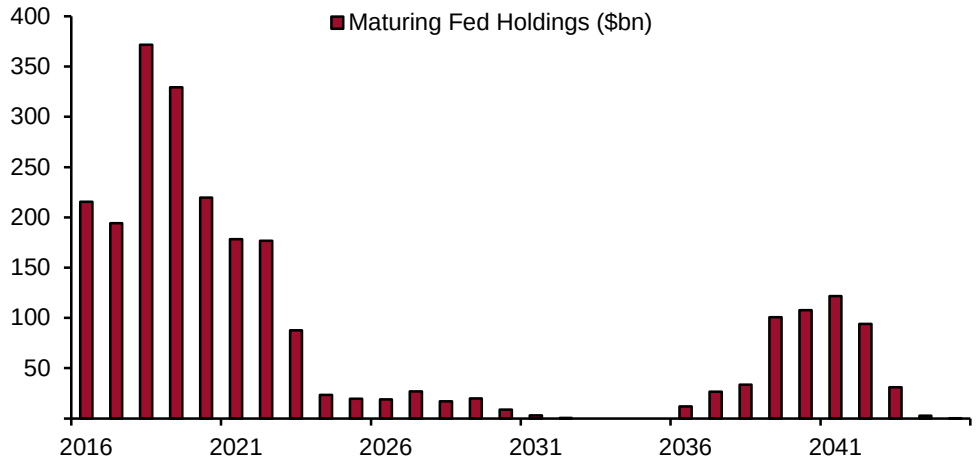
Fed SOMA roll-off would require additional T-bill issuance given uncertainty

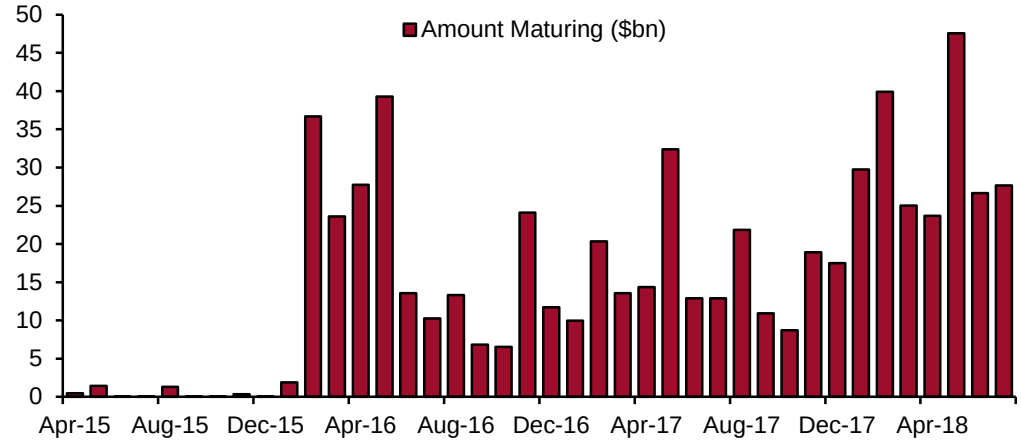
The Federal Reserve would be likely to reinvest a portion (and perhaps a high portion initially) of its holdings in 2016. An important reason to do so is to ensure there are on-the-run Treasuries in the SOMA for the securities lending program to ease funding pressures.

The FOMC has suggested that at least some run-off is likely during the hiking cycle, and the potential for short-maturity coupon sales was discussed.

Because the Treasury cannot plan for exactly when and how much the Fed will stop reinvesting, T-bills must be utilized initially to fill any funding gaps.

If the Fed allows significant roll-off over time, the Treasury would likely need to increase coupon issuance while also increasing bills outstanding.





