Treasury Presentation to TBAC

Office of Debt Management



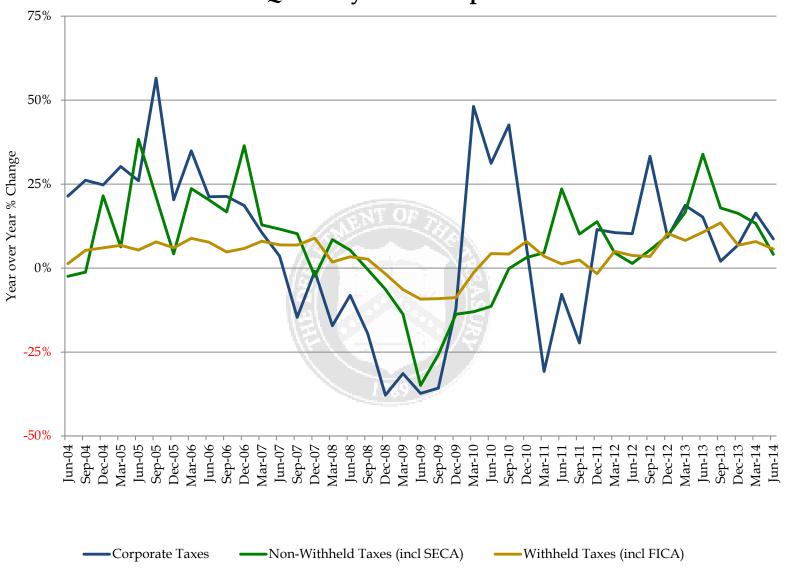
Fiscal Year 2014 Q3 Report

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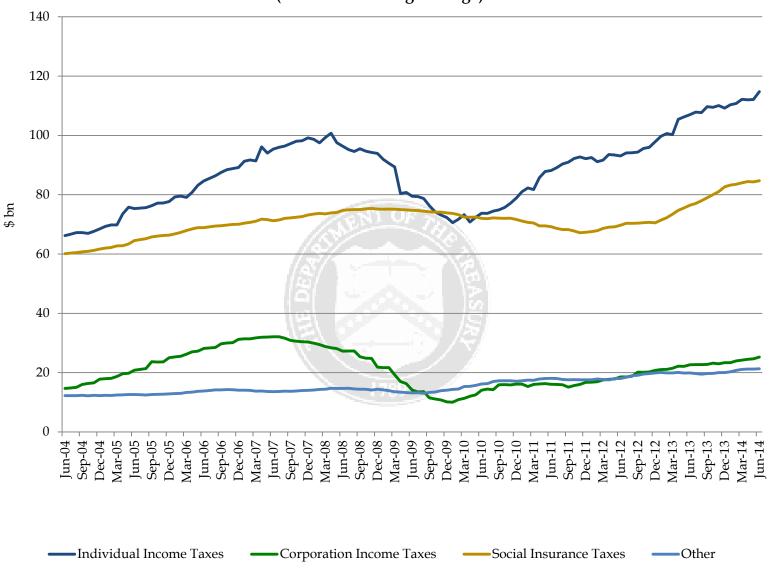
Section I: Fiscal

Quarterly Tax Receipts



Monthly Receipt Levels

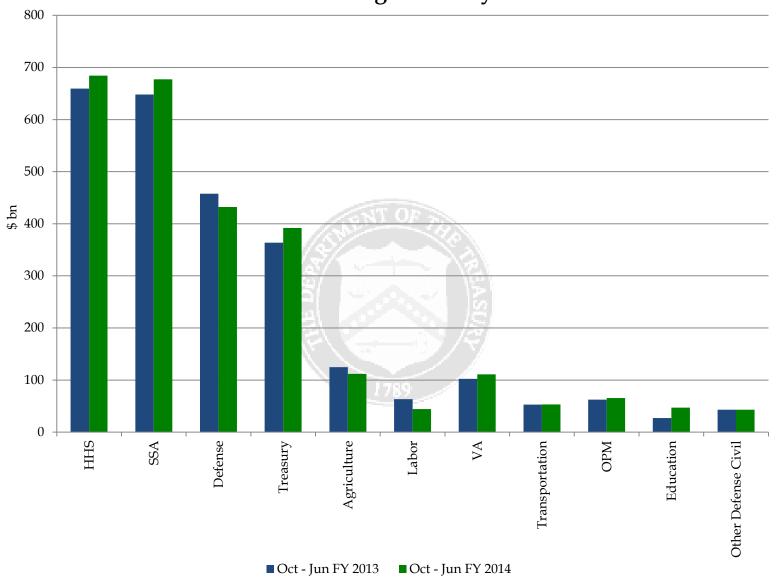
(12-Month Moving Average)



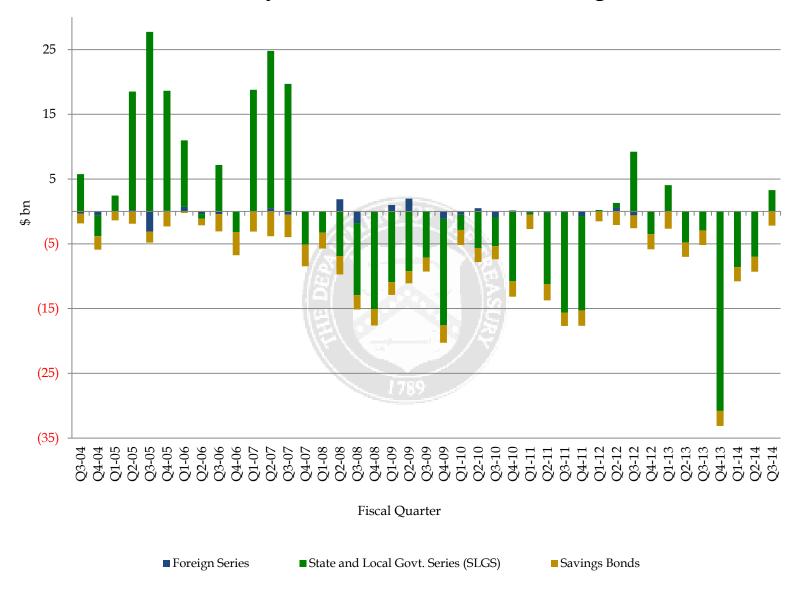
Individual Income Taxes include withheld and non-withheld. Social Insurance Taxes include FICA, SECA, RRTA, UTF deposits, FUTA and RUIA. Other includes excise taxes, estate and gift taxes, customs duties and miscellaneous receipts.

Source: United States Department of the Treasury

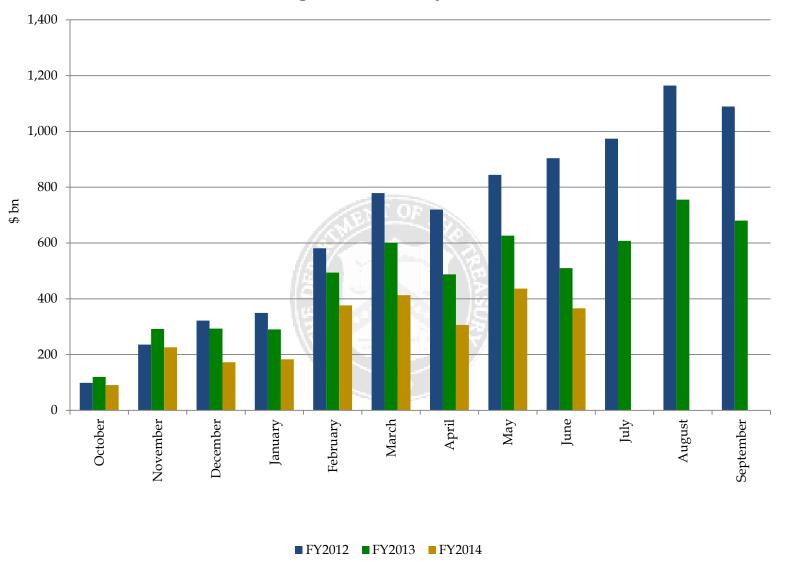
Eleven Largest Outlays



Treasury Net Nonmarketable Borrowing



Cumulative Budget Deficits by Fiscal Year



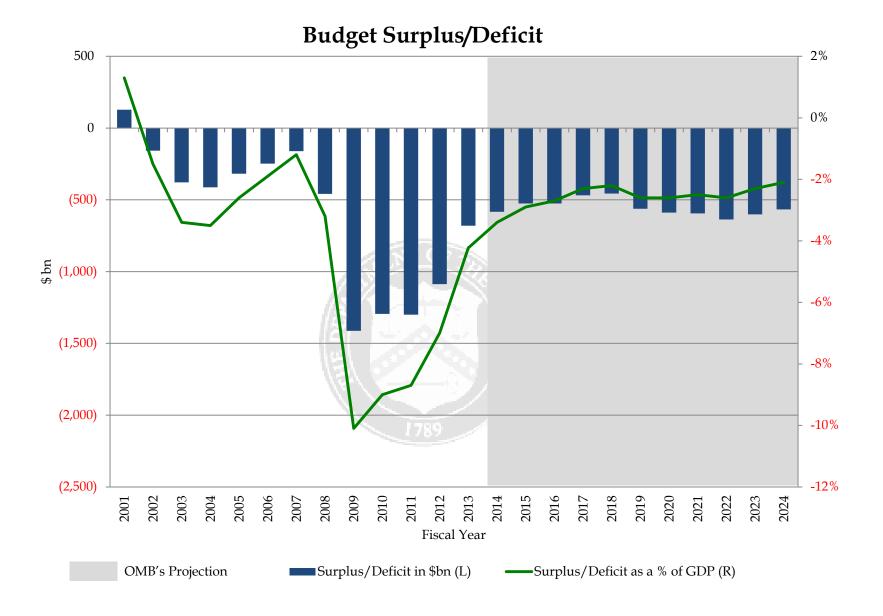
FY 2014-2016 Deficits and Net Marketable Borrowing Estimates

In \$ billions

			CBO's Analysis	
	Primary		of the	
	Dealers ¹	CBO ²	President's Budget ³	OMB MSR ⁴
FY 2014 Deficit Estimate	506	492	506	583
FY 2015 Deficit Estimate	492	496	509	525
FY 2016 Deficit Estimate	538	536	548	525
FY 2014 Deficit Range	450 - 560			
FY 2015 Deficit Range	425 - 600			
FY 2016 Deficit Range	375 - 750			
		12		
FY 2014 Net Marketable Borrowing Estimate	634	757	772	891
FY 2015 Net Marketable Borrowing Estimate	582	545	579	655
FY 2016 Net Marketable Borrowing Estimate	610	599	611	658
FY 2014 Net Marketable Borrowing Range	500 - 710			
FY 2015 Net Marketable Borrowing Range	400 - 730			
FY 2016 Net Marketable Borrowing Range	450 - 810			
Estimates as of:	Jul-14	Apr-14	Apr-14	Jul-14

¹Based on primary dealer feedback on Jul 28, 2014. Estimates above are averages. ² Table 1 of the "Updated Budget Projections: Fiscal Years 2014 to 2024" ³ Table 1 of the "An Analysis of the President's 2015 Budget"

⁴Table S-11 of the "Fiscal Year 2015 MSR"



Section II: Financing

Assumptions for Financing Section (pages 13 to 19)

- Portfolio & SOMA holdings as of 06/30/2014
- Estimated projections of the Large Scale Asset Purchase program, announced on 12/12/2012 by the Federal Reserve, assumed to last until October 2014 with SOMA redemptions until June 2021. These assumptions are based on the Federal Reserve's June 2014 primary dealer survey and Chairman Bernanke's June 2013 press conference.
- Assumes announced issuance sizes and patterns constant for Nominal Coupons, TIPS, and FRNs as of 08/06/2014, while using an average of ~1.45 trillion of Bills Outstanding consistent with Treasury's guidance of the FRN program replacing some Bills issuance.
- The principal on the TIPS securities was accreted to each projection date based on market ZCIS levels.
- No attempt was made to match future financing needs.



