

# Office of Debt Management

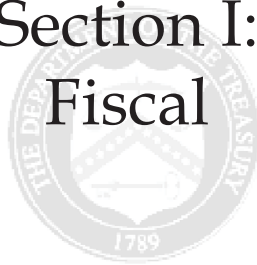


## Fiscal Year 2012 Q2 Report

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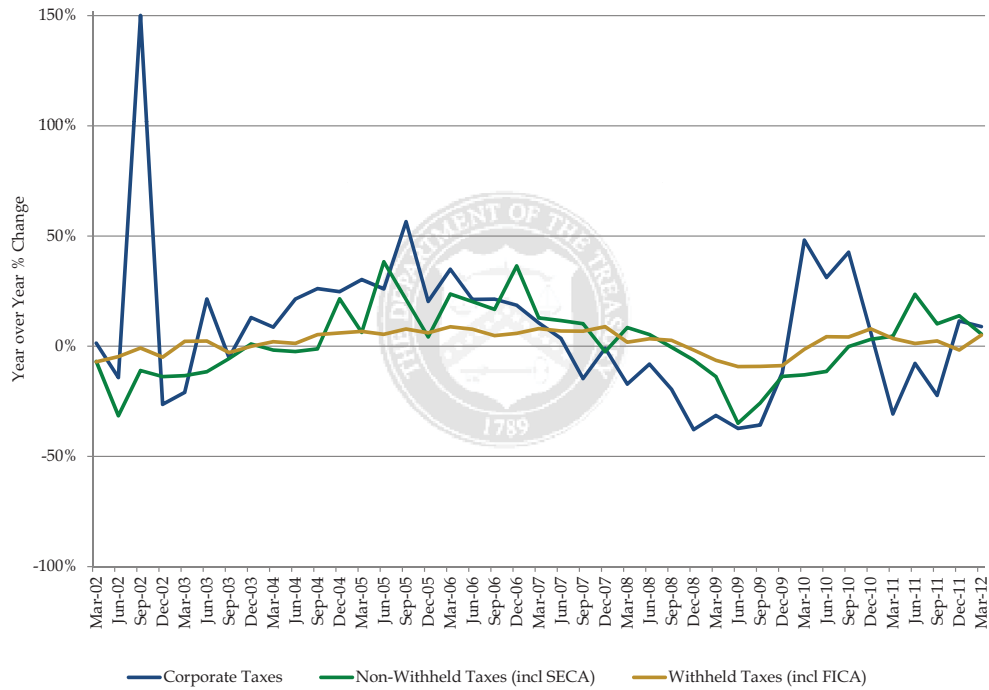
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# Section I: Fiscal



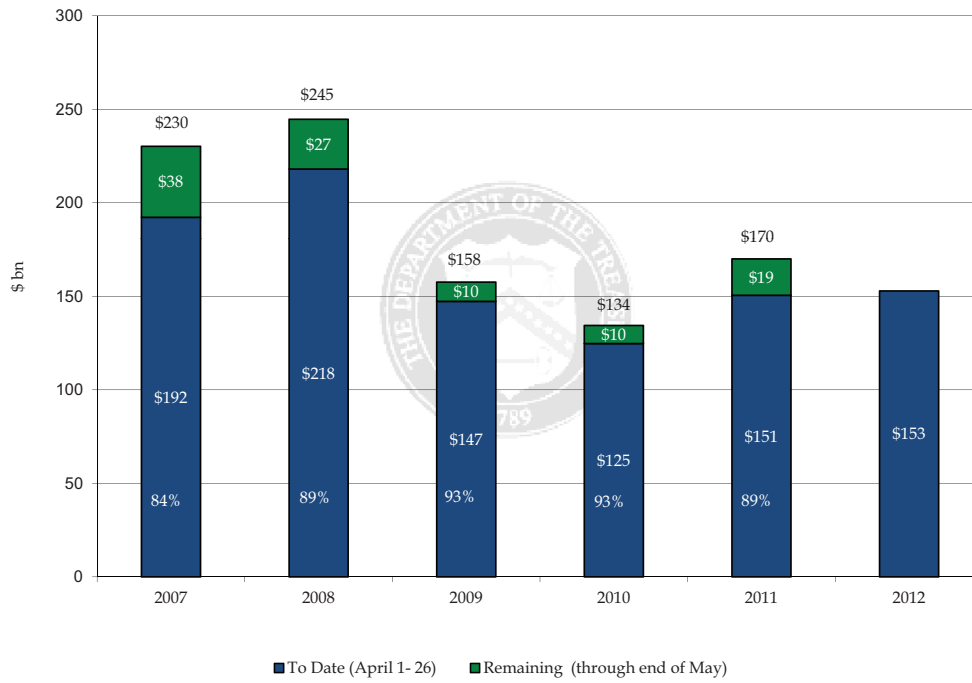
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## Quarterly Tax Receipts



