

Treasury Presentation to TBAC



Office of Debt Management

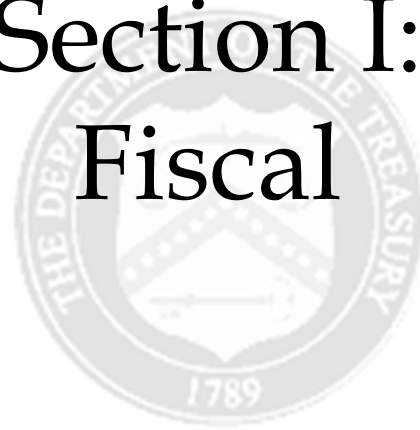


Fiscal Year 2013 Q3 Report

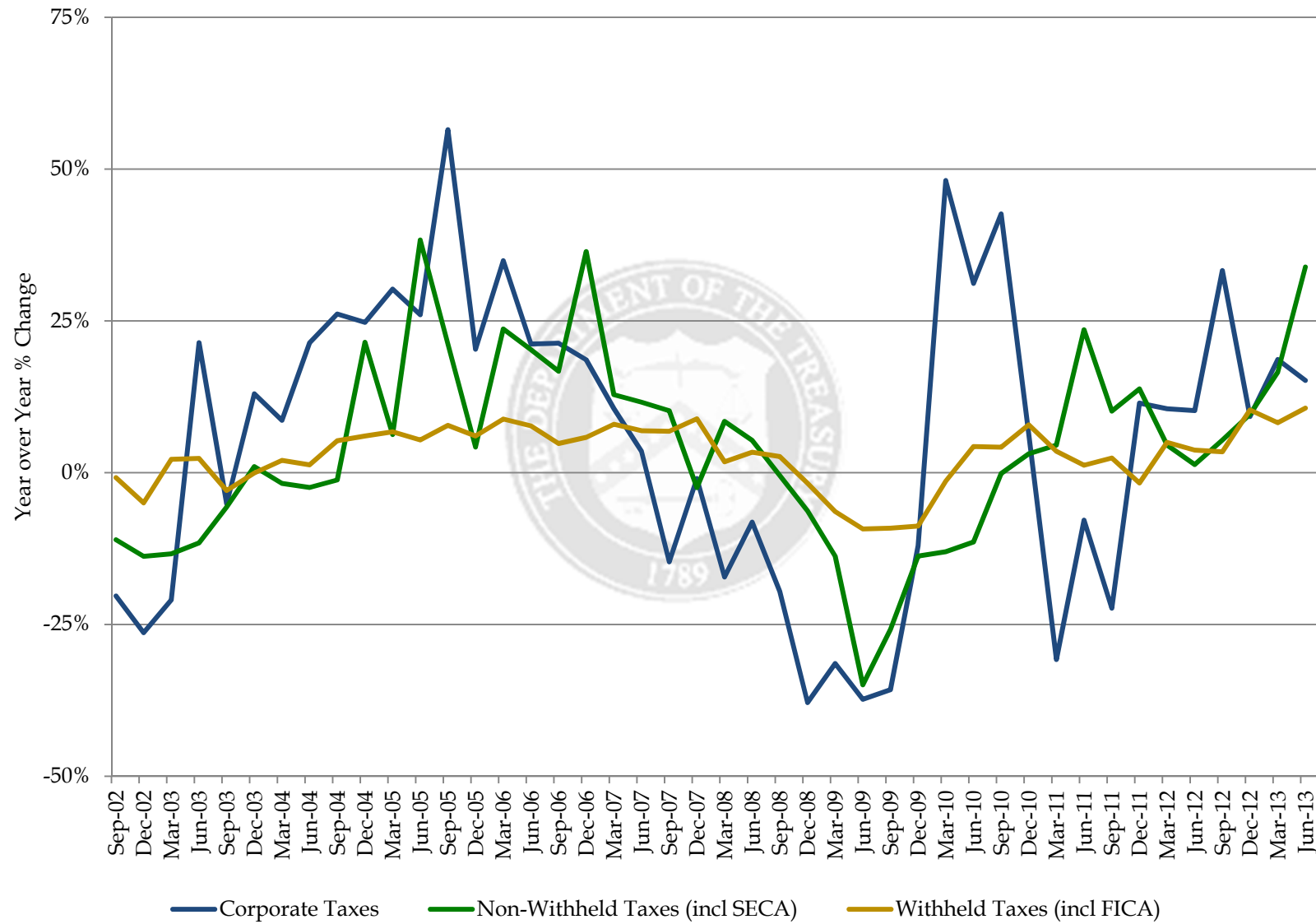
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Section I: Fiscal

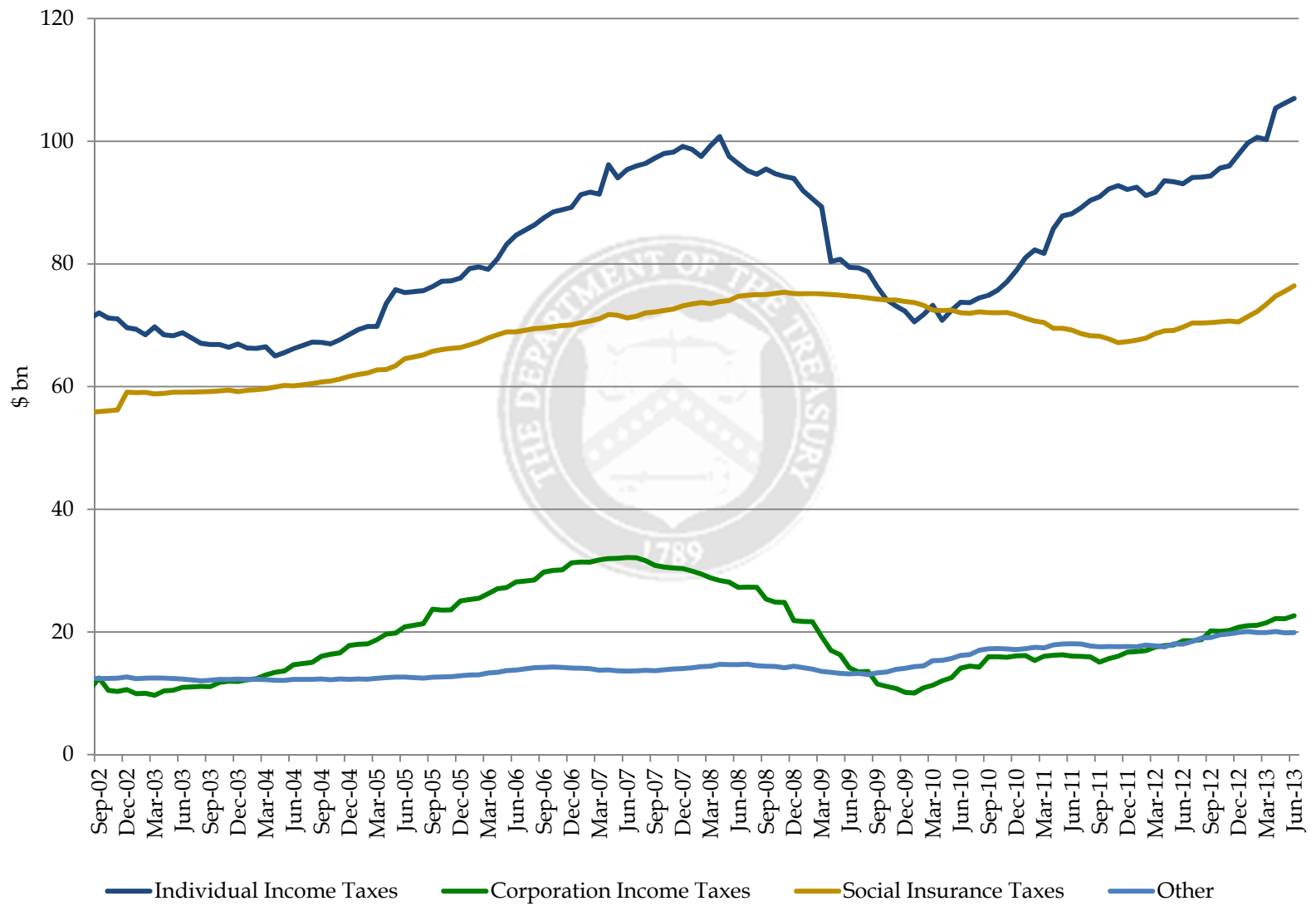


Quarterly Tax Receipts



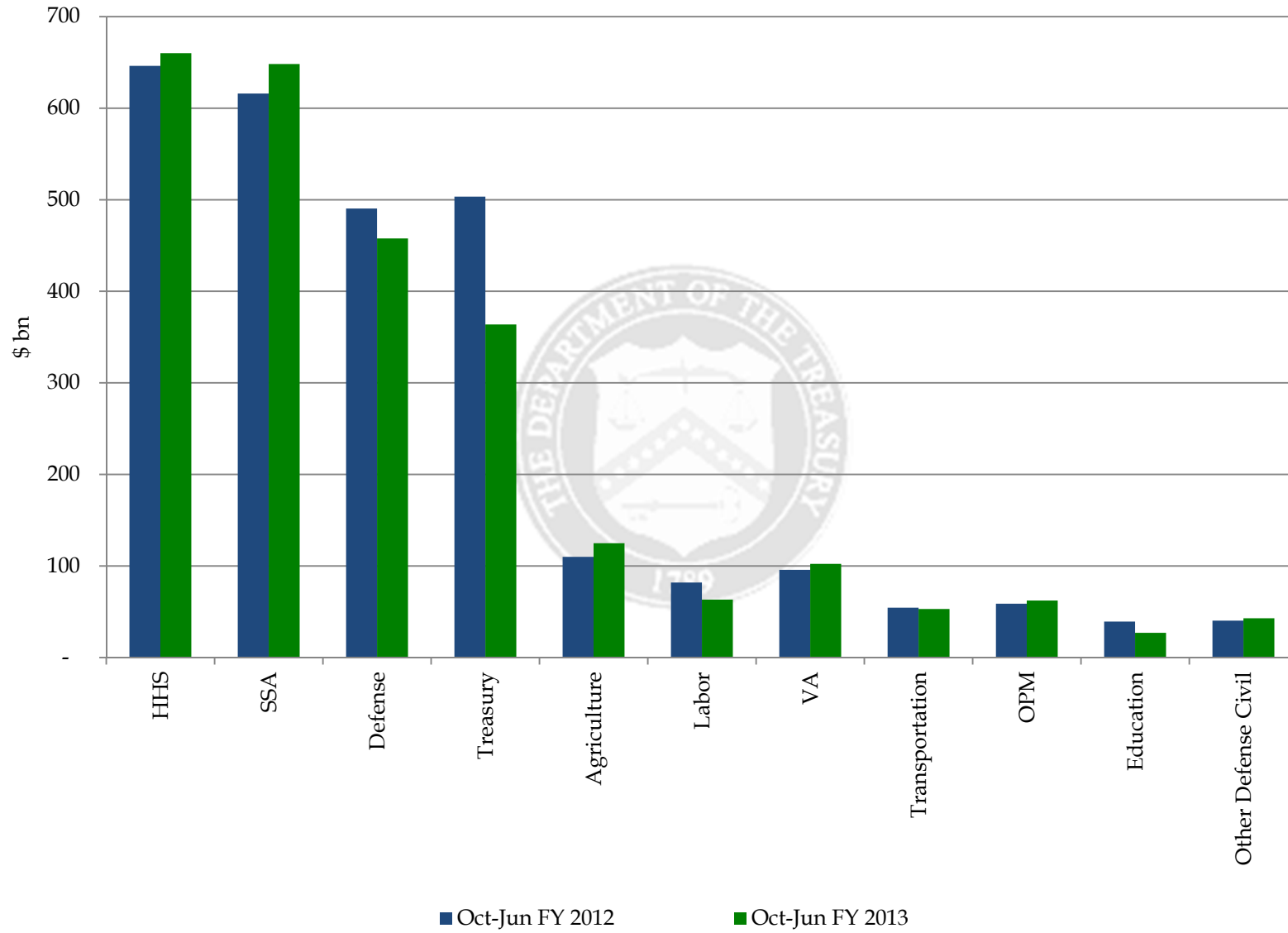
Sept. 2002 year over year % change data point excluded from corporate taxes due to 9-11 impacts on data.

Monthly Receipt Levels (12-Month Moving Average)

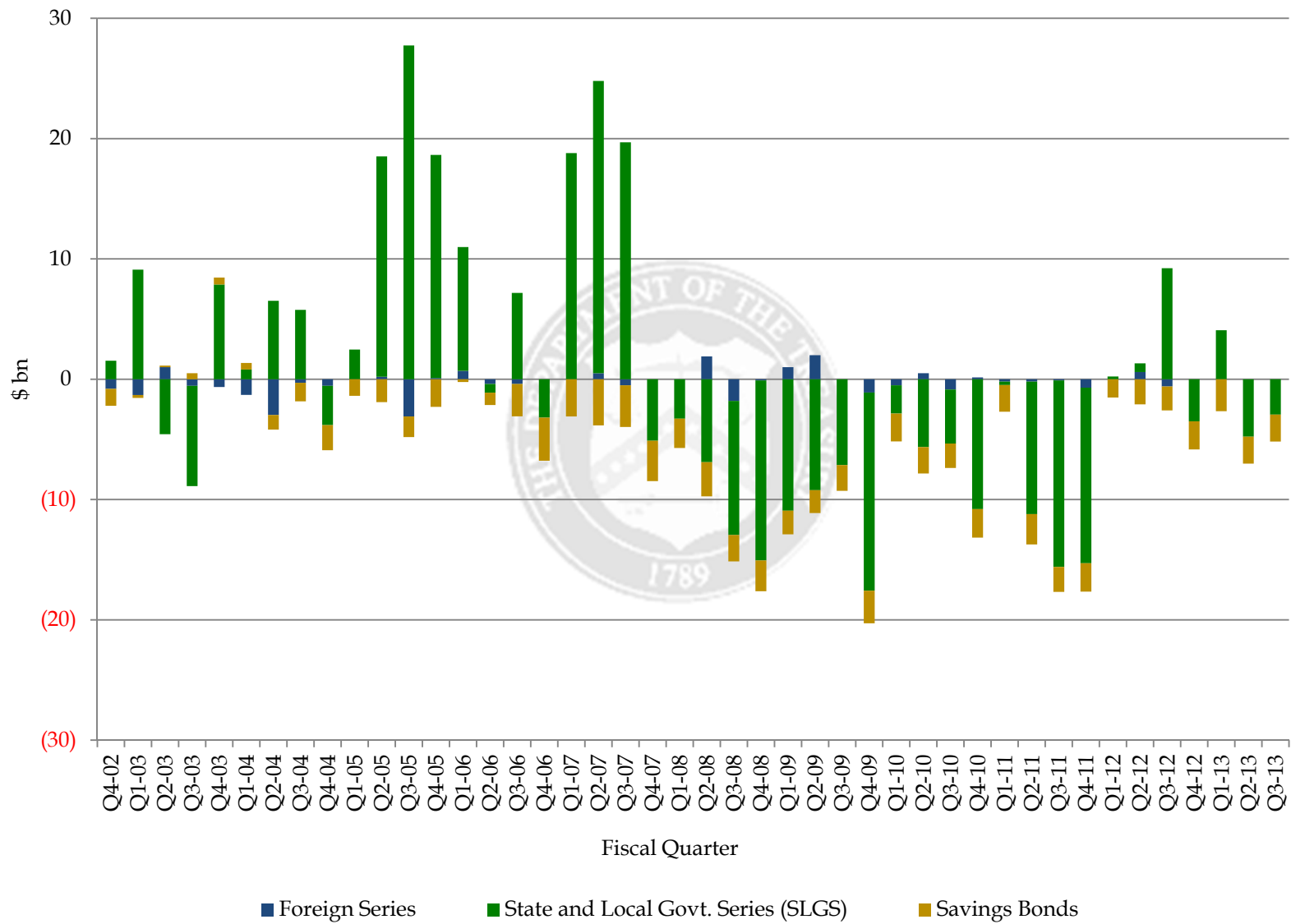


Individual Income Taxes include withheld and non-withheld. Social Insurance Taxes include FICA, SECA, RRTA, UTF deposits, FUTA and RUIA. Other includes excise taxes, estate and gift taxes, customs duties and miscellaneous receipts.

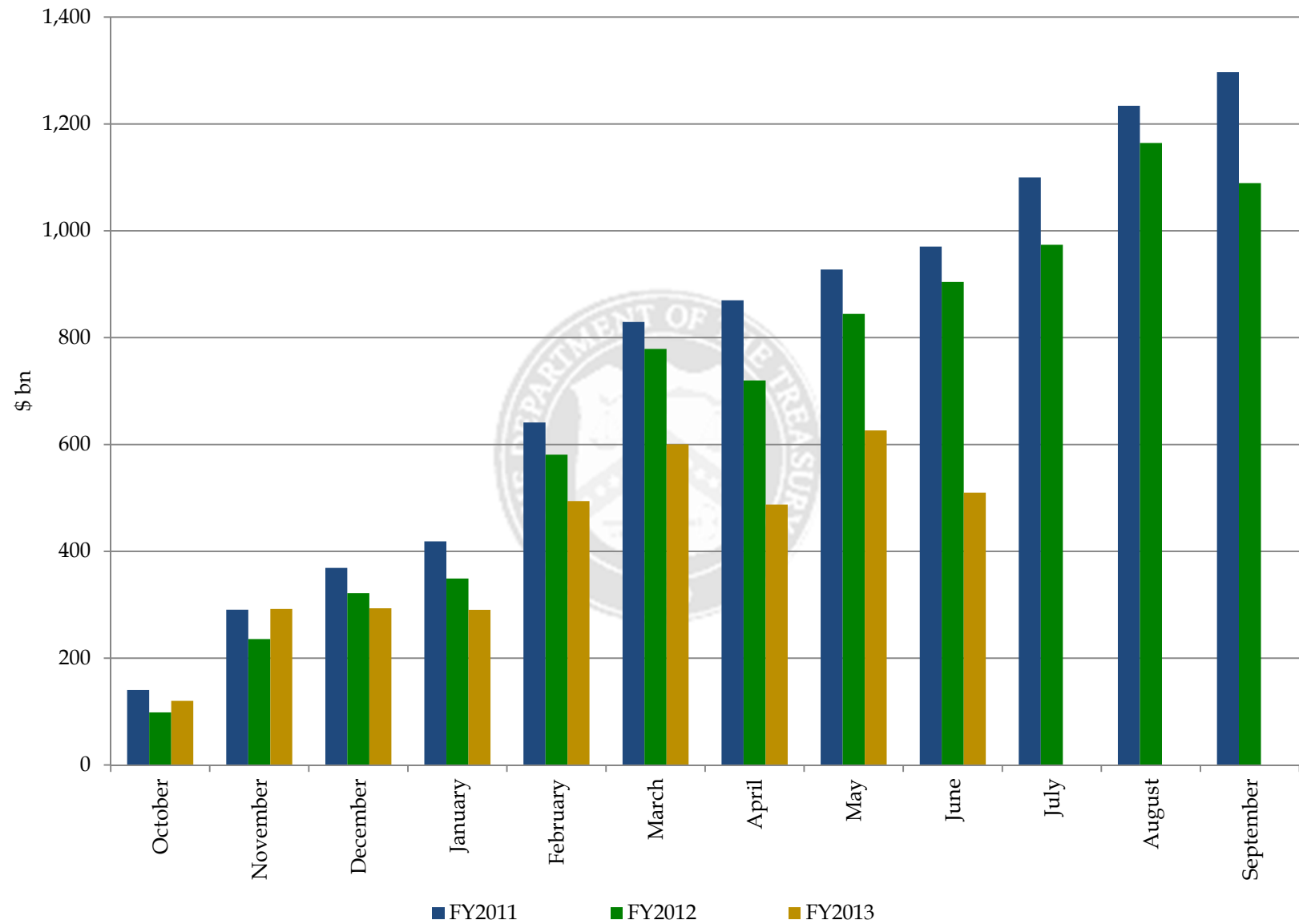
Eleven Largest Outlays



Treasury Net Nonmarketable Borrowing



Cumulative Budget Deficits by Fiscal Year



FY 2014-2016 Deficits and Net Marketable Borrowing Estimates

In \$ Billions

	Primary Dealers ¹	CBO ²	CBO's Estimate of the President's Budget ³	OMB ⁴
FY 2014 Deficit Estimate	627	560	675	750
FY 2015 Deficit Estimate	514	378	437	626
FY 2016 Deficit Estimate	506	432	413	578
FY 2014 Deficit Range	525-750			
FY 2015 Deficit Range	400-650			
FY 2016 Deficit Range	400-600			
FY 2014 Net Marketable Borrowing Estimate	677	649	754	874
FY 2015 Net Marketable Borrowing Estimate	566	471	530	787
FY 2016 Net Marketable Borrowing Estimate	568	510	497	736
FY 2014 Net Marketable Borrowing Range	482-825			
FY 2015 Net Marketable Borrowing Range	324-800			
FY 2016 Net Marketable Borrowing Range	445-750			
Estimates as of:	Jul-13	May-13	May-13	Jul-13

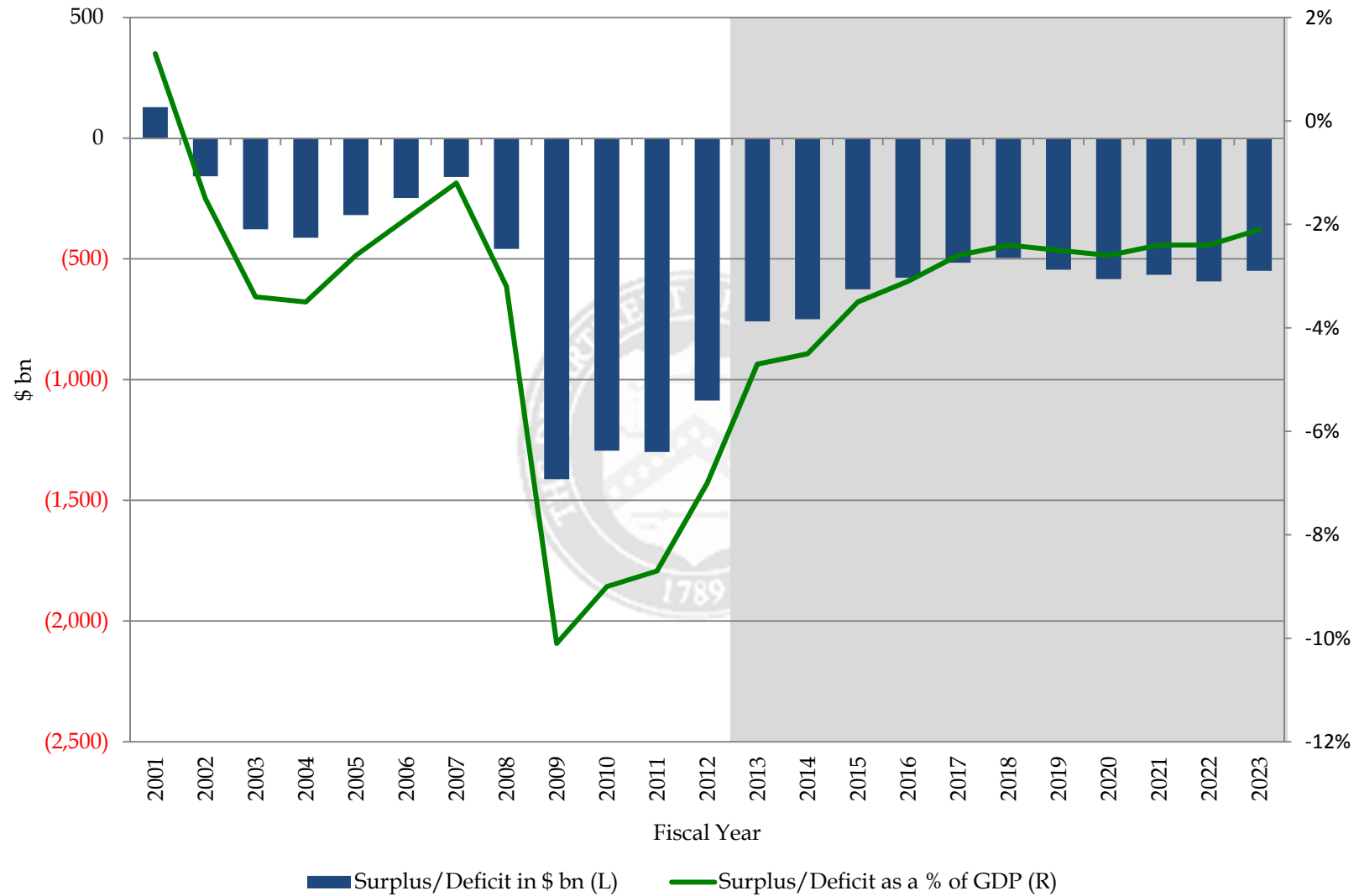
¹Based on primary dealer feedback on July 22, 2013. Estimates above are averages.

²Table 1 and 5 from "Updated Budget Projections: Fiscal Years 2013 to 2023"

³Table 1 and 2 of the "An Analysis of the President's 2014 Budget"

⁴Table S-5 and S-11 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government"

Budget Surplus/Deficit



OMB's Projection

Projections are from Table S-5 and S-6 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government."

Section II: Financing



Sources of Financing in Fiscal Year 2013 Q3

April-June 2013	
Net Bill Issuance	(221)
Net Coupon Issuance	210
Subtotal: Net Marketable Borrowing	(11)
Ending Cash Balance	135
Beginning Cash Balance	79
Subtotal: Change in Cash Balance	56
Net Implied Funding for FY 2013 Q3*	(66)

Issuance	April-June 2013 Bill Issuance			Fiscal Year to Date		
	Gross	Maturing	Net	Gross	Maturing	Net
4-Week	460	515	(55)	1,500	1,535	(35)
13-Week	404	437	(33)	1,257	1,261	(4)
26-Week	340	364	(24)	1,082	1,083	(1)
52-Week	98	102	(4)	248	254	(6)
CMBs	30	135	(105)	240	240	0
Bill Subtotal	1,332	1,553	(221)	4,327	4,373	(46)

Issue	April-June 2013 Coupon Issuance			Fiscal Year to Date		
	Gross	Maturing	Net	Gross	Maturing	Net
2-Year	105	112	(7)	315	330	(15)
3-Year	96	120	(24)	288	371	(83)
5-Year	105	62	43	315	158	157
7-Year	87	0	87	261	0	261
10-Year	66	18	48	198	56	142
30-Year	42	0	42	126	0	126
5-Year TIPS	18	16	2	32	16	16
10-Year TIPS	13	0	13	54	0	54
30-Year TIPS	7	0	7	23	0	23
Coupon Subtotal	539	329	210	1,612	932	680

Total	1,871	1,882	(11)	5,939	5,305	634
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*Assumes an end-of-June 2013 cash balance of \$79 billion versus a beginning-of-April 2013 cash balance of \$79 billion. By keeping the cash balance constant, Treasury arrives at the net implied funding amount.

Financing Estimates released by the Treasury can be found via the following url: <http://www.treasury.gov/resource-center/data-chart-center/quarterly-refunding/Pages/Latest.aspx>

Sources of Financing in Fiscal Year 2013 Q4 Assuming Constant Issuance Sizes as of 6/28/2013

July-September 2013	
Assuming Constant Issuance Sizes as of 6/28/2013*:	
Net Bill Issuance	(72)
Net Coupon Issuance	299
Subtotal: Net Marketable Borrowing	227
Treasury Announced Estimate: Net Marketable Borrowing**	209
Implied: Decrease In FY 2013 Q4 Net Issuances	(18)

Issuance	July-September 2013 Bill Issuance			Fiscal Year to Date		
	Gross	Maturing	Net	Gross	Maturing	Net
4-Week	390	395	(5)	1,890	1,930	(40)
13-Week	390	404	(14)	1,647	1,665	(18)
26-Week	325	378	(53)	1,407	1,461	(54)
52-Week	75	75	(0)	323	329	(6)
CMBs	0	0	0	240	240	0
Bill Subtotal	1,180	1,252	(72)	5,507	5,625	(118)

Issue	July-September 2013 Coupon Issuance			Fiscal Year to Date		
	Gross	Maturing	Net	Gross	Maturing	Net
2-Year	140	108	32	455	439	16
3-Year	96	104	(8)	384	476	(92)
5-Year	140	73	67	455	232	223
7-Year	116	0	116	377	0	377
10-Year	66	34	32	264	89	175
30-Year	42	0	42	168	0	168
5-Year TIPS	16	0	16	48	16	32
10-Year TIPS	28	25	3	82	25	57
30-Year TIPS	0	0	0	23	0	23
Coupon Subtotal	644	345	299	2,256	1,277	979

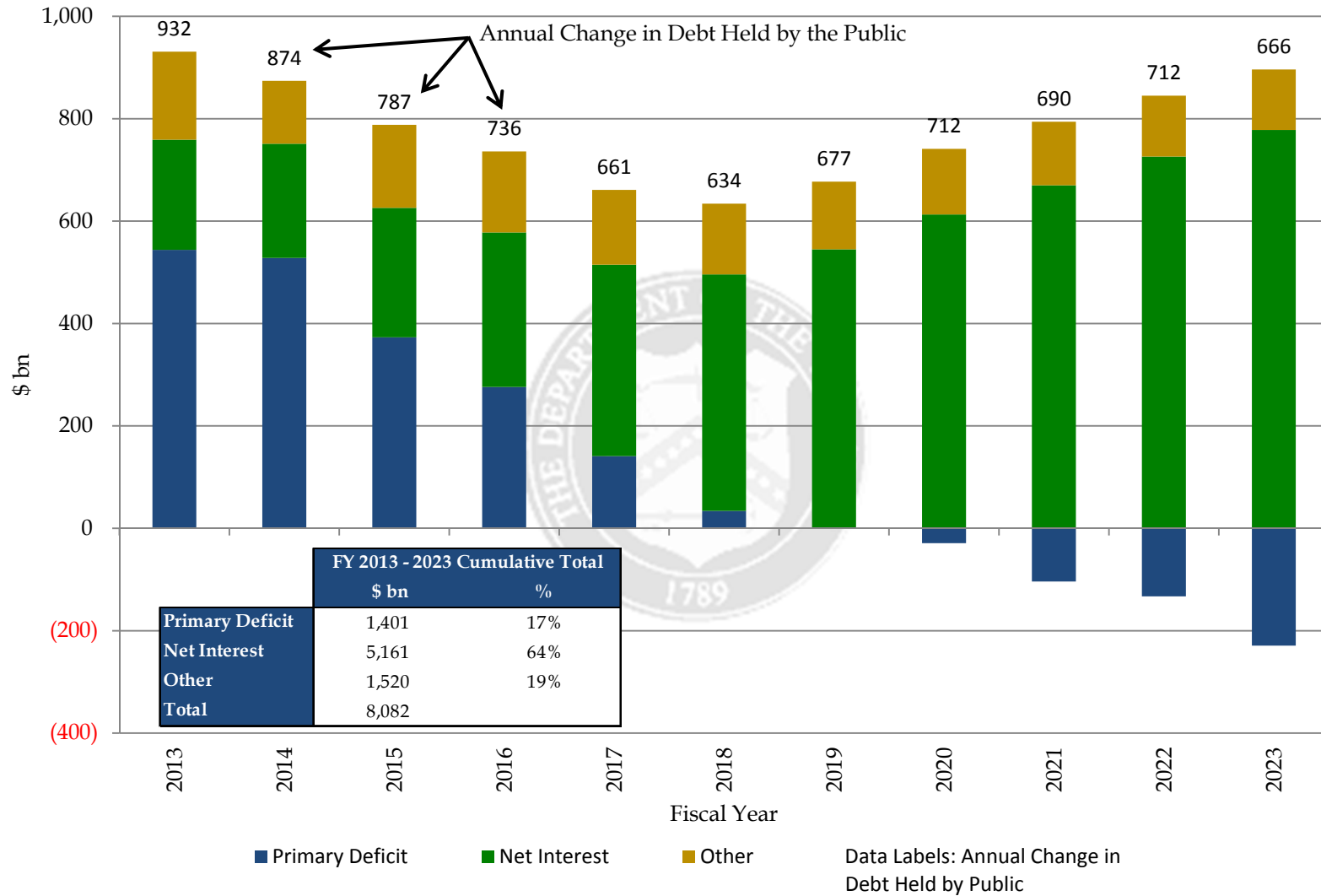
Total	1,824	1,597	227	7,763	6,902	861
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*Keeping issuance sizes and patterns, as of 6/28/2013, constant for all securities.