Sources of Financing in Fiscal Year 2014 Q3

April - June 2014	
Net Bill Issuance (2	64)
Net Coupon Issuance 20	00
Subtotal: Net Marketable Borrowing (6	54)
Ending Cash Balance 13	39
Beginning Cash Balance 14	42
Subtotal: Change in Cash Balance (3)
·	•
Net Implied Funding for FY 2014 Q3* (6	51)

	•	ril - June 2014 ill Issuance	Į.	Fiscal Year to Date			
Issuance	Gross Maturing Net			Gross	Maturing	Net	
4-Week	410	425	(15)	1,183	1,218	(35)	
13-Week	325	367	(42)	1,114	1,179	(65)	
26-Week	299	367	(68)	1,000	1,032	(32)	
52-Week	100	98	2	238	248	(10)	
CMBs	25	25 166		221	221	0	
Bill Subtotal	1,159	1,423	(264)	3,756	3,898	(142)	

	Apr	il - June 2014	:	Fiscal Year to Date			
	Cou	pon Issuance	2				
Issue	Gross	Maturing	Net	Gross	Maturing	Net	
2-Year	93	106	(13)	285	322	(37)	
2-Year FRN	41	0	41	82	0	82	
3-Year	87	98	(11)	267	293	(26)	
5-Year	105	110	(5)	315	294	21	
7-Year	87	0	87	261	0	261	
10-Year	66	27	39	198	86	112	
30-Year	42	0	42	126	0	126	
5-Year TIPS	18	17	1	34	17	17	
10-Year TIPS	13	0	13	54	27	27	
30-Year TIPS	7	0	7	23	0	23	
Coupon Subtotal	559	359	200	1,645	1,038	607	
Total	1,718	1,782	(64)	5,401	4,936	465	

^{*}Assumes an end-of-June 2014 cash balance of \$139 billion versus a beginning-of-April 2014 cash balance of \$142 billion. By keeping the cash balance constant, Treasury arrives at the net implied funding number.

Sources of Financing in Fiscal Year 2014 Q4

July - September 2014	
Assuming Constant Coupon and Average Bill Issuance Sizes as of 06/30/2014*:	
Net Bill Issuance	38
Net Coupon Issuance	178
Subtotal: Net Marketable Borrowing	216
Treasury Announced Estimate: Net Marketable Borrowing**	192
Implied: Decrease In FY 2014 Q4 Net Issuances	(24)

	, ,	- September Bill Issuance		Fisc	cal Year to Da	ıte
Issuance	Gross	Maturing	Net	Gross	Maturing	Net
4-Week	416	408	8	1,599	1,626	(27)
13-Week	364	325	39	1,478	1,504	(26)
26-Week	325	334	(9)	1,325	1,366	(41)
52-Week	72	72	0	310	320	(10)
CMBs	0 0		0	221	221	0
Bill Subtotal	1,177	1,139	38	4,933	5,037	(104)

		September oupon Issuar		Fiscal Year to Date			
Issue	Gross	Maturing	Net	Gross	Maturing	Net	
2-Year	85	105	(20)	370	427	(57)	
2-Year FRN	41	0	41	123	0	123	
3-Year	79	97	(18)	346	390	(44)	
5-Year	105	121	(16)	420	415	5	
7-Year	87	0	87	348	0	348	
10-Year	66	25	41	264	111	153	
30-Year	42	0	42	168	0	168	
5-Year TIPS	16	0	16	50	17	33	
10-Year TIPS	28	24	4	82	50	32	
30-Year TIPS	0	0	0	23	0	23	
Coupon Subtotal	549	371	178	2,194	1,410	784	

Total	1,726	1,510	216	7,127	6,447	680	

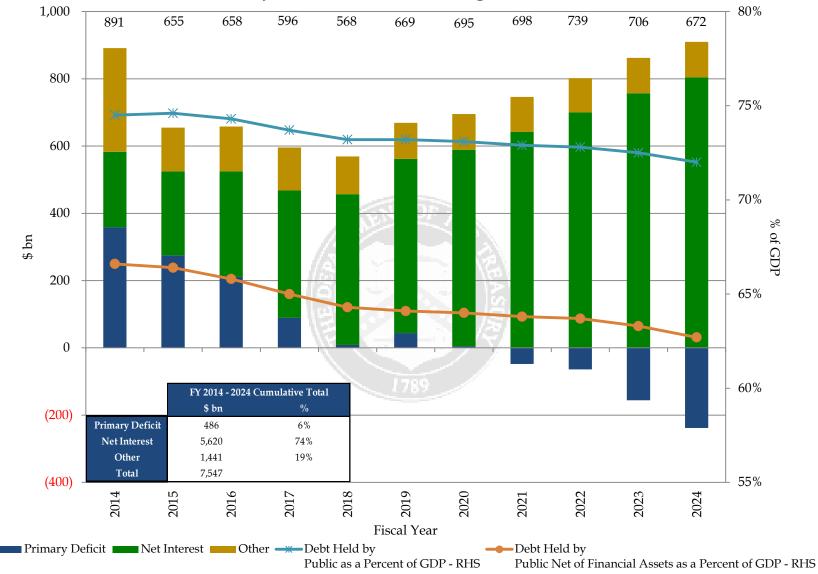
^{*}Keeping announced issuance sizes and patterns constant for Nominal Coupons, TIPS, and FRNs as of 08/06/2014, while using an average of

^{~1.45} trillion of Bills Outstanding consistent with Treasury's guidance of the FRN program replacing some Bills issuance.

**Assumes an end-of-September 2014 cash balance of \$150 billion versus a beginning-of-July 2014 cash balance of \$139 billion.

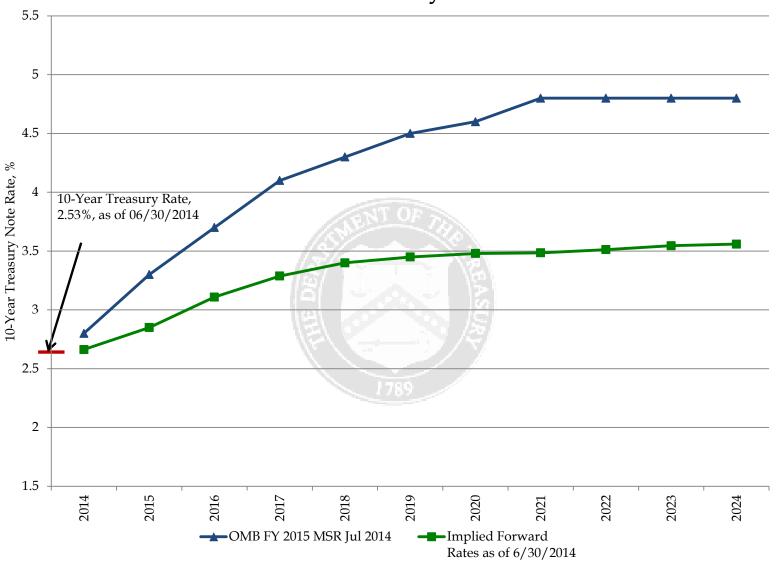
Financing Estimates released by the Treasury can be found via the following url: http://www.treasury.gov/resource-center/data-chart-center/quarterly-refunding/Pages/Latest.aspx

OMB's Projections of Borrowing from the Public



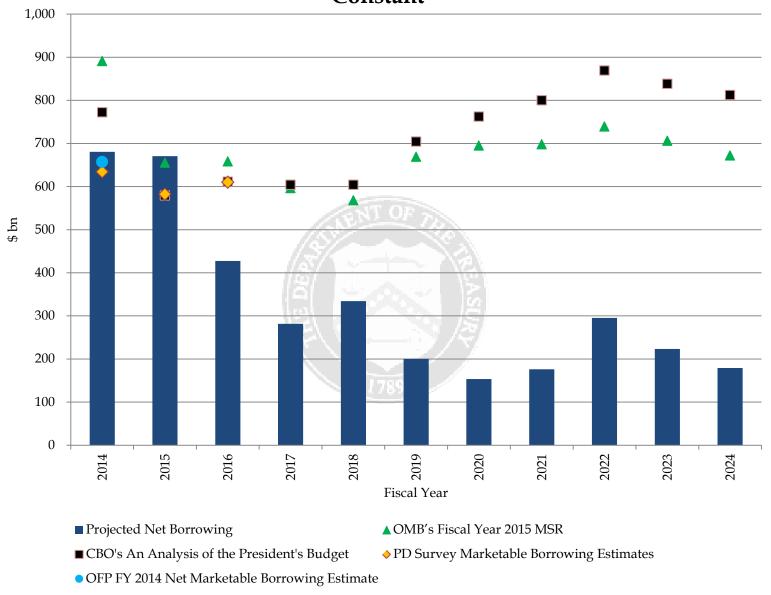
OMB's projections of net borrowing from the public are from Table S-11 of the "Fiscal Year 2015 Mid-Session Review." Data labels at the top represent the change in debt held by the public in \$ billions. "Other" represents borrowing from the public to provide direct and guaranteed loans.

Interest Rate Assumptions: 10-Year Treasury Notes



OMB's economic assumption of the 10-year Treasury note rates are from Table 2 of the "Fiscal Year 2015 Mid-Session Review." The implied 10-year Treasury note forward rates are the averages for each fiscal year.

Projected Net Borrowing Assuming Future Issuance Remains Constant

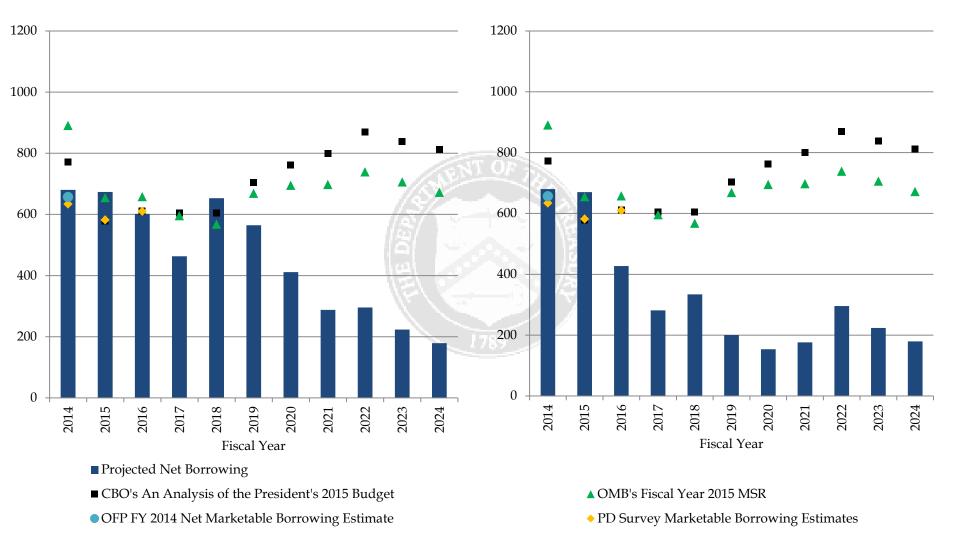


Treasury's primary dealer survey estimates can be found on page 9. OMB's estimates of borrowing from the public are from Table S-11 of the "Fiscal Year 2015 Mid-Session Review." CBO's estimates of the borrowing from the public are from Table 2 of the "An Analysis of the President's 2015 Budget." See table at the end of this section for details.

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

With Fed Reinvestments (\$bn)

Without Fed Reinvestments (\$bn)



Treasury's primary dealer survey estimates can be found on page 9. OMB's estimates of borrowing from the public are from Table S-11 of the "Fiscal Year 2015 Mid-Session Review." CBO's estimates of the borrowing from the public are from Table 2 of the "An Analysis of the President's 2015 Budget." See table at the end of this section for details.