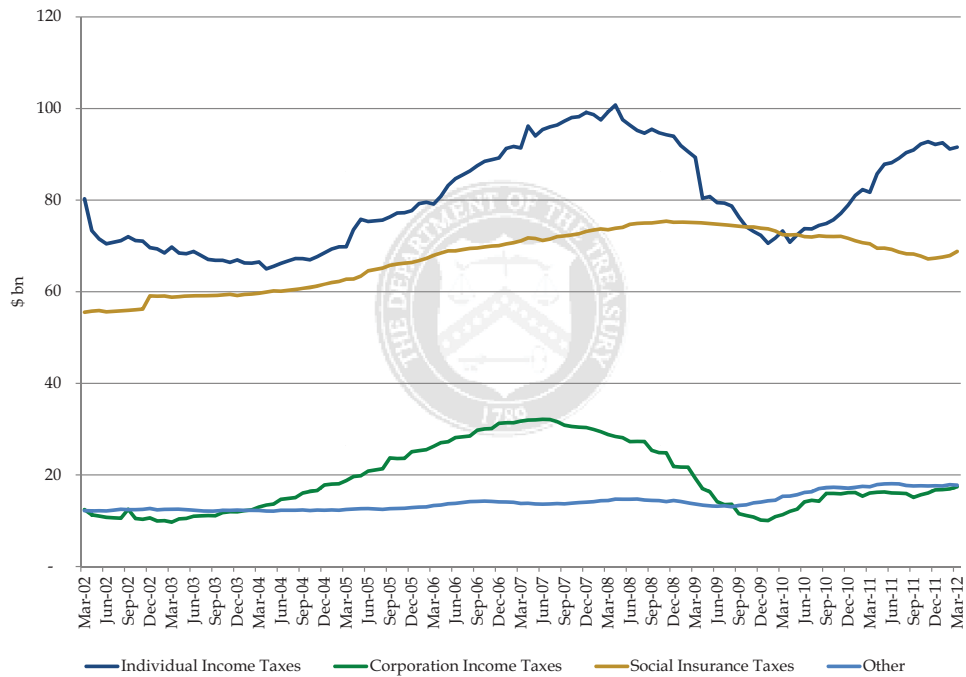
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## Peak Season Non-Withheld/SECA Taxes, 2007-2012



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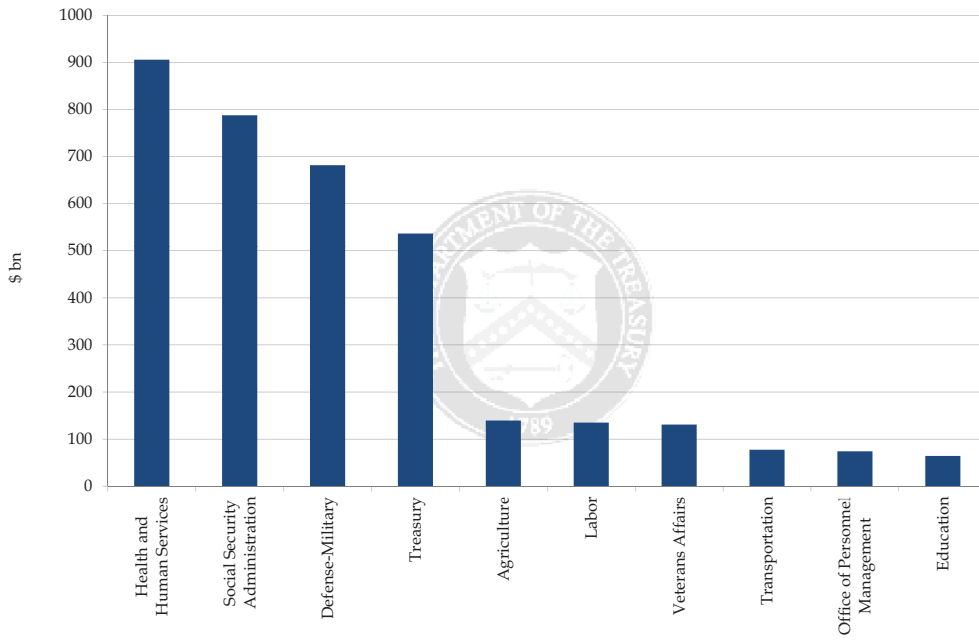
## Monthly Receipt Levels (12-Month Moving Average)



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.