Source: FRBNY

Fed reverse repo, raising rates, and related uncertainty

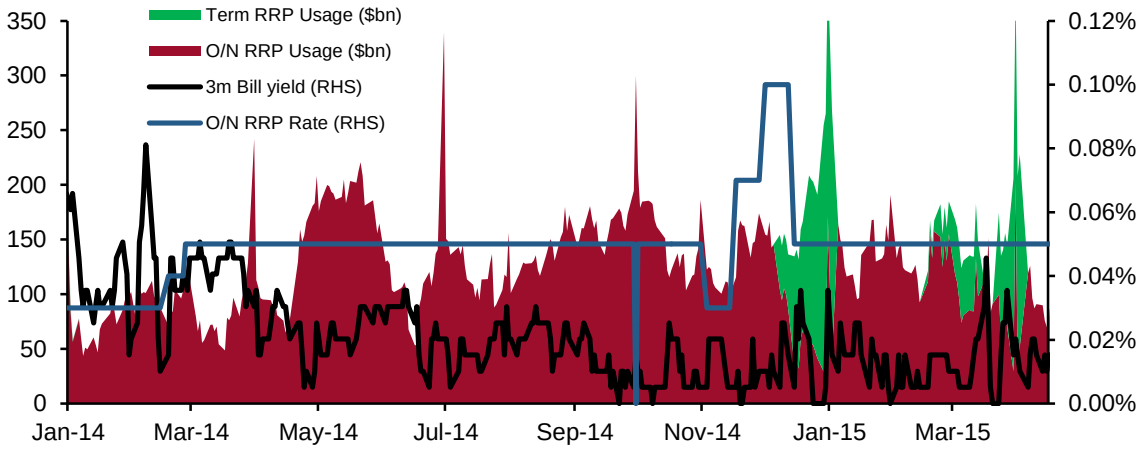
The Fed's reverse repo facility provides certain front-end investors – critically money funds and GSEs – access to the Fed and offers a T-bill-like substitute.

- Currently capped at $300bn (still in testing); term operations boosted capacity at recent quarter-ends

During the substantial T-bill supply reduction in spring 2014, RRP usage picked up substantially and appeared to succeed in supporting yields.

RRP is expected to help the normalization process, but questions remain regarding size and duration of the facility.

- If RRP did not exist or were inadequate during rate hikes, bank balance sheet reductions at quarter-end, or other stress points, T-bill yields may be driven lower and risk significant market dislocations.



Sources: FRBNY, the BLOOMBERGPROFESSIONAL™ service

Conclusion

- **In order to satisfy demand and ensure market function, we suggest that the Treasury at least maintains the current level of T-bills outstanding over the next 12 months.** This would require either maintaining a larger cash balance or reducing coupon issuance.
  - If possible, the Treasury should consider increasing the level of T-bills outstanding.
  - Otherwise, T-bills outstanding would likely decline over the coming quarters as funding needs will be smaller than cash raised by coupon issuance.
- Demand for short-term, HQLA is increasing as a result of structural market changes stemming from bank capital rules, 2a-7 reform, and growing clearing/ margin needs.
- T-bill substitutes are either stagnating or declining in size as a result of developments such as shrinking bank balance sheets or have drawbacks such as failing to offer truly comparable liquidity.
- These dual dynamics suggest that appetite exists for greater T-bill supply and that there is relatively little risk of crowding out other short-term products.
- From the Treasury's perspective, increasing T-bill issuance now could help it maintain a larger cash balance and would afford flexibility in navigating uncertain monetary policy periods ahead.
- The Fed's reverse repo facility is providing a key vehicle for front-end investors, in the event of a stress event or if the facility isn't sufficiently large to absorb funds, potentially overwhelming flows into T-bills and resulting in dislocations .
- The Treasury could approach increasing supply either by increasing current auction sizes or introducing regular 1-week and 2-month issuance.
  - If the Treasury increases current auction sizes, we recommend that those adjustments be made primarily to 4-week and 13-week bills, as structural, regulatory-driven demand is highest for shorter-dated paper.
  - Alternatively, considering new auction tenors could provide additional points of price discovery, enhancing liquidity and avoiding ballooning individual auction sizes, particularly down the road as deficits grow.