**Assumes an end-of-September 2013 cash balance of \$95 billion versus a beginning-of-July 2013 cash balance of \$135 billion.

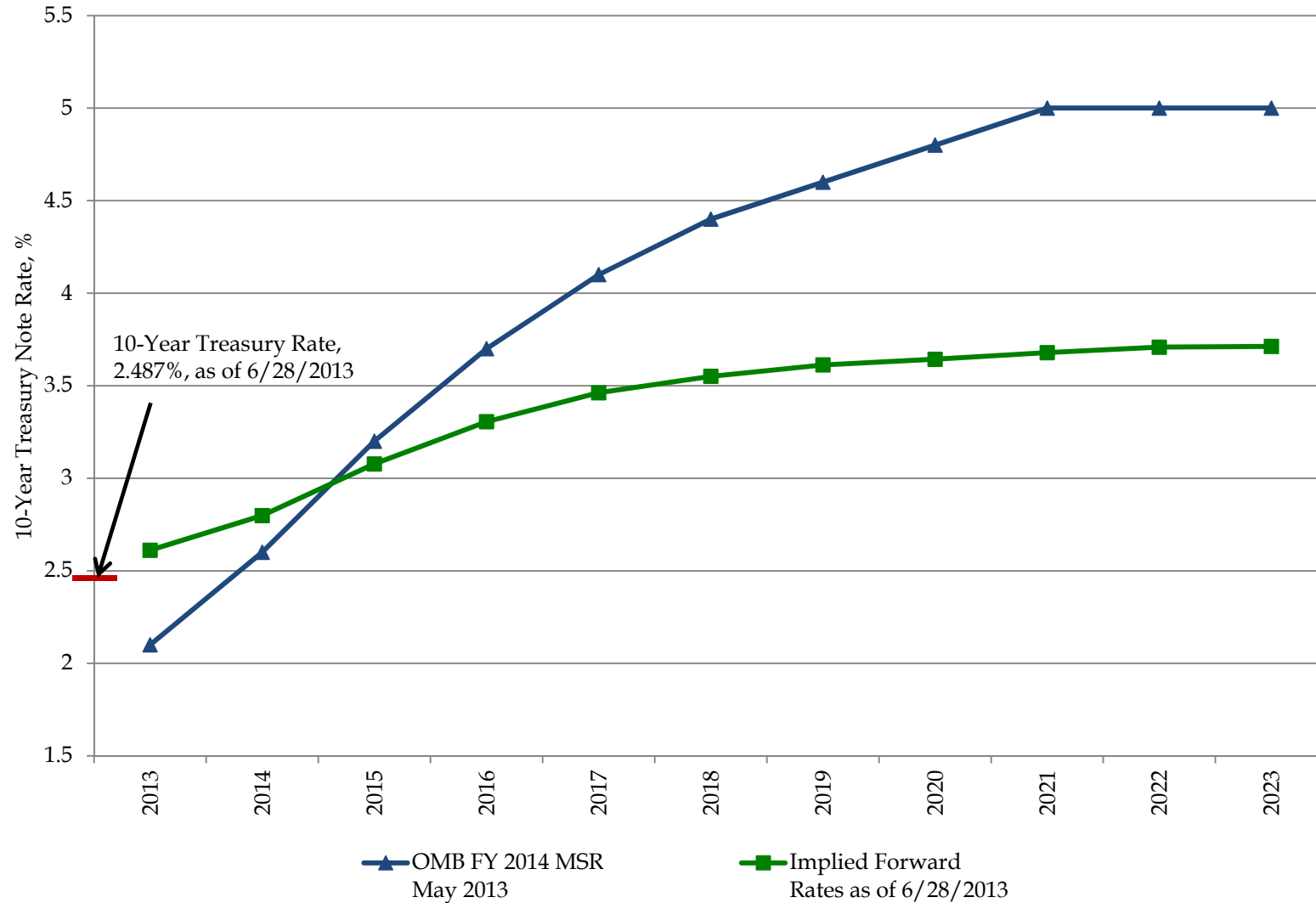
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OMB's Projections of Borrowing from the Public



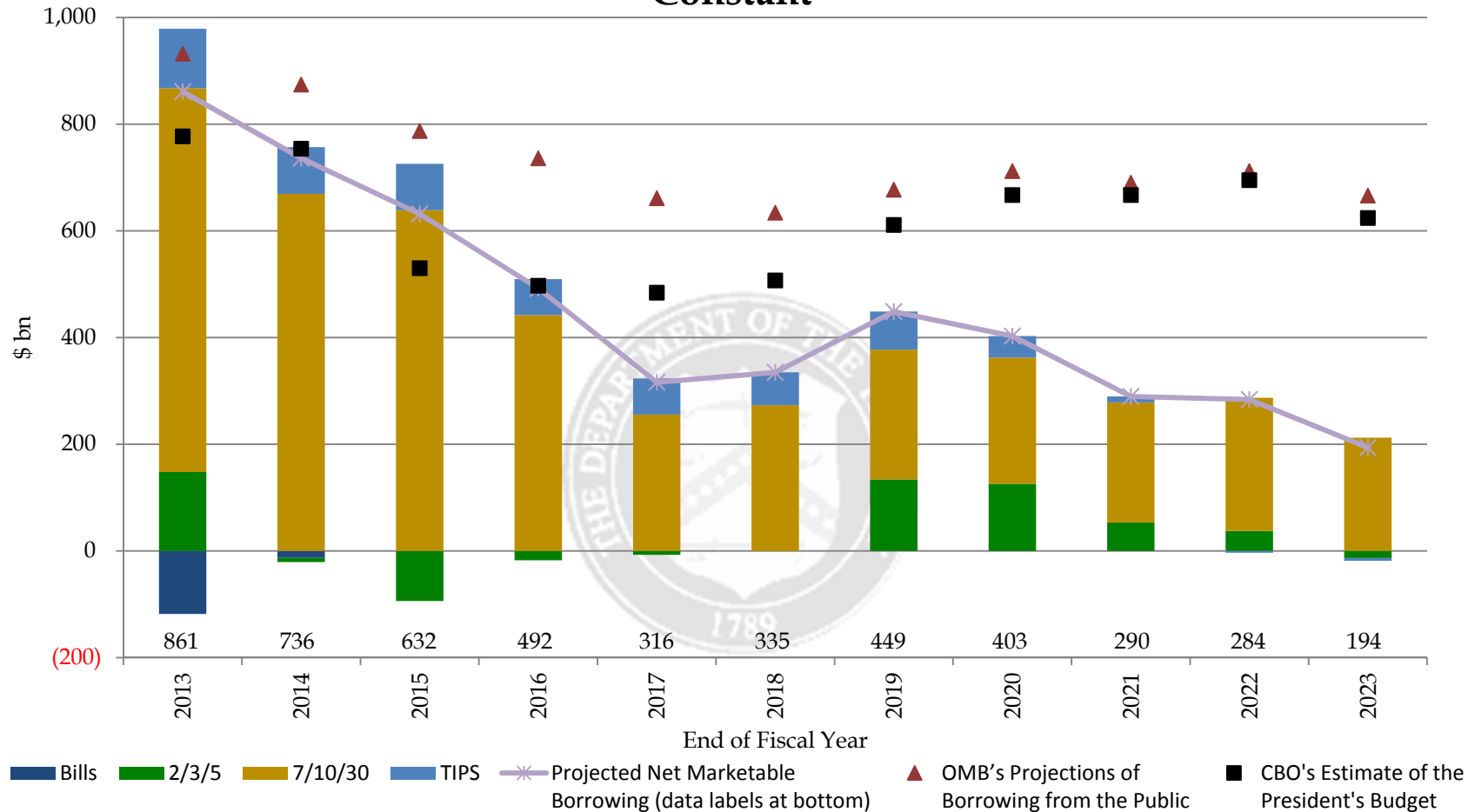
OMB's projections of borrowing from the public are from Table S-11 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government." Data labels represent the change in debt held by the public in \$ billions. "Other" represents borrowing from the public to provide direct and guaranteed loans, in addition to TARP activity. Data labels represent the annual change in debt held by the public.

Interest Rate Assumptions: 10-Year Treasury Notes



OMB's economic assumption of the 10-year Treasury note rates were developed in late May 2013 and are from the Table 2 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government." The implied 10-Year Treasury note forward rates are the averages for each fiscal year.

Projected Net Borrowing Assuming Future Issuance Remains Constant



Portfolio & SOMA holdings as of 6/28/2013 and estimated projections of the Large Scale Asset Purchase program, announced on 12/12/2012 by the Federal Reserve, assumed to last until June 2014 with SOMA redemptions until December 2018. These assumptions are based on the Federal Reserve's June 2013 primary dealer survey. Assumes issuance sizes for Bills, Nominal Coupons and TIPS are unchanged from 6/28/2013 levels. The principal on the TIPS securities were accreted to each projection date based on market ZCIS levels. No attempt was made to match future financing needs. OMB's projections of borrowing from the public are from Table S-11 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government." CBO's estimate of the borrowing from the public are from Table 2 of the "An Analysis of the President's 2014 Budget."

Data labels represent historical net marketable borrowing and projected net borrowing assuming future issuance remains constant at current sizes. See table on the following page for details.

Historical Net Marketable Borrowing and Projected Net Borrowing* Assuming Future Issuance Remains Constant, \$ Billion

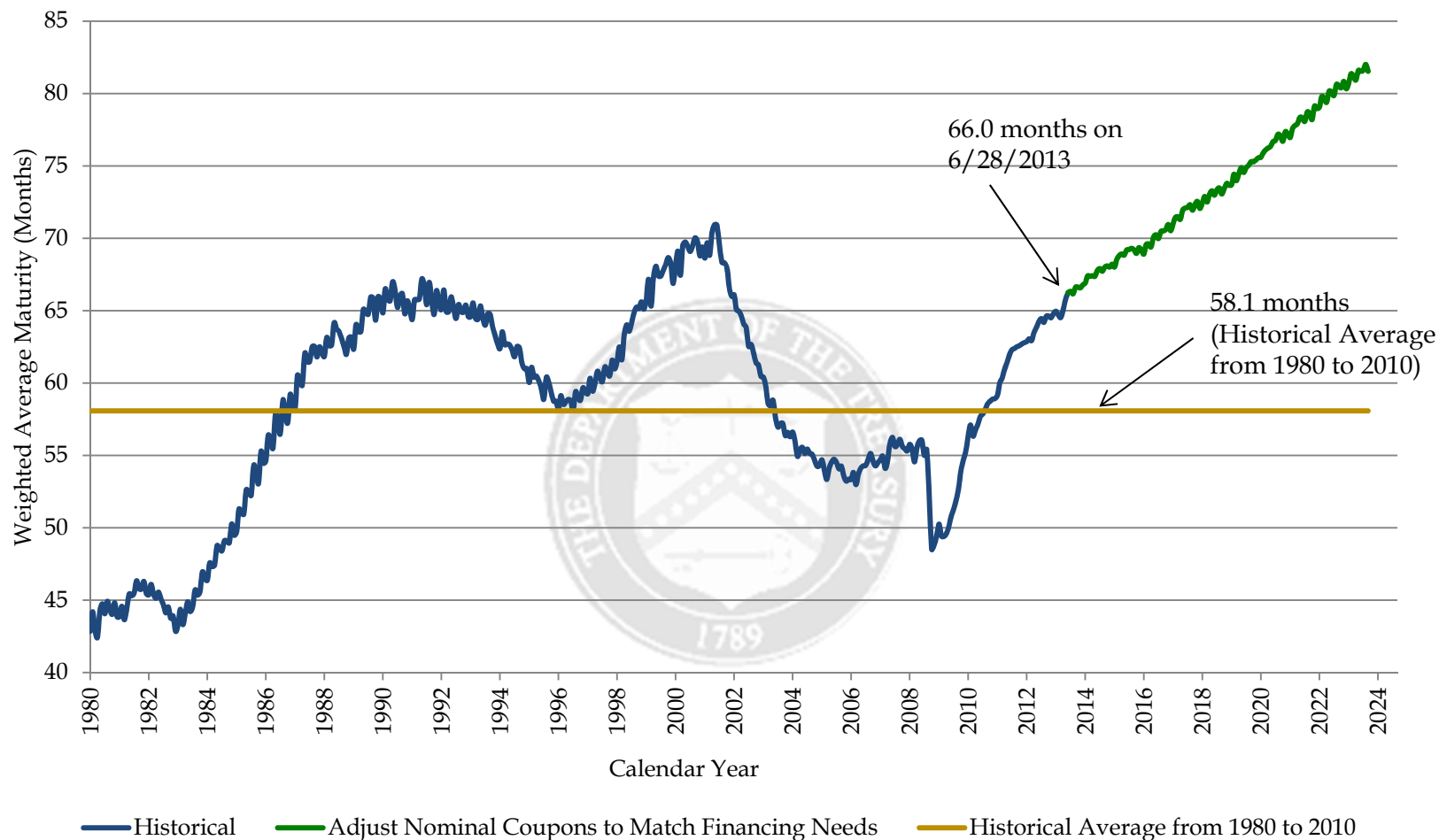
End of Fiscal Year	Bills	2/3/5	7/10/30	TIPS	Historical Net Marketable Borrowing/Projected Net Borrowing Capacity	OMB's Projections of Borrowing from the Public	CBO's Estimate of the President's Budget
2009	503	732	514	38	1,786		
2010	(204)	869	783	35	1,483		
2011	(311)	576	751	88	1,104		
2012	139	148	738	90	1,115		
2013	(118)	148	720	111	861	932	777
2014	(13)	(8)	669	88	736	874	754
2015	0	(94)	639	87	632	787	530
2016	0	(18)	442	67	492	736	497
2017	0	(7)	256	68	316	661	484
2018	0	0	273	62	335	634	507
2019	0	134	243	71	449	677	611
2020	0	126	236	40	403	712	667
2021	0	54	225	11	290	690	667
2022	0	38	249	(3)	284	712	695
2023	0	(13)	212	(5)	194	666	624

Portfolio & SOMA holdings as of 6/28/2013 and estimated projections of the Large Scale Asset Purchase program, announced on 12/12/2012 by the Federal Reserve, assumed to last until June 2014 with SOMA redemptions until December 2018. These assumptions are based on the Federal Reserve's June 2013 primary dealer survey. Assumes issuance sizes for Bills, Nominal Coupons and TIPS are unchanged from 6/28/2013 levels. The principal on the TIPS securities were accreted to each projection date based on market ZCIS levels. No attempt was made to match future financing needs. OMB's projections of borrowing from the public projections are from Table S-11 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government." CBO's estimate of the borrowing from the public are from Table 2 of the "An Analysis of the President's 2014 Budget."

Section III: Portfolio Metrics

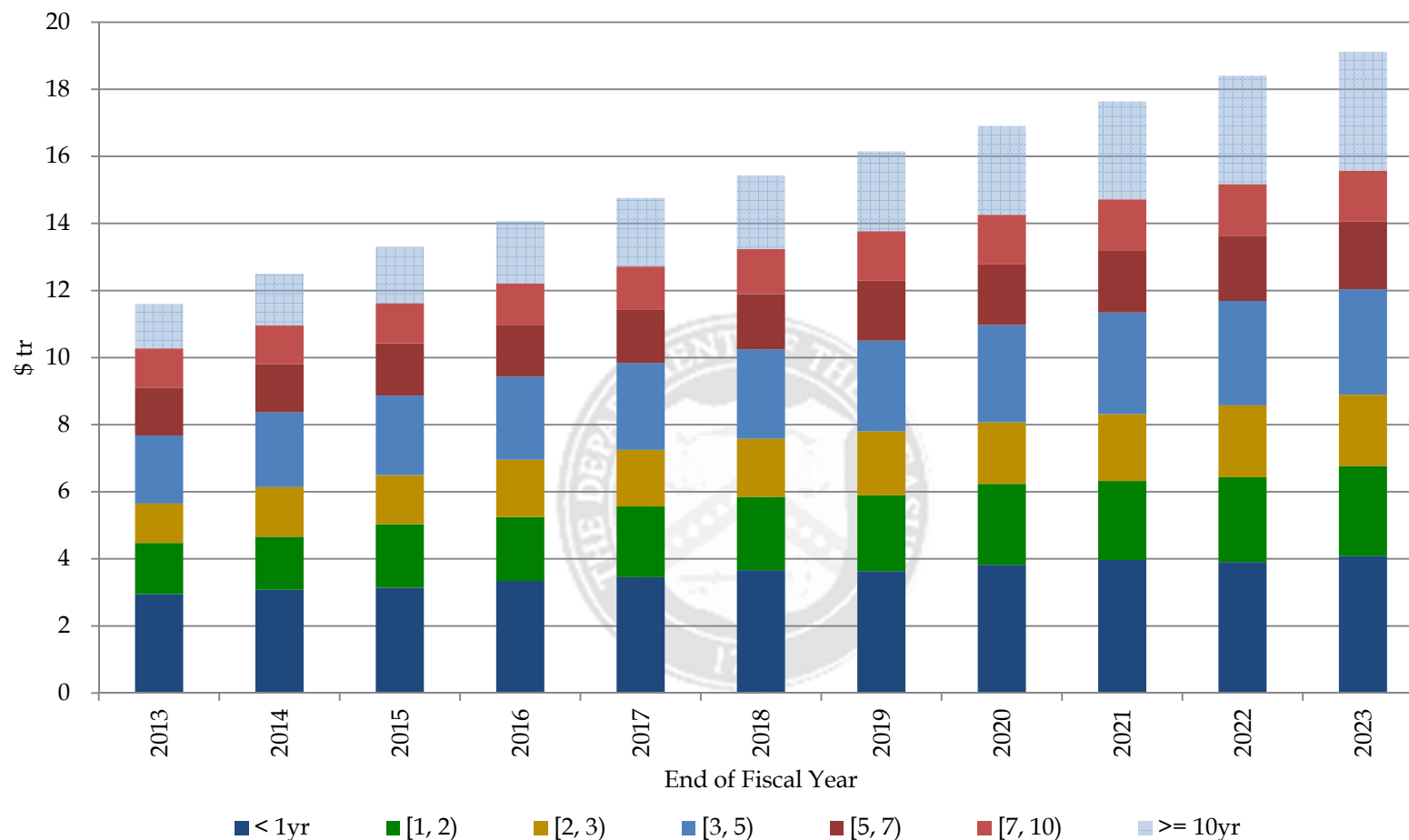


Weighted Average Maturity of Marketable Debt Outstanding



Portfolio & SOMA holdings as of 6/28/2013 and estimated projections of the Large Scale Asset Purchase program, announced on 12/12/2012 by the Federal Reserve, assumed to last until June 2014 with SOMA redemptions until December 2018. These assumptions are based on the Federal Reserve's June 2013 primary dealer survey. 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 were accreted to each projection date based on market ZCIS levels. OMB's projections of borrowing from the public projections are from Table S-11 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government." 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, \$ Trillion



Portfolio & SOMA holdings as of 6/28/2013 and estimated projections of the Large Scale Asset Purchase program, announced on 12/12/2012 by the Federal Reserve, assumed to last until June 2014 with SOMA redemptions until December 2018. These assumptions are based on the Federal Reserve's June 2013 primary dealer survey. 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 were accreted to each projection date based on market ZCIS levels. OMB's projections of borrowing from the public projections are from Table S-11 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government." 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 the following page for details.

Maturity distribution by original issuance type and term can be found in the appendix (slide 43).

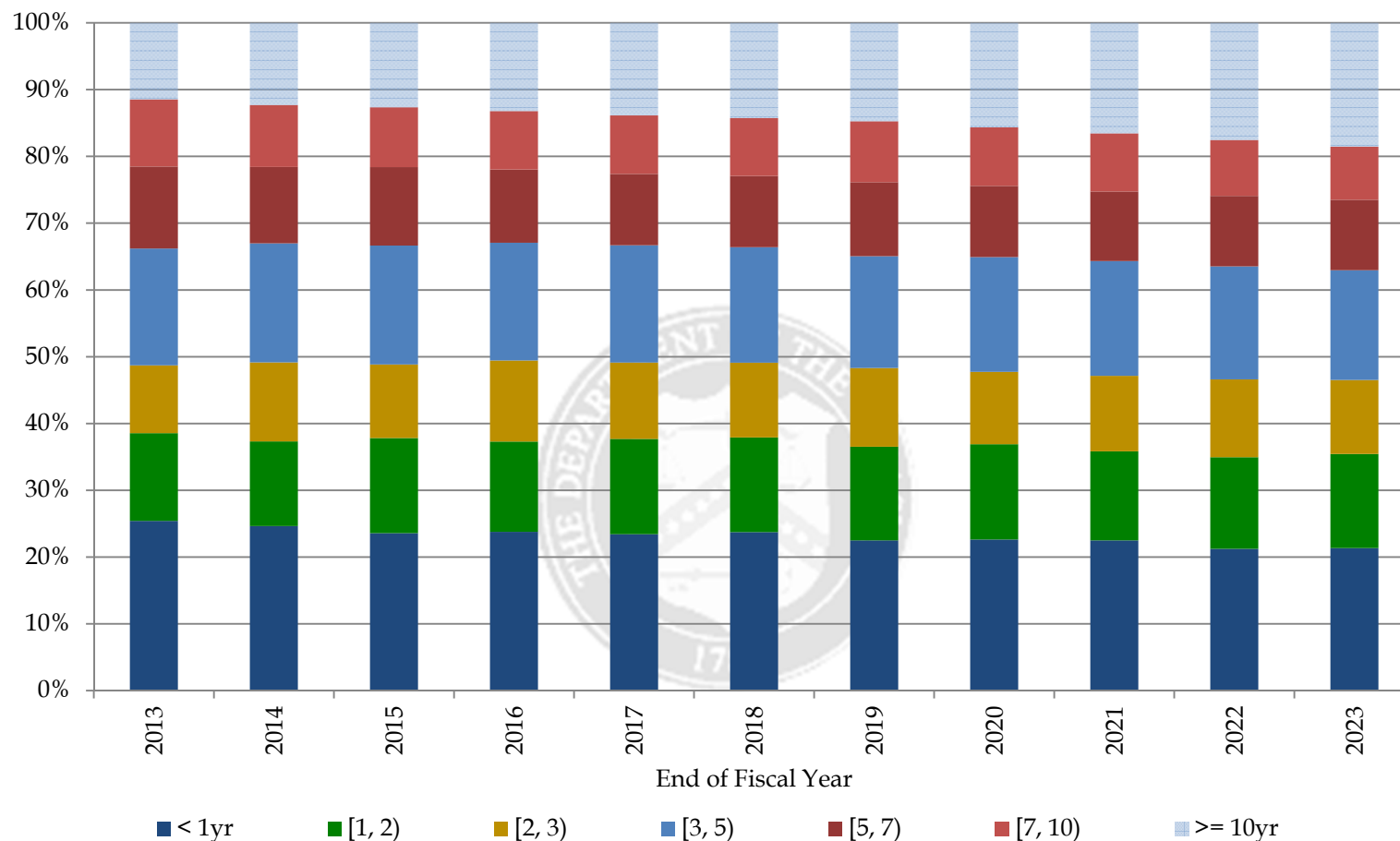
Recent and Projected Maturity Profile, \$ Billion

End of Fiscal Year	< 1yr	[1, 2)	[2, 3)	[3, 5)	[5, 7)	[7, 10)	>= 10yr	Total	[0, 5)
2007	1,581	663	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	529	672	695	6,998	5,101
2010	2,563	1,141	869	1,299	907	856	853	8,488	5,872
2011	2,620	1,272	1,002	1,516	1,136	1,053	1,017	9,616	6,410
2012	2,889	1,395	1,109	1,847	1,214	1,108	1,181	10,742	7,239
2013	2,947	1,525	1,177	2,030	1,425	1,165	1,331	11,601	7,680
2014	3,078	1,585	1,478	2,230	1,429	1,159	1,538	12,496	8,370
2015	3,138	1,894	1,466	2,372	1,561	1,192	1,683	13,305	8,869
2016	3,344	1,903	1,709	2,477	1,543	1,232	1,859	14,068	9,434
2017	3,456	2,108	1,686	2,593	1,578	1,294	2,045	14,761	9,844
2018	3,662	2,188	1,729	2,670	1,645	1,338	2,200	15,432	10,248
2019	3,634	2,264	1,903	2,707	1,787	1,474	2,380	16,149	10,508
2020	3,825	2,412	1,834	2,904	1,803	1,479	2,648	16,904	10,974
2021	3,967	2,353	1,994	3,032	1,837	1,536	2,921	17,641	11,347
2022	3,908	2,525	2,142	3,117	1,941	1,536	3,233	18,401	11,692
2023	4,081	2,694	2,120	3,141	2,018	1,518	3,547	19,119	12,035

Portfolio & SOMA holdings as of 6/28/2013 and estimated projections of the Large Scale Asset Purchase program, announced on 12/12/2012 by the Federal Reserve, assumed to last until June 2014 with SOMA redemptions until December 2018. These assumptions are based on the Federal Reserve's June 2013 primary dealer survey. 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 were accreted to each projection date based on market ZCIS levels. OMB's projections of borrowing from the public projections are from Table S-11 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government." 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.

Maturity distribution by original issuance type and term can be found in the appendix (slide 43).

Projected Maturity Profile, Percent



Portfolio & SOMA holdings as of 6/28/2013 and estimated projections of the Large Scale Asset Purchase program, announced on 12/12/2012 by the Federal Reserve, assumed to last until June 2014 with SOMA redemptions until December 2018. These assumptions are based on the Federal Reserve's June 2013 primary dealer survey. 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 were accreted to each projection date based on market ZCIS levels. OMB's projections of borrowing from the public projections are from Table S-11 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government." 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 the following page for details.

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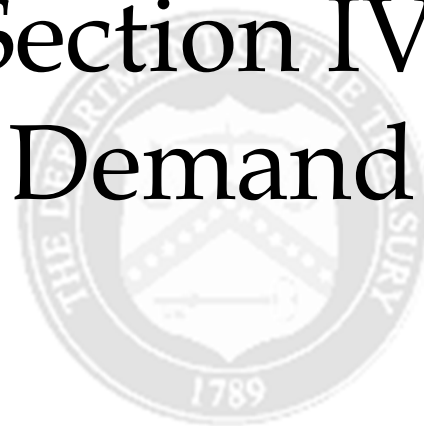
Recent and Projected Maturity Profile, Percent

End of Fiscal Year	< 1yr	[1, 2)	[2, 3)	[3, 5)	[5, 7)	[7, 10)	>= 10yr	[0, 3)	[0, 5)
2007	35.7%	15.0%	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%	7.6%	9.6%	9.9%	59.1%	72.9%
2010	30.2%	13.4%	10.2%	15.3%	10.7%	10.1%	10.0%	53.9%	69.2%
2011	27.2%	13.2%	10.4%	15.8%	11.8%	10.9%	10.6%	50.9%	66.7%
2012	26.9%	13.0%	10.3%	17.2%	11.3%	10.3%	11.0%	50.2%	67.4%
2013	25.4%	13.1%	10.1%	17.5%	12.3%	10.0%	11.5%	48.7%	66.2%
2014	24.6%	12.7%	11.8%	17.8%	11.4%	9.3%	12.3%	49.1%	67.0%
2015	23.6%	14.2%	11.0%	17.8%	11.7%	9.0%	12.6%	48.8%	66.7%
2016	23.8%	13.5%	12.1%	17.6%	11.0%	8.8%	13.2%	49.4%	67.1%
2017	23.4%	14.3%	11.4%	17.6%	10.7%	8.8%	13.9%	49.1%	66.7%
2018	23.7%	14.2%	11.2%	17.3%	10.7%	8.7%	14.3%	49.1%	66.4%
2019	22.5%	14.0%	11.8%	16.8%	11.1%	9.1%	14.7%	48.3%	65.1%
2020	22.6%	14.3%	10.8%	17.2%	10.7%	8.7%	15.7%	47.7%	64.9%
2021	22.5%	13.3%	11.3%	17.2%	10.4%	8.7%	16.6%	47.1%	64.3%
2022	21.2%	13.7%	11.6%	16.9%	10.5%	8.3%	17.6%	46.6%	63.5%
2023	21.3%	14.1%	11.1%	16.4%	10.6%	7.9%	18.6%	46.5%	62.9%

Portfolio & SOMA holdings as of 6/28/2013 and estimated projections of the Large Scale Asset Purchase program, announced on 12/12/2012 by the Federal Reserve, assumed to last until June 2014 with SOMA redemptions until December 2018. These assumptions are based on the Federal Reserve's June 2013 primary dealer survey. 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 were accreted to each projection date based on market ZCIS levels. OMB's projections of borrowing from the public projections are from Table S-11 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government." 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.