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

End of Fiscal Year	Bills	2/3/5	7/10/30	TIPS	FRN	Historical Net Marketable Borrowing/Projected Net Borrowing Capacity	OMB's Fiscal Year 2015 MSR	CBO's An Analysis of the President's Budget	July 2014 Primary Dealer Survey
2009	503	732	514	38	0	1,786			
2010	(204)	869	783	35	0	1,483			
2011	(311)	576	751	88	0	1,104			
2012	139	148	738	90	0	1,115			
2013	(86)	86	720	111	0	830			
2014	(104)	(96)	669	88	123	680	657*	772	634
2015	28	(247)	639	86	164	670	655	579	582
2016	0	(123)	442	67	41	427	658	611	610
2017	0	(41)	256	67	0	282	596	604	
2018	0	35	238	61	0	334	568	604	
2019	0	35	104	62	0	200	669	704	
2020	0	0	119	34	00	153	695	762	
2021	0	14	155	7	1780	176	698	800	
2022	0	75	226	(6)	0	296	739	869	
2023	0	43	188	(7)	(0)	223	706	838	
2024	0	(0)	188	(8)	0	179	672	812	

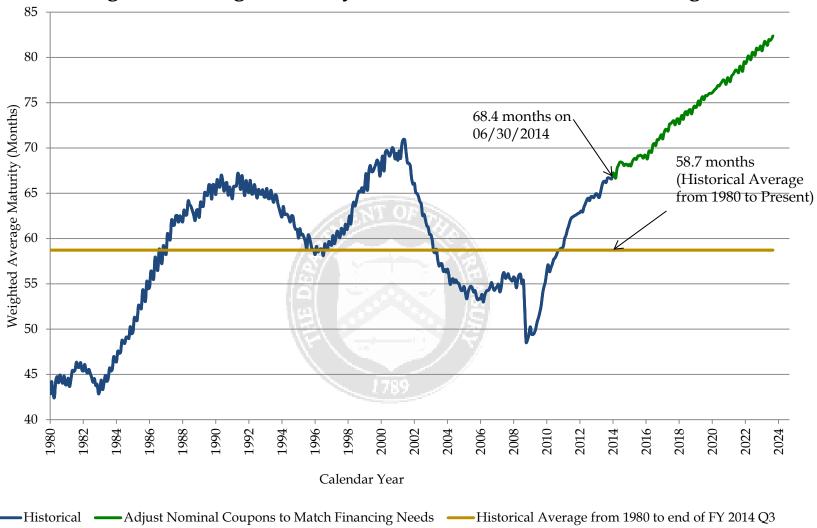
^{*}OFP's FY 2014 Net Marketable Borrowing Projection

Section III: Portfolio Metrics

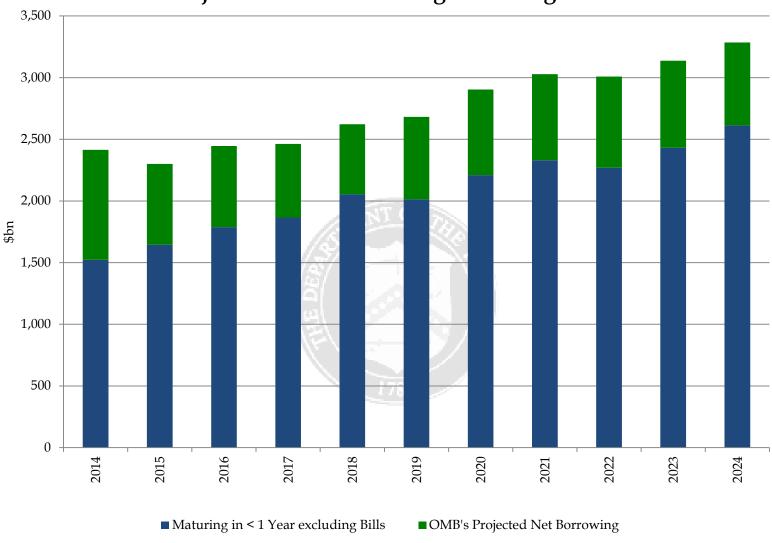
Assumptions for Portfolio Metrics Section (pages 22 to 27) and Appendix

- Portfolio & SOMA holdings as of 06/30/2014
- Estimated projections of the Large Scale Asset Purchase program, announced on 12/12/2012 by the Federal Reserve, assumed to last until October 2014 with SOMA redemptions until June 2021. These assumptions are based on the Federal Reserve's June 2014 primary dealer survey and Chairman Bernanke's June 2013 press conference.
- To match OMB's projected borrowing from the public for the next 10 years, nominal coupon securities (2-, 3-, 5-, 7-, 10-, and 30-year) were adjusted by the same percentage.
- The principal on the TIPS securities was accreted to each projection date based on market ZCIS levels.
- OMB's estimates of borrowing from the public are from Table S-11 of the "Fiscal Year 2015 Mid-Session Review."

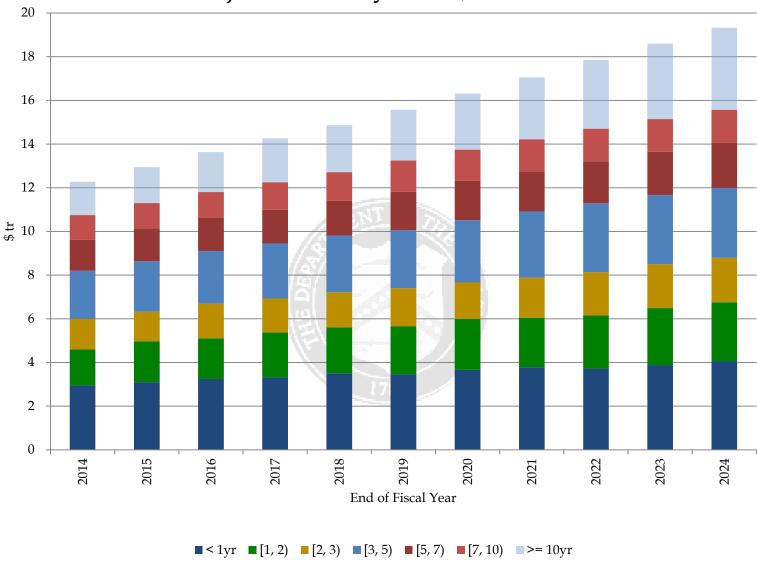
Weighted Average Maturity of Marketable Debt Outstanding



Projected Gross Borrowing Excluding Bills

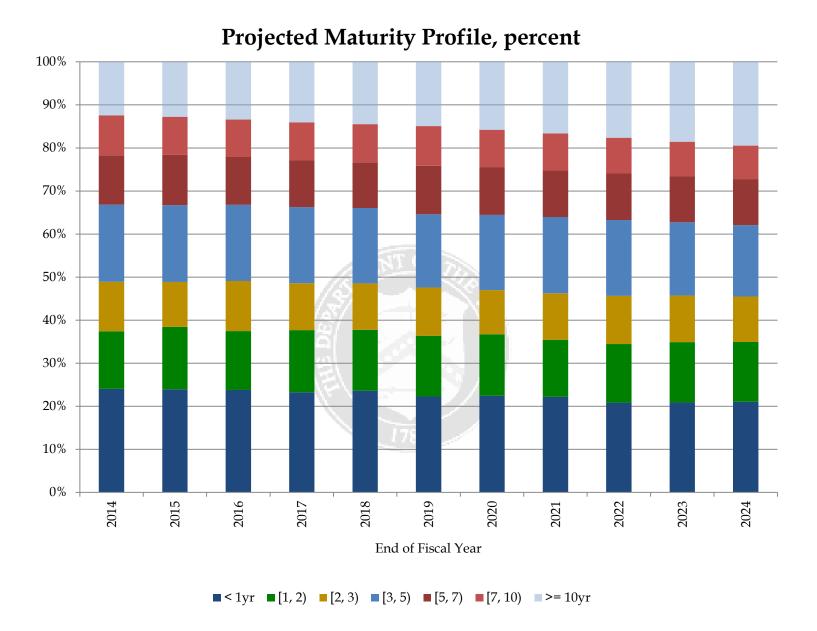


Projected Maturity Profile, \$ trillions



Recent and Projected Maturity Profile, \$ billions

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	2,939	1,523	1,176	2,031	1,425	1,165	1,331	11,590	7,669
2014	2,950	1,643	1,407	2,201	1,408	1,136	1,525	12,269	8,201
2015	3,099	1,878	1,353	2,310	1,507	1,146	1,654	12,948	8,640
2016	3,242	1,864	1,587	2,414	1,511	1,187	1,828	13,633	9,108
2017	3,320	2,053	1,554	2,523	1,541	1,261	2,009	14,260	9,450
2018	3,509	2,105	1,602	2,603	1,577	1,314	2,154	14,863	9,818
2019	3,467	2,198	1,742	2,652	1,751	1,436	2,325	15,572	10,060
2020	3,663	2,327	1,674	2,851	1,810	1,416	2,571	16,311	10,515
2021	3,785	2,265	1,834	3,027	1,843	1,467	2,834	17,056	10,912
2022	3,724	2,427	1,991	3,145	1,930	1,483	3,145	17,844	11,287
2023	3,885	2,605	2,017	3,164	1,979	1,494	3,457	18,602	11,671
2024	4,067	2,686	2,037	3,205	2,068	1,506	3,758	19,327	11,996



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%	10.1%	11.5%	48.6%	66.2%
2014	24.0%	13.4%	11.5%	17.9%	11.5%	9.3%	12.4%	48.9%	66.8%
2015	23.9%	14.5%	10.4%	17.8%	11.6%	8.9%	12.8%	48.9%	66.7%
2016	23.8%	13.7%	11.6%	17.7%	11.1%	8.7%	13.4%	49.1%	66.8%
2017	23.3%	14.4%	10.9%	17.7%	10.8%	8.8%	14.1%	48.6%	66.3%
2018	23.6%	14.2%	10.8%	17.5%	10.6%	8.8%	14.5%	48.5%	66.1%
2019	22.3%	14.1%	11.2%	17.0%	11.2%	9.2%	14.9%	47.6%	64.6%
2020	22.5%	14.3%	10.3%	17.5%	11.1%	8.7%	15.8%	47.0%	64.5%
2021	22.2%	13.3%	10.8%	17.7%	10.8%	8.6%	16.6%	46.2%	64.0%
2022	20.9%	13.6%	11.2%	17.6%	10.8%	8.3%	17.6%	45.6%	63.3%
2023	20.9%	14.0%	10.8%	17.0%	10.6%	8.0%	18.6%	45.7%	62.7%
2024	21.0%	13.9%	10.5%	16.6%	10.7%	7.8%	19.4%	45.5%	62.1%

Section IV: Demand

Summary Statistics for Fiscal Year 2014 Q3 Auctions

Security Type	Term	Stop Out Rate	Bid-to- Cover	Competitive Awards (\$ bn)	% Primary Dealer*	% Direct*	% Indirect*	Non- Competitive	SOMA Add Ons	10-Yr Equivalent
			Ratio*					Awards (\$ bn)	(\$ bn)	(\$ bn)**
Bill	4-Week	0.026	4.4	405.5	73.8%	6.8%	19.4%	3.1	0.0	3.6
Bill	13-Week	0.030	4.8	316.0	73.1%	5.9%	21.0%	5.5	0.0	9.4
Bill	26-Week	0.053	5.0	286.9	57.0%	6.3%	36.7%	4.6	0.0	17.3
Bill	52-Week	0.109	4.5	99.0	55.4%	5.9%	38.7%	0.6	0.0	11.6
Bill	CMBs	0.050	4.7	25.0	93.0%	6.2%	0.8%	0.0	0.0	0.1
Coupon	2-Year	0.449	3.4	92.2	55.8%	22.4%	21.8%	0.5	0.0	21.4
Coupon	3-Year	0.917	3.4	86.6	50.0%	22.7%	27.3%	0.1	0.0	30.0
Coupon	5-Year	1.638	2.8	104.8	37.9%	12.8%	49.3%	0.2	0.0	58.2
Coupon	7-Year	2.160	2.5	86.9	36.4%	19.9%	43.6%	0.1	0.0	65.1
Coupon	10-Year	2.658	2.8	65.9	37.5%	18.9%	43.6%	0.1	0.0	66.8
Coupon	30-Year	3.468	2.4	42.0	39.7%	15.5%	44.8%	0.0	0.0	90.7
TIPS	5-Year	(0.213)	2.7	17.9	35.7%	5.9%	58.4%	0.1	0.0	10.5
TIPS	10-Year	0.339	2.9	13.0	27.5%	6.3%	66.3%	0.0	0.0	13.8
TIPS	30-Year	1.116	2.8	7.0	32.1%	8.2%	59.7%	0.0	0.0	19.7
FRN	2-Year	0.067	4.6	40.9	55.1%	6.4%	38.5%	0.1	0.0	0.8
	Total Bills	0.042	4.7	1,132.5	68.2%	6.3%	25.5%	13.8	0.0	42.0
	Total Coupons	1.674	2.9	478.3	43.4%	18.8%	37.8%	1.0	0.0	332.2
	Total TIPS	0.221	2.8	37.9	32.2%	6.5%	61.3%	0.1	0.0	44.0

55.1%

6.4%

38.5%

Total FRN

0.067

4.6

40.9

0.8

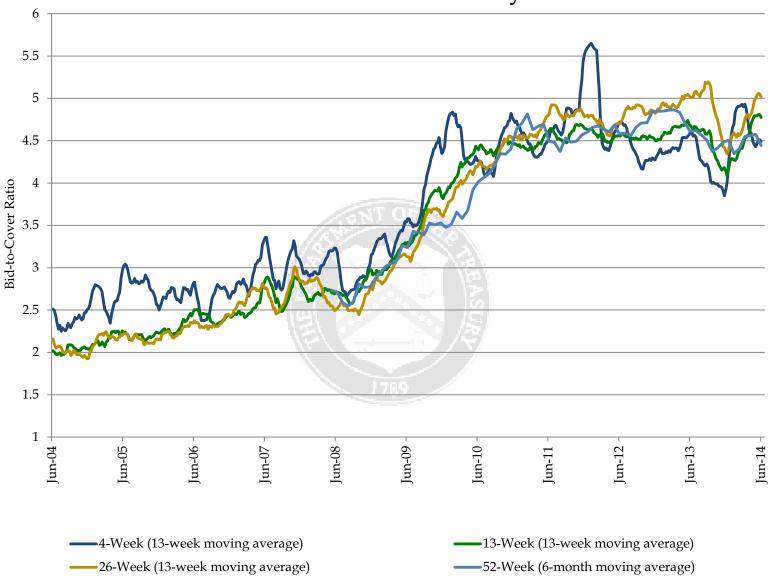
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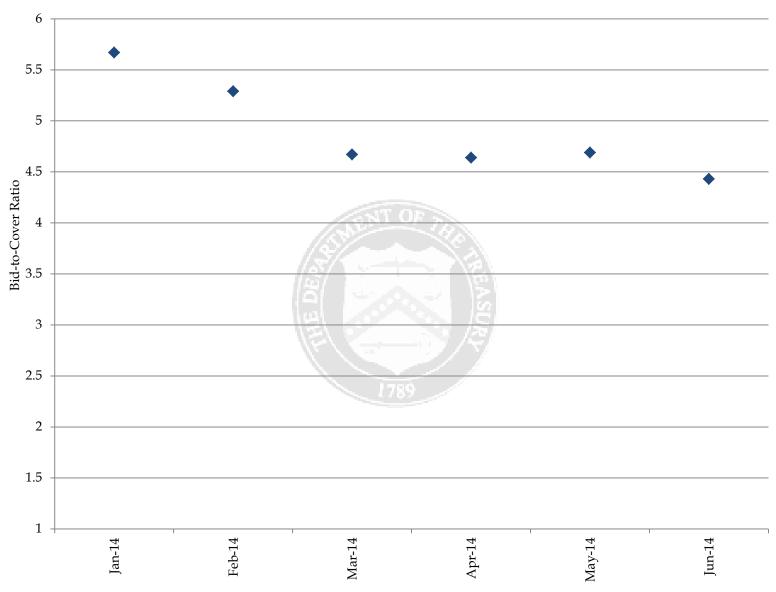
^{*}Weighted averages of Competitive Awards.