Mix of T-bill issuance – possible increases to current tenors

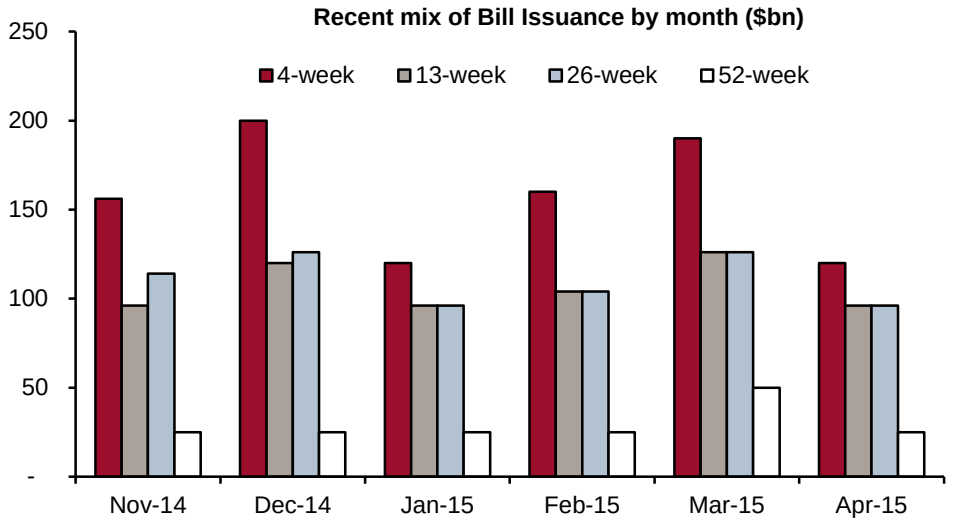
If the Treasury increases current auction sizes, we recommend that those adjustments be made primarily to 4-week and 13-week T-bills, as structural, regulatory-driven demand is highest for shorter-dated paper.

A recent survey of primary dealers suggests that 4-week T-bill auctions could grow to ~$56bn and 13-week bill auctions to ~$39bn – increases of $20bn and $14bn, respectively, from the last quarter's average auction size – without significant yield deviations from fair value.

The same survey also suggests that the Treasury could make these adjustments relatively quickly.

Tranche	Minimum auction size needed to maintain benchmark liquidity ($bil)		Maximum auction size that could be issued without causing significant yield deviations from fair value ($bil)		Maximum change (+/-) per quarter in auction size ($bil)		Auction size over last 13 weeks	
	MEAN	STD	MEAN	STD	MEAN	STD	MEAN	Max/Min
4-week	22	4.5	56	5.4	17	7.8	36.2	40 / 30
13-week	20	2.7	39	6.5	11	5.2	25.1	26 / 24
26-week	19	2.5	37	4.5	10	5	25.1	26 / 24
52-week	17	2.6	32	4.3	6	2.3	25	25 / 25

Sources: Primary Dealer Auction Size Survey, the BLOOMBERG PROFESSIONAL™ service



Source: the BLOOMBERG PROFESSIONAL™ service

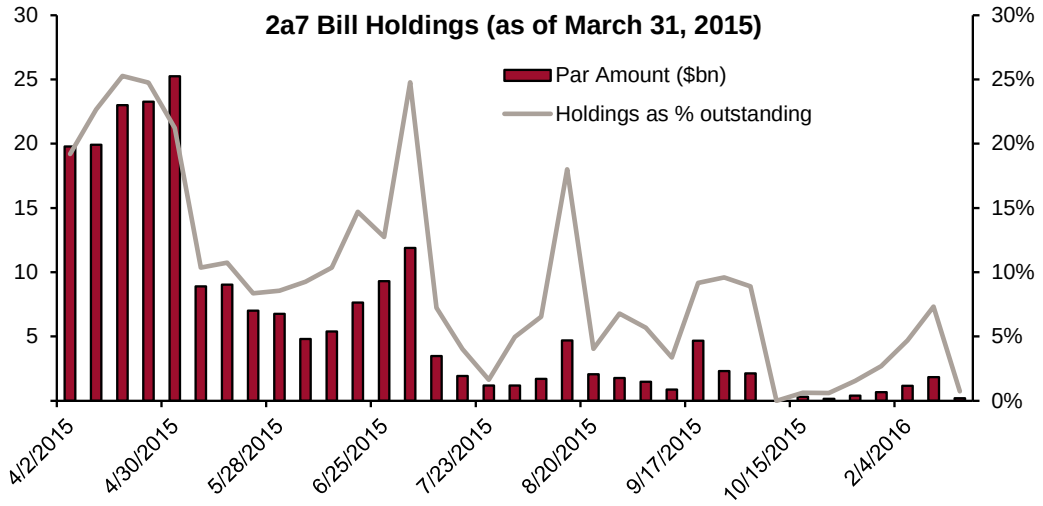
Mix of T-bill issuance – possible to consider 1-week and 2-month