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Section IV: Demand



Summary Statistics for Fiscal Year 2013 Q3 Auctions

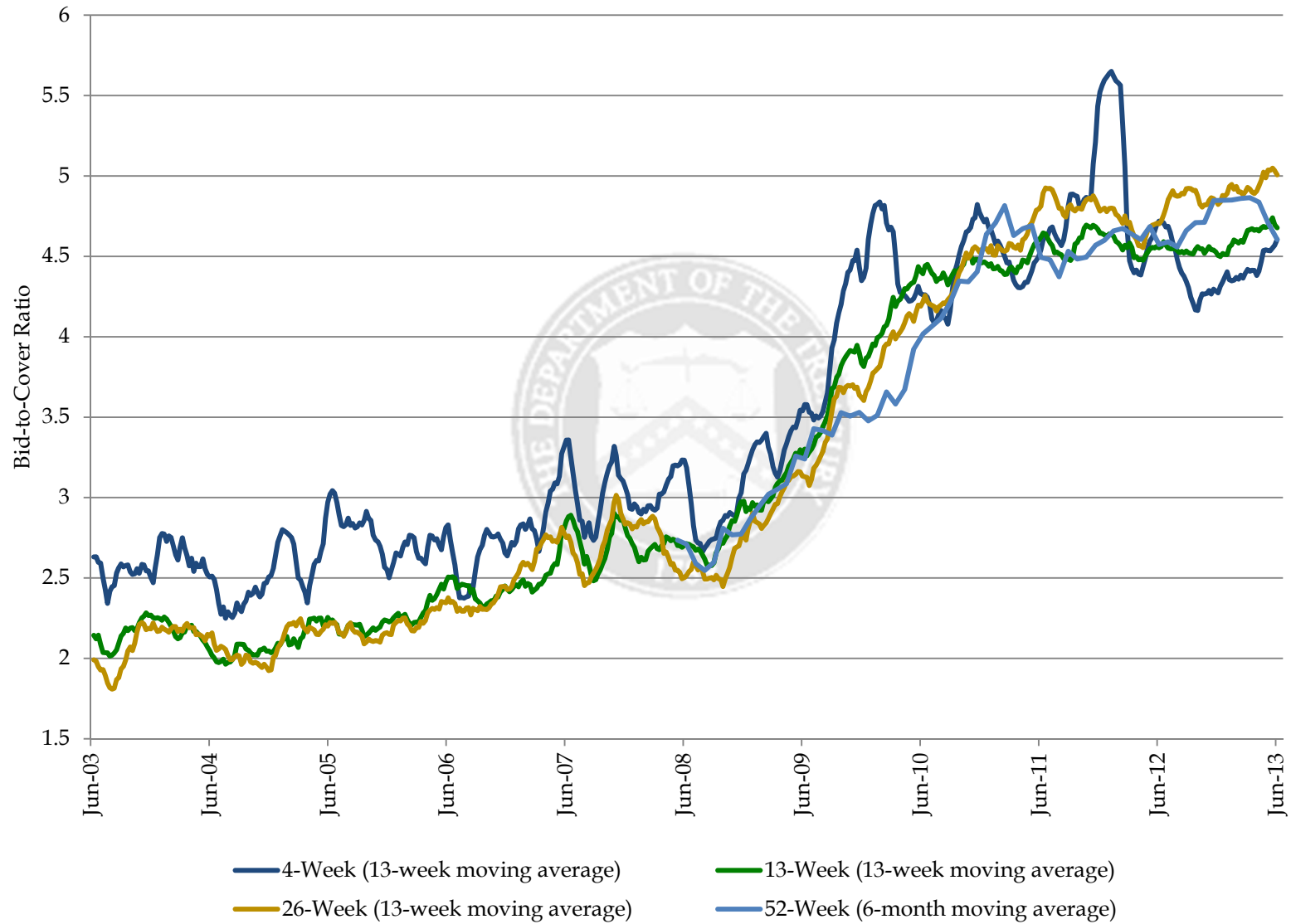
Security Type	Term	Stop Out Rate (%)*	Bid-to-Cover Ratio*	Competitive Awards (\$ bn)	% Primary Dealer*	% Direct*	% Indirect*	Non-Competitive Awards (\$ bn)	SOMA Add Ons (\$ bn)	10-Yr Equivalent (\$ bn)**
Bill	4-Week	0.043	4.5	499.5	66.7%	8.3%	25.0%	3.6	0.0	4.0
Bill	13-Week	0.054	4.7	461.9	76.3%	8.8%	14.8%	7.3	0.0	11.3
Bill	26-Week	0.088	5.0	385.6	62.3%	9.2%	28.4%	6.2	0.0	19.0
Bill	52-Week	0.137	4.6	121.3	59.7%	7.7%	32.6%	0.7	0.0	10.9
Bill	CMBs	0.050	4.3	30.0	89.0%	5.6%	5.4%	0.0	0.0	0.1
Coupon	2-Year	0.257	3.3	104.2	58.2%	20.7%	21.1%	0.5	0.0	15.6
Coupon	3-Year	0.426	3.2	95.6	59.3%	13.1%	27.6%	0.1	0.0	32.2
Coupon	5-Year	0.838	2.8	104.9	37.4%	18.0%	44.6%	0.1	0.0	38.2
Coupon	7-Year	1.300	2.7	87.0	41.5%	20.0%	38.5%	0.0	0.0	43.3
Coupon	10-Year	1.932	2.7	66.0	40.2%	19.1%	40.6%	0.0	0.0	66.9
Coupon	30-Year	3.102	2.5	42.0	48.5%	14.5%	37.0%	0.0	0.0	92.4
TIPS	5-Year	(1.311)	2.2	17.9	46.1%	7.8%	46.1%	0.1	0.0	10.1
TIPS	10-Year	(0.225)	2.5	13.0	30.9%	12.4%	56.8%	0.0	0.0	13.7
TIPS	30-Year	1.420	2.5	7.0	38.9%	0.4%	60.8%	0.0	0.0	20.7

Total Bills	0.066	4.7	1,498.3	68.4%	8.6%	23.0%	17.9	0.0	45.2
Total Coupons	1.053	2.9	499.6	48.0%	17.8%	34.2%	0.8	0.0	288.6
Total TIPS	(0.436)	2.4	37.9	39.6%	8.0%	52.4%	0.1	0.0	44.6

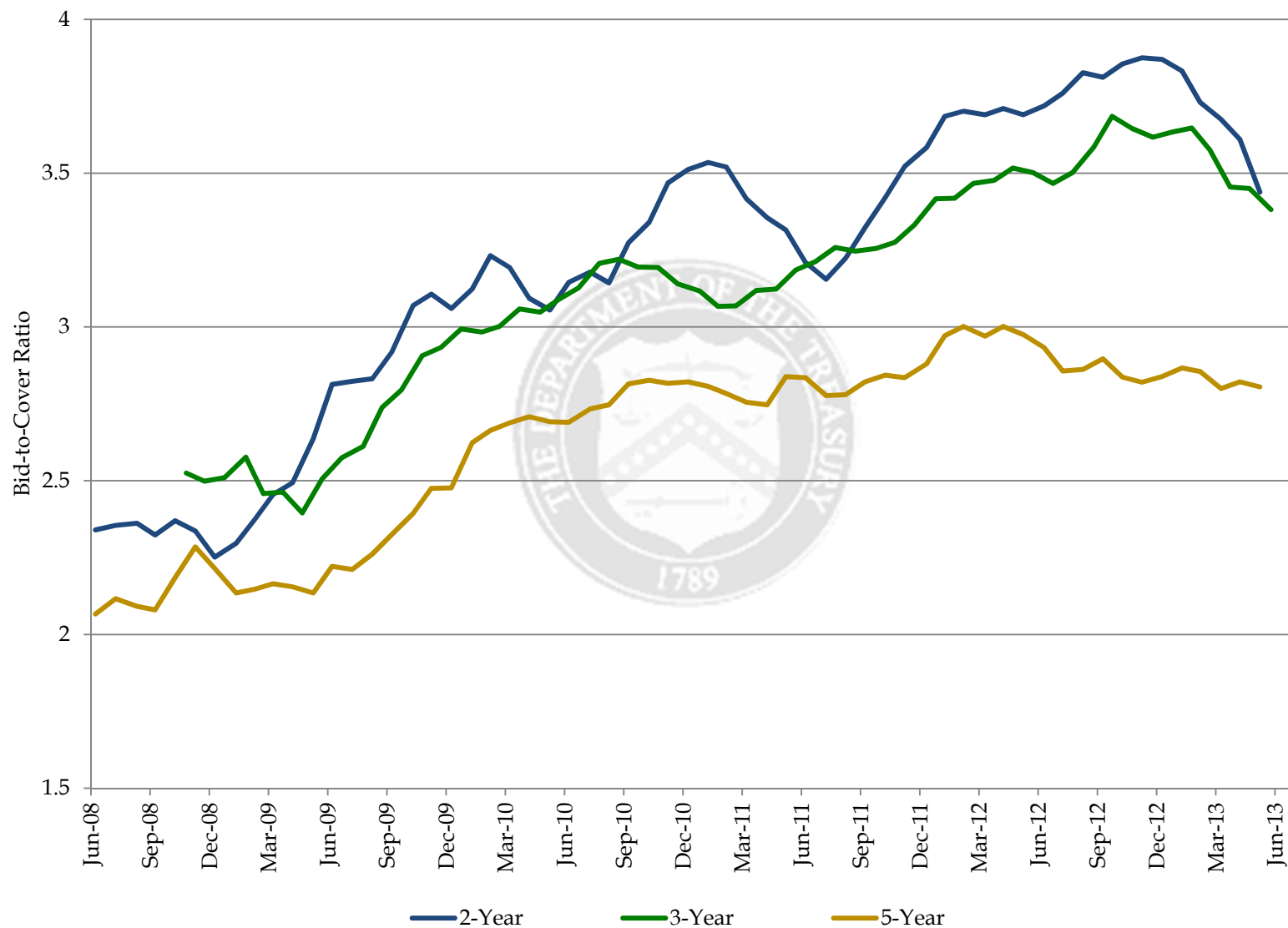
*Weighted averages of Competitive Awards.

**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.

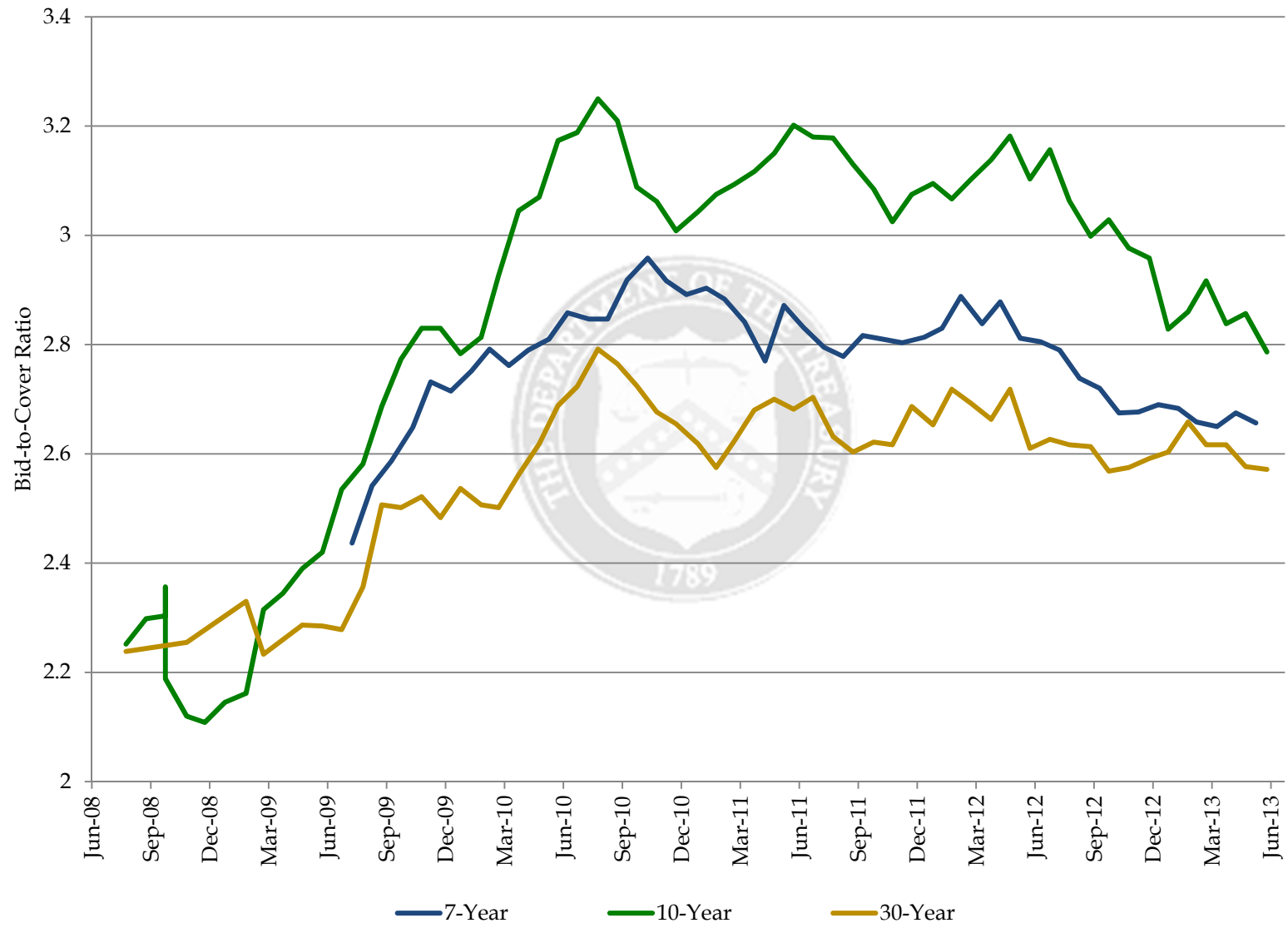
Bid-to-Cover Ratios for Treasury Bills



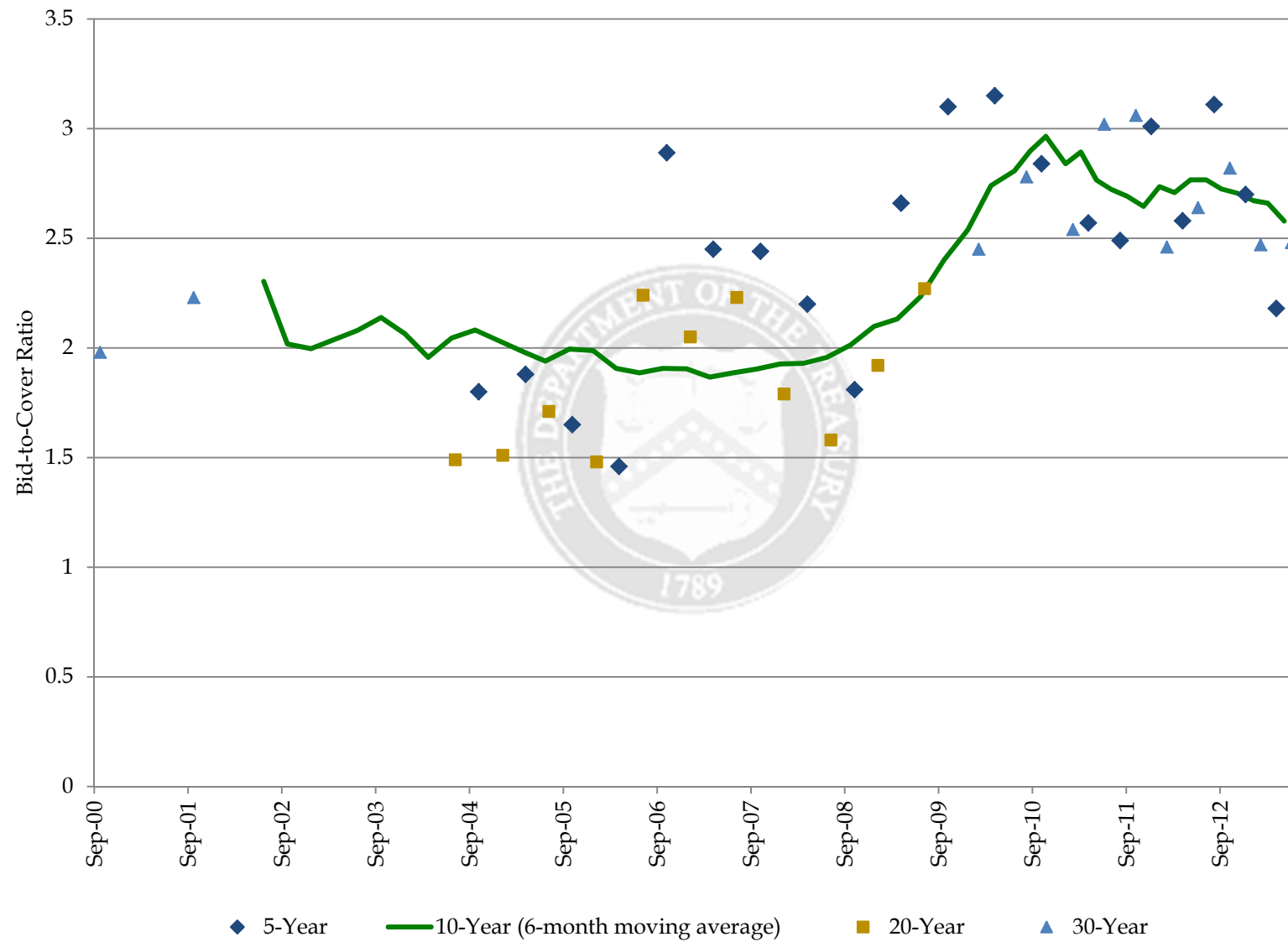
Bid-to-Cover Ratios for 2-, 3-, and 5-Year Nominal Securities (6-Month Moving Average)



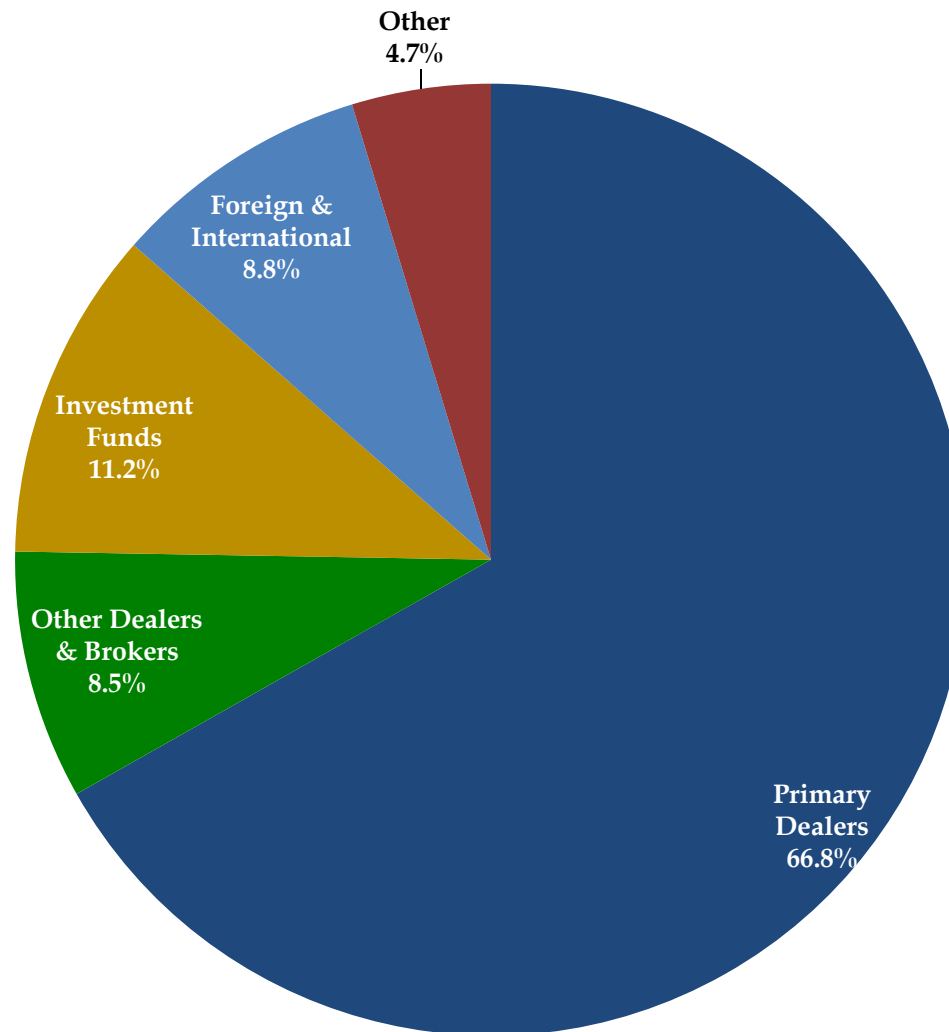
Bid-to-Cover Ratios for 7-, 10-, and 30-Year Nominal Securities (6-Month Moving Average)



Bid-to-Cover Ratios for TIPS

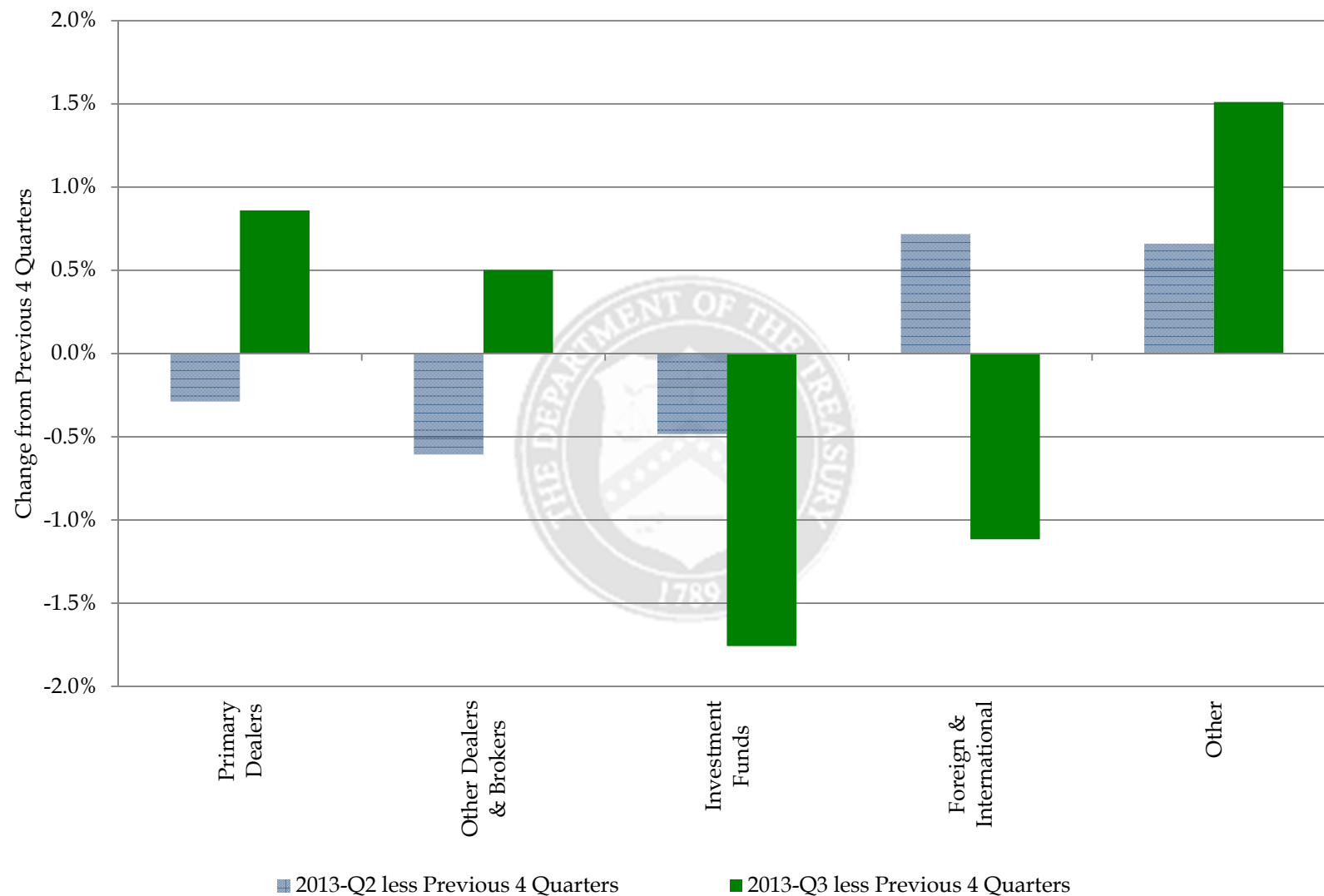


Investor Class Auction Awards: Bills Fiscal Year 2013-Q3



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

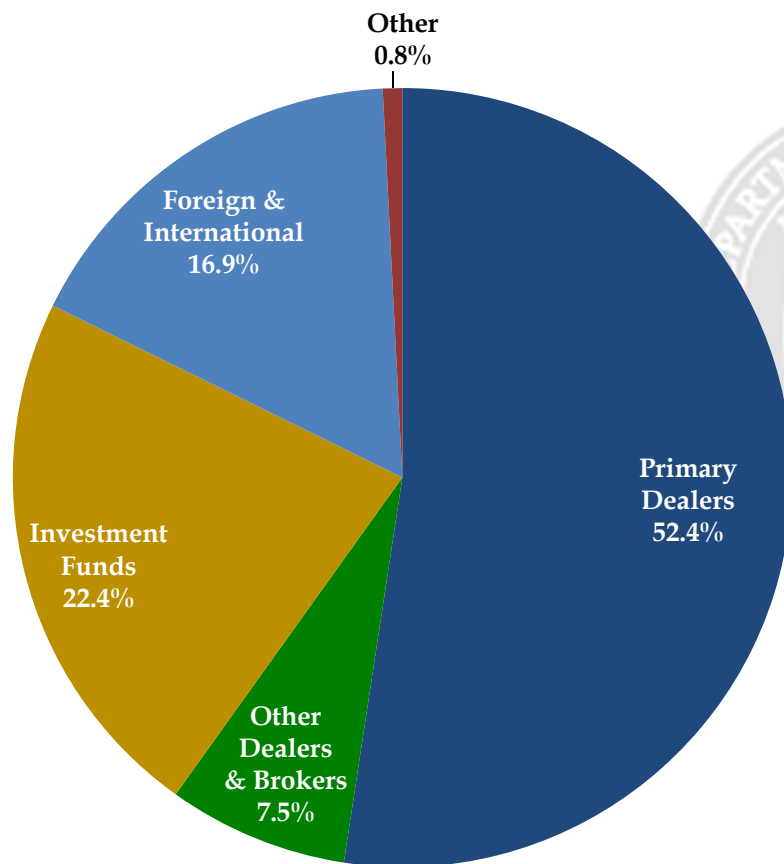
Change in Demand Over the Last Year in Bills, Auction Awards by Investor Class



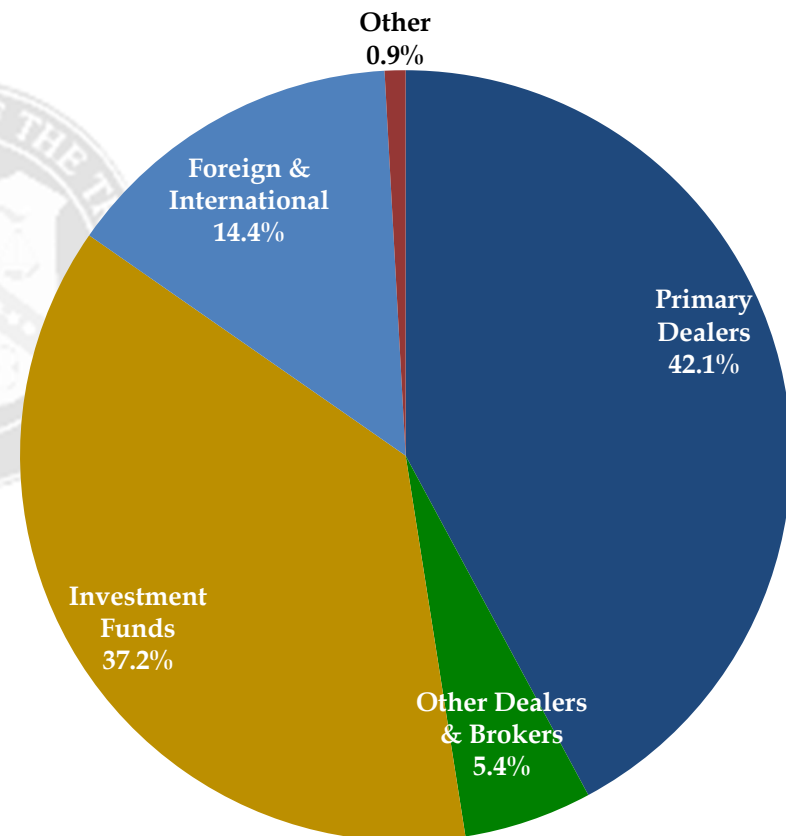
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance. These results may include seasonal effects.

"Previous 4 Quarters" = Total Awards for the previous 4 quarters divided by Total Auction Awards of the previous 4 quarters

**Investor Class Auction Awards:
2-, 3-, and 5-Year Nominal
Securities
Fiscal Year 2013-Q3**

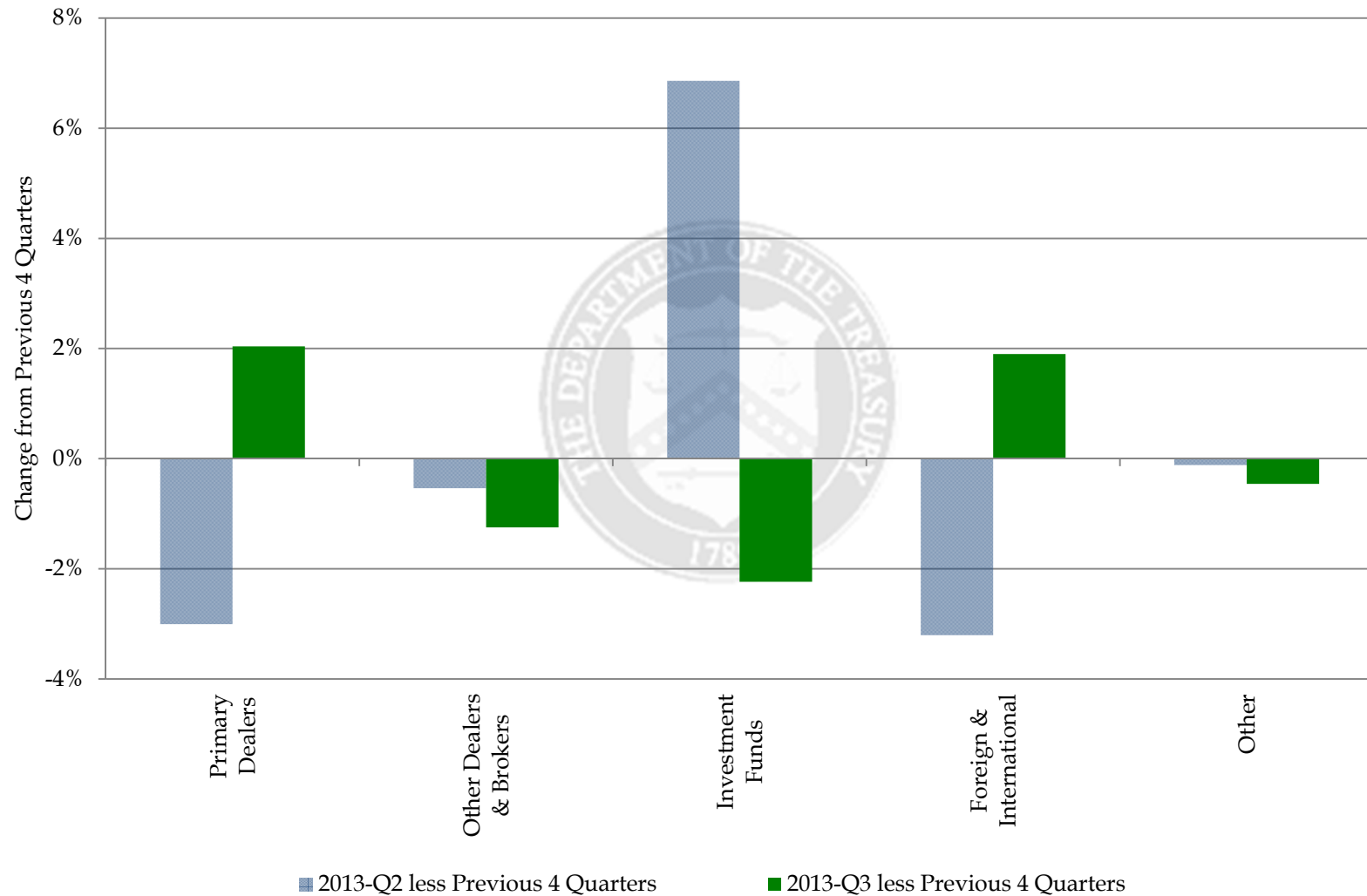


**Investor Class Auction Awards:
7-, 10-, and 30-Year Nominal
Securities
Fiscal Year 2013-Q3**



Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance. 32

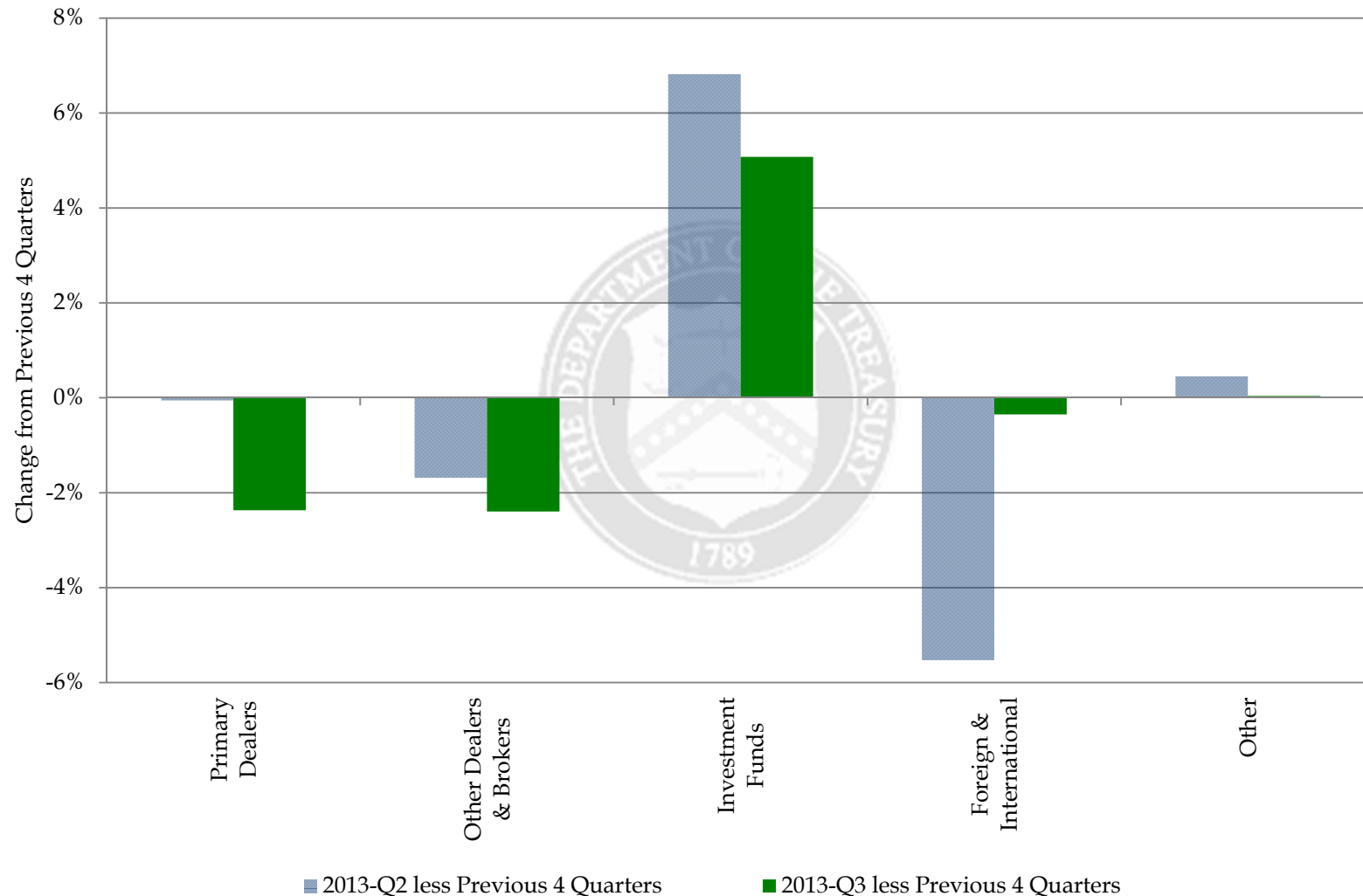
Change in Demand Over the Last Year in 2-, 3-, 5-Year Nominal Securities, Auction Awards by Investor Class