^{**}Approximated using prices at settlement and includes both Competitive and Non-Competitive Awards. For TIPS' 10-year equivalent, a constant auction BEI is used as the inflation assumption.

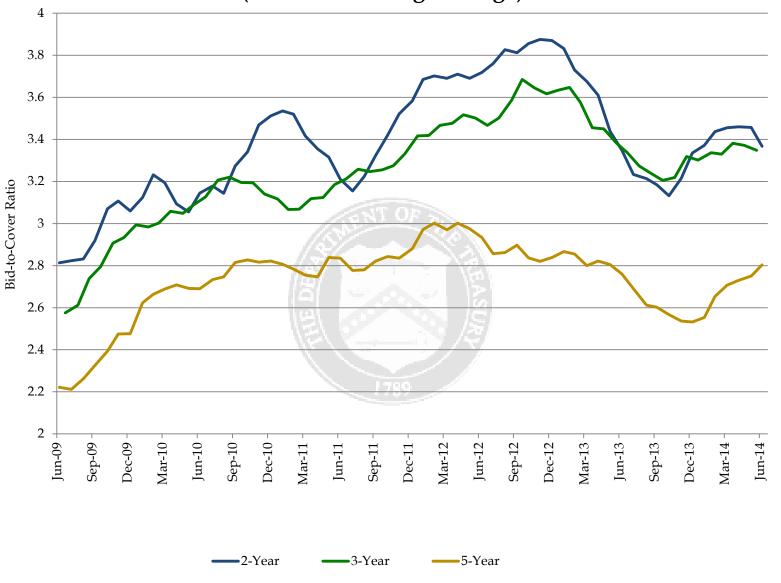
Bid-to-Cover Ratios for Treasury Bills



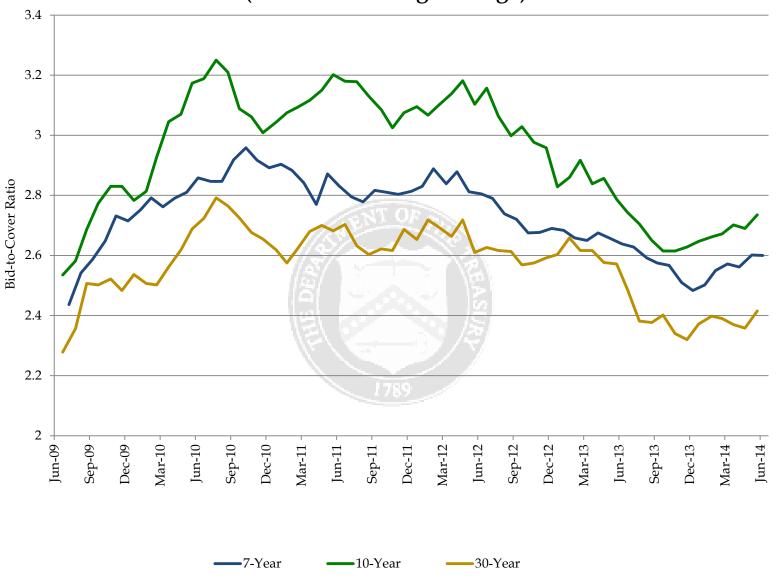
Bid-to-Cover Ratios for FRNs



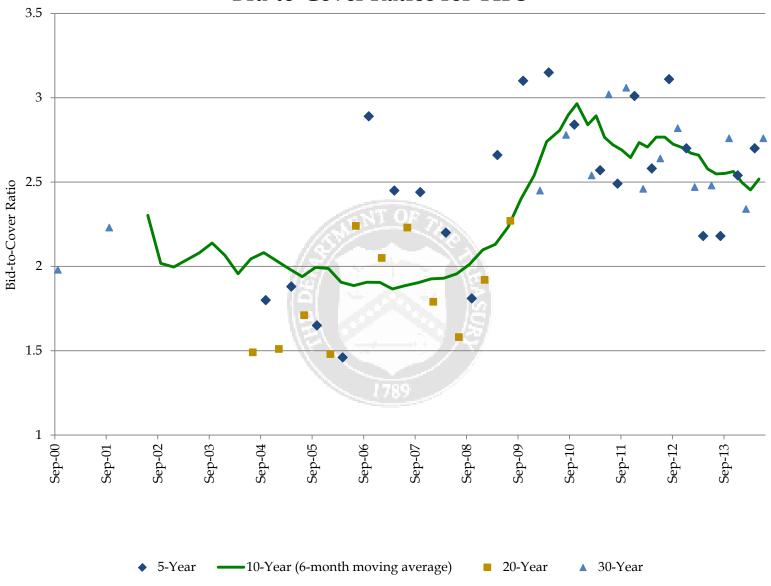
Bid-to-Cover Ratios for 2-, 3-, and 5-Year Nominal Securities (6-Month Moving Average)



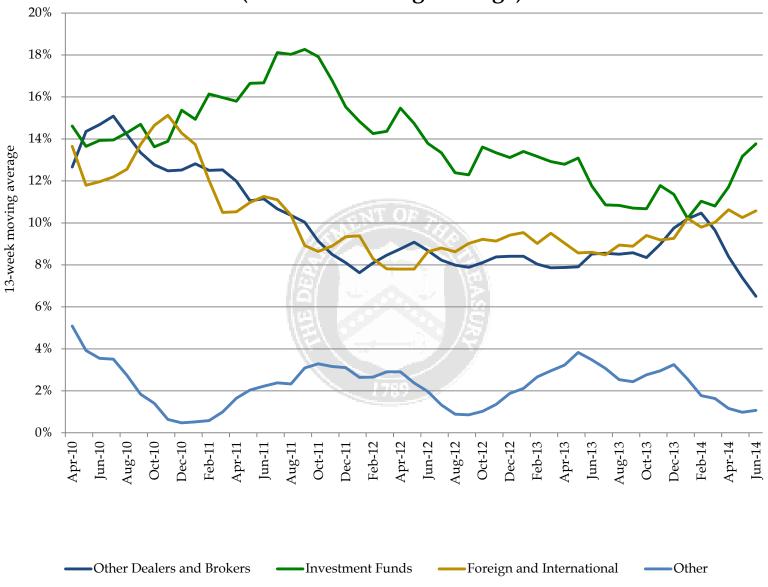
Bid-to-Cover Ratios for 7-, 10-, and 30-Year Nominal Securities (6-Month Moving Average)



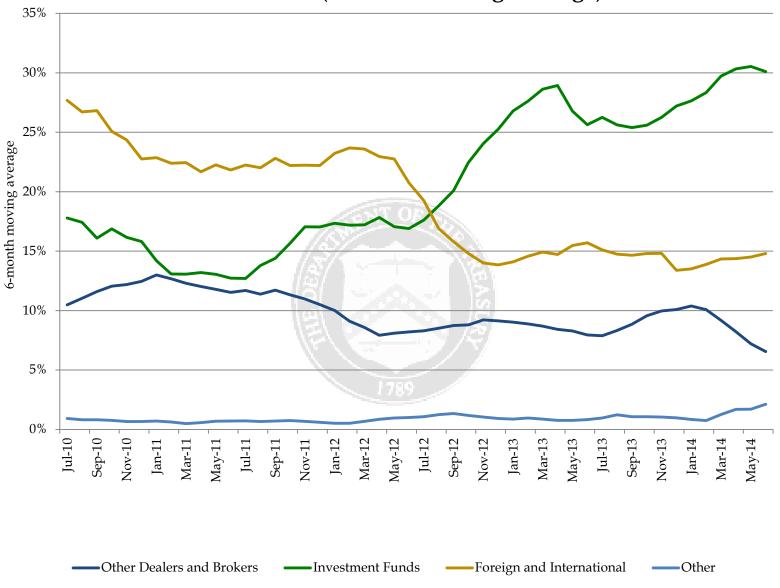
Bid-to-Cover Ratios for TIPS



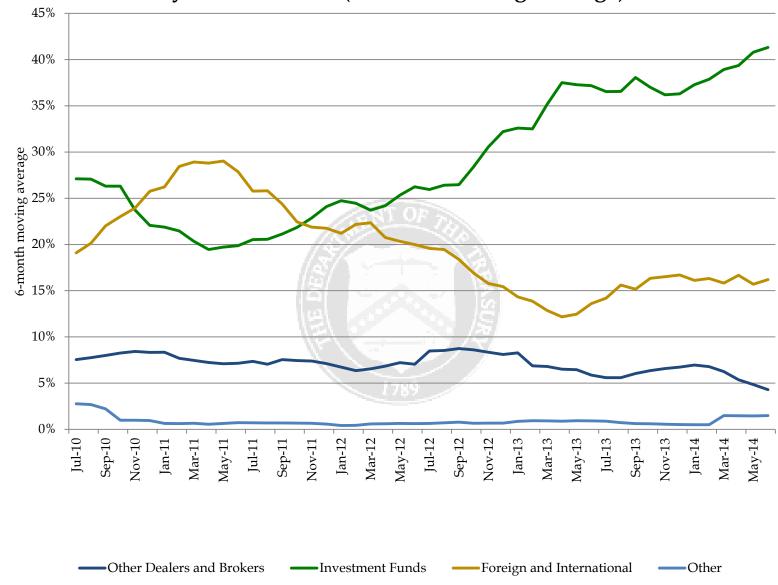
Percent Awarded in Bills Auctions by Investor Class (3-Month Moving Average)



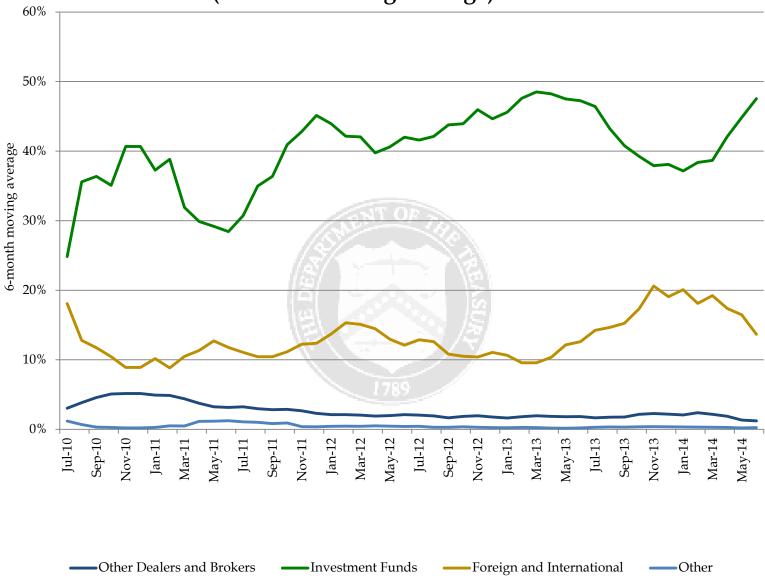
Percent Awarded in 2-, 3-, 5-Year Nominal Security Auctions by Investor Class (6-Month Moving Average)