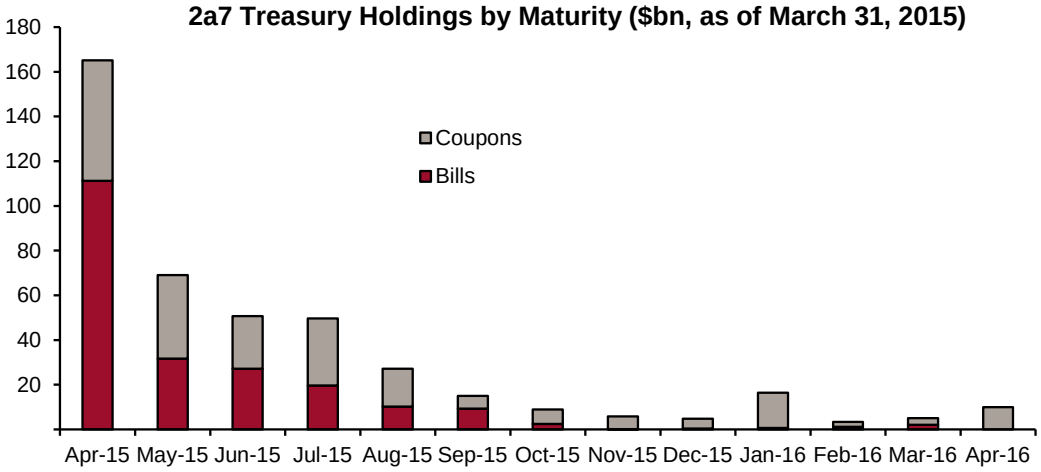
Alternatively, considering new auction tenors could provide additional points of price discovery, enhancing liquidity and avoiding ballooning individual auction sizes, particularly down the road as deficits grow.

Aggregate demand for T-bills is very short as short tenors are most cash-like and fit the demand from some of the larger investor classes.

- 2a7 funds demand for shorter assets increases as maturities shorten. This pivots at about 30 days (4-5 weeks).

The Treasury could adjust sizes based on near-term demand, reduce them into quarter-end if necessary, and use them in place of CMBs for short-term borrowing needs.





Sources: Crane Data, the BLOOMBERG PROFESSIONL™ service

Pros and Cons of More T-Bill Issuance as a Portion of Treasury Debt Issuance

Pros of Issuing More T-Bills	Cons of Issuing More T-Bills
T-bills offer lower borrowing costs for taxpayers on average over time	Rollover risk in the future may be more challenging
Demand is likely to be higher as banks' need for short-term HQLA is likely to increase	If more bills are issued in lieu of long-term Treasury benchmarks , the liquidity of fixed income assets may be significantly reduced
Demand is likely to be higher as new Money Fund regulations increase demand for short-end government paper	Balance sheet constraints (leverage ratios) may make market making more difficult, subsequently challenging bill liquidity, in particular around quarter-end
Fewer bill substitutes are likely as outstanding amounts of other short-term alternatives are generally flat or shrinking, which also poses little risk of T-bills crowding out other HQLA	
The Treasury could maintain a higher cash balance while maintaining coupon sizes	

Appendix: A Study of T-Bill Market Liquidity

- T-bills compared to short coupons
  - T-bill sizes tend to be larger than individual coupons
  - Dealers appear unwilling to buy short coupons, meaning that offers can remain competitive, while bids are very wide compared to those for T-bills
- T-bill turnover tends to be much higher than for short coupons
- Dealers tend to bid on bills, but foreigners own a substantial amount
- The special place for bills becomes more acute during crises