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

"Previous 4 Quarters" = Total Awards for the previous 4 quarters divided by Total Auction Awards of the previous 4 quarters

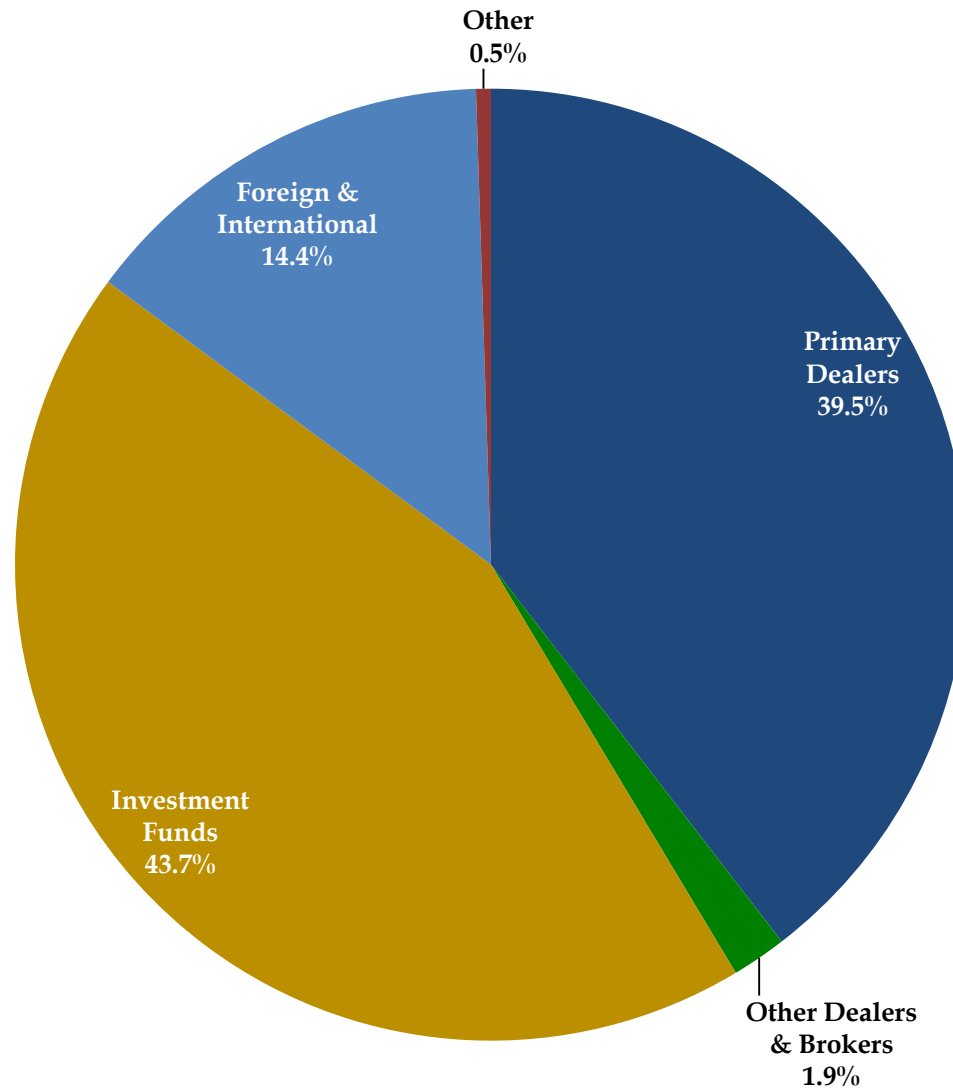
Change in Demand Over the Last Year in 7-, 10-, 30-Year Nominal Securities, Auction Awards by Investor Class



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

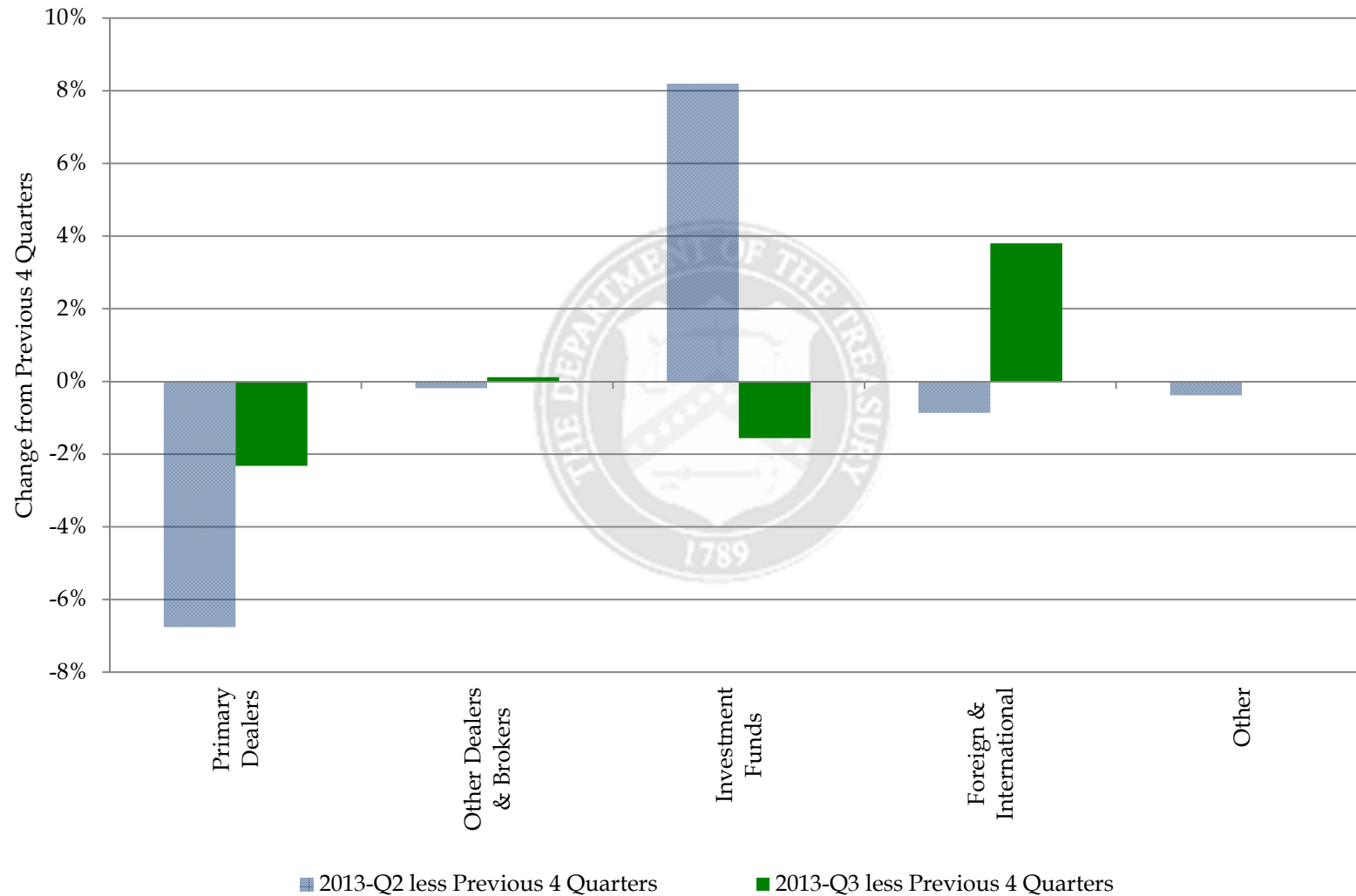
"Previous 4 Quarters" = Total Awards for the previous 4 quarters divided by Total Auction Awards of the previous 4 quarters

**Investor Class Auction Awards:
TIPS
Fiscal Year 2013-Q3**



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

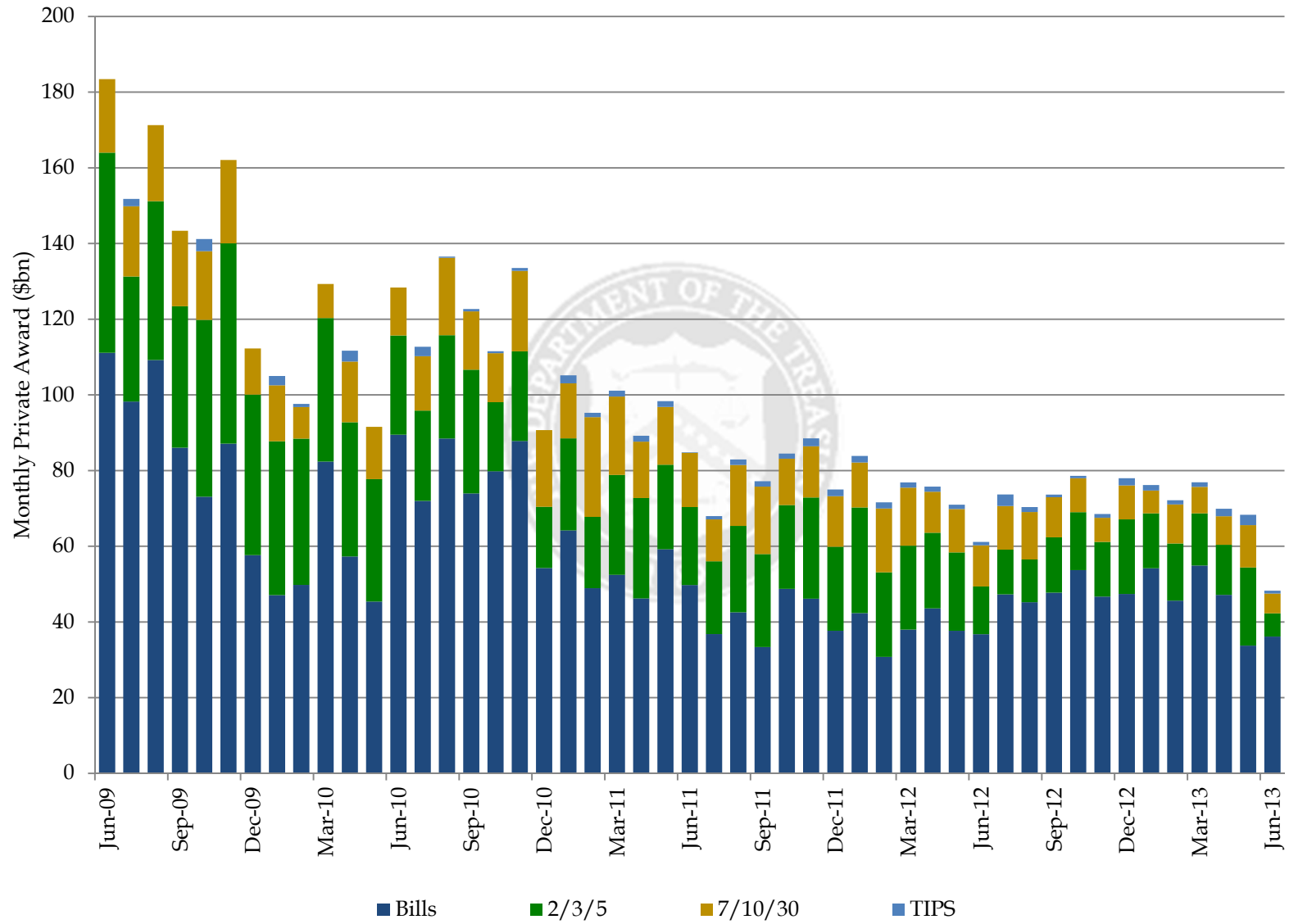
Change in Demand Over the Last Year in TIPS, Auction Awards by Investor Class



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

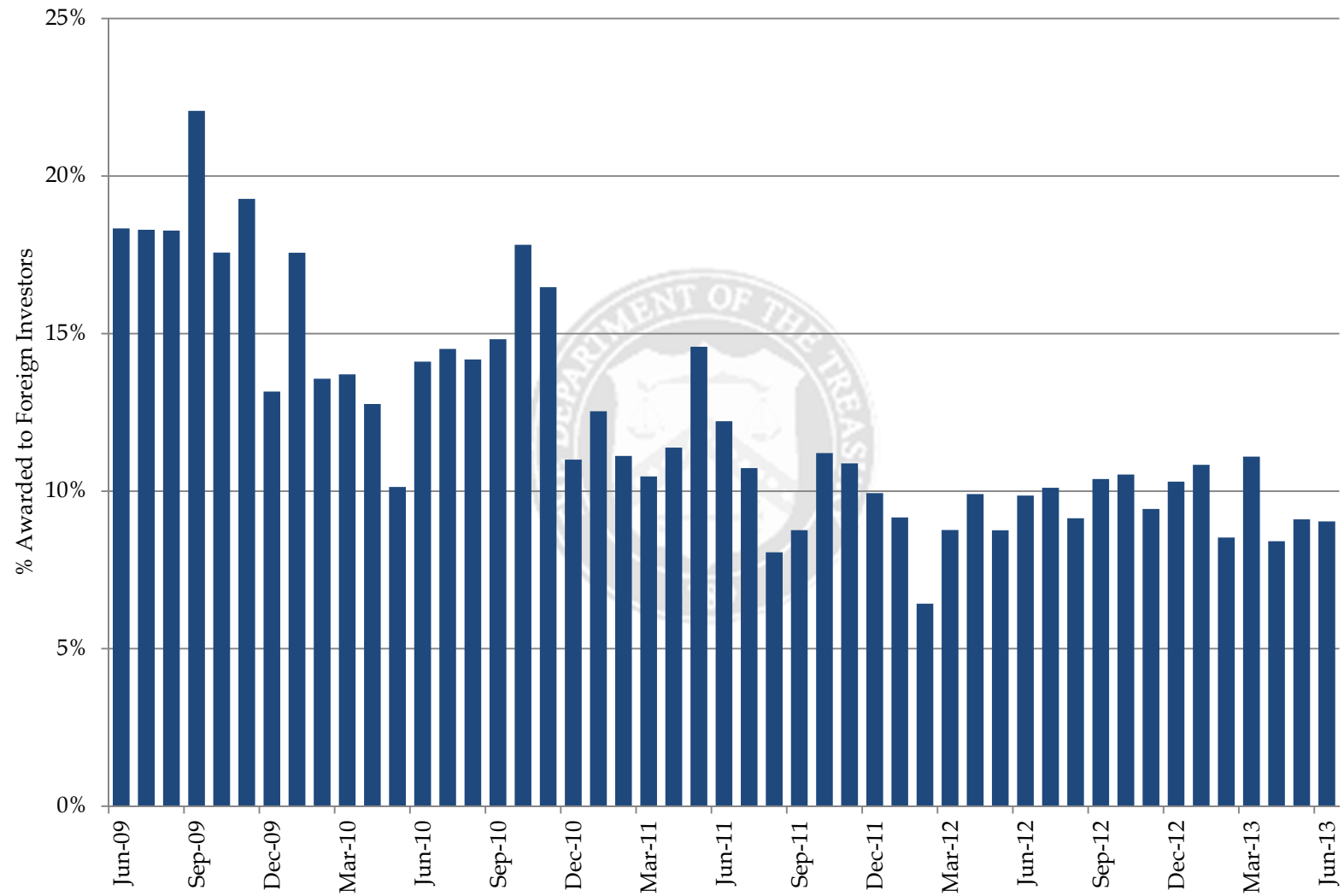
"Previous 4 Quarters" = Total Awards for the previous 4 quarters divided by Total Auction Awards of the previous 4 quarters

Total Foreign Awards of Treasuries at Auction, \$ Billion



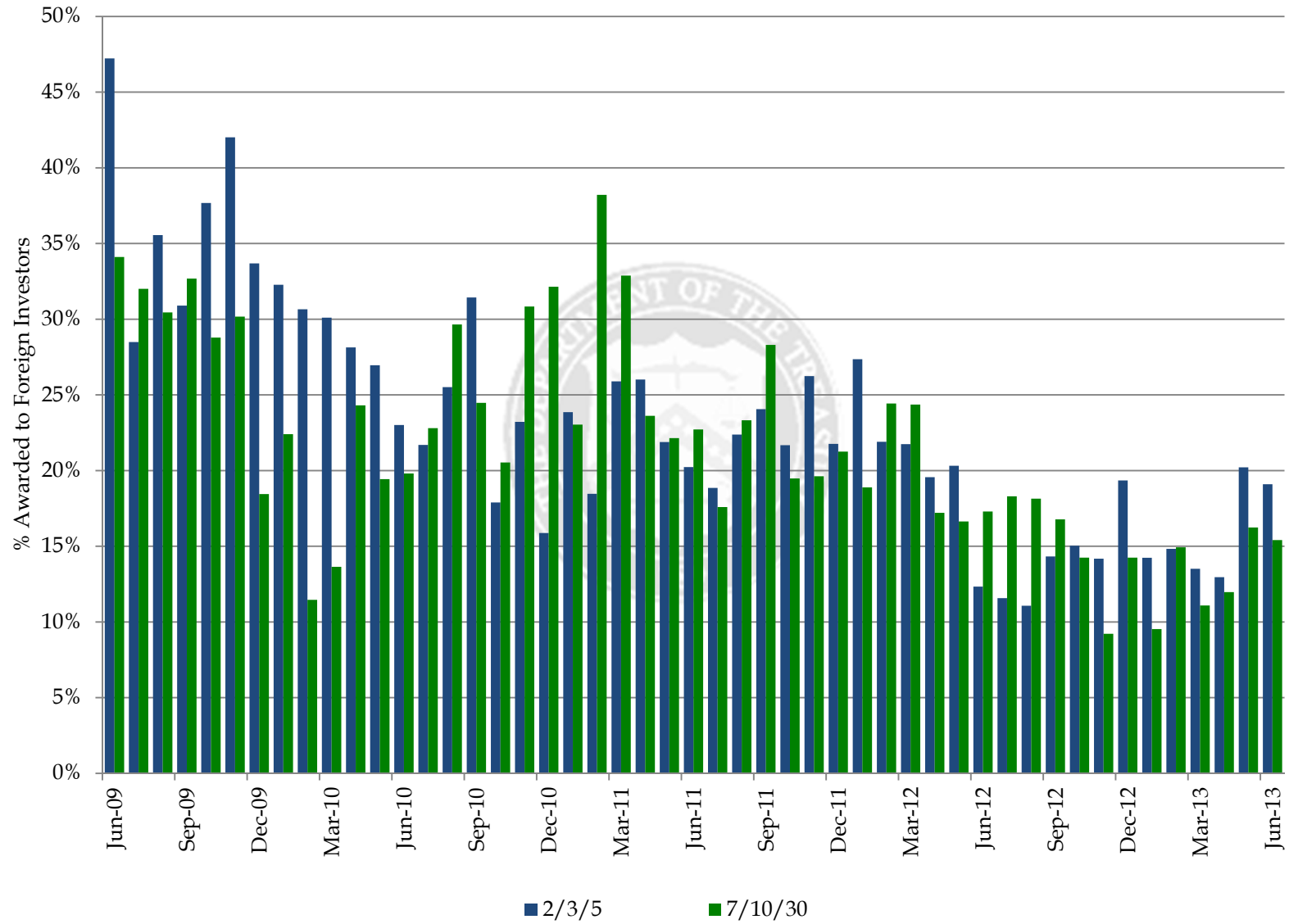
Foreign includes both private sector and official institutions.

Foreign Awards of Bills at Auction, Percent



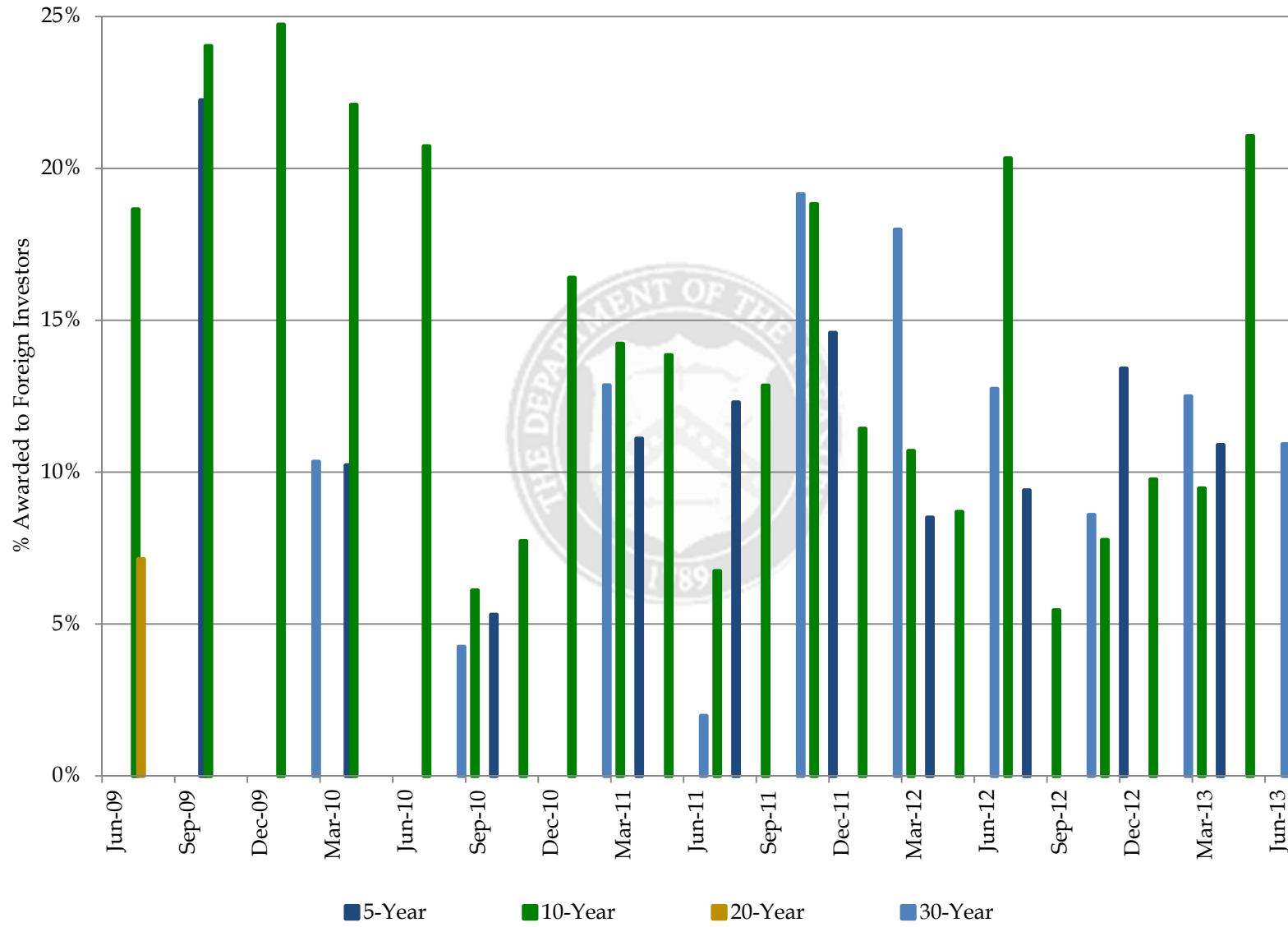
Excludes SOMA add-ons. Foreign includes both private sector and official institutions.

Foreign Awards of Nominal Coupons at Auction, Percent



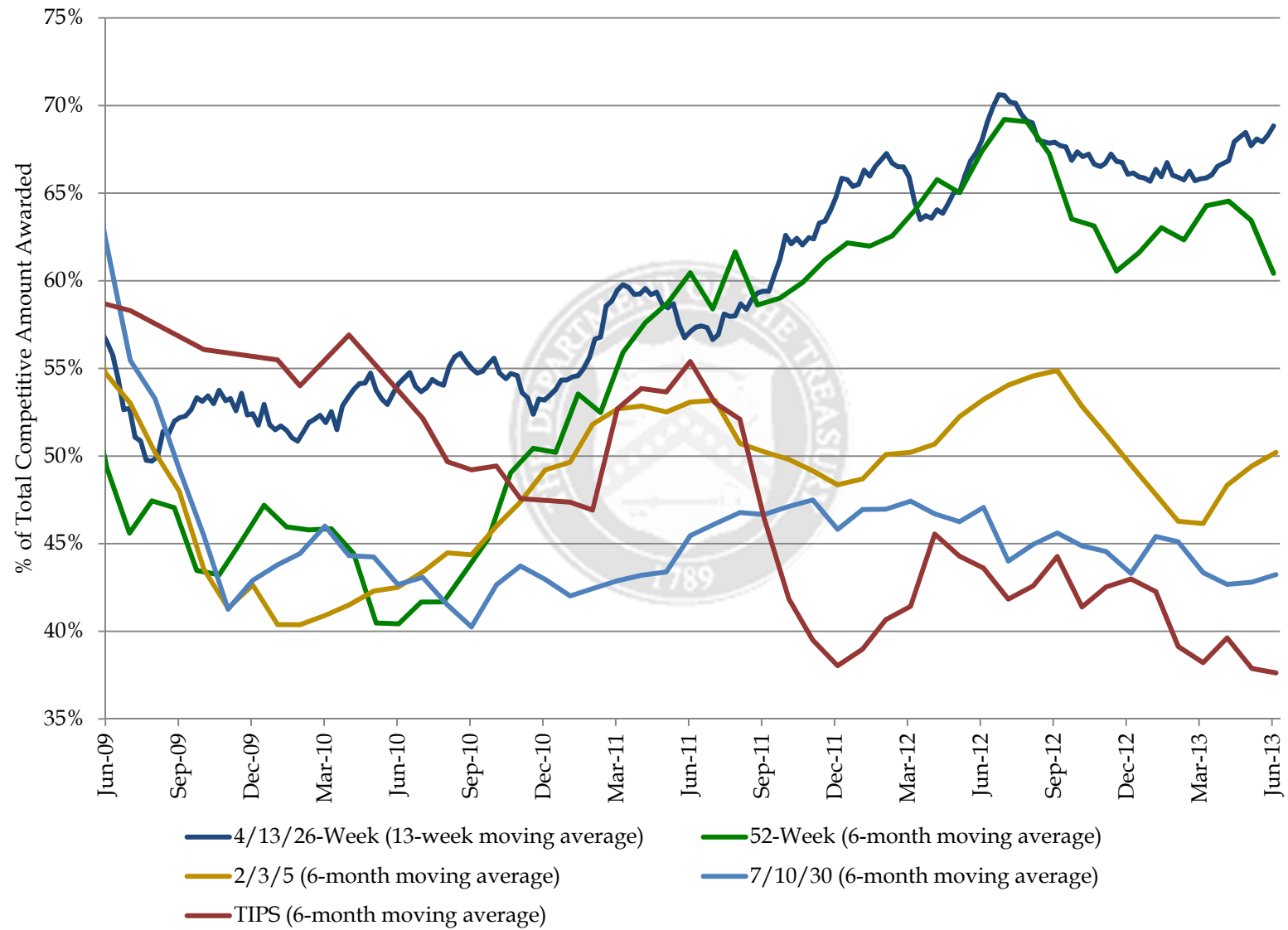
Excludes SOMA add-ons. Foreign includes both private sector and official institutions.

Foreign Awards of TIPS at Auction, Percent



Excludes SOMA add-ons. Foreign includes both private sector and official institutions.