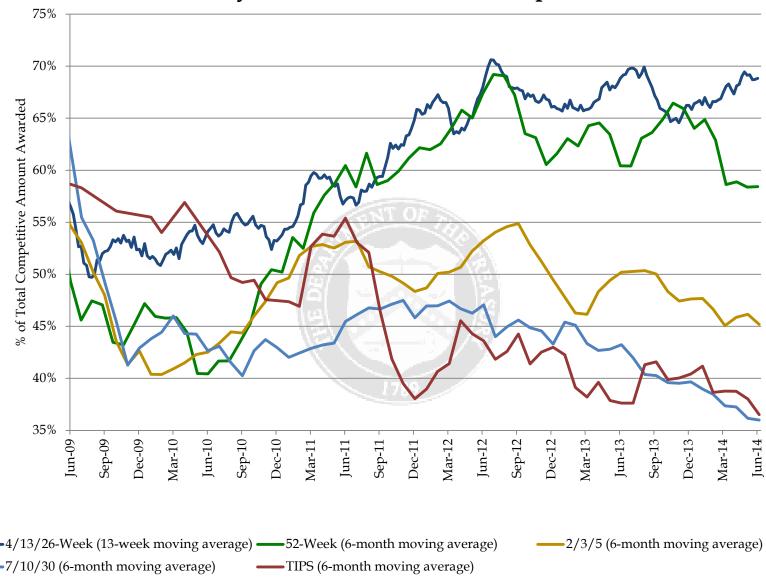
Percent Awarded in 7-, 10-, 30-Year Nominal Security Auctions by Investor Class (6-Month Moving Average)



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

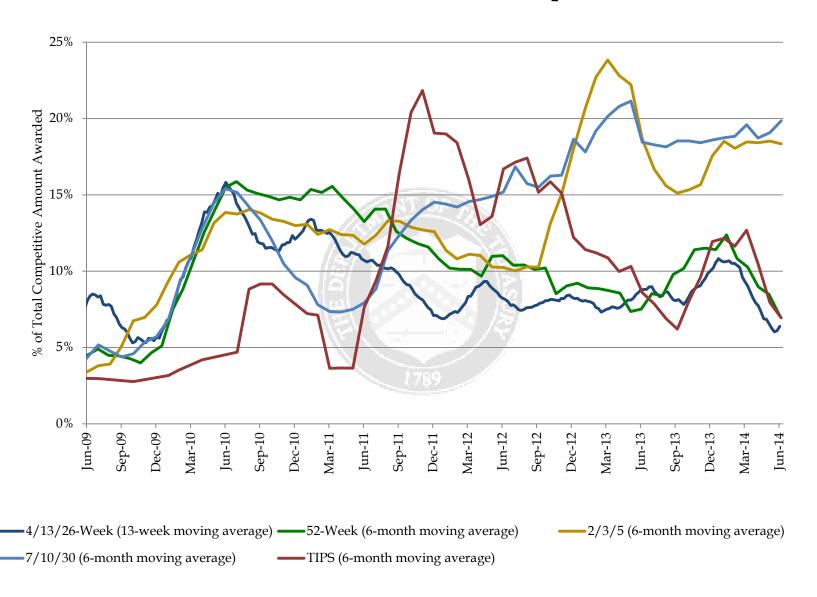


Primary Dealer Awards at Auction, percent



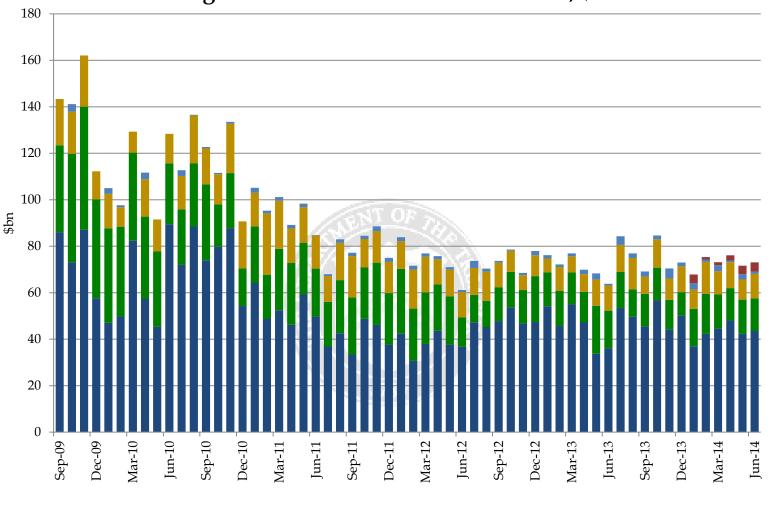
40

Direct Bidder Awards at Auction, percent

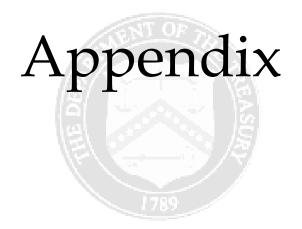


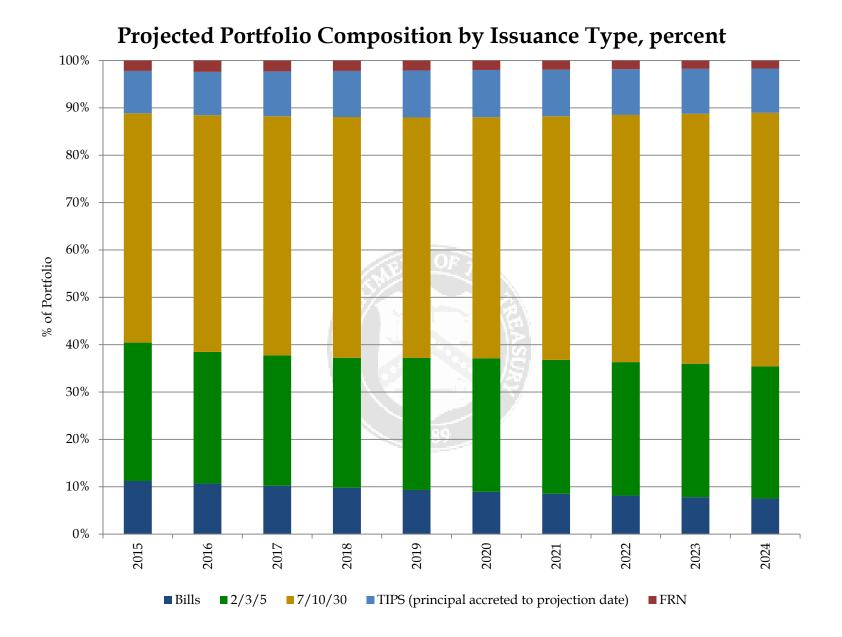
41 Excludes SOMA add-ons.

Total Foreign Awards of Treasuries at Auction, \$ billions



■Bills ■2/3/5 ■7/10/30 ■TIPS ■FRNs





Recent and Projected Portfolio Composition by Issuance Type, percent

End of Fiscal Year	Bills	2-, 3-, 5-Year Nominal Coupons	7-, 10-, 30-Year Nominal Coupons	Total Nominal Coupons	TIPS (principal accreted to projection date)	FRN
2007	21.6%	38.9%	29.2%	68.1%	10.3%	0.0%
2008	28.5%	34.5%	26.9%	61.4%	10.0%	0.0%
2009	28.5%	36.2%	27.4%	63.6%	7.9%	0.0%
2010	21.1%	40.1%	31.8%	71.9%	7.0%	0.0%
2011	15.4%	41.4%	35.9%	77.3%	7.3%	0.0%
2012	15.0%	38.4%	39.0%	77.4%	7.5%	0.0%
2013	13.2%	35.8%	43.0%	78.7%	8.1%	0.0%
2014	11.6%	32.9%	45.9%	78.9%	8.5%	1.0%
2015	11.2%	29.2%	48.4%	77.6%	8.9%	2.2%
2016	10.7%	27.8%	50.0%	77.8%	9.2%	2.4%
2017	10.2%	27.5%	50.5%	78.1%	9.5%	2.3%
2018	9.8%	27.4%	50.8%	78.3%	9.7%	2.2%
2019	9.3%	27.9%	50.8%	78.6%	9.9%	2.1%
2020	8.9%	28.2%	50.9%	79.1%	10.0%	2.0%
2021	8.5%	28.3%	51.4%	79.7%	9.8%	1.9%
2022	8.1%	28.2%	52.2%	80.4%	9.7%	1.8%
2023	7.8%	28.2%	52.8%	80.9%	9.5%	1.8%
2024	7.5%	27.9%	53.5%	81.4%	9.4%	1.7%

					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	4/3/2014	0.020	4.67	24.75	69.5%	7.7%	22.9%	0.25	0.00	0.22
4-Week	4/10/2014	0.025	4.98	24.76	73.3%	3.8%	22.9%	0.24	0.00	0.22
4-Week	4/17/2014	0.025	5.00	24.76	67.6%	6.2%	26.2%	0.24	0.00	0.22
4-Week	4/24/2014	0.015	4.83	24.78	74.7%	5.2%	20.1%	0.22	0.00	0.23
4-Week	5/1/2014	0.010	4.55	24.39	83.6%	4.6%	11.8%	0.28	0.00	0.23
4-Week	5/8/2014	0.025	4.10	34.76	84.4%	5.6%	10.0%	0.24	0.00	0.32
4-Week	5/15/2014	0.025	4.70	39.77	71.5%	3.2%	25.3%	0.23	0.00	0.36
4-Week	5/22/2014	0.030	4.04	44.77	77.1%	11.4%	11.6%	0.23	0.00	0.39
4-Week	5/29/2014	0.040	3.77	44.49	69.2%	10.9%	19.9%	0.23	0.00	0.39
4-Week	6/5/2014	0.035	4.38	34.74	75.4%	6.4%	18.3%	0.26	0.00	0.31
4-Week	6/12/2014	0.030	4.68	29.75	64.3%	5.4%	30.4%	0.25	0.00	0.26
4-Week	6/19/2014	0.030	4.31	29.74	71.9%	4.7%	23.3%	0.26	0.00	0.26
4-Week	6/26/2014	0.010	4.38	24.06	77.3%	9.4%	13.3%	0.21	0.00	0.22
13-Week	4/3/2014	0.045	4.83	24.29	83.5%	8.6%	7.9%	0.46	0.00	0.73
13-Week	4/10/2014	0.030	4.88	24.49	76.0%	7.8%	16.2%	0.47	0.00	0.73
13-Week	4/17/2014	0.035	4.59	24.45	75.7%	4.8%	19.5%	0.43	0.00	0.73
13-Week	4/24/2014	0.030	4.64	24.47	74.4%	4.5%	21.1%	0.43	0.00	0.73
13-Week	5/1/2014	0.020	4.89	23.85	77.9%	6.3%	15.8%	0.36	0.00	0.73
13-Week	5/8/2014	0.025	4.86	24.50	71.3%	6.0%	22.7%	0.40	0.00	0.73
13-Week	5/15/2014	0.025	5.05	24.47	57.3%	4.2%	38.5%	0.43	0.00	0.74
13-Week	5/22/2014	0.025	4.82	24.44	73.4%	5.5%	21.1%	0.46	0.00	0.71
13-Week	5/29/2014	0.030	4.93	23.93	67.0%	3.8%	29.2%	0.41	0.00	0.71
13-Week	6/5/2014	0.035	5.05	24.40	58.8%	5.3%	35.9%	0.40	0.00	0.71
13-Week	6/12/2014	0.035	4.96	24.54	69.7%	3.7%	26.6%	0.44	0.00	0.72
13-Week	6/19/2014	0.035	4.40	24.53	85.1%	4.8%	10.2%	0.37	0.00	0.72
13-Week	6/26/2014	0.025	4.17	23.68	80.6%	11.1%	8.4%	0.41	0.00	0.72
26-Week	4/3/2014	0.065	5.18	22.05	50.1%	7.5%	42.4%	0.37	0.00	1.34
26-Week	4/10/2014	0.050	5.35	22.01	49.8%	7.5%	42.7%	0.41	0.00	1.34
26-Week	4/17/2014	0.050	4.96	22.07	57.1%	7.3%	35.6%	0.35	0.00	1.34
26-Week	4/24/2014	0.050	4.64	22.04	55.7%	4.4%	39.8%	0.31	0.00	1.35
26-Week	5/1/2014	0.045	5.28	21.71	55.2%	7.2%	37.6%	0.30	0.00	1.35
26-Week	5/8/2014	0.045	5.06	22.04	55.0%	5.9%	39.1%	0.39	0.00	1.35
26-Week	5/15/2014	0.050	4.95	22.14	69.5%	2.8%	27.7%	0.38	0.00	1.35
26-Week	5/22/2014	0.050	5.08	22.27	58.1%	5.8%	36.0%	0.35	0.00	1.31
26-Week	5/29/2014	0.050	5.19	21.70	54.5%	3.1%	42.4%	0.35	0.00	1.32
26-Week	6/5/2014	0.055	4.90	22.36	59.8%	5.3%	35.0%	0.32	0.00	1.31
26-Week	6/12/2014	0.060	5.28	22.39	64.3%	3.0%	32.8%	0.34	0.00	1.32
26-Week	6/19/2014	0.070	4.76	22.36	59.4%	5.9%	34.7%	0.37	0.00	1.32
26-Week	6/26/2014	0.050	4.60	21.79	53.0%	14.1%	33.0%	0.33	0.00	1.33
52-Week	4/3/2014	0.125	4.99	24.75	44.6%	6.5%	48.9%	0.18	0.00	2.91
52-Week	5/1/2014	0.105	4.50	24.70	62.3%	7.9%	29.8%	0.12	0.00	2.93
52-Week	5/29/2014	0.095	4.57	24.77	58.8%	5.6%	35.6%	0.15	0.00	2.84
52-Week	6/26/2014	0.110	4.05	24.79	56.2%	3.5%	40.3%	0.13	0.00	2.87
CMBs	6/5/2014	0.050	4.66	25.00	93.0%	6.2%	0.8%	0.00	0.00	0.11