T-bill versus short coupon – liquidity bill premium

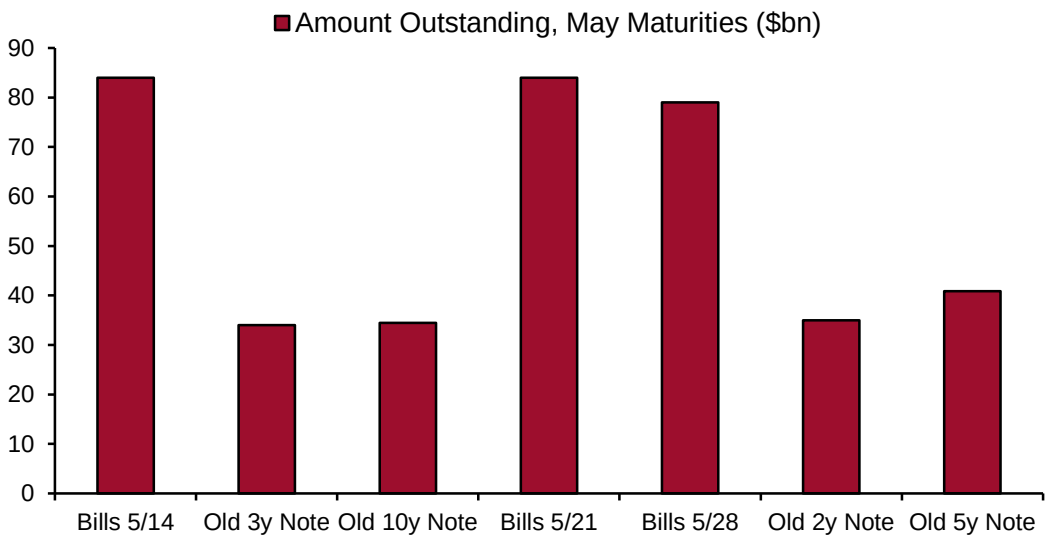
Short coupons are not cheap given market technicals ,as some suggest – just more illiquid.

- Offers for short coupons are generally similar to T-bills, bids are not.

T-bill liquidity tends to better because short-coupon sizes are relatively small and disconnected, while T-bill sizes increase at each auction.

The bid/offer spread on short coupons is wider as they can sit on dealers' balance sheets and prove more difficult to sell.

Regular T-bill Issuance allows for better price discovery, while short coupons do not have similar instruments issued within two years to maturity.



May 2015 Maturities, as of 24 Apr 2015	Bid/Offer Spread (bps)	Bid (bps)	Offer (bps)
Bills (May 14)	0.005	0.015	0.010
Old 3y Note	0.135	0.115	-0.019
Old 10y Note	0.132	0.149	0.017
Bills (May 21)	0.005	0.010	0.005
Bills (May 28)	0.005	0.015	0.010
Old 2y Note	0.077	0.096	0.019
Old 5y Note	0.076	0.087	0.011

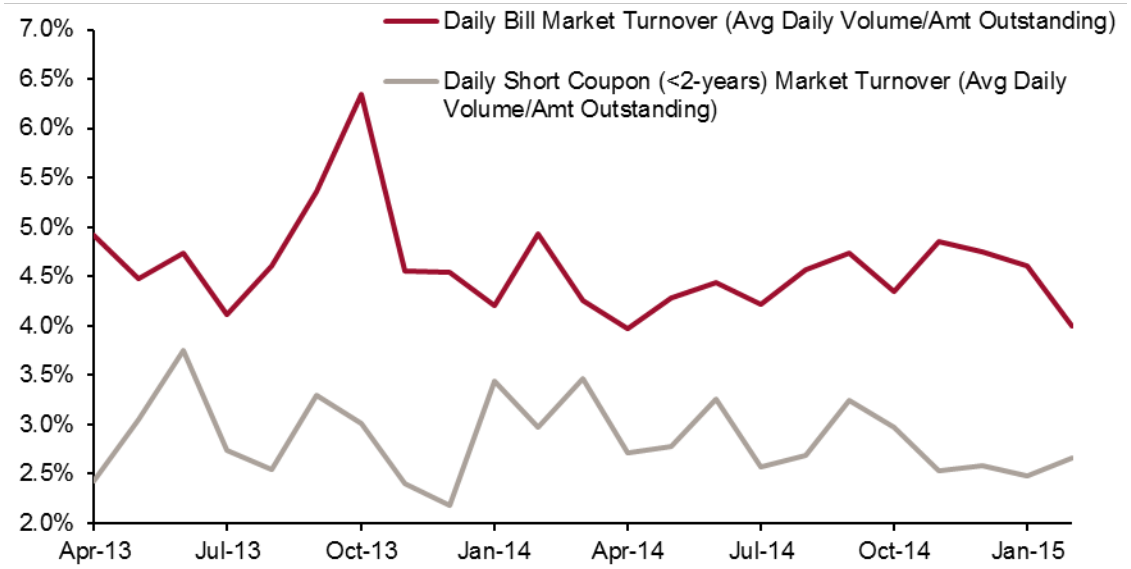
Source: the BLOOMBERG PROFESSIONAL™ service