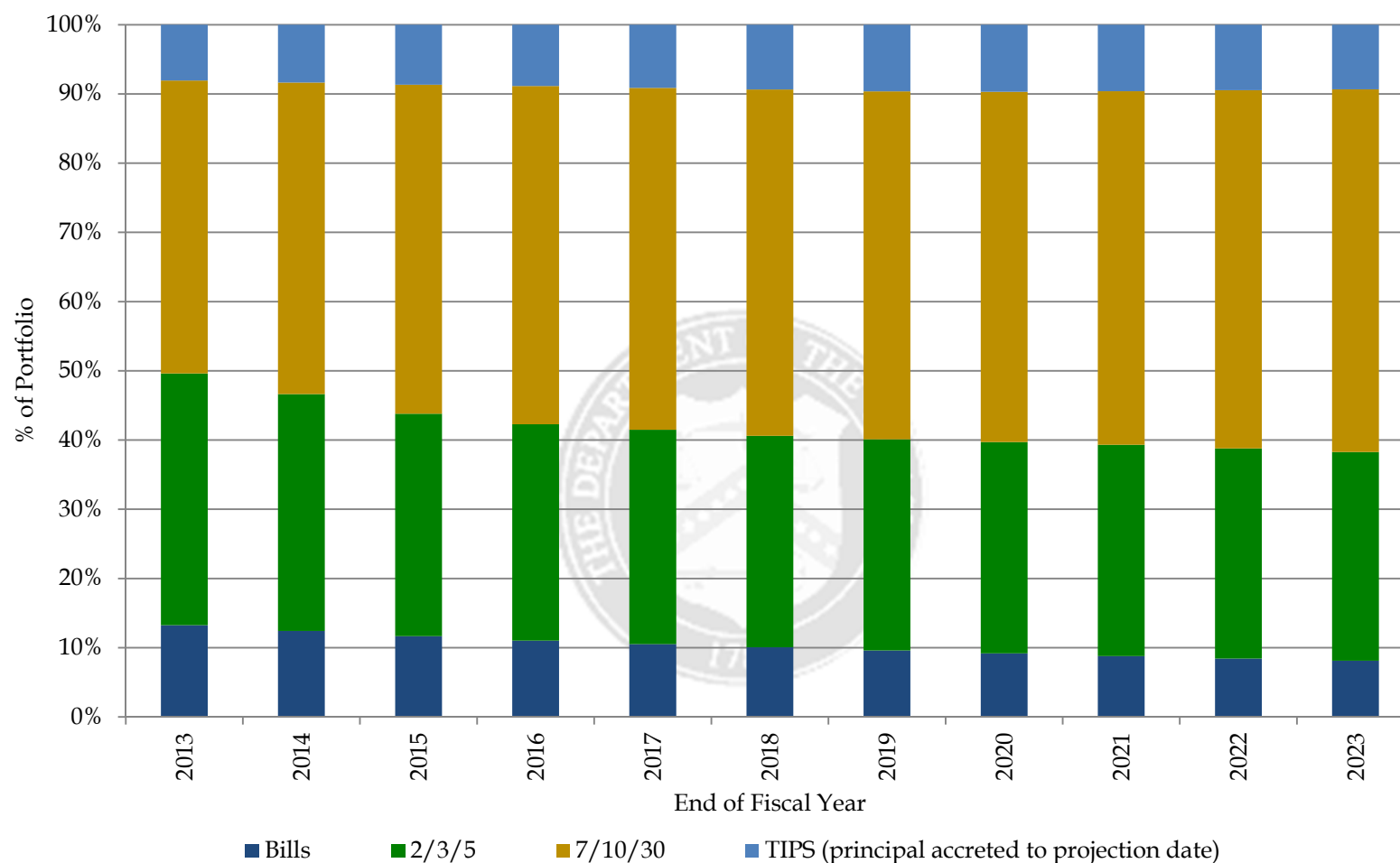
Primary Dealer Awards at Auction, Percent



Appendix



Projected Portfolio Composition by Issuance Type, Percent



Portfolio & SOMA holdings as of 6/28/2013 and estimated projections of the Large Scale Asset Purchase program, announced on 12/12/2012 by the Federal Reserve, assumed to last until June 2014 with SOMA redemptions until December 2018. These assumptions are based on the Federal Reserve's June 2013 primary dealer survey. 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 were accreted to each projection date based on market ZCIS levels. OMB's projections of borrowing from the public projections are from Table S-11 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government." 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 the 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)
2006	21.3%	40.5%	29.0%	69.5%	9.2%
2007	21.6%	38.9%	29.2%	68.1%	10.3%
2008	28.5%	34.5%	26.9%	61.4%	10.0%
2009	28.5%	36.2%	27.4%	63.6%	7.9%
2010	21.1%	40.1%	31.8%	71.9%	7.0%
2011	15.4%	41.4%	35.9%	77.3%	7.3%
2012	15.0%	38.4%	39.0%	77.4%	7.5%
2013	13.3%	36.4%	42.3%	78.7%	8.1%
2014	12.4%	34.2%	45.0%	79.2%	8.3%
2015	11.7%	32.1%	47.5%	79.7%	8.7%
2016	11.0%	31.2%	48.9%	80.1%	8.9%
2017	10.5%	31.0%	49.4%	80.4%	9.1%
2018	10.1%	30.6%	50.0%	80.6%	9.4%
2019	9.6%	30.5%	50.3%	80.8%	9.6%
2020	9.2%	30.5%	50.6%	81.1%	9.7%
2021	8.8%	30.5%	51.1%	81.6%	9.6%
2022	8.4%	30.4%	51.7%	82.1%	9.5%
2023	8.1%	30.1%	52.4%	82.5%	9.3%

Portfolio & SOMA holdings as of 6/28/2013 and estimated projections of the Large Scale Asset Purchase program, announced on 12/12/2012 by the Federal Reserve, assumed to last until June 2014 with SOMA redemptions until December 2018. These assumptions are based on the Federal Reserve's June 2013 primary dealer survey. 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 were accreted to each projection date based on market ZCIS levels. OMB's projections of borrowing from the public projections are from Table S-11 of the "Fiscal Year 2014 Mid-Session Review Budget of the US Government." 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.

Bill Issues										
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-Yr Equivalent (\$ bn)**
4-Week	4/4/2013	0.070	4.26	44.74	63.1%	9.3%	27.7%	0.26	0.00	0.39
4-Week	4/11/2013	0.060	4.58	44.70	52.9%	7.2%	39.9%	0.30	0.00	0.39
4-Week	4/18/2013	0.050	4.43	44.69	65.7%	6.3%	28.0%	0.26	0.00	0.39
4-Week	4/25/2013	0.045	4.45	39.75	73.0%	9.7%	17.3%	0.25	0.00	0.35
4-Week	5/2/2013	0.025	4.93	29.18	73.9%	8.7%	17.3%	0.26	0.00	0.26
4-Week	5/9/2013	0.000	5.42	19.76	83.3%	6.5%	10.3%	0.24	0.00	0.17
4-Week	5/16/2013	0.010	5.08	19.73	80.7%	8.6%	10.8%	0.27	0.00	0.17
4-Week	5/23/2013	0.035	4.41	44.77	61.8%	8.1%	30.1%	0.23	0.00	0.38
4-Week	5/30/2013	0.030	4.12	44.19	56.0%	5.9%	38.2%	0.23	0.00	0.38
4-Week	6/6/2013	0.040	4.38	34.75	71.5%	7.9%	20.6%	0.25	0.00	0.31
4-Week	6/13/2013	0.040	4.63	29.73	65.1%	10.1%	24.7%	0.27	0.00	0.26
4-Week	6/20/2013	0.045	4.61	29.72	72.6%	9.9%	17.5%	0.28	0.00	0.26
4-Week	6/27/2013	0.030	4.55	29.06	78.3%	9.6%	12.1%	0.25	0.00	0.26
13-Week	4/4/2013	0.075	4.61	33.87	72.8%	7.2%	20.0%	0.48	0.00	0.99
13-Week	4/11/2013	0.065	4.87	34.36	79.4%	10.2%	10.4%	0.49	0.00	0.98
13-Week	4/18/2013	0.055	4.40	34.35	75.7%	7.7%	16.6%	0.54	0.00	0.98
13-Week	4/25/2013	0.050	4.75	31.53	80.8%	6.6%	12.6%	0.47	0.00	0.90
13-Week	5/2/2013	0.050	4.86	27.86	82.7%	10.6%	6.7%	0.42	0.00	0.82
13-Week	5/9/2013	0.040	4.96	28.39	79.2%	10.4%	10.3%	0.51	0.00	0.82
13-Week	5/16/2013	0.045	4.86	28.36	66.3%	9.8%	23.9%	0.49	0.00	0.82
13-Week	5/23/2013	0.045	4.54	29.41	73.5%	6.6%	19.8%	0.49	0.00	0.82
13-Week	5/30/2013	0.045	4.55	28.82	71.9%	5.9%	22.1%	0.48	0.00	0.83
13-Week	6/6/2013	0.045	4.97	29.36	78.2%	7.0%	14.9%	0.44	0.00	0.83
13-Week	6/13/2013	0.045	4.79	29.48	80.7%	9.2%	10.1%	0.52	0.00	0.83
13-Week	6/20/2013	0.045	4.35	29.41	77.3%	11.2%	11.5%	0.49	0.00	0.83
13-Week	6/27/2013	0.060	4.30	28.48	74.3%	12.9%	12.8%	0.54	0.00	0.83
26-Week	4/4/2013	0.105	4.85	29.10	69.2%	6.6%	24.2%	0.40	0.00	1.68
26-Week	4/11/2013	0.095	4.95	29.13	70.4%	11.8%	17.8%	0.48	0.00	1.68
26-Week	4/18/2013	0.090	4.85	28.97	61.9%	8.2%	29.9%	0.43	0.00	1.68
26-Week	4/25/2013	0.085	5.14	27.05	62.4%	5.4%	32.2%	0.40	0.00	1.57
26-Week	5/2/2013	0.080	5.43	22.87	52.7%	7.9%	39.4%	0.33	0.00	1.35
26-Week	5/9/2013	0.075	5.37	23.11	60.4%	9.9%	29.7%	0.40	0.00	1.36
26-Week	5/16/2013	0.080	5.25	23.10	70.3%	7.8%	21.9%	0.42	0.00	1.36
26-Week	5/23/2013	0.085	4.67	24.21	56.3%	10.0%	33.7%	0.42	0.00	1.37
26-Week	5/30/2013	0.080	5.13	23.87	48.5%	9.6%	41.9%	0.38	0.00	1.38
26-Week	6/6/2013	0.080	5.15	23.91	59.0%	11.2%	29.8%	0.41	0.00	1.38
26-Week	6/13/2013	0.080	4.99	24.15	61.2%	12.0%	26.8%	0.37	0.00	1.38
26-Week	6/20/2013	0.075	4.78	24.29	56.7%	12.9%	30.3%	0.43	0.00	1.39
26-Week	6/27/2013	0.105	4.53	23.60	60.3%	6.7%	33.0%	0.42	0.00	1.39
52-Week	4/4/2013	0.140	4.89	24.74	59.9%	7.3%	32.7%	0.16	0.00	2.80
52-Week	5/2/2013	0.105	4.91	22.67	62.8%	7.7%	29.6%	0.13	0.00	2.59
52-Week	5/30/2013	0.135	4.19	24.58	51.3%	8.3%	40.4%	0.15	0.00	2.75
52-Week	6/27/2013	0.160	4.10	24.59	64.9%	7.9%	27.1%	0.13	0.00	2.78
CMBs	6/4/2013	0.050	4.28	30.00	89.0%	5.6%	5.4%	0.00	0.00	0.12

*Weighted averages of Competitive Awards.

**Approximated using prices at settlement and includes both Competitive and Non-Competitive Awards.

Nominal Coupon Securities										
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-Yr Equivalent (\$ bn)**
2-Year	4/30/2013	0.233	3.63	34.76	51.6%	27.7%	20.7%	0.14	0.00	7.89
2-Year	5/31/2013	0.283	3.04	34.74	65.5%	12.6%	21.9%	0.16	0.00	7.70
2-Year	7/1/2013	0.430	3.05	34.76	56.3%	7.8%	35.8%	0.13	0.00	7.78
3-Year	4/15/2013	0.342	3.24	31.88	64.9%	16.2%	19.0%	0.02	0.00	10.75
3-Year	5/15/2013	0.354	3.38	31.86	54.7%	14.6%	30.7%	0.04	0.00	10.87
3-Year	6/17/2013	0.581	2.95	31.87	58.4%	8.4%	33.1%	0.03	0.00	10.54
5-Year	4/30/2013	0.710	2.86	34.98	42.4%	14.0%	43.6%	0.02	0.00	19.43
5-Year	5/31/2013	1.045	2.79	34.97	32.6%	23.3%	44.0%	0.03	0.00	18.79
5-Year	7/1/2013	1.484	2.45	34.95	43.5%	3.6%	53.0%	0.04	0.00	18.82
7-Year	4/30/2013	1.155	2.71	28.99	41.0%	19.7%	39.3%	0.01	0.00	21.99
7-Year	5/31/2013	1.496	2.70	28.98	38.5%	20.7%	40.8%	0.02	0.00	21.27
7-Year	7/1/2013	1.932	2.61	28.99	37.8%	15.7%	46.4%	0.01	0.00	21.16
10-Year	4/15/2013	1.795	2.79	20.99	33.6%	29.1%	37.3%	0.01	0.00	20.98
10-Year	5/15/2013	1.810	2.70	23.98	49.2%	16.9%	33.9%	0.02	0.00	24.94
10-Year	6/17/2013	2.209	2.53	20.98	36.6%	11.7%	51.7%	0.02	0.00	20.99
30-Year	4/15/2013	2.998	2.49	12.99	49.3%	19.2%	31.4%	0.01	0.00	28.32
30-Year	5/15/2013	2.980	2.53	15.99	45.7%	15.5%	38.8%	0.01	0.00	36.20
30-Year	6/17/2013	3.355	2.47	13.00	51.3%	8.5%	40.2%	0.00	0.00	27.92

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-Yr Equivalent (\$ bn)**
5-Year	4/30/2013	(1.311)	2.18	17.93	46.1%	7.8%	46.1%	0.07	0.00	10.12
10-Year	5/31/2013	(0.225)	2.52	12.97	30.9%	12.4%	56.8%	0.03	0.00	13.75
30-Year	6/28/2013	1.420	2.48	6.98	38.9%	0.4%	60.8%	0.02	0.00	20.70

*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.

TBAC Presentation to Treasury: Charge 1

Financing this Quarter

We would like the Committee's advice on the following:

- The composition of Treasury notes and bonds to refund approximately \$69.6 billion of Treasury notes maturing on August 15, 2013.
- The composition of Treasury marketable financing for the remainder of the July-September quarter, including cash management bills.
- The composition of Treasury marketable financing for the October - December quarter, including cash management bills.

Principles for Debt Issuance Strategy

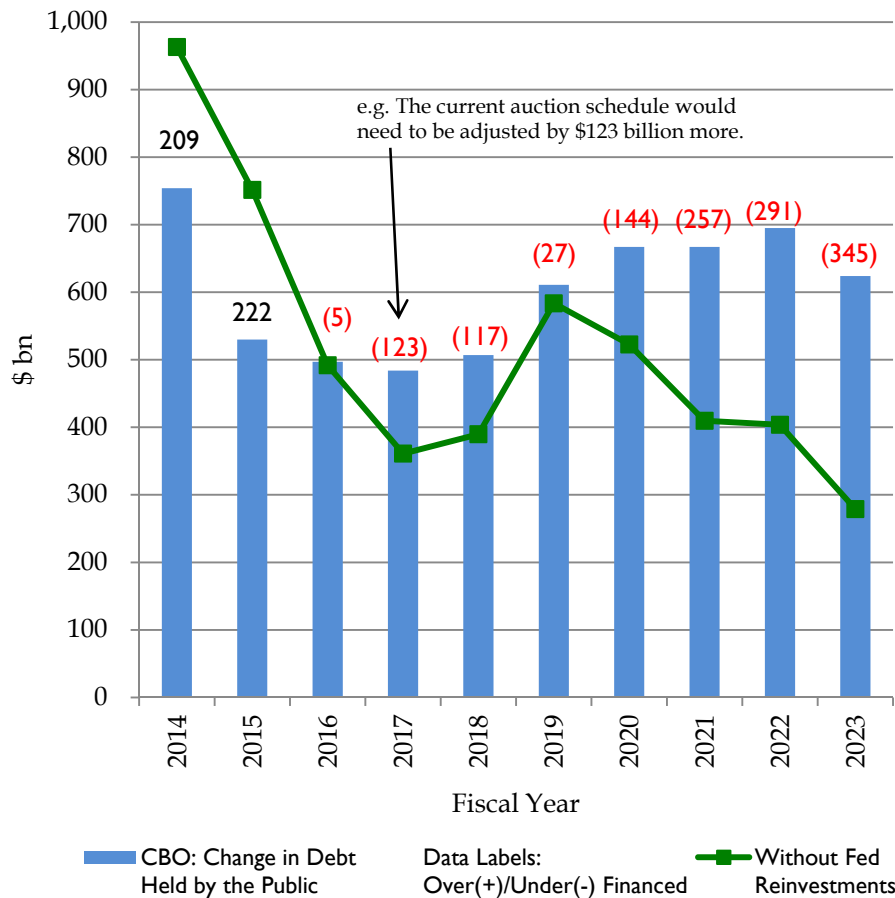
- ▶ Extend the Weighted Average Maturity (WAM) of the Treasury portfolio.
 - ▶ Continuing to increase the WAM will further reduce Treasury's rollover risk and reduce the volatility of Treasury's net interest cost should interest rates rise unexpectedly.

- ▶ Safeguard the liquidity and depth of the Treasury Bills market
 - ▶ Treasury must ensure that there continues to be an adequate supply of bills, given increased structural demand for high-quality, short duration securities.

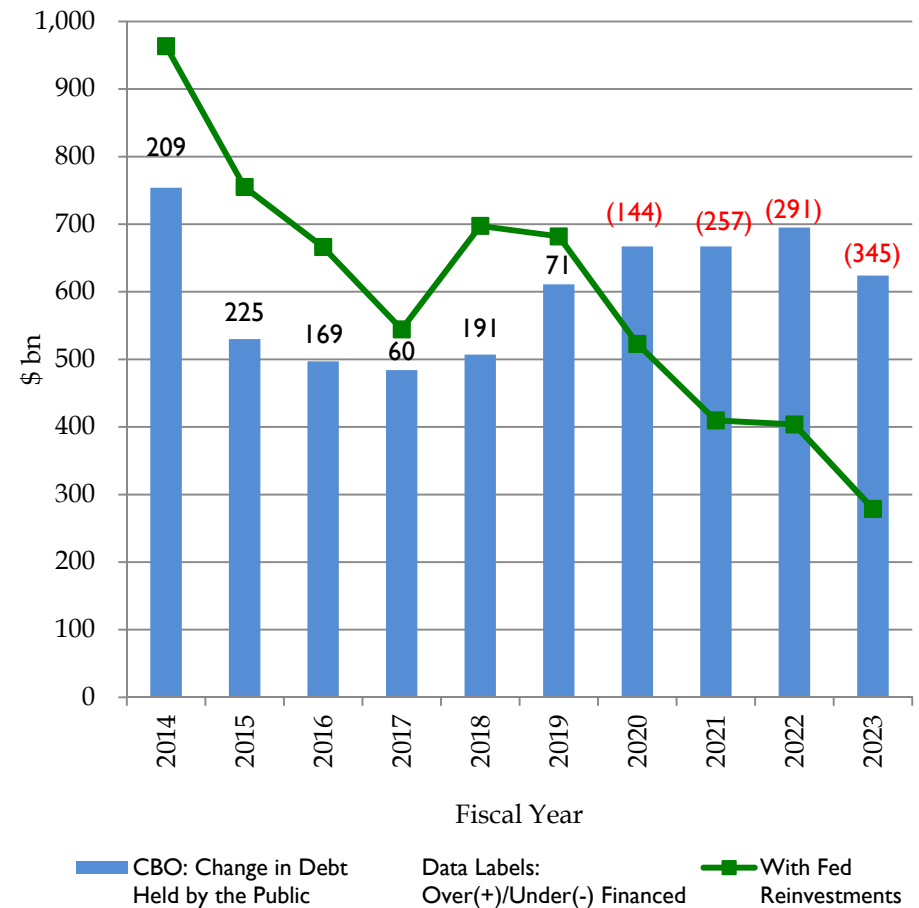
- ▶ Incorporate Floating Rate Notes (FRN) into Treasury's issuance calendar
 - ▶ Treasury expects to issue the first FRN in either Q4 2013 or Q1 2014.

Potential Impacts on Borrowing Needs

Without Fed Reinvestments



With Fed Reinvestments



CBO's change in debt held by the public is from "An Analysis of the President's 2014 Budget," published in May 2013.

Assessing fixed income market liquidity

Presentation to TBAC

July 2013

Committee Charge #2: Fixed Income Market Liquidity

Since the 2008 financial crisis, there have been a number of developments in financial markets, such as new regulations, changes in market structure, and technological advancements.

To varying degrees, these developments have had an impact on the landscape and structure of the global financial marketplace. We would like the Committee to comment on the extent to which these changes could impact liquidity in fixed-income markets.

What is the outlook for fixed-income liquidity over the longer-term?

Executive summary

- Market turnover has if anything increased since the financial crisis
- But liquidity is about much more than turnover
 - Tendency to disappear abruptly when really needed
- Primary liquidity not really a problem; major issues all in secondary
- Neither turnover nor the street have been able to keep pace with the massive expansion in markets
- Regulations have created multiple constraints likely to curtail liquidity when it is really needed:
 - Most have pushed liquidity towards Treasuries, reducing it in risky assets:
 - Basel risk-weightings, swaps clearing, LCR requirements
 - Now, supplementary leverage ratios risk curtailing it even in Treasuries: dealers likely to meet requirements by reducing assets rather than raising capital
- Effects of regulations to date have been offset by Fed policy pushing investors in the opposite direction:
 - Significant demand for fixed income assets in general, and risky assets in particular
- Technology and shifts in market structure have added to the *appearance* of liquidity, but done little to add depth
- Potential for significant dislocation when investor flows reverse

Agenda

Trends in fixed income liquidity

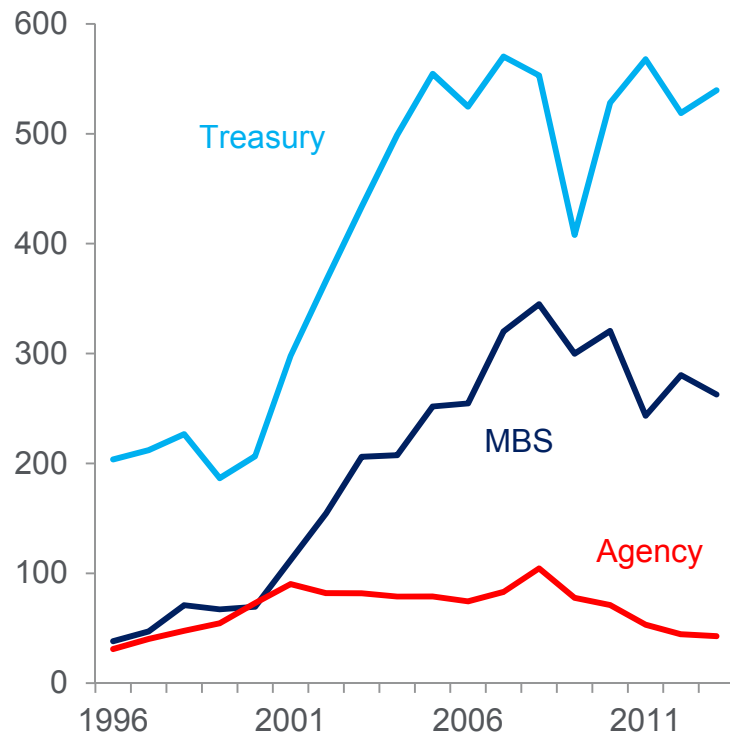
Effects of new regulations

Effects of policy and market structure

Simple market turnover

Turnover in Treasuries & Agencies

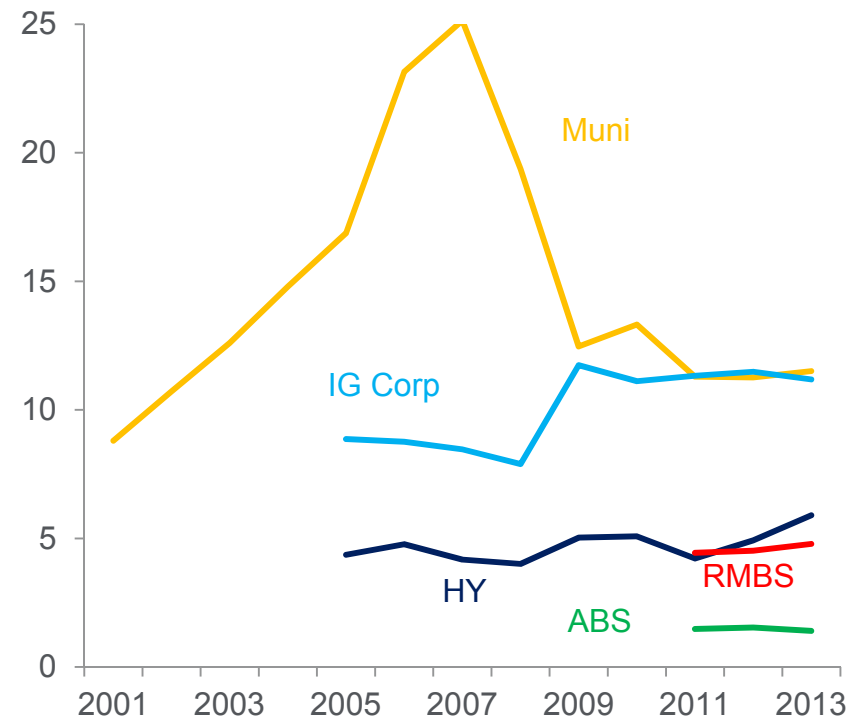
Average daily traded volumes (\$bn)



Source: SIFMA. Agency and MBS data uses primary dealer transactions. TRACE-reported volumes are much lower.

Turnover in credit

US traded volumes in credit (\$bn, daily)



Source: SIFMA, FINRA TRACE, Haver Analytics.

Dollar turnover suggests no great drop since 07

But what do we mean by liquidity?

The four dimensions of liquidity

- **Tightness:** difference between bid and offer
- **Depth:** size of transaction that can be absorbed without affecting prices
- **Immediacy:** speed with which orders can be executed
- **Resiliency:** ease with which prices return to “normal”

Source: Borio, C., Market liquidity and stress: selected issues and policy implications, BIS (2000)

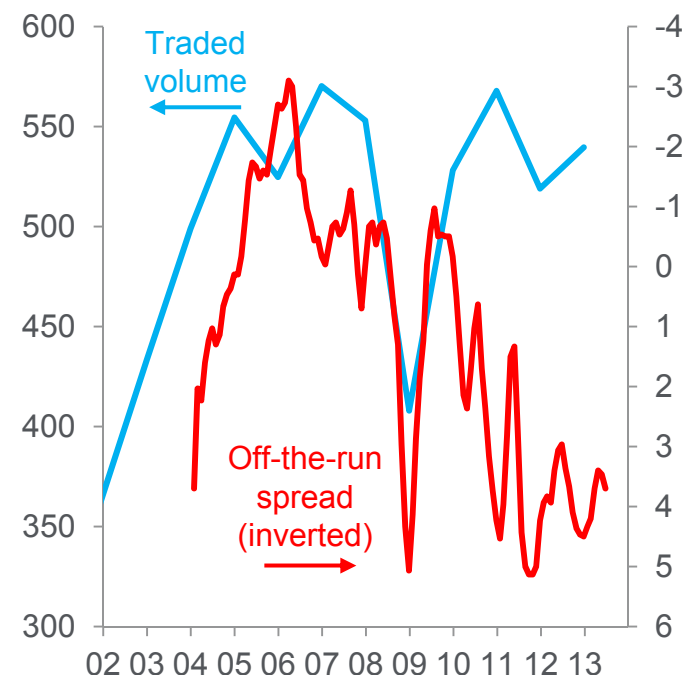
Ingredients for a liquid market

- Competitive market structure
- Low fragmentation
- Minimization of transaction costs
- Heterogeneity of market participants
- Sound infrastructure

Source: BIS Committee on the Global Financial System, *CGFS issues recommendations for the design of liquid markets*, BIS (1999).

Volumes up; liquidity not

10y UST off-the-run on-the run premium, bp vs average daily traded Treasury volume, \$bn



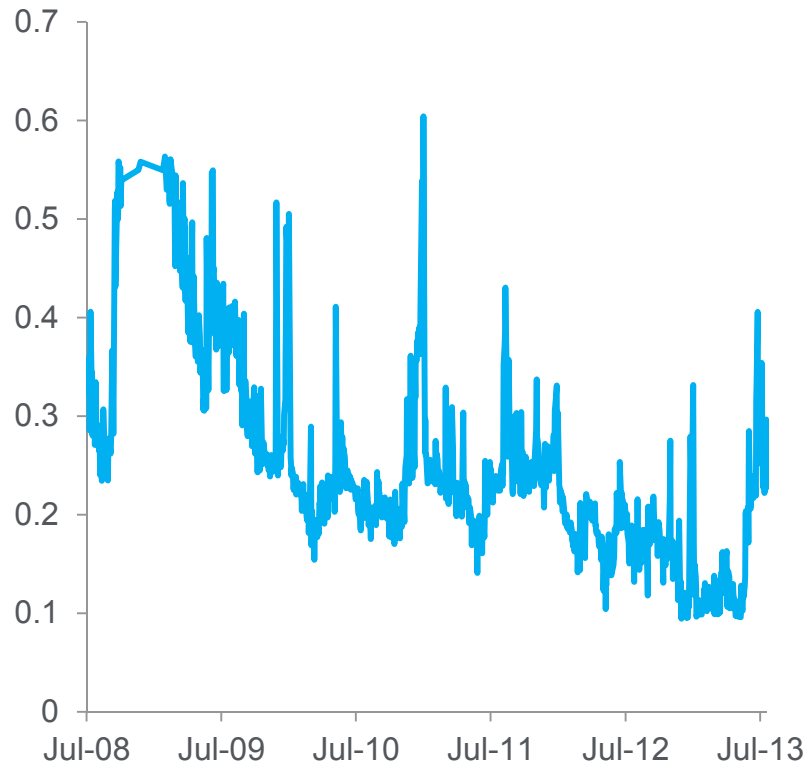
Source: Haver Analytics.

Liquidity has many facets

Bid-offer tends to be spiky

Trend improving, spikes not

Cost to trade 2k TY futures, yield bp



Source: Bloomberg.

Prone to sudden spikes

Modelled* bid-offer in credit, 15-day rolling, median, bp



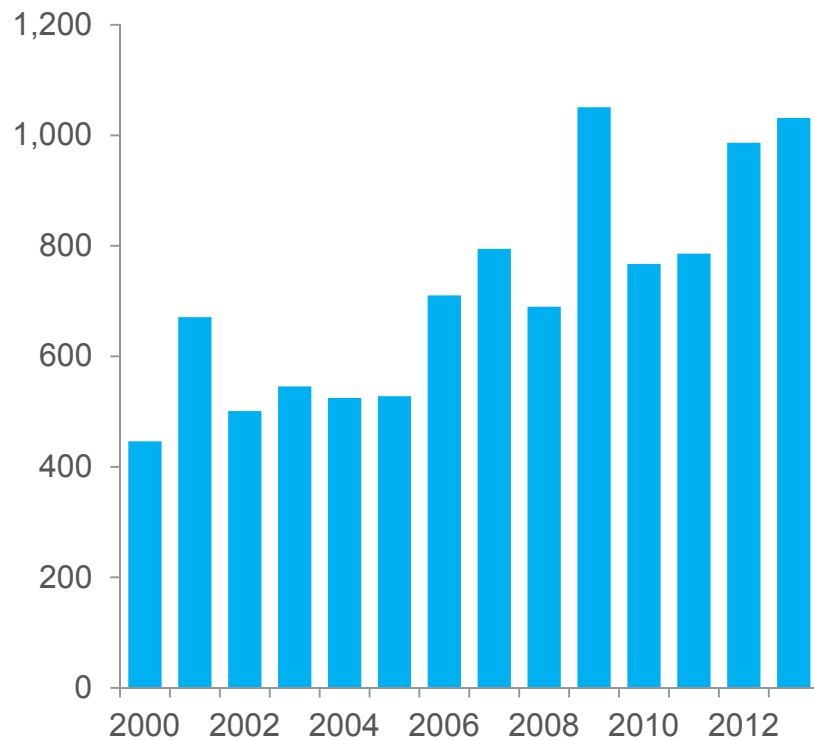
Source: Bloomberg. See "A Simple Implicit Measure of the Effective Bid-Ask Spread", R. Roll, *Journal of Finance* (1984).

Liquidity typically fine – until you actually need it

Assessing liquidity in primary

Record volumes in primary...

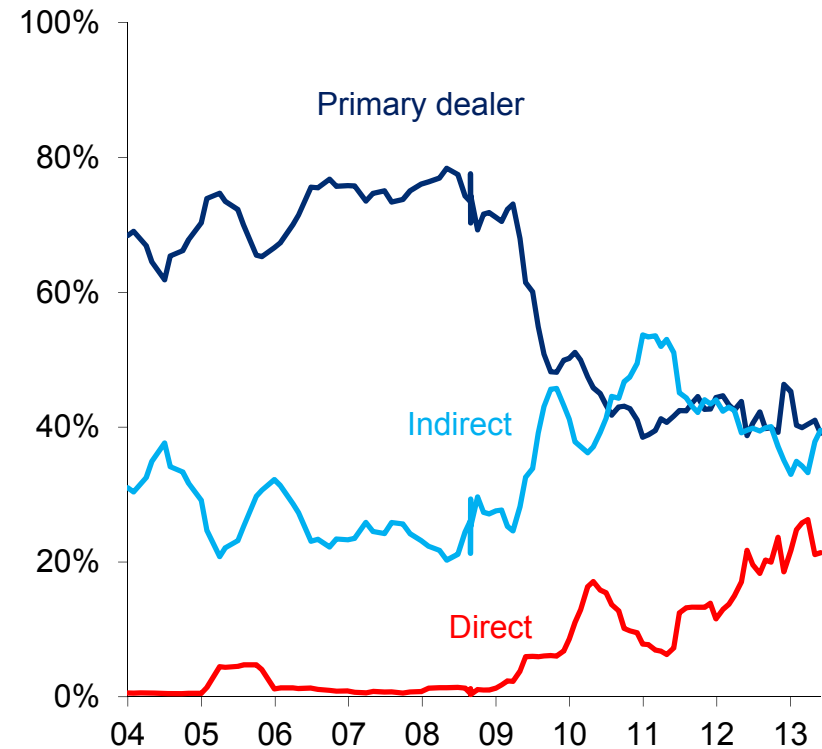
Gross new issuance of \$ corporates (fin+nonfin, fixed + floating), \$bn



Source: Dealogic. 2013 data are annualized from first seven months.