^{*}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	Bid-to-Cover	Competitive	% Primary	% Direct*	% Indirect*	Non-Competitive		
		Rate (%)*	Ratio*	Awards (\$ bn)	Awards (\$ bn) Dealer*			Awards (\$ bn)	Ons (\$ bn)	(\$ bn)**
2-Year	4/30/2014	0.447	3.35	31.76	57.7%	19.0%	23.4%	0.14	0.00	7.47
2-Year	6/2/2014	0.392	3.52	30.71	55.9%	25.2%	18.9%	0.19	0.01	7.03
2-Year	6/30/2014	0.511	3.23	29.75	53.6%	23.3%	23.1%	0.15	0.00	6.87
3-Year	4/15/2014	0.895	3.36	29.86	48.8%	24.0%	27.3%	0.04	0.00	10.35
3-Year	5/15/2014	0.928	3.40	28.86	47.4%	24.5%	28.1%	0.04	0.00	10.10
3-Year	6/16/2014	0.930	3.41	27.84	54.1%	19.4%	26.5%	0.05	0.00	9.48
5-Year	4/30/2014	1.732	2.79	34.95	36.5%	18.6%	44.9%	0.05	0.00	19.63
5-Year	6/2/2014	1.513	2.73	34.93	39.1%	10.5%	50.4%	0.07	0.01	19.17
5-Year	6/30/2014	1.670	2.74	34.94	38.2%	9.3%	52.5%	0.06	0.00	19.28
7-Year	4/30/2014	2.317	2.60	28.98	31.0%	19.1%	49.9%	0.02	0.00	21.92
7-Year	6/2/2014	2.010	2.60	28.96	35.6%	24.1%	40.4%	0.04	0.01	21.53
7-Year	6/30/2014	2.152	2.44	28.98	42.7%	16.7%	40.6%	0.02	0.00	21.62
10-Year	4/15/2014	2.720	2.76	20.97	40.1%	15.2%	44.7%	0.03	0.00	20.93
10-Year	5/15/2014	2.612	2.63	23.93	29.1%	21.6%	49.3%	0.06	0.00	24.87
10-Year	6/16/2014	2.648	2.88	20.96	44.5%	19.4%	36.1%	0.03	0.00	20.96
30-Year	4/15/2014	3.525	2.52	12.99	38.8%	17.9%	43.3%	0.01	0.00	27.57
30-Year	5/15/2014	3.440	2.09	15.97	51.2%	8.4%	40.4%	0.02	0.00	35.27
30-Year	6/16/2014	3.444	2.69	12.99	26.5%	21.8%	51.8%	0.01	0.00	27.75
2-Year FRN	4/30/2014	0.069	4.64	14.97	60.7%	4.8%	34.4%	0.03	0.00	0.45
2-Year FRN	5/30/2014	0.063	4.69	12.99	48.9%	9.4%	41.7%	0.01	0.00	0.26
2-Year FRN	6/27/2014	0.069	4.43	12.99	54.8%	5.1%	40.1%	0.01	0.00	0.14

	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	4/30/2014	-0.213	2.70	17.94	35.7%	5.9%	58.4%	0.06	0.00	10.44
10-Year	5/30/2014	0.339	2.91	12.96	27.5%	6.3%	66.3%	0.04	0.00	13.84
30-Year	6/30/2014	1.116	2.76	6.99	32.1%	8.2%	59.7%	0.01	0.00	19.69

^{*}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.

Financing Outlook

Current Path of 2-Year and 3-Year Issuance

- Treasury initiated a series of 2-year and 3-year Treasury security reductions at the May 2014 refunding.
 - 2-year was reduced by \$1 billion per month from \$32 billion.
 - > 3-year was reduced by \$1 billion per month from \$30 billion.
- If Treasury cuts once more in August, 2-year and 3-year monthly issuance will reach \$28 billion and \$26 billion, respectively.
- This will result in a cumulative \$92 billion of reductions through May 2015.

		2-year		3-y	vear
		Base Case	Reduction	Base Case	Reduction
2014	Apr-14	32	32	30	30
2014	May-14	32	31	30	29
2014	Jun-14	32	30	30	28
2014	Jul-14	32	29	30	27
2014	Aug-14	32	28	30	26
2014	Sep-14	32	28	30	26
2015	Oct-14	32	28	30	26
2015	Nov-14	32	28	30	26
2015	Dec-14	32	28	30	26
2015	Jan-15	32	28	30	26
2015	Feb-15	32	28	30	26
2015	Mar-15	32	28	30	26
2015	Apr-15	32	28	30	26
2015	May-15	32	28	30	26
Total		448	402	420	374
Difference			(46)		(46)

Overfunding in FY 2014/2015

- The table below highlights projected borrowing needs, borrowing capacity and over/underfunding.*
- As a result of the reduction in issuance since the May refunding, Treasury will be overfunded by just ~\$56 billion if the Federal Reserve redeems and \$60 billion if they reinvest over FY 2014 and 2015.
 - This overfunding could be addressed by reducing bill issuance.
- The extent to which Treasury is underfunded from 2016 onwards will increase substantially due to the structural nature of deficits.

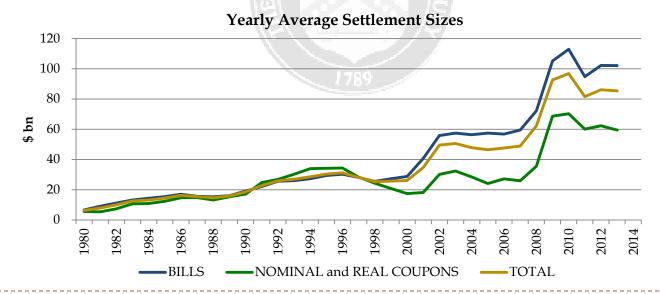
		Federal Rese	erve Redeems	Federal Reserve Reinvests		
	Forecasted Borrowing Needs	Issuance Capacity	Over/Underfunding	<u>Issuance Capacity</u>	Over/Underfunding	
2014	657	680	23	680	23	
2015	637	670	33	674	37	
2016	636	427	(209)	602	(34)	
2017	595	282	(313)	463	(132)	
2018	538	334	(204)	653	115	
2019	630	200	(430)	565	(65)	
2020	647	153	(494)	411	(236)	
2021	646	176	(470)	288	(358)	
2022	677	296	(381)	296	(381)	
2023	650	223	(427)	223	(427)	
2024	587	179	(408)	179	(408)	

^{50 *}Over/underfunding assumes that 2-year and 3-year issuance sizes are reduced to and held at \$28 billion and \$26 billion, respectively. Figures also assume bills will be held constant at \$1.454 trillion.

Considerations for Developing the Optimal Treasury Cash Balance

Treasury Cash Balance Buffer History

- Historically, Treasury has sought to minimize cash balances, with a cash balance floor set at \$5 billion.
- This floor was established in the 1980s when auction sizes were substantially smaller than current auction sizes and Treasury faced a "negative carry" on cash balances which made holding large cash balances costly. Auctions were also less frequent in the 1980s than today.
- Prudent risk management during the 2008-2009 financial crisis resulted in Treasury increasing cash balances, but no formal minimum cash balance was ever set.
 - From 2002 2008, the average daily cash balance was \$26 billion.
 - From 2009 2014, the average daily cash balance was \$63 billion.

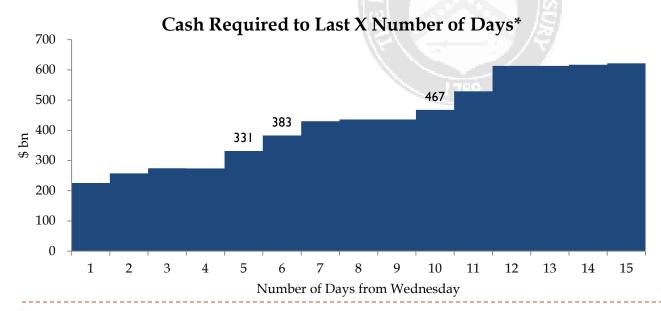


Treasury's Cash Balance Risks

- Projections of Treasury's two main sources of cash are subject to risk:
 - Revenue (60 percent of total cash): Revenue projections are subject to fiscal forecast risk.
 - <u>Auction Proceeds</u> (40 percent of total cash): Auction proceed projections are subject to auction settlement and market access risk.
- Historically, Treasury has focused only on risks associated with fiscal projection forecast errors.
 - There is a large amount of data available for analysis and "proceeds risk" has historically been deemed to be very low.
- However, several events made it clear that other risks, including settlement and market access risks, are real and could have a significant impact.
 - December 2, 2013 delay of a 4-week bill auction due to IT issues
 - Super Storm Sandy in October 2012
 - September 11, 2001

Loss of market access – estimating how long

- Historical experience suggests that it is possible for financial markets to be disrupted for several business days.
 - Hurricane Sandy: 1.5 days
 - ▶ September 11th: 2-3 days
- Cash required to cover the worst 1-5 days since FY2009 is relatively constant at approximately \$331 billion



- * Worst case scenario since FY2009
- Includes bills, notes, bonds maturing
- Fiscal flow includes interest payments on marketable debt, Medicare/Medicaid and social security payments, etc.

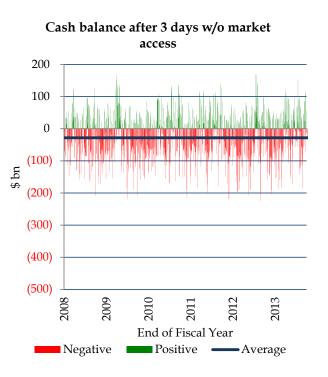
Treasury's Current Level of Coverage

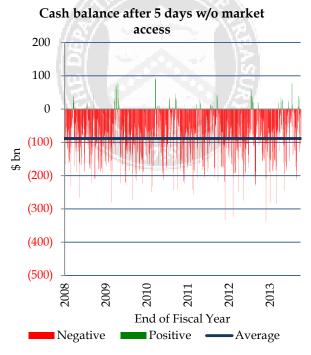
- Historically, Treasury has only had enough cash to withstand a loss of market access for approximately 2 days.
 - Treasury would have been protected against losing market access for 1 day roughly 80 percent of the time.
 - Treasury would have been protected against losing market access for 5 days less than 10 percent of the time.
- Treasury's current level of protection against losing market access is roughly the same as it was prior to the financial crisis.

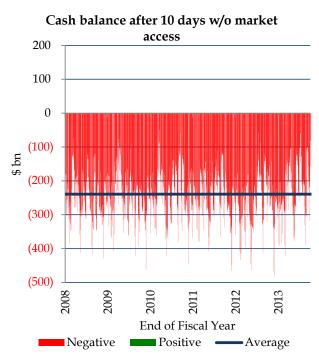


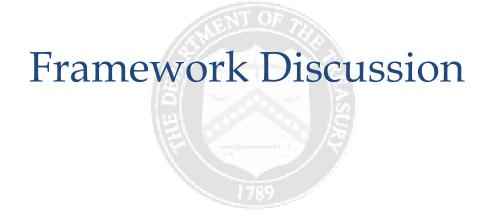
Cash Shortfall from Loss of Market Access

- If Treasury lost market access for a short period of time, the U.S. government would face a substantial cash shortfall.
 - Since the beginning of the financial crisis, on average, Treasury would have faced an \$28 billion cash shortfall if market access had been lost for 3 days.
 - This shortfall increases to \$89 billion if market access had been lost for 5 days and \$239 billion if market access had been lost for 10 days.









Volatility Presentation

Asset price volatility has declined over the past two years both in the United States and globally. At the same time, forward-looking measures of market uncertainty across a range of fixed income, equity, and foreign exchange markets have also declined.