T-bill versus short coupon – turnover has favored T-bills

Since the end of the financial crisis, T-bill turnover has increased and remains higher than that of short coupons.

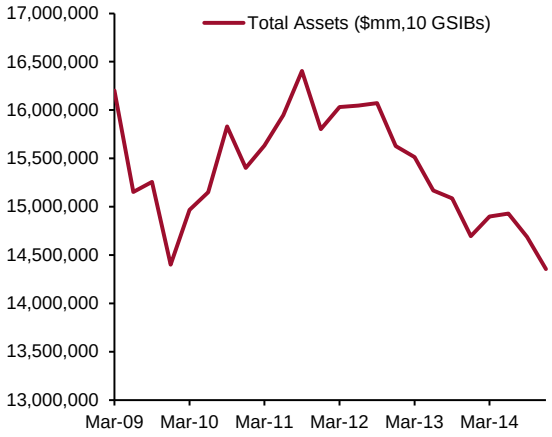
Bank trading assets have generally been declining, with value-at-risk falling even faster.

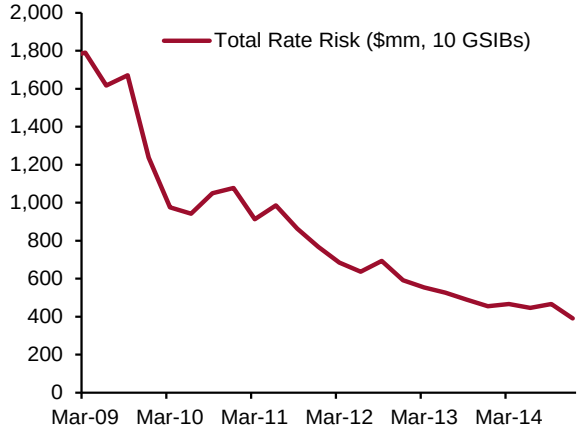
Less flexible balance sheets may lead to market volatility, not only in longer-maturity Treasury securities but also T-bills – particularly around changes in expectations for monetary policy.



Sources: Federal Reserve Bank of New York

Ten of the Largest Banks Globally



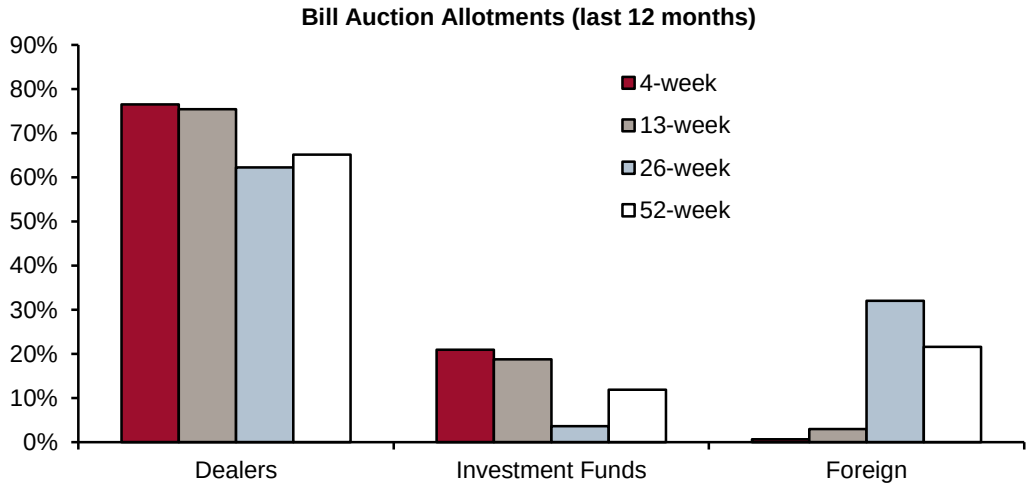


Source: Company reports

Other demand for and ownership of T-bills

Dealers and investment funds are dominant in the primary market for 4-week and 13-week T-bills.