... though direct participation may lead to secondary “opacity”

Treasury auction participation, %



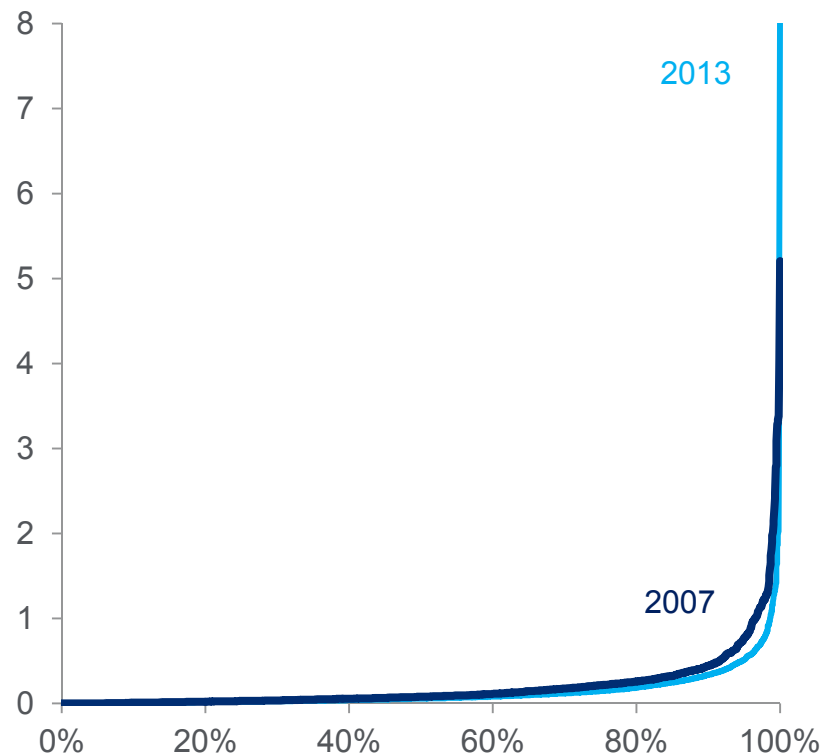
Source: NY Fed.

Primary markets are generally not a problem

Assessing liquidity in secondary

Corp turnover concentrated in very few bonds

Corp bonds ranked by annual traded volume in block trades, \$bn



Source: TRACE.

Post-crisis, balance sheet costs more

Asset swap spread of TIP Jan25, bp



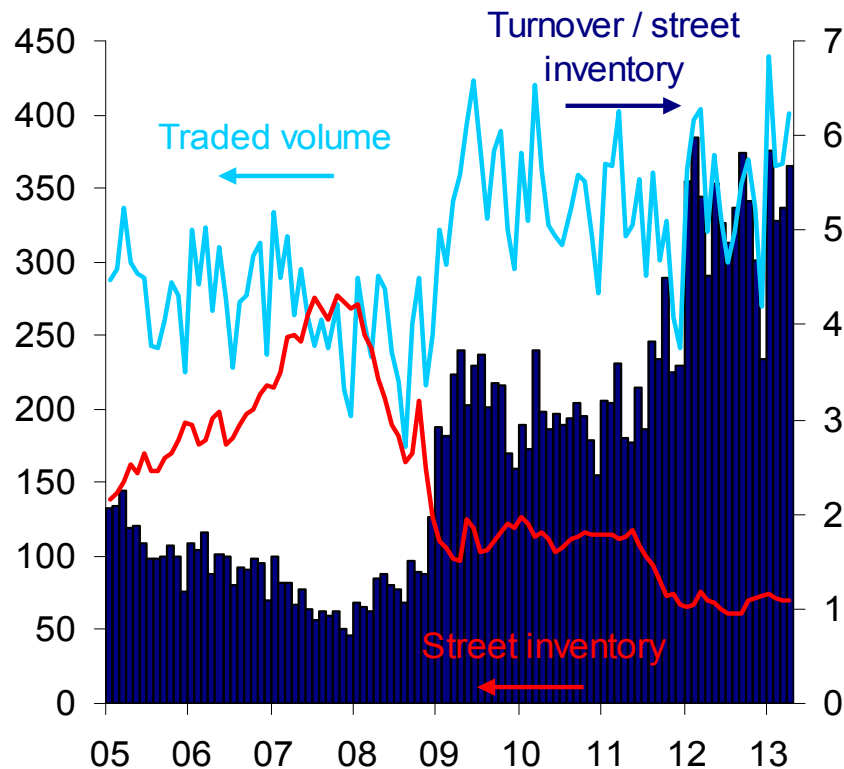
Source: TRACE.

Secondary trading requires risk warehouses

Accounting for the growth in the market

The street has become more efficient...

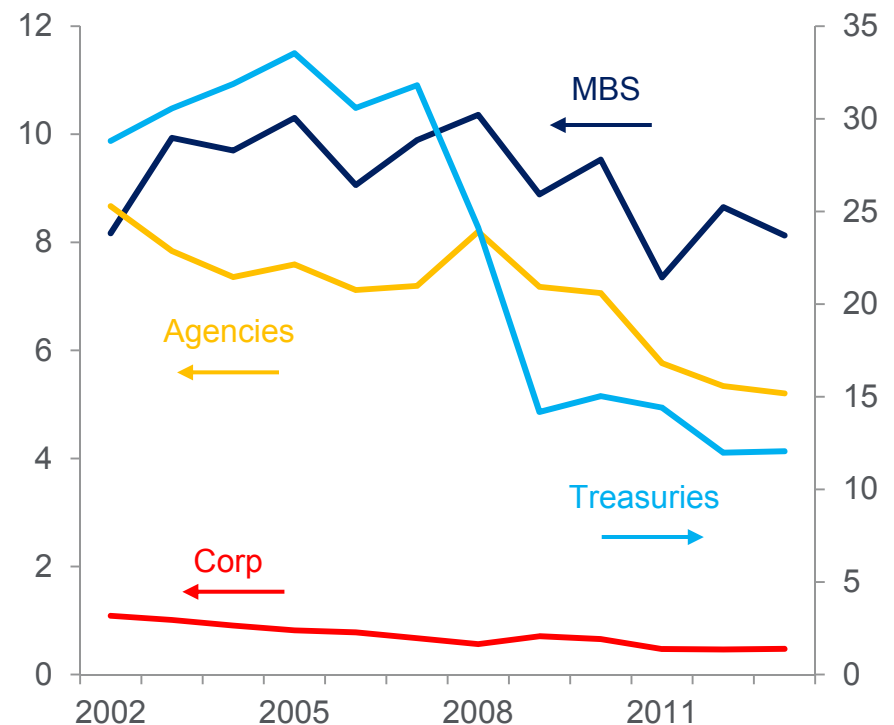
US traded volumes (IG+HY, \$bn) vs inventory (\$bn) and ratio



Source: FINRA TRACE, Haver Analytics.

...but has not kept pace with outstandings

Turnover, multiple of outstandings, annual, times



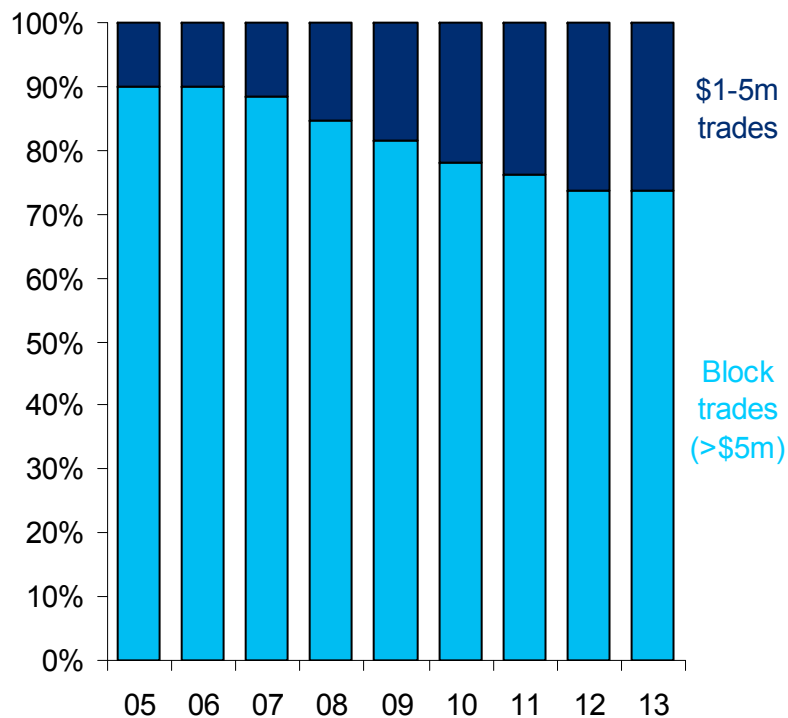
Source: SIFMA, TRACE.

Markets have grown rapidly;
neither turnover nor the street has kept up

How are investors responding?

Fewer large trades...

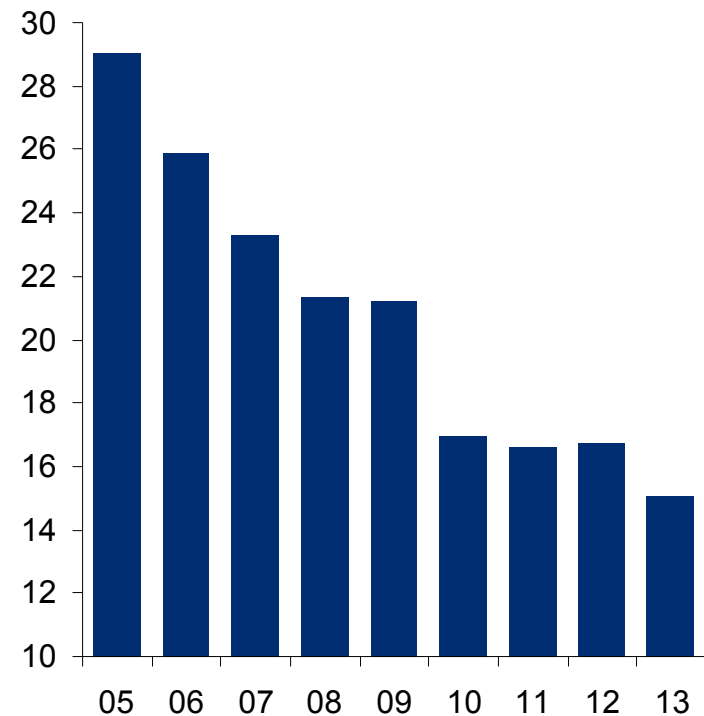
Block trade volume as % total traded volume, US



Source:FINRA TRACE.

...and even those are smaller

Average block trade size, US IG, \$m



Source:FINRA TRACE.

Making trades smaller – or not trading at all

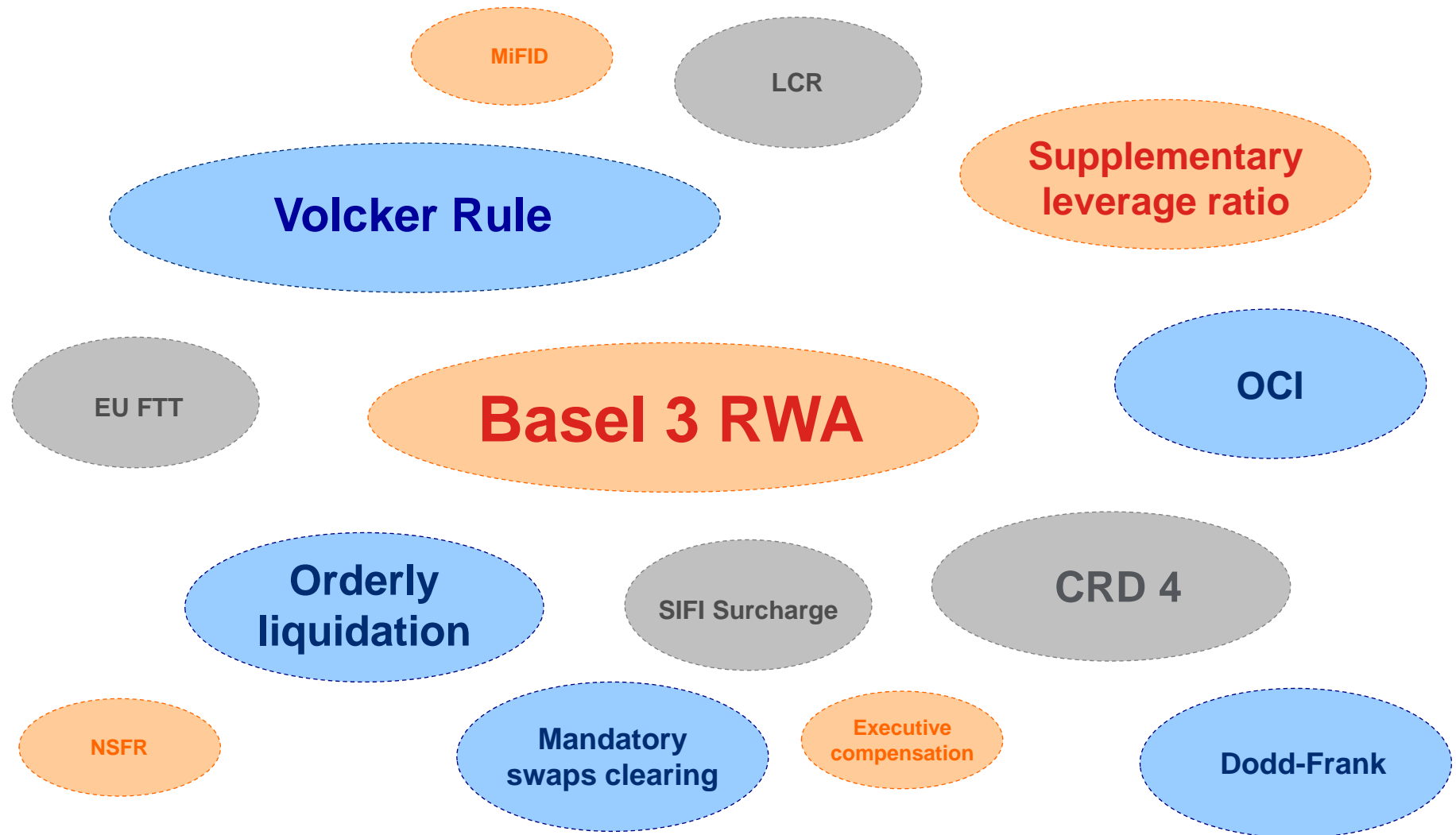
Agenda

Trends in fixed income liquidity

Effects of new regulations

Effects of policy and market structure

A tighter regulatory framework

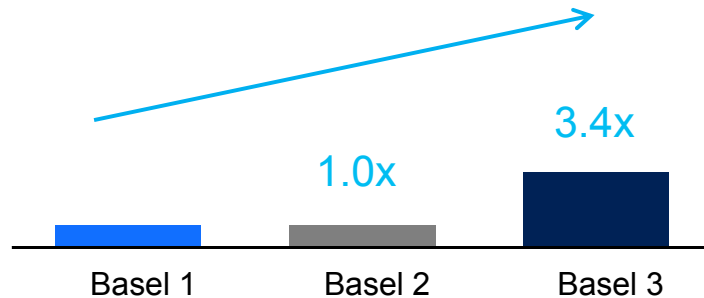


Reduced risk – but also reduced liquidity

Capital cost under Basel 3

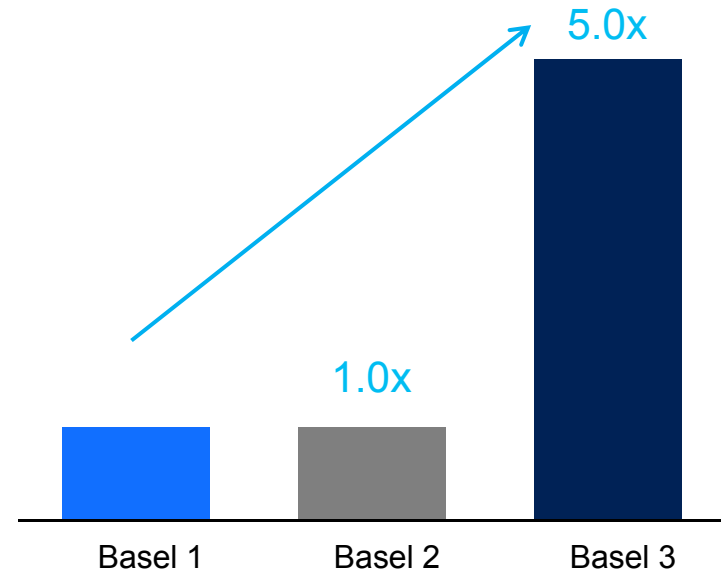
3x cost for investment grade

Risk-weighted asset charges (\$m)



5x cost for high yield

Risk-weighted asset charges (\$m)



Bond Description

Average Tenor	2-3 years
IG Ratings	Average of AAA, AA, A, BBB
HY Ratings	Average of BB, B, CCC

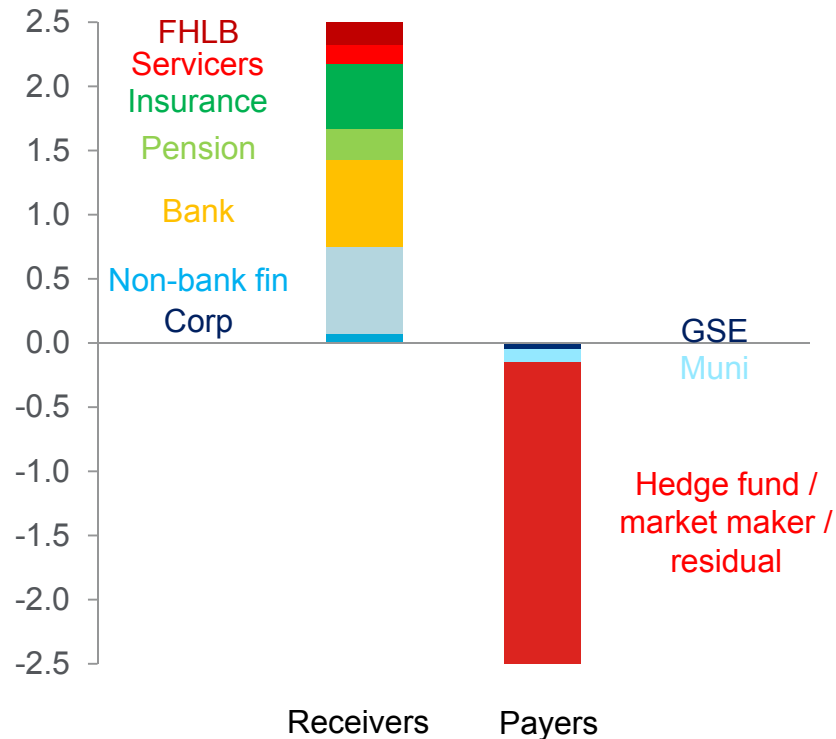
Note: Capital Impact from Basel 1 to Basel 3 is based on single bonds and does not take into account portfolio diversification effects

3-5x increase in charges for corporate bonds

Swaps clearing

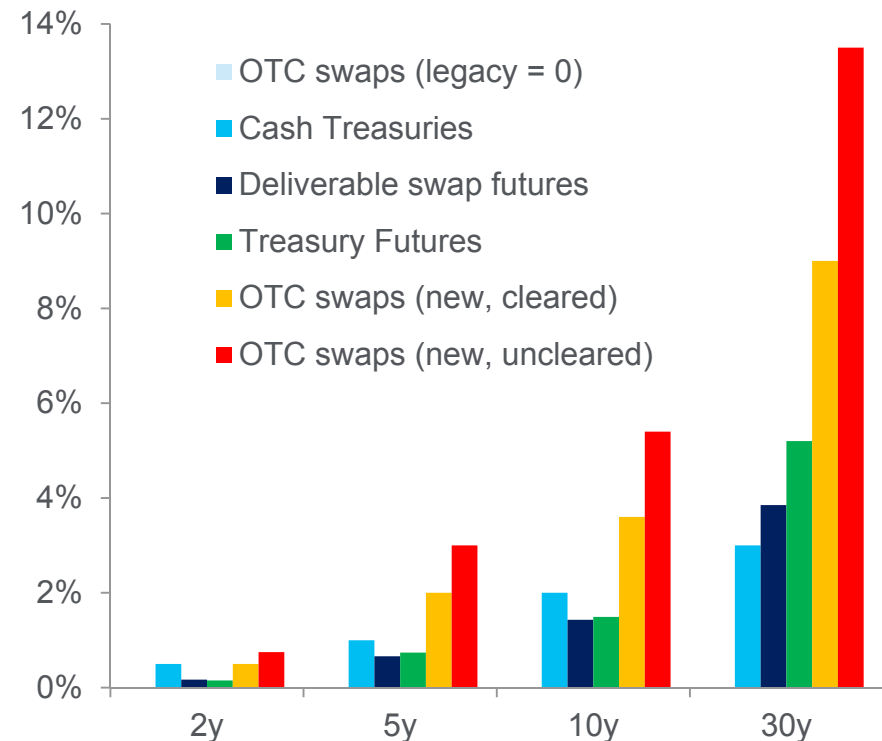
A market out of balance...

Imbalance between OTC swaps payers and receivers, \$bn DV01



...even before margins were hiked

Initial margin requirements (% notional)*



Source: Dealer estimates.

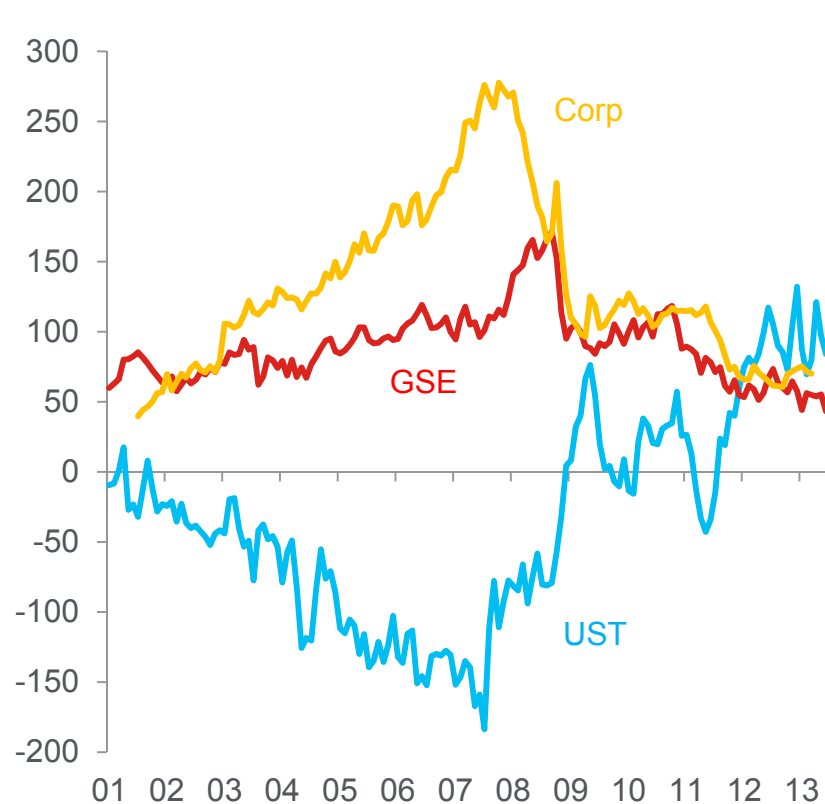
Source: CFTC. * Calculated from current VaR levels.

Activity migrating from swaps towards futures

Higher balance sheet charges have affected:

What the street holds

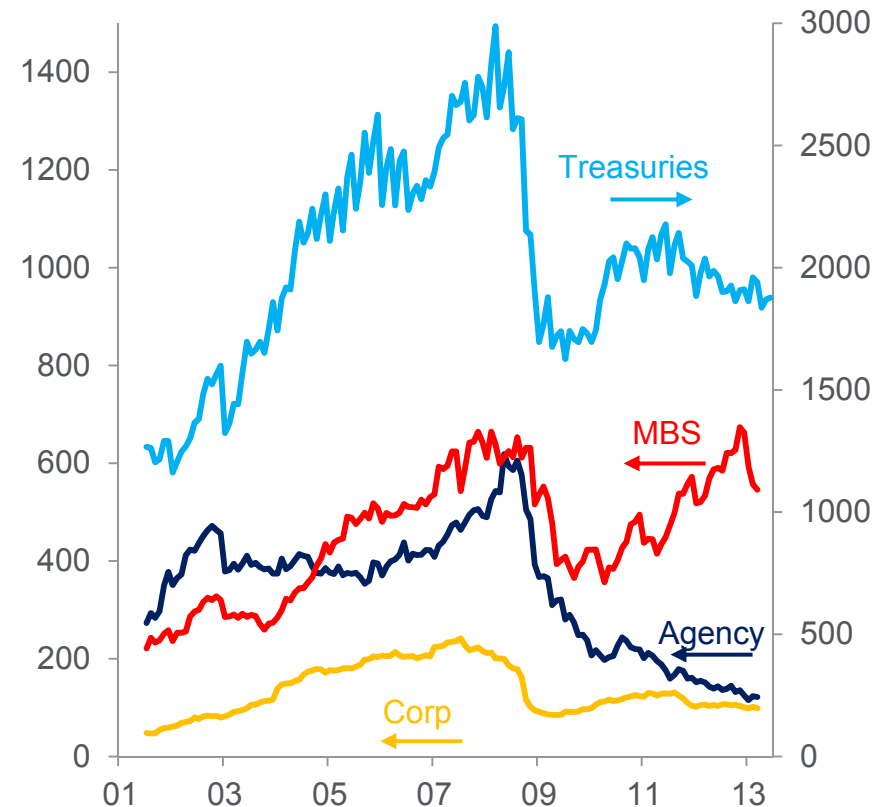
Primary dealer positions by asset class, \$bn



Source: NY Fed, Haver Analytics.

What the street is willing to finance

Primary dealer financing (reverse repo) by asset class, \$bn



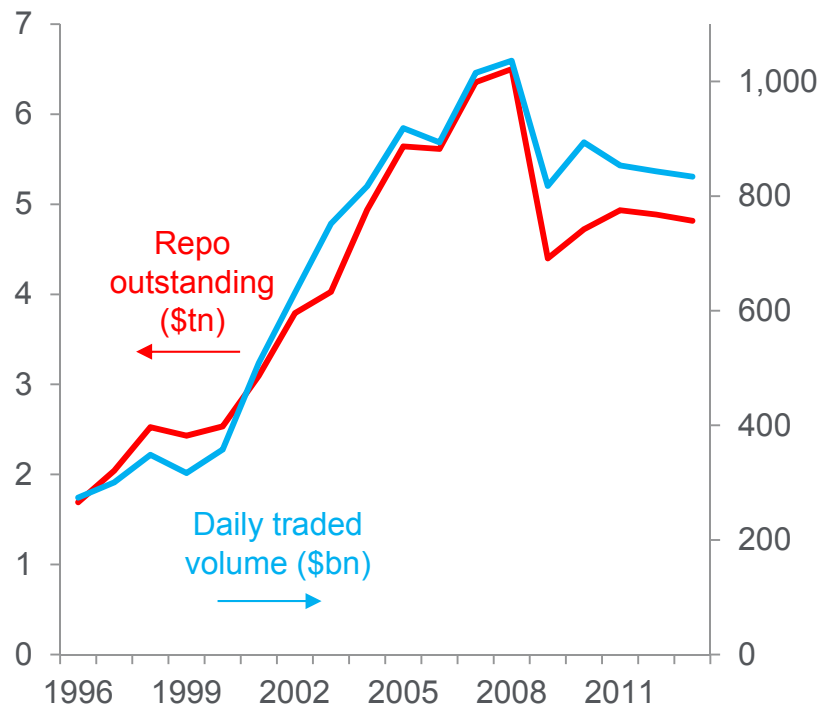
Source: NY Fed, Haver Analytics.

Dealers can no longer afford to act as credit warehouses

Supplementary leverage ratios

The silently beating heart of the market

Primary dealer total financing (\$tn) vs
total daily traded volume across US fixed income (\$bn)



Source: SIFMA. Dealer financing = repo + reverse repo.

- Key leveraged players in fixed-income markets consume dealer balance sheet via repo
 - Relative value players police the Treasury yield curve
 - REITs, hedge funds police the MBS basis
- Supplementary leverage ratios could significantly reduce dealer repo activity (low margin, balance sheet intensive)
- Would increase yield curve and agency MBS basis volatility

Leverage ratios will leave dealers less willing
to provide repo financing and to hold USTs

How much might leverage ratios cost?

Cut assets, or raise more capital?

Changes in leverage ratio (bp) produced by shifts in balance sheet (\$bn) and capital (\$bn)

Change in balance sheet assets (\$bn)

→

↓ Increase in capital (\$bn)

	-50	-40	-30	-20	-10	0	10	20	30	40	50	100	150	200	250
0	11	6	6	4	2	0	-2	-4	-6	-8	-10	-20	-29	-38	-47
0.5	13	8	8	6	4	2	0	-2	-4	-6	-8	-18	-27	-36	-45
1	15	10	10	8	6	4	2	0	-2	-4	-6	-16	-25	-35	-43
1.5	17	13	13	10	8	6	4	2	0	-2	-4	-14	-23	-33	-41
2	19	15	15	13	10	8	6	4	2	0	-2	-12	-22	-31	-40
2.5	21	17	17	15	12	10	8	6	4	2	0	-10	-20	-29	-38
3	23	19	19	17	15	12	10	8	6	4	2	-8	-18	-27	-36
3.5	25	21	21	19	17	14	12	10	8	6	4	-6	-16	-25	-34
4	28	23	23	21	19	17	14	12	10	8	6	-4	-14	-23	-32
4.5	30	25	25	23	21	19	16	14	12	10	8	-2	-12	-21	-30
5	32	27	27	25	23	21	19	16	14	12	10	0	-10	-19	-28
10	53	48	48	46	44	41	39	37	35	33	30	20	10	0	-10
15	74	69	69	67	64	62	60	57	55	53	51	40	29	19	9
20	95	90	90	88	85	83	80	78	76	73	71	60	49	38	28

10bp higher ratio can be offset by \$2.5bn in capital,
or by shedding \$50bn in assets

OCI changes

- Large banks must now reflect mark-to-market gains/losses in tier-1 capital
- Recent 100 bp sell-off in Treasury market dented tier-1 capital by ~\$40 bn
- Worsened tier-1 capital ratio by ~0.3%

And that was only the first 100bp

Net unrealized gains (losses) on available-for-sale securities, domestic commercial banks, \$bn



Source: Federal Reserve H.8.