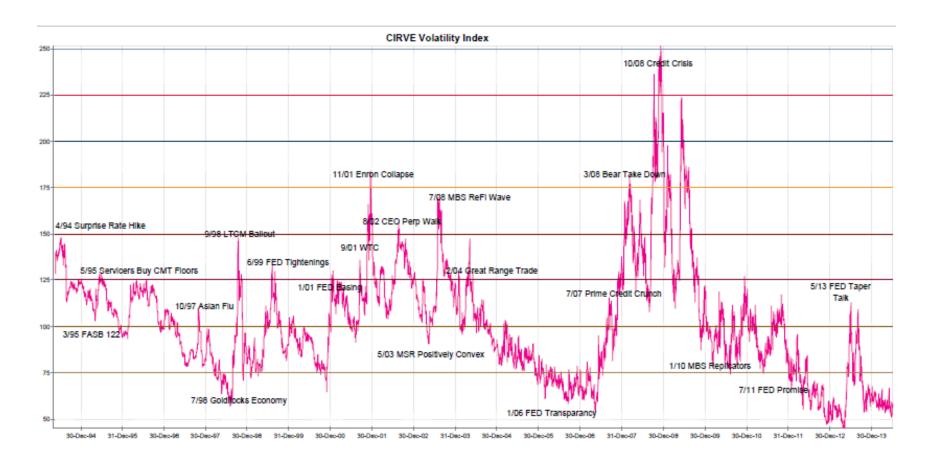
What are the Committee's views on these developments and the factors that have contributed to the current environment of low volatility globally?

Current state of volatility

Monthly count of Bloomberg articles that contain the phrase "low volatility".



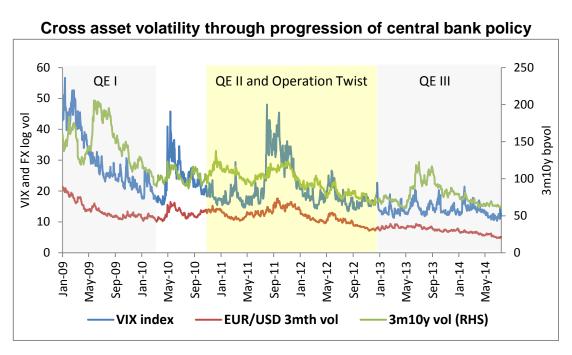
Current state of volatility



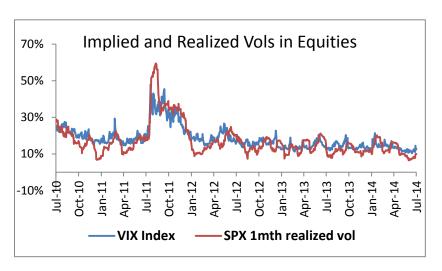
Credit Suisse Interest Rate Volatility Estimate: yield curve weighted index of normalized implied volatility on a rolling series of constant at-the-money one-month expiry swaptions weighted across benchmark maturities 2yr, 5yr, 10yr and 30yr.

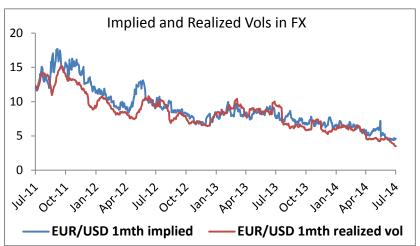
Factors contributing to low volatility

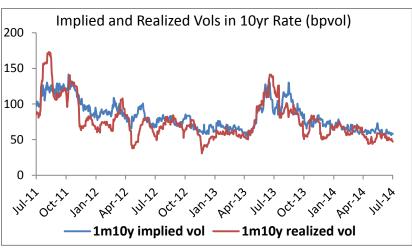
- Actions by the Fed and ECB have significantly clipped the left tail risk, in terms of both economic outcomes and market outcomes (QE I)
- As interest rates approached the zero lower bound, rate vol is lower by construction which leads to maturity extensions, lower term premia and declining volatility across other asset classes through a lower and more certain discount rate (QE II)
- Suppression of yield and vol induces investors to take on more risk (QE III). The market clings to
 perception of certainty regarding outcomes, despite the Fed shifting commitment modes from time
 or level-based to data dependent. This stage of policy should eventually lead to increased
 uncertainty and risk.

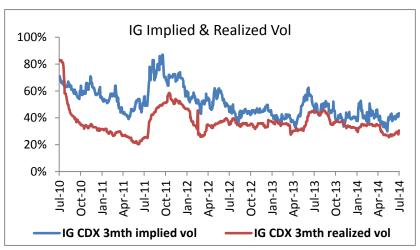


Realized volatility is extremely low, which leads to lower implied volatility in a self-reinforcing loop.



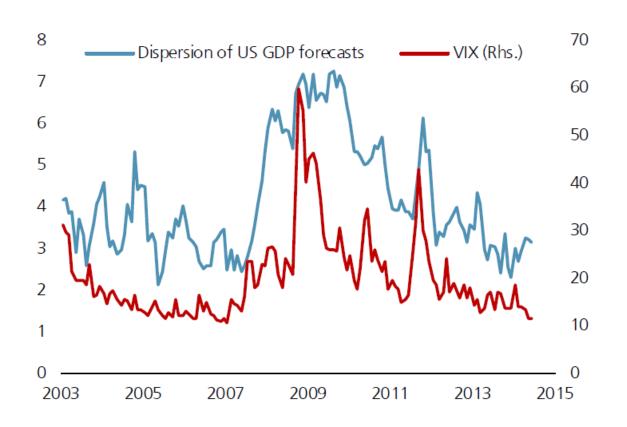






Dispersion among Wall Street analyst forecasts for GDP is falling

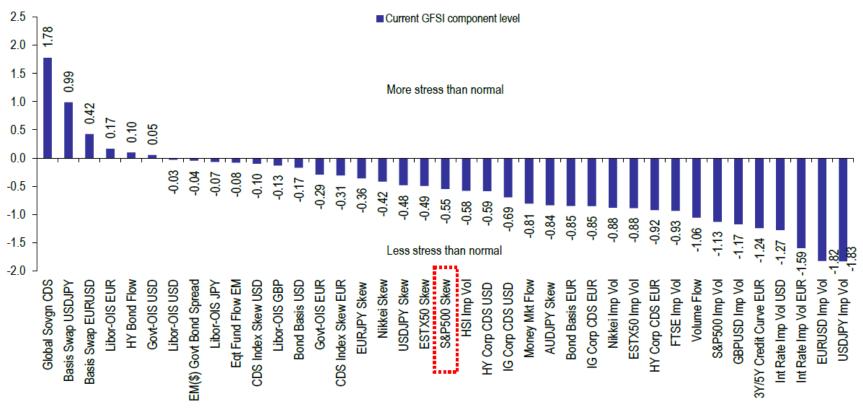
- VIX level on right hand scale
- Standard deviation of US GDP forecasts provided to database on left hand scale



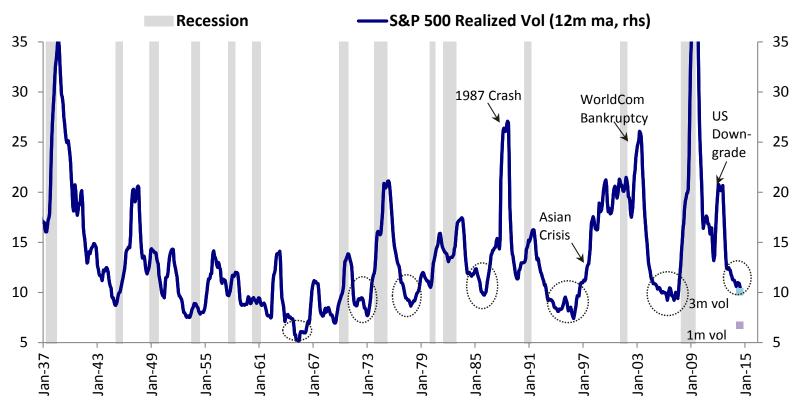
The Global financial Stress Index (GFSI) measures

- Risk as indicated by cross-asset measures of volatility, solvency and liquidity
- Hedging demand implied by equity and currency option skew
- Investor risk appetite gauged by trading volumes and flows into equities and high yield bonds and out of money markets

33 out of 39 indicators point to vol being too low.



Realized volatility follows the business cycle – high around recessions, falling with recovery, bottoming out mid to late cycle before turning up again

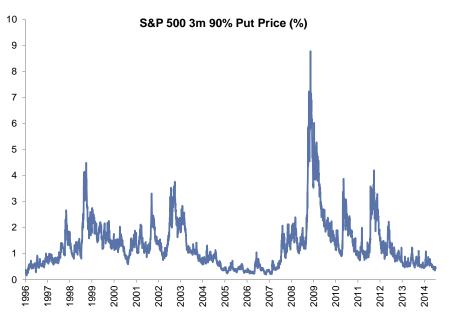


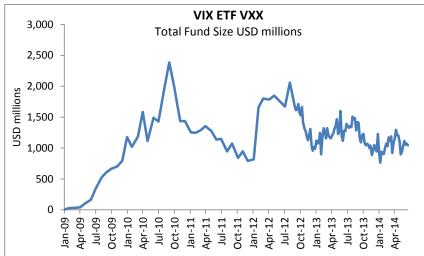
^{*} Realized vol is the annualized standard deviation of daily log changes in S&P 500 over a 1m window

Supply / demand factors in the options markets

Tail hedgers have decreased as evidenced by

- Falling prices of downside puts on the S&P
- Shrinking fund size of VIX ETF

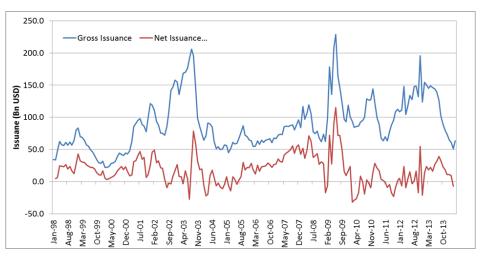




Supply / demand factors in the options markets

Convexity hedging by mortgage accounts has gone down significantly after the crisis because of lower issuance and the Fed's QE purchases. QE mortgage purchases remove both duration and convexity from the market, making it one of the most powerful policy tools.

MBS Issuance

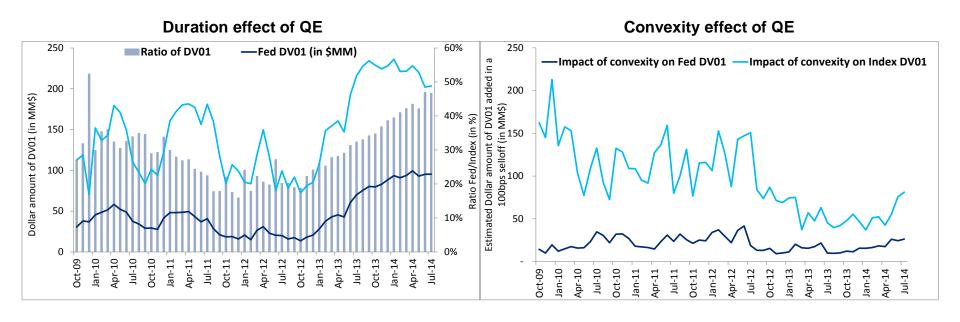


Fed MBS holdings % outstanding



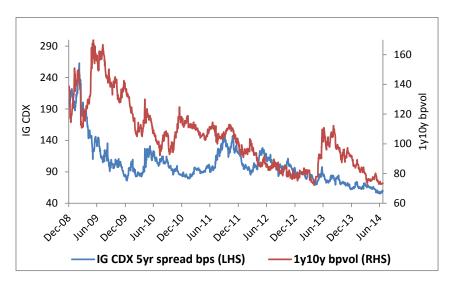
Supply / demand factors in the options markets

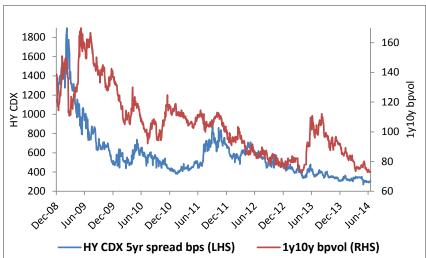
QE mortgage purchases remove both duration and convexity from the market, making it one of the most powerful policy tools.