- At auction, they have combined to take down 97% of the 4-week T-bills and 94% of the 13-week T-bills over the last 12 months.



Foreign investors hold a substantial portion of the T-bill market, with their primary market activity more concentrated in the 26-week and 52-week issuance.

- Foreign investors have been awarded 32% of 26-week issuance and nearly 22% of the 52-week auctions over the last year.

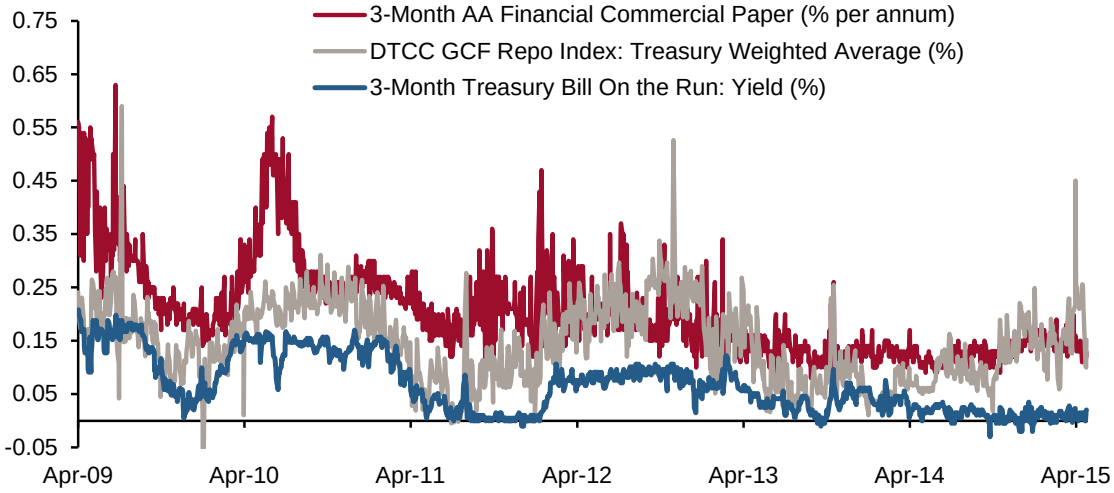
Source: US Treasury

T-bills relative to other markets

T-bill yields already trade below the fixed rate and other money market rates; Fed hikes may cause investors to shorten assets' duration, creating additional T-bill demand.

The relative behavior of other rates versus bills could offer a gauge of market stresses and function.

- Spreads of other front-end rates widened noticeably during the crisis.



Source: Haver Analytics®

	As of April 24, 2015				As of October 15, 2008			
Instrument	**Yield**	**3m Average**	**Spread to Bills (bps)**	**3m Avg Spread To Bills (bps)**	**Yield**	**3m Average**	**Spread to Bills (bps)**	**3m Avg Spread To Bills (bps)**
3m Bill	0.015%	0.014%	-	-	0.213%	1.264%	-	-
Fixed O/N RRP Rate	0.050%	0.050%	3.5	3.6				
Fed Funds Effective	0.130%	0.120%	11.5	10.6	1.040%	1.860%	82.7	59.7
GCF Repo	0.152%	0.173%	13.7	15.9				
3m OIS	0.135%	0.130%	12.0	11.6	1.097%	1.855%	88.4	59.1
3m LIBOR	0.279%	0.267%	26.4	25.4	4.550%	3.228%	433.7	196.5
3m Financial CP	0.120%	0.140%	10.5	12.6	3.950%	2.920%	373.7	165.7

Source: the BLOOMBERG PROFESSIONAL™ service