Will reduce banks' role as stabilizer in agency MBS

Agenda

Trends in fixed income liquidity

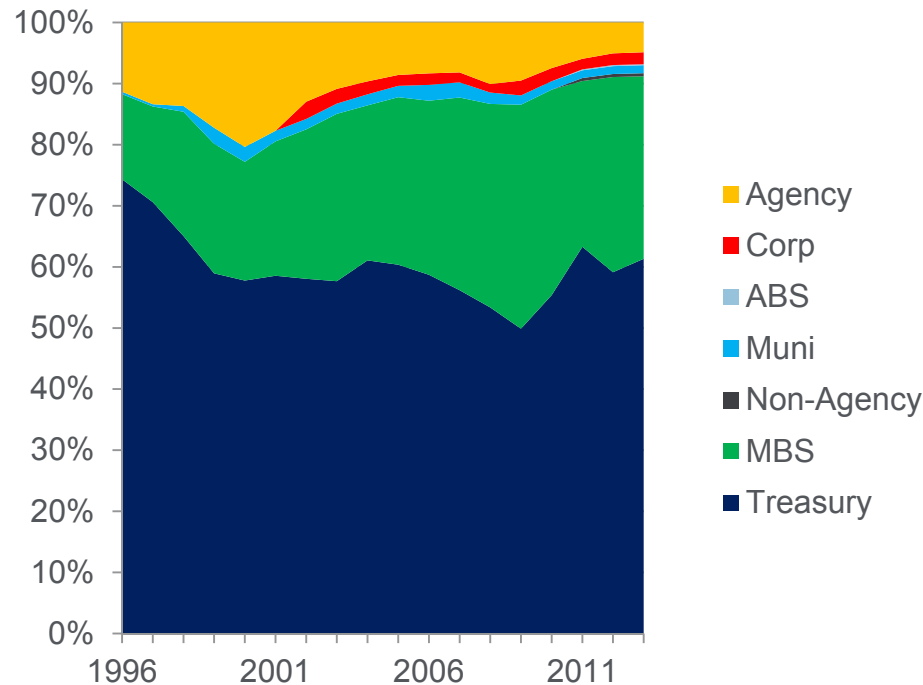
Effects of new regulations

Effects of policy and market structure

Regulations and monetary policy in conflict

Liquidity moving towards Treasuries...

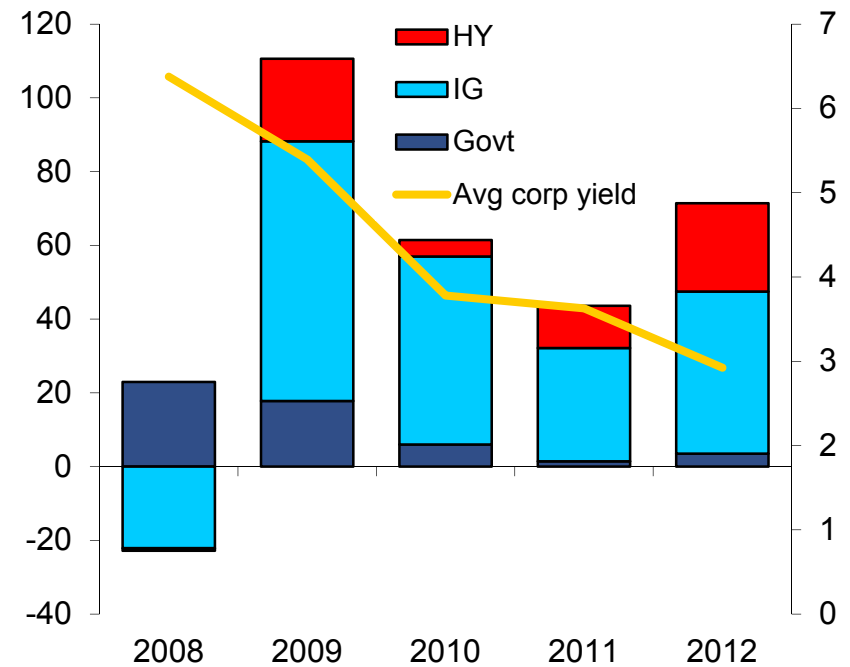
Distribution of daily market turnover, %



Source: SIFMA.

Investors moving away from them

Net mutual fund sales, \$bn



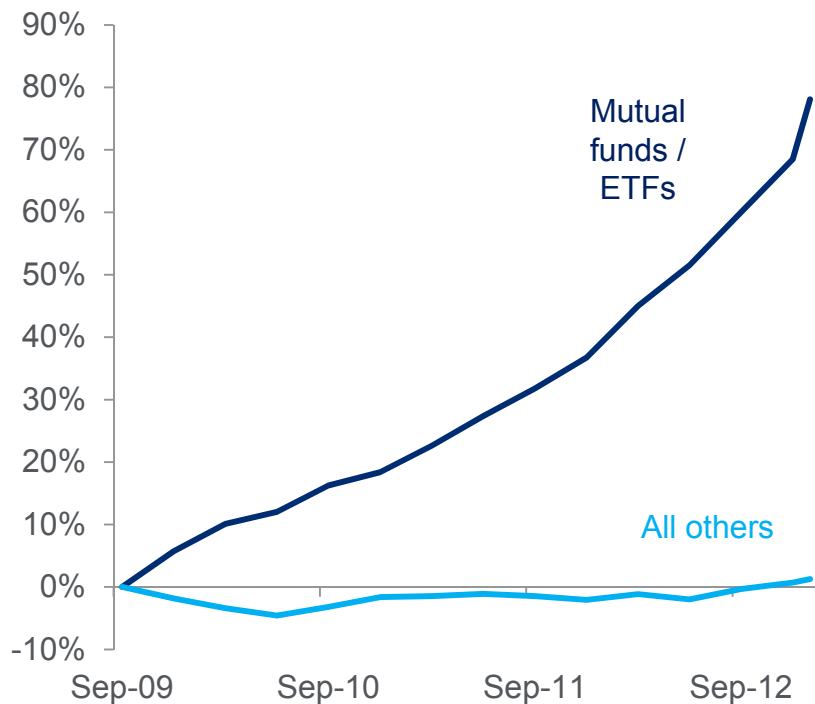
Source: ICI, Haver Analytics.

Regulations moving one way; investors moving the other

Credit awash with inflows

Tourist influx?

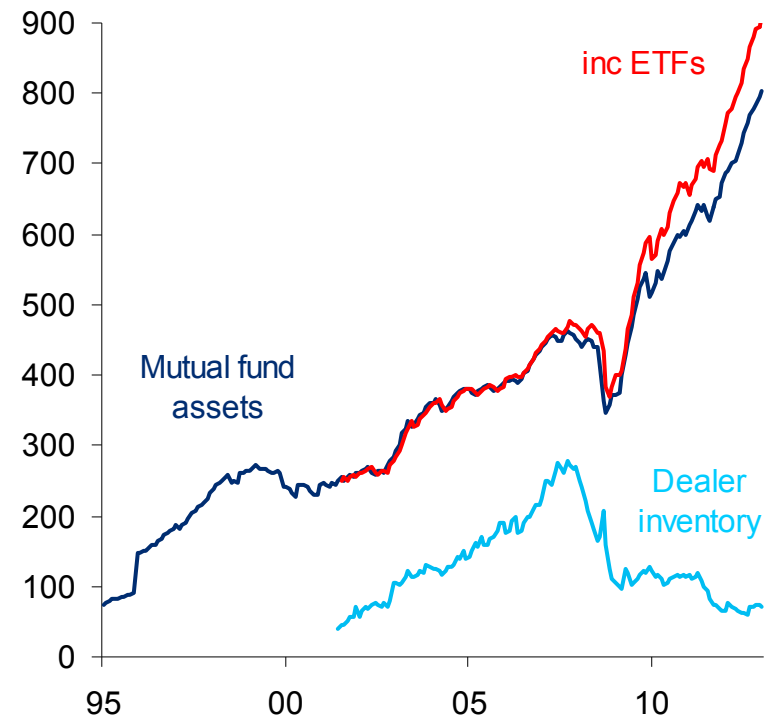
Percentage growth in credit holdings since Sep09



Source: Federal Reserve, Haver Analytics.

Entrance with no exit?

US credit mutual fund assets vs dealer inventory (\$bn, IG+HY)



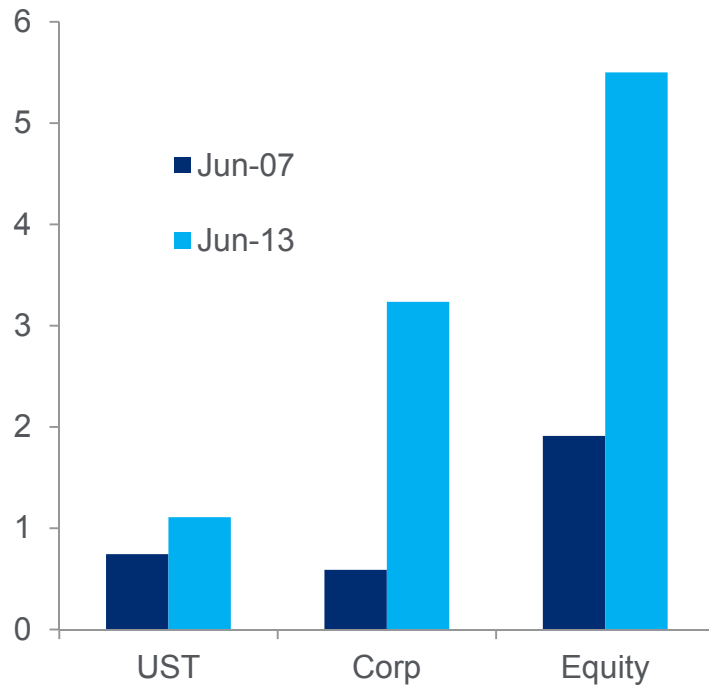
Source: ICI, NY Fed, Bloomberg, Haver Analytics.

Liquidity likely to prove a problem on the way out

ETFs

Small, but growing fast...

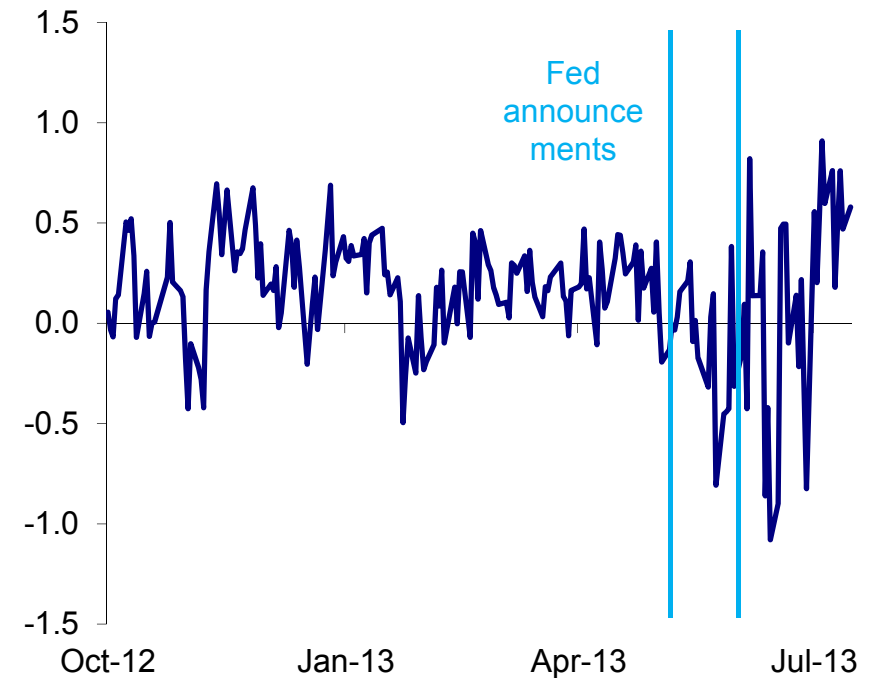
ETF outstandings vs underlying mkt size, %



Source: ICI, Haver Analytics.

...and vulnerable to any rush for the exit

US HY JNK ETF discount to net asset value, %



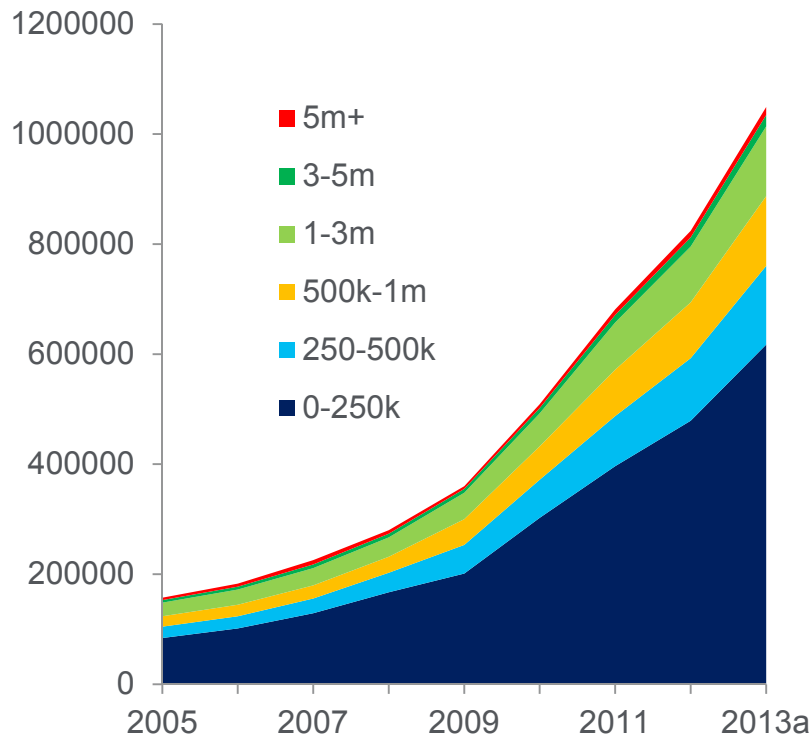
Source: Bloomberg.

Still small, but symptomatic of a broader issue

E-trading: phantom liquidity personified

Massive growth in electronic inquiry...

Number* of price inquiries on Market Axess
by size, IG Corp, annual

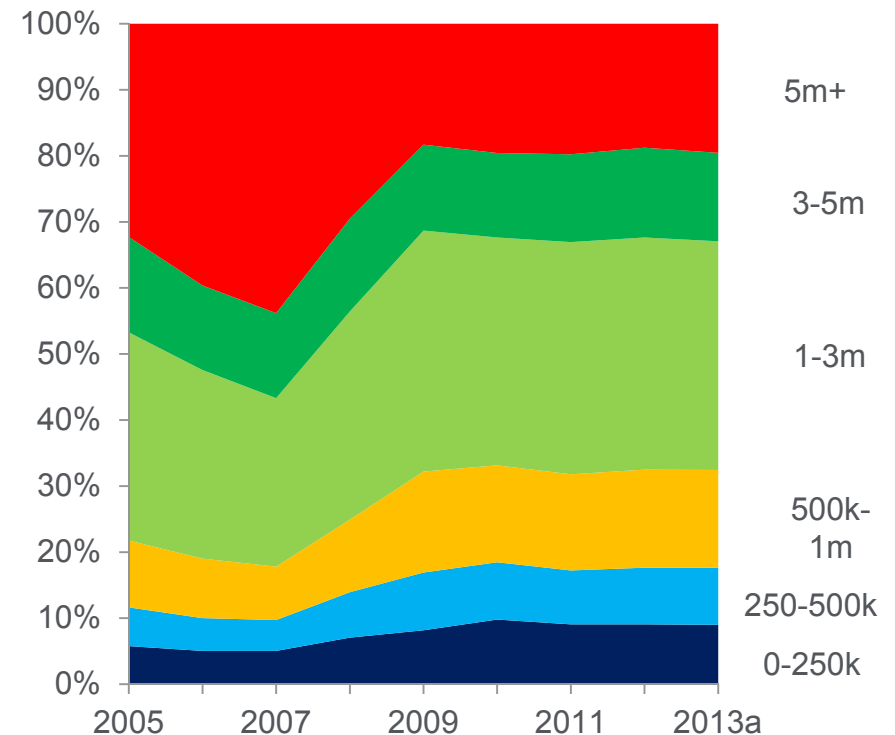


Source: Market Axess. 2013 data is annualized from 1H.

* Uses single dealer data thought to be representative of broad market.

...shame so much is in small sizes

\$ volume of Market Axess inquiries by size*, IG Corp, \$bn



Source: Market Axess.

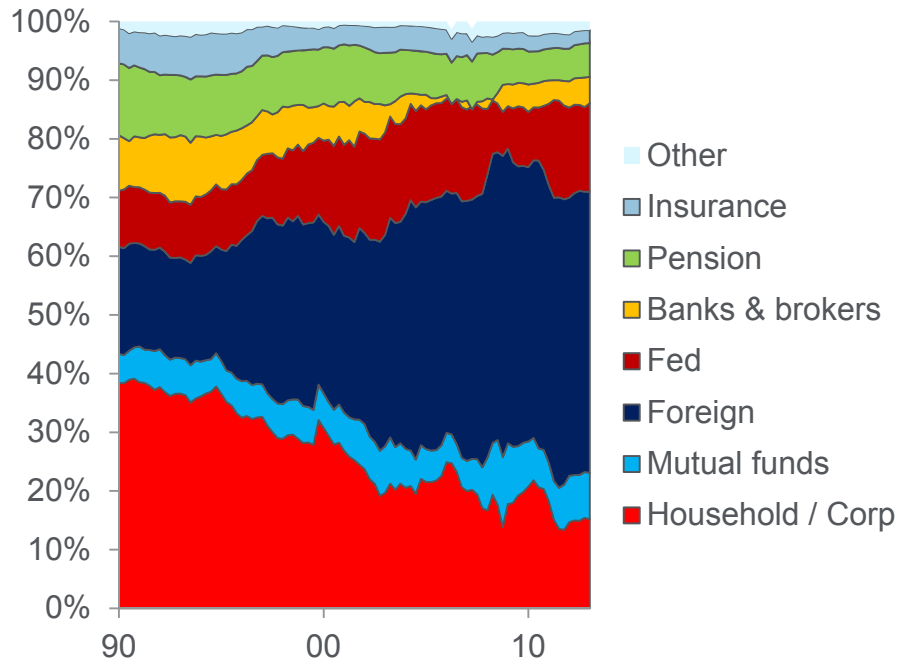
* Uses single dealer data thought to be representative of broad market.

Much volume, little depth

Shifts in market structure

Dominated by the Fed and foreigners

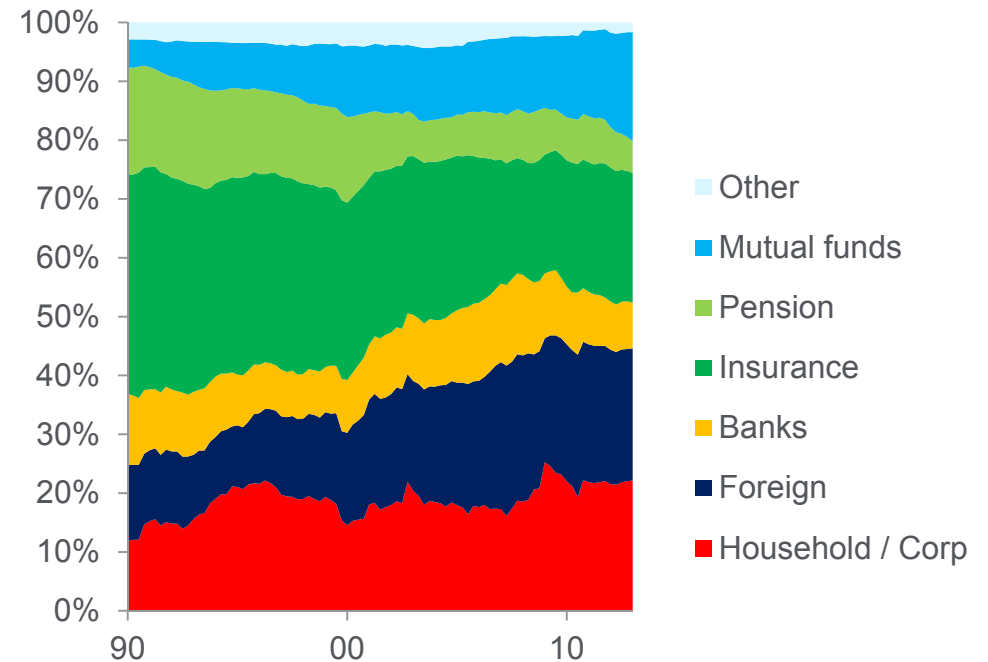
Holders of US Treasuries, % outstandings



Source: Federal Reserve Flow of Funds, Haver Analytics.

Total return investors on the rise

Holders of US Corporate bonds, % outstandings



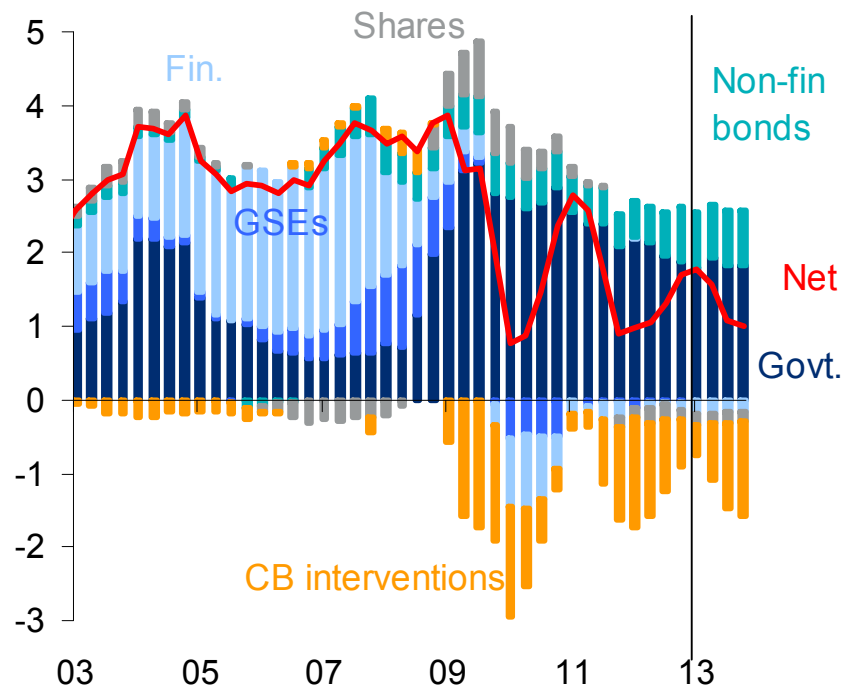
Source: Federal Reserve Flow of Funds, Haver Analytics.

Reduced heterogeneity

The impact of monetary policy (1)

Net issuance down from \$4tn to \$1tn

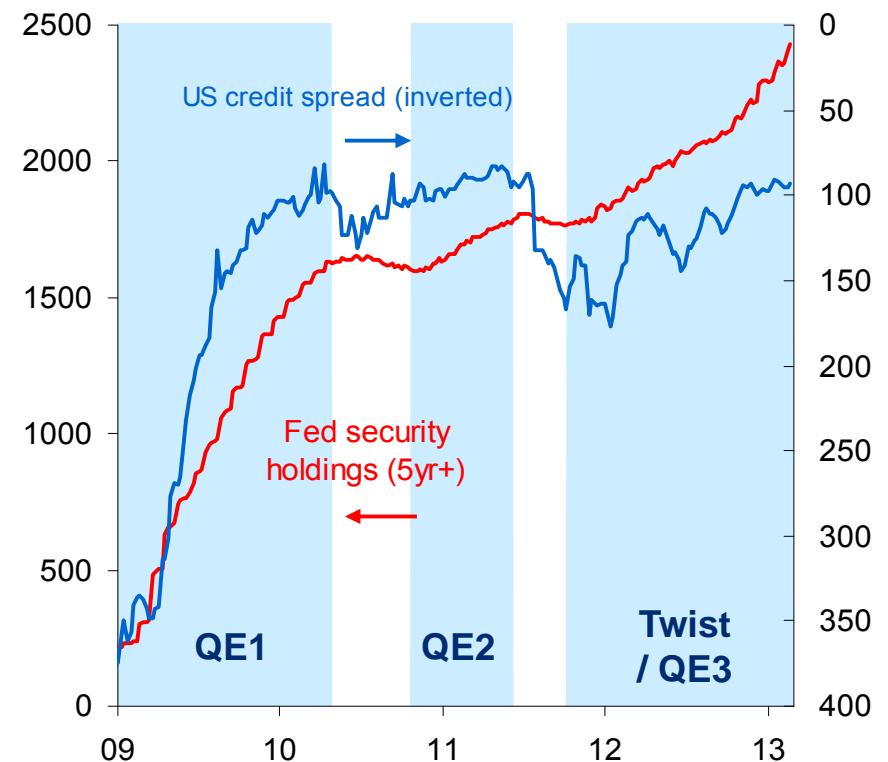
Net iss. of new securities minus central bank* interventions, 12m rolling, \$tn



Source: Haver Analytics. *: Federal Reserve, BoJ & ECB

No one dares fight the Fed

US BIG Corporate spread (bp) vs Fed security holdings (\$bn)



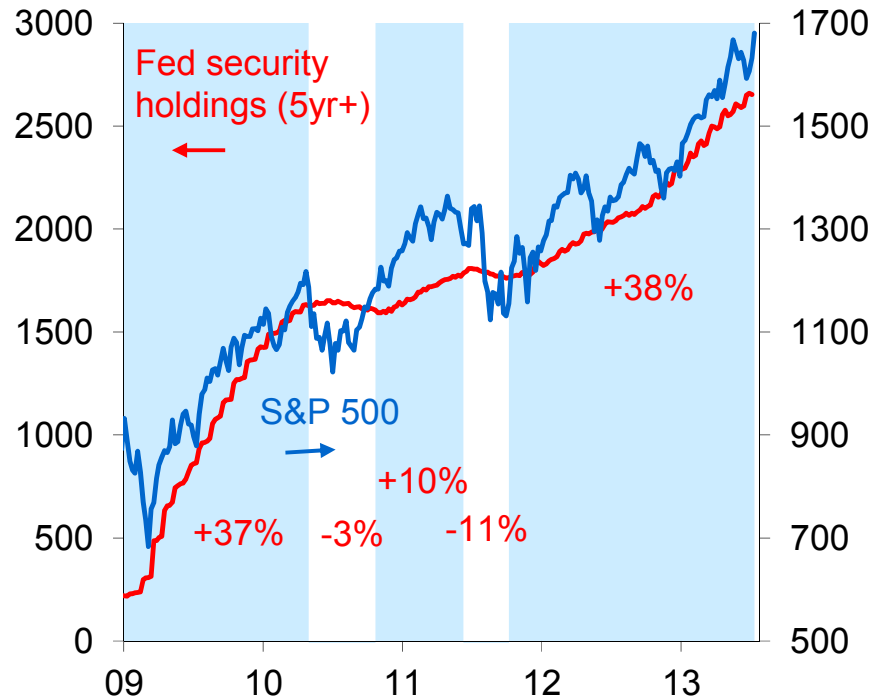
Source: Federal Reserve.

Not just increased demand – also reduced supply

The impact of monetary policy (2)

It also works in equities

S&P 500 vs Fed security holdings (\$bn)



Source: Haver Analytics.

It even works week by week

Weekly Fed purchases vs associated market move in credit and equities, Jan09-Apr13

Fed buying (\$bn)	S&P Chg pts	Chg %	US BIG Chg bp	# Weeks Count
>5bn	570	54%	-401	159
<5bn	141	15%	55	62
<0	-51	-2%	36	29

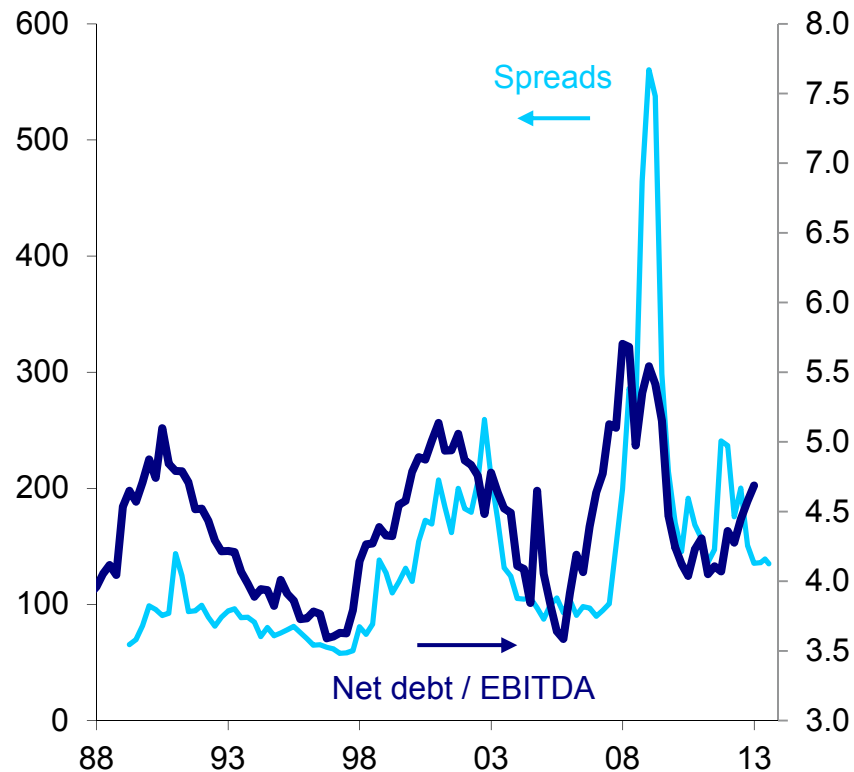
Source: Bloomberg, Haver Analytics.

Investors just following the Fed

Beware the potential for reversal

No longer following fundamentals

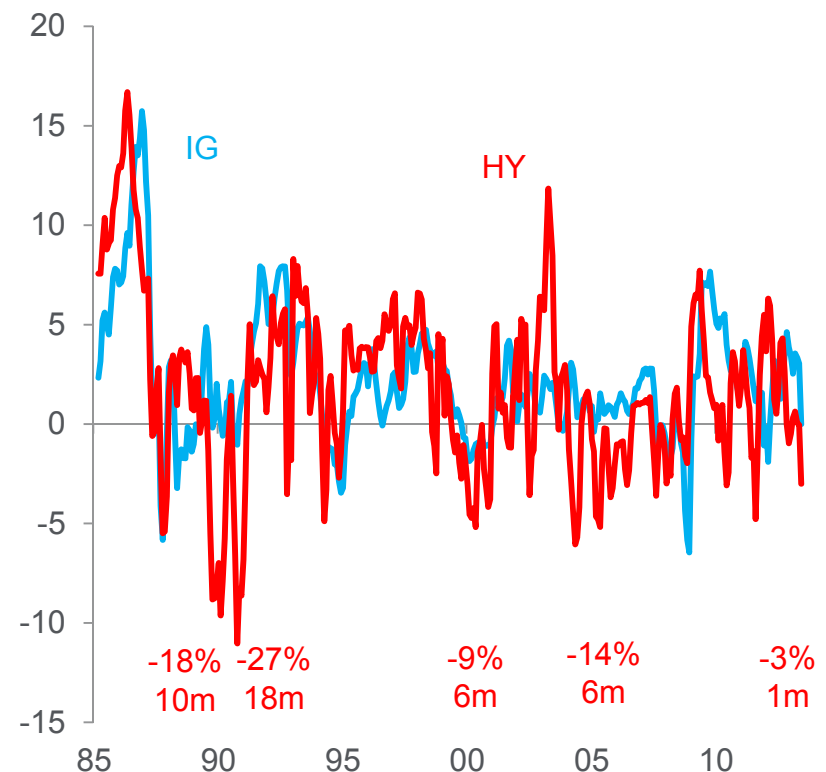
US IG credit spreads (bp) vs nonfin corp leverage (times)



Source: Federal Reserve Flow of Funds, Bloomberg.