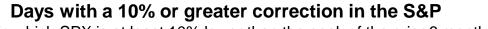


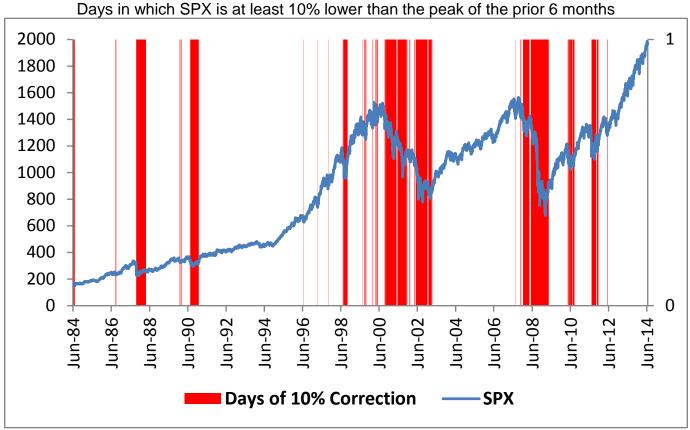
Interest rate volatility can be viewed as a proxy for the corporate bond market and the interest rate at which people and companies borrow money.

Shown below is 1y10y interest rate vol with 5yr spreads of the credit default index of investment grade on the left and high yield on the left.





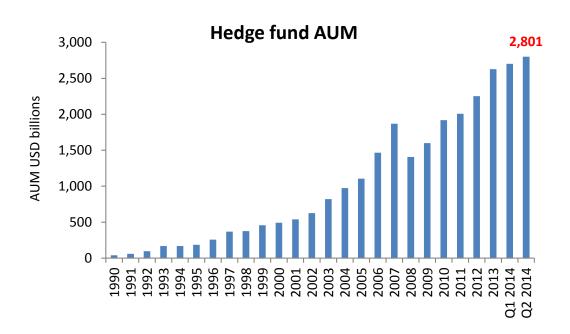




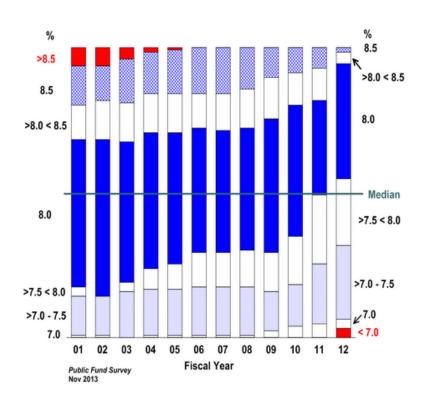
Note the lack of 10% corrections during the past hiking cycles in 2004 and 1994

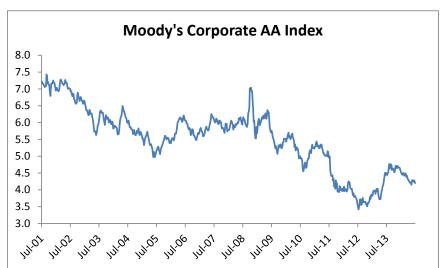
Against environment of low vol and low returns, the only way to achieve the same return targets is to take on more risk

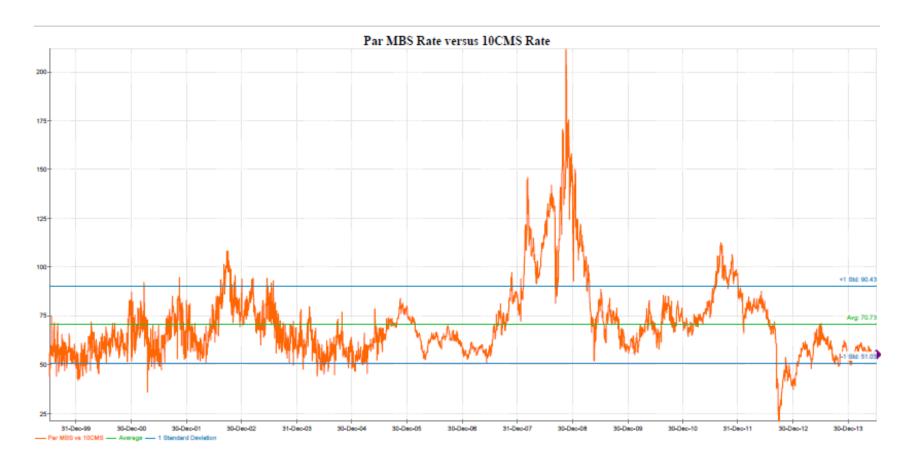
- Ballooning AUM invested in hedge funds, now \$2.7 trillion
- VAR-based risk management frameworks and risk-parity investment models in which volatility
 is an input that determines the amount of risk to take



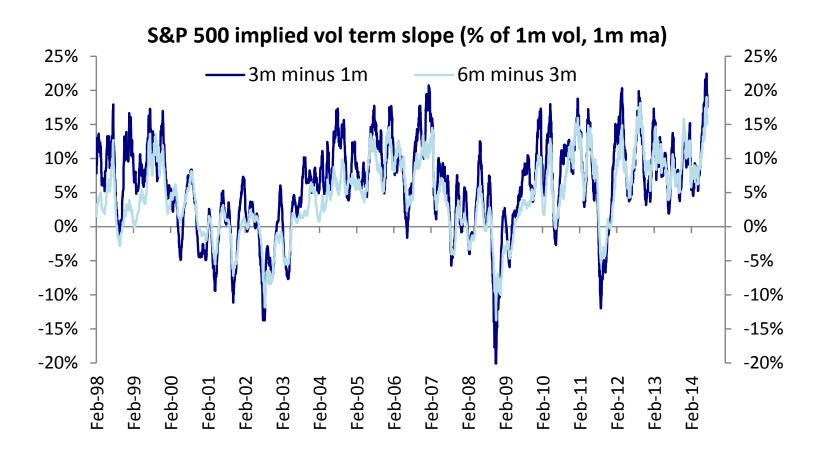
Mostly unchanged target for investment returns from the pension community. Latest data from November 2013 shows the median target shifted to just under 8% in 2012, despite the yield on Moody's AA index having fallen to 4.2%.





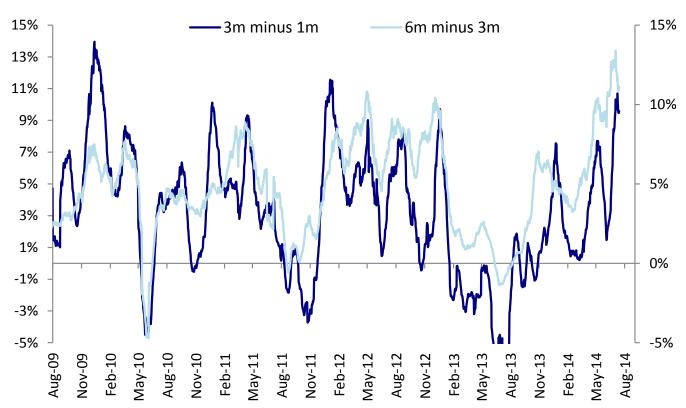


This represents the extra yield of owning pass-thru mortgage securities from the option value without embedded prepayment assumptions.

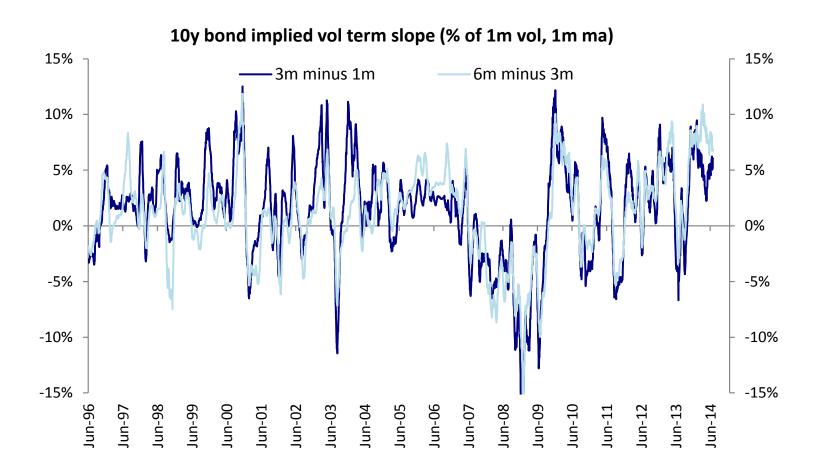


Equity vol term structure has held up against complacency in the market place.

FX implied vol term slope (% of 1m vol, 1m ma)

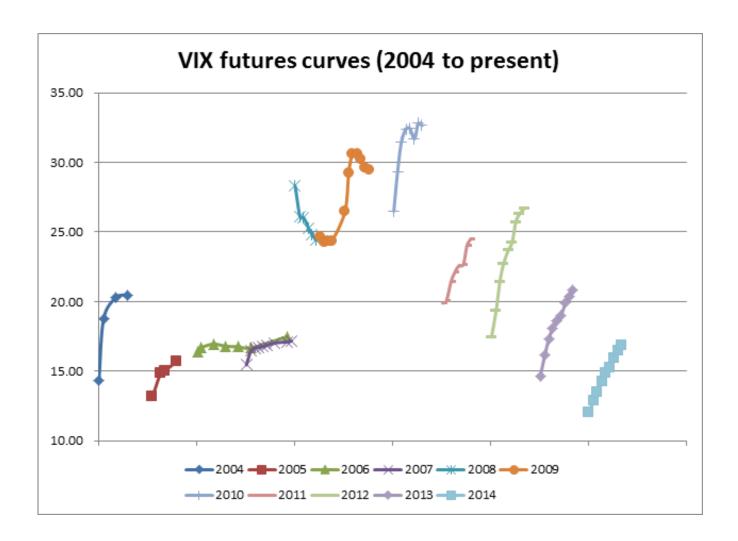


FX vol term structure is also near the steepest level in the last 5 years.

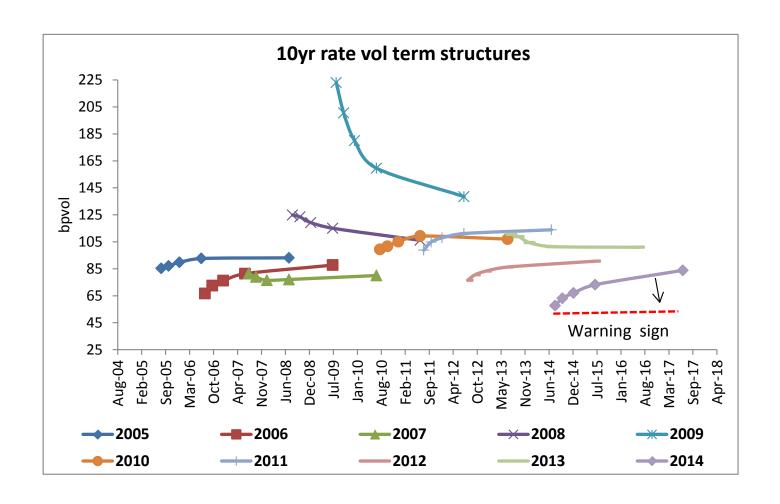


Rate vol term structure is off the highs despite the Fed being closer to tightening than at any other point in the last 5 years.

Equity volatility term structures

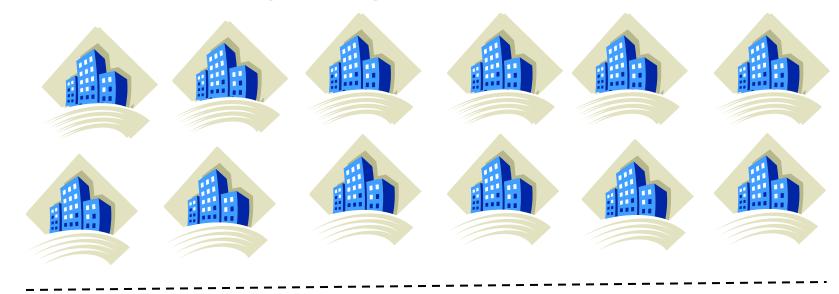


Interest rate volatility term structures



Liquidity providers

Less warehouses for risk = higher storage costs















Conclusions

- Monetary policy and regulatory changes have contributed to the decline in volatility.
- Less demand for volatility across asset classes naturally lowers the price for such insurance.
- VAR-based analysis leads to self-reinforcing loops as low volatility causes models to recommend scaling up risk.
- The term structure of volatility is a powerful indicator; flatter vol curves would suggest excessive complacency and presage increasing risk.
- Volatility tends to rise mid-to-late stage of the business cycle as expansive endeavors increase through the system.
- An unexpected increase in volatility might come from broad-based selling of assets wanting to derisk in front of a turn in policy.
- With liquidity providers having declined in number and capacity, the system is less able to deal with such episodes of higher volatility. Institutions which deliver absolute returns or provide liquidity to the system would be most at risk.

Reference

- P6: Consensus Economics, UBS
- P7: Bank of America Merrill Lynch
- P8: Haver, Deutsche Bank
- P11: Citibank
- P14: HFR Global Hedge Fund Industry Report
- P15: Public Fund Survey
- P17: Deutsche Bank
- P18: Deutsche Bank. FX vol is computed on the currencies that make up the Deutsche Bank Currency Volatility Index.
- P19: Deutsche Bank