June will happen again, and worse

Net flow into US credit mutual funds, % outstandings, 3m sum

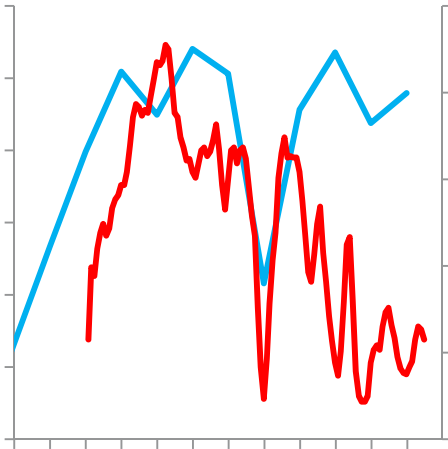


Source: ICI, Haver Analytics.

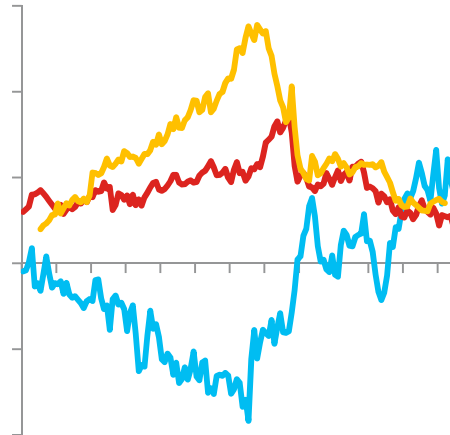
Potential for sudden dislocations

Conclusion

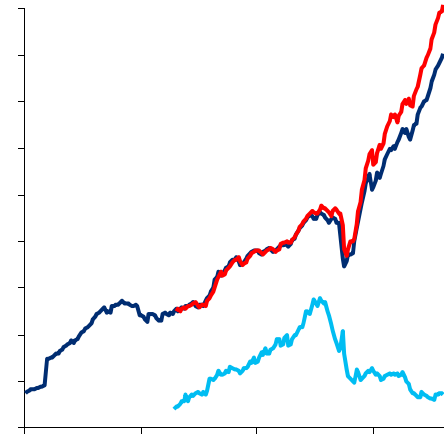
Turnover up;
liquidity not



Regulations creating
ever greater constraints



What happens when policy
and investor flows turn?



Liquidity significantly more challenged
than has been visible to date



Treasury Borrowing Advisory Committee

Committee Charge #3

July 30, 2013

Committee Charge #3

Survey of Beneficial Debt Management Tools

Treasury continually seeks ways to minimize borrowing costs, better manage its liability profile, enhance market liquidity, and expand the investor base in Treasury securities. In light of these objectives, we would like the Committee to comment on the need, if any, for Treasury to implement other types of debt management tools. In answering the question, please review the tools employed by debt management authorities around the world.

Executive Summary

The charge to the TBAC concerning potentially beneficial debt management tools builds upon the work presented to the Committee in February 2011 ⁽¹⁾, which focused on potential new security types and debt management tools. In assessing the relevance of the topics reviewed in 2011, it is important to note the differences today that inform the recommendations herein:

- Recently announced introduction of a new product since the prior analysis, which considered a range of new products
 - The Floating Rate Notes (FRN) program, to be launched later this year, represents the first new product launch since the introduction of TIPS in 1997
 - Given the infrequency with which Treasury introduces new products, it appears premature to consider a new product introduction until the FRN is well distributed and seasoned, at the earliest
- Improving budgetary conditions and resulting market dynamics
 - The Federal budget deficit picture has improved substantially over the past several years -- and especially in the last six months. Consequently, Treasury's financing need is quite a bit smaller than previously anticipated. For example, in FY 2011, the budget deficit amounted to \$1.3 trillion while CBO currently expects the deficit in FY 2013 to be \$642 billion ⁽²⁾
 - At the same time, it appears that the Federal Reserve is moving closer to starting to wind down its asset purchase program, implying that the volume of net supply that must be absorbed by the private market could rise despite a potential decline in Treasury issuance
- Given the expected reduced issuance requirements coupled with the new product launch, we concluded that the refresh to the 2011 analysis should focus exclusively on process enhancements rather than revisit the array of potential new products. Factors that could motivate considering new products include:
 - The passage of time such that the introduction of a new product is appropriate
 - Fed ceases rollover of its maturing Treasury securities, which increases Treasury's marketable borrowing needs
 - Meaningful regulatory changes that alter the demand dynamics for U.S. Treasury securities

All discussions and suggestions are intended to adhere to Treasury's core principle of "regular and predictable" issuance

Notes

1. Presentation available here: <http://www.treasury.gov/press-center/press-releases/Documents/TBAC%20Discussion%20Charts%20Merged%202.2011.pdf>

2. "The U.S. Federal Budget: Infographic" by the Congressional Budget Office, December 2011 (<https://cbo.gov/sites/default/files/cbofiles/attachments/budgetinfographic.pdf>) and "Updated Budget Projections: Fiscal Years 2013 to 2023" by the Congressional Budget Office, May 2013 (<http://cbo.gov/sites/default/files/cbofiles/attachments/44172-Baseline2.pdf>)

Regular and Predictable Issuance is a Key Tenet of Debt Management

Treasury should remain a “regular and predictable” borrower in its debt management practice. Treasury is a regular market participant, not a market timer.

- Lowers costs by removing uncertainty and allowing investors to plan future commitments of funds
- Builds out a more complete yield curve and spreads out rollover risk
- Academic analysis has indicated that the years of opportunistic and flexible issuance by the U.S. Treasury resulted in “excess yield volatility” compared with periods of “regular and predictable” debt management practices.
 - A study of the 5-year Treasury note yield between January 1971 and May 1975 showed that the variance during periods of opportunistic and flexible issuance was 2.9 basis points higher than during regular and predictable issuance ⁽¹⁾
 - During the period, average short-term market volatility during auction announcement periods was noticeably higher during times of flexible issuance ⁽¹⁾

While in certain circumstances there may be value in reverse inquiry driven / opportunistic issuance, we do not believe that these benefits would outweigh the costs associated with a divergence from the principal of regular and predictable issuance and therefore should only be examined as a supplement to the current issuance schedule, if at all

- Regular and predictable issuance is an appropriate borrowing strategy if new issue sizes are large enough to remain liquid and prevent squeezes
 - In the case where it is necessary to decrease issue sizes, additional techniques can be employed (i.e., lowering the maximum bid percentage in an auction, increasing the non-competitive bid size in an auction, etc.)

Note

1. “The Emergence of ‘Regular and Predictable’ As a Treasury Debt Management Strategy” by Kenneth D. Garbade, FRBNYH Economic Policy Review, March 2007

Section 1:

Primary Market Techniques

A Multiple-Price Auction Format

Tool

- Auctions are the most common method of government bond issuance in major developed economies and have proven to be a cost-effective and transparent way to issue debt
- Current method in the U.S. is a single-price (Dutch) auction model
 - Bidding process identifies the lowest yield (highest price) at which the auctioneer can sell all available bonds
 - All bidders in the auction who bid below the auction yield (above the auction price) will receive bonds at the auction yield
- Other sovereign countries employ an alternative multiple-price (English) auction method
 - Successful bidders are awarded bonds at the yield at which they bid
 - Non-competitive bids are awarded at the weighted average price of competitive bids

Background

- Per a 2009 OECD study, 19 of 29 countries studied used single-price and 20 used multiple-price auction methods (some used both) ⁽¹⁾
- Empirical studies by Malvey, Archibald and Flynn in 1995 and by Malvey and Archibald in 1998 found evidence that participants bid more aggressively in single-price auctions than in multiple-price auctions ^{(2) (3)}
- Auction of 2-year notes in May 1991 under the prior multiple-price format, which led to a squeeze in secondary market availability, was a catalyst for an investigation into alternative ways to conduct Treasury auctions
 - The Dutch auction process was consequently adopted, along with limitations on the size of individual bids
 - By 1998, Treasury fully replaced multiple-price auctions with single-price auctions

Benefits

- In theory, multiple-price auctions could lower the cost of borrowing

Considerations

- In practice, multiple-price auctions enable the possibility of collusion and cornering
- Multiple-price auctions create a “Winner’s Curse” or “Seller’s Curse”: the winner pays the highest price, which may lead bidders to scale back their bids in case they ultimately win
- In 1959 Milton Friedman argued that the simplicity of single-price auctions would reduce bidders’ cost of preparing bids, broaden their participation, and reduce the incentive to collude or to try to corner the market ⁽⁴⁾

Notes

1. “New Challenges in the Use of Government Debt Issuance Procedures, Techniques and Policies in OECD Markets” by Hans J. Blommestein, OECD: Financial Market Trends, 2009
2. “Uniform-Price Auctions: Evaluation of the Treasury Experience” by Malvey, Archibald and Flynn, Department of the Treasury, 1996
3. “Uniform-Price Auctions: Update of the Treasury Experience” by Paul Malvey and Christine Archibald, Office of Market Finance, Department of the Treasury, October 1998
4. Milton Friedman 30 Oct 1959 Hearing before the JEC 86th Congress Testimony in Employment, Growth and Price Levels

B Syndications

Tool

- Distribute a primary offering of Treasury securities to investors via a syndicate of broker-dealers
- Appoint a small group of joint-bookrunning managers to interface with the market and assume underwriting liability for the offered securities
 - Build an order book of investor demand at a starting price recommended by lead-managing broker-dealers
 - Tweak pricing range to determine the clearing level for Treasury's target size
 - Allocate securities to investors at the market-clearing price

Background

- Used by other sovereign nations for primary issuance
 - Favored generally by countries with lower issuance needs, but also used in certain circumstances by the United Kingdom, Japan, Italy, France, and Germany
 - Germany uses syndications for the first ever issuance of a new federal security
- Primary method of new-issue distribution for other securities, including GSE benchmark bullets, investment grade corporate bonds, high yield bonds, and equities

Benefits

- Increases certainty of execution
- Enables price discovery and greater transparency for market participants
- Facilitates a uniform-price clearing mechanism at a price that matches investor demand
- Provides a competitive incentive for bookrunning managers, through underwriting commissions and status, to find marginal buyers
- Fulfills the edict of "regular and predictable" borrowing, if syndications are announced in the quarterly calendar of issuance
- Allows a broader distribution of new issues

Syndications (Cont'd)

Considerations

- Requires a syndicate to be selected by Treasury and compensated for underwriting liability
- Exposes Treasury to market movements across a multi-hour or multi-day execution window
- Incorporates syndicate discretion into the investor allocation process
 - Participating investors agree to accept the universal price offered by the bookrunning managers
 - Decision to allocate to a buyer is made by the syndicate, rather than by the buyer's marginal price
- Enables market psychology to affect pricing outcome, if investors become “spooked” by a slow book-building process or price widening
- Deep existing investor base and highly liquid secondary trading market for Treasury notes enables a smooth auction process for new issuance without a syndicate
- Current primary dealer framework incorporates broker-dealers in the new-issue process without discretion toward specific broker-dealers or investors

Additional Considerations

- Syndication may be an effective distribution tool in the issuance of a new Treasury product, where price discovery and execution certainty will be critical
- A syndicate structure is likely not additive for the upcoming FRN issuance given it has been well publicized, is expected to be short-term and therefore is likely to attract a deep investor base
- In contrast, syndication is more likely to be additive for products where the investor base is less certain and the pricing benchmarks are less clear
 - For example, Treasury securities with maturities greater than 30 years, foreign currency-denominated issues, or potentially longer-dated FRNs

C Responding to Reverse Inquiries & Window-Driven Issuance

Tool

- Capture opportunistic windows for issuance and respond quickly to investor demand
 - Treasury may regularly post issuance targets, to supplement or complement the existing funding plan
 - Treasury may also respond to specific investor demand for a new issue (such as an ultra-long duration instrument that targets niche investors) or re-opening

Background

- Mimics a funding strategy employed by other frequent borrowers
 - GSEs currently use this funding model for issuance of callable bonds, structured notes, floating-rate notes, and discount notes
 - Corporate borrowers, especially financial institutions, will issue in optimal market windows and post opportunistic target funding levels for structured Medium Term Notes (MTNs) and commercial paper

Benefits

- Retain flexibility in strategy to issue securities in opportunistic windows
- Respond to specific investor demand for a given product or maturity at an optimal price
- Use posted funding targets to drive investor participation to a target point on the maturity curve for Treasury to issue
- Receive real-time feedback from investors on price and demand

Considerations

- Increases operational burden on Debt Management Office
 - Small issue sizes and new streams of CUSIPs will need technological and operational support
 - Treasury must monitor issuance targets to avoid creating unintended dislocations between primary and secondary markets
- Integration with current issuance strategy may pose challenges
 - If used in conjunction with existing auction processes, may impact demand from investors and dealers in auctions
 - If used instead of auction processes, may impact perception of Treasury as a “regular and predictable” borrower
- Change in target levels could lead to indirect gains or losses for holders of existing securities
- Lumpy and unpredictable cash flow needs may generate negative carry costs on opportunistic issuance
- Fragments secondary liquidity if issue sizes are small and may cause issue-specific mispricings in periods of market stress, creating orphaned secondary market segments like the high coupon callables issued in the 1980s

D Taps and Mini Tenders

Tool

- A tap is a sale of government securities where the debt management agent believes that there is a dislocation in the market caused by excess demand for a particular issue or sector
 - Removes or reduces the dislocation by re-opening an existing issue to increase the outstanding notional
 - Performed as needed, to correct adverse lending conditions
 - Announcement and auction actions are taken quickly
- A mini-tender is also a sale of government securities to correct market dislocations
 - Announcement is made in advance via the supply calendar

Background

- Used by 10 out of 29 countries studied by the OECD in 2009 ⁽¹⁾
- The most recent execution of a tap by Treasury was in the re-opening of four issues on October 8 and 9, 2008 ⁽²⁾
 - These taps had tails of 41.1bps, 15bps, 7.1bps, and 7.8bps
 - Tails may have been a function of the rapid execution as well as financial conditions at the time

Benefits

- Alleviates market dysfunction in times of great stress or systemic failure
- Reduces market pressure if there is temporary excess demand for an issue or other exceptional circumstances
- Allows lower borrowing costs for Treasury, since rich issues are typically the target securities
- Enables Treasury to fine-tune their borrowing requirements, in the case of mini-tenders. Treasury can consult the market prior to a mini-tender to understand the preferred timing and target issues
- Facilitates smooth management of Treasury's debt maturity profile (i.e., fill in a long-end gap in the yield curve)

Notes

1. "New Challenges in the Use of Government Debt Issuance Procedures, Techniques and Policies in OECD Markets" by Hans J. Blommestein, OECD: Financial Market Trends, 2009
2. "The Introduction of the TMPG Fails Charge for US Treasury Securities" by Garbade, Keane, Logan, Stokes, and Wolgemuth, FRBNY Economic Policy Review, October 2010

Taps and Mini Tenders (Cont'd)

Considerations

- Unpredictable or irregular operations may have negative market implications
- May adversely affect current holders of the target securities
- Once implemented, market may come to rely on taps or mini-tenders as a source of liquidity
- Market requires sufficient time to digest announcements of a tap, in order for the tool to be effective
- Communication strategy is critical
 - Methods will have the most impact if the market has sufficient time to digest an announcement and position appropriately
 - Treasury may provide advanced notice or define a set a parameters that will warrant action

E Over-Allotment Option (“Greenshoe”)

Tool

- Allow underwriters to use incremental buying power to maintain an orderly trading market

Background

- Over-allotment option typically serves two potential purposes in an equity or equity-like offering
 - If after-market conditions are strong, the issuer or selling shareholders deliver additional shares, increasing the base offering size by 15%
 - If after-market conditions are weak, the underwriters buy up to 15% of the base offering in the after-market to stabilize the price and improve liquidity
- Over-allotment option is not used by investment grade corporations or the GSEs in senior debt offerings
- As applied to Treasury securities, a greenshoe would provide primary dealers with the right to buy incremental notes within a defined short period of time after the auction at the same price that the securities clear the auction

Benefits

- Increases after-market demand
 - If new notes trade well after an auction, primary dealers may purchase incremental securities from Treasury within a defined short period of time to cover primary dealers’ short positions.
 - If new notes are subject to selling pressure after an auction, primary dealers may purchase incremental securities in the aftermarket to stabilize performance
- Creates an incentive for primary dealer participation in auction processes
- Process increases availability of a new issue and facilitates a more healthy repo market for a new issue
- Over-allotment could alleviate primary dealer auction constraints due to increased direct bidder participation

Considerations

- Not clear that Treasury has use for excess funds or would benefit from “under-issuing” in order to allow for greenshoe exercise
- Limits visibility for investors into final issue size in the inaugural auctioning of the securities
- The over-allotment option is only an effective tool in the issuance of a new security, not in a periodic re-opening of an existing issue
- Requires a formula to calibrate primary dealers’ portions of the over-allotment option
- Presents operational challenges to manage a short position and execute a greenshoe

Section 2:

Secondary Market Techniques

A Repurchases: Buybacks and Switches

Tool

- Actively adjust Treasury's outstanding debt and maturity profile through liability management
 - Repurchase outstanding issues in whole or in part ("buybacks")
 - Issue new securities to replace repurchased securities ("switches")

Background

- Treasury engaged in a repurchase program from March 2000 to April 2002 as a result of the emergence of a fiscal surplus
 - United States swung from a \$290 billion deficit in 1993 (4.7% of GDP) to a \$236 billion surplus in 2001 (2.4% of GDP)
 - Treasury's buyback program ceased as deficits returned by FY 2003
 - United States has only posted a surplus in 5 of the last 42 fiscal years
- Corporate borrowers engage opportunistically in liability management exercises through tenders, exchanges, and open market operations
 - Low interest rate environment since 2009 has provided an incentive for investment grade corporate borrowers to repurchase high-coupon debt and refinance with lower-cost funding
 - Considerations include net present value analysis, accounting implications, and long-term interest rate views
- Fannie Mae and Freddie Mac also have a history of conducting repurchases
 - GSEs have engaged in reverse-auction buybacks, tender offers, and exchanges
 - Repurchased securities include callable bonds, benchmark bullets, floating-rate notes, subordinated debt, and foreign-denominated securities

Repurchases: Buybacks and Switches (Cont'd)

Benefits

- May be an effective tool to manage Treasury debt in periods of surplus
- Smooth the predictability of new issuance in periods of shrinking deficits or rising surplus
 - When cash needs decrease, repurchasing outstanding issues will delay the need to abruptly eliminate a current auction series
- Prevent an extension of the average maturity of outstanding debt in periods of surplus
 - Repurchase long-dated maturities
 - Redeem shorter-dated maturities without refinancing
 - Reduce aggregate new issuance
- Increase size and liquidity of new Treasury issuance, using new financing to fund repurchases
- Lower Treasury's interest expense in low interest rate environments by replacing high-coupon debt with lower-cost financing
- Buybacks can potentially help Treasury better manage its seasonal cash balances

Considerations

- Treasury currently effectively adjusts to seasonal cash flows by moderating the supply of bills
- Reduce liquidity of outstanding issues, where liquidity in off-the-run notes is already vulnerable in periods of market stress
- Subject to revenues and cyclicalities of cash balances, if repurchases are performed for cash management purposes
 - Treasury may be more active in repurchases during periods of higher tax revenue
 - Auction sizes could be variable in periods of low revenue
- Face replacement risk, where the coupon on new issuance may be higher than the coupon on the repurchased securities
- Can influence the yield curve as a result of the distribution of purchases
- Create a potential impact on futures markets, where the cheapest to deliver security may be affected by a reduction in outstanding Treasury coupons
- Issuance-funded repurchases may contradict Treasury's objectives as a "regular and predictable" borrower and can adversely impact the yield curve

B Securities Lending Facility / Collateral Swap Facility

Tool

- A securities lending facility provides a temporary source of securities to the financing market to promote the efficient functioning of markets
- A collateral swap facility enables the exchange of high quality assets for posted collateral

Background ⁽¹⁾

- The Federal Reserve Bank of New York (FRBNY) operates a securities lending facility
 - Offers Treasury and Agency securities for loan from the System Open Market Account (SOMA) portfolio via a daily auction process
 - Security loans are collateralized on an overnight basis with Treasury bills, notes, bonds and inflation-linked securities
- Failure by a primary dealer to re-deliver collateral against borrowed securities by the loan maturity date results in a penalty fee equal to the general collateral repo rate plus a fail charge

Benefits

- A securities lending facility at Treasury would complement the Fed's SOMA lending program
- Market dislocations and fails may be significantly reduced if Treasury implements a separate facility

Considerations

- Legal implications of creating a Treasury facility ⁽¹⁾
 - Treasury may likely need new authority to be able to issue securities for the purpose of securities lending
 - Issuance for this purpose should be considered in the context of the debt ceiling
- Existing FRBNY securities lending facility, which is limited to Treasury-for-Treasury swaps, has proven to be beneficial, but at this point it seems premature to consider an extension of this mechanism for the Treasury Department

Note

1. See "References" for further information (slide 21)

Appendix




Significant Squeezes in the U.S. Treasury Market

Significant Squeezes	Issue	Background	GC Repo Rate (%)		Action
April 1986	9.25% Feb 2016	May refunding, some foreign investors did not lend the old issue	6.75	High GC rate made repo failure on 9.25 Feb 16 costly	No action: the 9.25% February 2016 traded with a negative repo rate for some time
September / October 2001	5-year, 4.625% May 2016 and 10-year, 5% Aug 2011	Significant fails, 9/11	3.5 to 2	Bank of New York had their operations in the World Trade Center, so settlements of many trades were negatively impacted	Treasury reopened the OTR 10-year on Oct 4, 2001 and indicated a possible reopening of OTR 5-year as well
June 2003	On-the-run 10-year: 3.625% May 2013	Chronic short position in market due to long-term buyers not lending the issue	1.00	Low GC rate made repo failure on 3.625% May 2013 not so costly	No action: fails persisted until end of year after quarterly 10-year note auction in November 2003
October 2008	4 issues suffered major shortage	Credit crisis: demise of Lehman Brothers and the Reserve Fund breaking the buck	0.02	The ultra low level of GC would have normally meant the fails wouldn't have been so costly, but there was an extreme flight to simplicity as well as quality going on and many dealers were short	Treasury re-opened 4 issues: 4.25% Aug 2015 and 4.125% May 2015 on Oct 8, 2008, then 3.5% Feb 2018 and 4% Feb 2015 on Oct 9, 2008

Source: "The Introduction of the TMPG Fails Charge for US Treasury Securities" by Garbade, Keane, Logan, Stokes, and Wolgemuth, FRBNY Economic Policy Review, October 2010

Appendix: Global Issuance Recap




Global Issuance Recap

	Debt Instrument	Maturity	Auction Type	Auction Timeline	Syndicated	Taps / Mini-Tenders	Buybacks / Switches
 U.K.	Conventional Gilt	2 years – 50 years	Multiple-price auction	Announcement: Tuesday of the previous week; Auction: 30-yr issued quarterly, 5-year and 10-year issued 1 st and 3 rd month of the quarter; Settlement: 3 business days after transaction	Yes: GBP5Bn 50-yr done on 6/2013, (GBP 3.5Bn more in conventional gilts to come for FY 2013)	Tap: Yes, but none since April 1996; Mini-tenders: ~GBP 2Bn sales to date	Buybacks of 6 or fewer months remaining to maturity to smooth maturity peaks; Switches on an ad-hoc basis, last one done 2001 in Treasury stock
	Index-Linked Gilt	5 years – 50 years	Single-price auction	Announcement: Tuesday of the previous week; Auction: Monthly with varying maturities; Settlement: 3 business days after transaction	Yes: GBP 12.5Bn planned for FY 2013	Tap: Yes, but none since November 1998; Mini-tenders: ~GBP 750MM sales to date	Switches on an ad-hoc basis, Last one done 2001
	Other Products	Treasury Bills, Double-dated Gilts and Undated Gilts (both not in circulation currently); DMO provides a Post Auction Option Facility (PAOF) for successful bidders at all auctions to have the option to acquire up to an additional 10% of the total gilts they were allotted at the average accepted price of the auction; Last reverse gilt auction in 2001					
 Japan	JGB	2 years – 40 years	Competitive price auction (2-year, 5 year, 10-year, 20-year, 30-year); Competitive yield auction / Dutch (40-year)	Announcement: About a week before auction at 10:30AM; Auction: Bidding closes at 12PM, 2-year issued end-month, 5-year issued mid-month, 10-year issued beginning of month, Issuance times of longer-maturity bonds vary; Settlement: 2 – 3 business days following auction	Yes: Not since the 1990's	Not ad-hoc but two tap auctions per month (JPY300Bn in 5-year – 15-year and in 15-year – 30-year); Mini-tender: No	Buybacks done on a monthly basis, recently focused on Linkers and Floaters; No switches
	Inflation-Indexed Bonds	10 years	None specified	None specified	No	Tap: No; Mini-tender: No	Buybacks recently targeted in 10-yr Inflation-linked and 15-yr Floaters
	Other Products	5 – 10-yr auctions also issued through non-competitive auctions for smaller bidders; OTC sales system of 2-yr, 5-yr, 10-yr JGBs, price determined by MOF for each issue, max value of JPY100 per individual applicant, monthly OTC sales; Also issue Floating Rate Bonds					
 Germany	Schaetze, Bobl, Bund	Schaetze: 2-year, Bobl: 5-year, Bund: 10- and 30-year	Multiple-price auction	Announcement: 6 business days prior to auction; Auction: Wednesdays at 11:30AM; Settlement: 2 business days following the auction	No	Tap: Yes, usually only off benchmarks; Mini-tender: No	Buybacks on a daily, ad-hoc basis in the secondary market (no announcements beforehand, no post-trading data); Switches on an ad-hoc basis
	Bobl / EI, Bund / EI	Bobl / EI: 5-year, Bund / EI: 10-year	Multiple-price auction	Announcement: Flexible; Auction: Wednesdays at 12:00PM	Yes: only for first issuance and first reopening	Tap: Yes, more sporadically than Bund / Bobl taps; Mini-tender: No	Buybacks on a daily, ad-hoc basis in the secondary market (no announcements beforehand, no post-trading data); Switches on an ad-hoc basis
	Other Products	Foreign currency bonds, Federal Savings Notes; Bunds are strippable					

Source: OECD, National Central Banks, National Debt Management Offices

Appendix: Global Issuance Recap (Cont'd)

Global Issuance Recap (cont'd)

	Debt Instrument	Maturity	Auction Type	Auction Timeline	Syndicated	Taps / Mini-Tenders	Buybacks / Switches
 Italy	CTZ, BTP	CTZ: 2-year; BTP: 3-year – 30-year	Single-price auction	Announcement: 2 business days prior to auction; Auction: 2-year at end of month, 2-year issued mid-month, 5-year and 10-year issued end of month; Settlement: 3 business days following the auction	Yes: EUR15Bn 15-yr in January 2013; EUR6Bn 30-yr in May 2013	Tap: Yes, off off-the-runs more regularly; Mini-tender: No	Buybacks and Switches on an ad-hoc basis
	CCTeu (FRN), BTP€i (Linker)	CCTeu: 5-year, BTP€i: 5-year to 30-year	Single-price auction	CCTeu: Announcement: 2 business days prior to auction; Auction: End of most favorable month; Settlement: 2 business days following the auction; Announcement: 2 business days prior to auction; BTP€i: Auction: End of month together with CTZ auction; Settlement: 3 business days following the auction	None in 2012 – 2013 but BTP Italia deal this year (see Other Products section)	Tap: Yes, CCTeu fairly regularly and Linkers more sporadically; Mini-tender: No	Beginning June 2010, MEF offered opportunity to exchange current CCTs with new CCTeu
	Other Products	BTP Italia (Inflation-Linked Bonds): EUR17Bn syndicated deal in 2013; Bonds over 5 years are strippable					
 France	BTAN, OAT	BTAN: 2 years – 5 years; OAT: 7 years to 50 years	Multiple-price auction	Announcement of BTAN and OAT: 4 business days prior to auction; BTAN Auction: 3 rd working Thursday of each month at 10:50AM; OAT auction: 1 st working Thursday of each month at 10:50AM; Settlement of BTAN and OAT: Tuesday following the auction	Yes: EUR4.5Bn of 30-yr OAT done on May 25, 2013 (usually 1 syndication in the long end each year)	Tap: Yes, sporadically, more frequently for 30-year bonds than for shorter paper; Mini-tenders: No	Buybacks daily, Switches on an ad-hoc basis
	OATi, OAT€i (Inflation Linked)	≥ 7 years	Multiple-price auction	Announcement: 4 business days prior to auction; Auction: 3 rd working Thursday of month at 11:50AM; Settlement: Tuesday following the auction	Yes: sporadic, EUR3bln of 15yr in 2008	Tap: Yes, sporadically; Mini-tenders: No	Buybacks on an ad-hoc basis
	Other Products	Floating rate OAT Bonds: TEC 10 OAT (last matured in 2009, none in circulation currently), OATs and BTANs are strippable					
 Canada	Nominal Bond	2-year to 30-year	Multiple-price auction	Announcement: Week prior at 3:30PM; Auction: Usually on Wednesday by 12:00PM; Settlement: 2 business days for 2- and 3-year bonds; 3 business days for 5-, 10-, and 30-year bonds	Yes: not since 1991	Tap: No; Mini-tenders: No	Buybacks and switches done regularly; bond buybacks done once or twice a quarter, target off-the-runs (12 months – 25 years); cash management buybacks (under 18 months) done weekly; Switches quarterly in 2-yr paper, less frequently in 30s
	Real Return Bond	30-year	Single-price auction (as scheduled for the 9/5/2013 30-yr auction)	Announcement: Week prior at 3:30PM; Auction: Usually on Wednesday by 12:05PM; Settlement: 3 business days after auction	Yes: sporadic; 30-yr deal in the mid 1990's	Tap: No; Mini-tenders: No	No buybacks nor switches
	Other Products	Canadian Savings Bonds, Canadian Premium Bonds, Foreign currency funding (syndicated offerings)					

Source: OECD, National Central Banks, National Debt Management Offices

References

Securities Lending Facility (Slide 16) – Additional Background Information ⁽¹⁾ ⁽²⁾

- **Background ⁽¹⁾**

- The FRBNY has been operating a securities lending facility since 1969. The FRBNY's securities lending program offers securities for loan from the System Open Market Account or SOMA portfolio. Lending is done on an overnight basis and to prevent overnight bank reserves from being severely affected by the supply/demand changes, the security loans are collateralized with Treasury bills, notes, bonds and inflation-linked securities rather than cash. The theoretical supply of a particular issue is limited to 90% of each Treasury and Agency security held in the SOMA with a maturity greater than 13 days. If less than 90% of a particular issue is held in the SOMA, then the entire SOMA holding can be lent. Primary dealers are limited to 25% of this theoretical supply. If a primary dealer fails to deliver collateral against borrowed securities by the loan date, cash will be held overnight against the loan without interest and a penalty fee equal to the general collateral repo rate will be applied--in addition to the lending fee and the fail charge. Failure by a primary dealer to re-deliver collateral against borrowed securities by the loan maturity date will mean a penalty fee equal to the general collateral repo rate plus the fail charge. The fail charge was introduced in 1 May 2009.
- The fail charge is calculated by:
$$c = \frac{1}{360} * 0.01 * \max(3 - R, 0) * P$$

(C = fails charge, R = Fed Funds target rate, P = amount of funds due from the non-failing party)

- **Legal Issues:**

- A 2006 White Paper by the Office of Debt Management at the Department of the Treasury ⁽²⁾, cites Chapter 31 of Title 31 of the United States Code that authorizes the Secretary of the Treasury to issue Treasury securities, and authorizes the Secretary to borrow amounts necessary for expenditures, and may issue securities for the amounts borrowed, as well as to buy, redeem or refund outstanding securities. However, there is no reference to securities lending. It seems likely that the Treasury would need new authority to be able to issue securities for the purpose of securities lending.
- Debt ceiling issues are another matter to consider. If the securities lending facility received collateral trading well above par value borrowing from the securities lending facility could be said to be increasing the debt subject to the debt limit.

Notes

1. "The Introduction of the TMPG Fails Charge for US Treasury Securities" by Garbade, Keane, Logan, Stokes, and Wolgemuth, FRBNY Economic Policy Review, October 2010
2. "Consideration of a Proposed Treasury Securities Lending Facility" Department of the Treasury, Office of Debt Management, May 2006