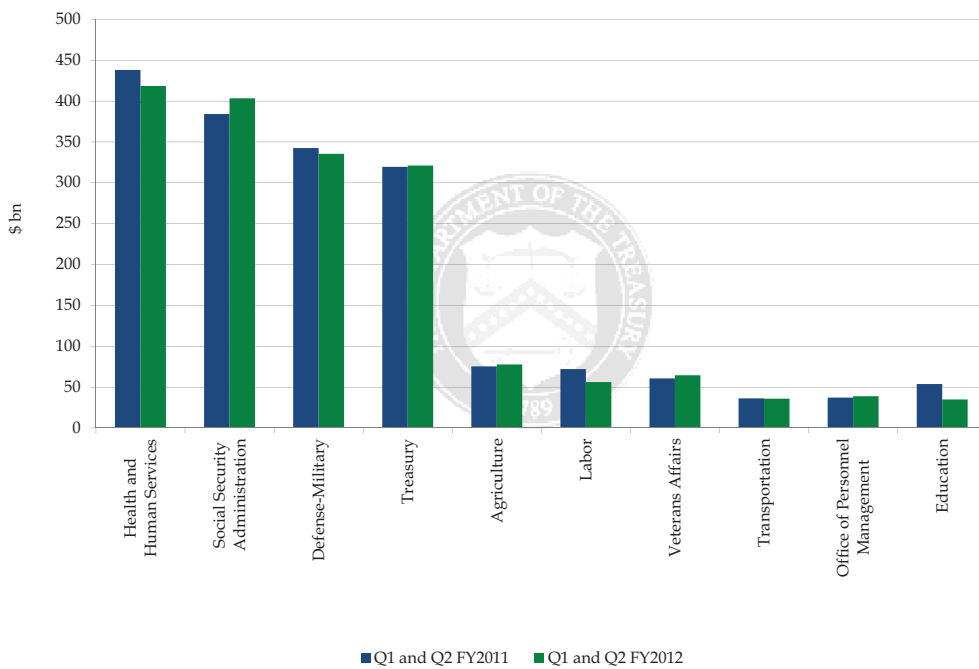
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### Ten Largest Outlays for Fiscal Year 2011



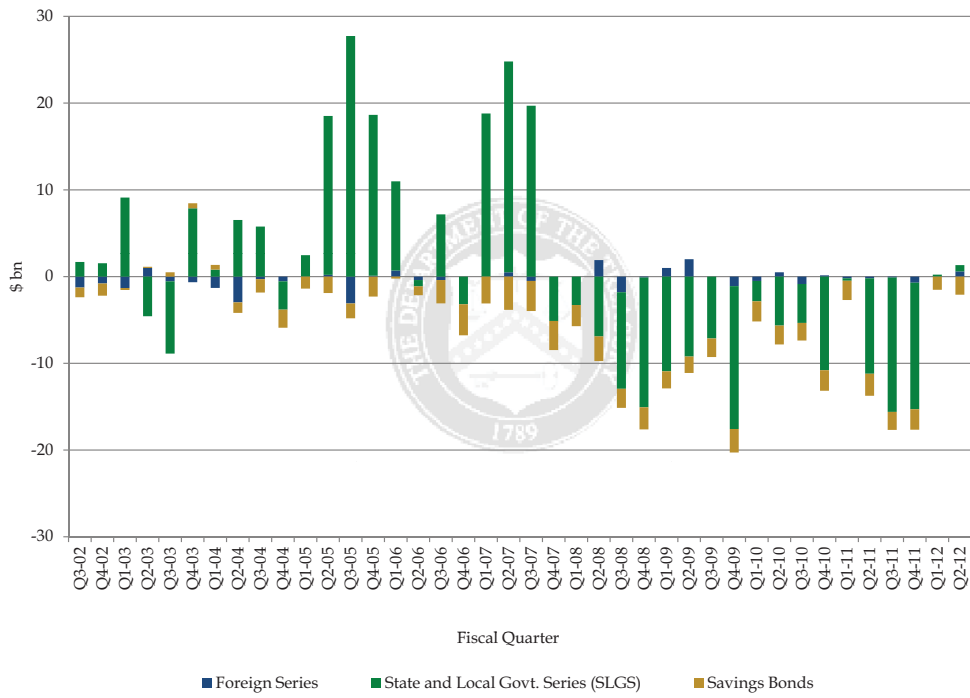
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### Fiscal Year-to-Date Levels of Ten Largest Outlays

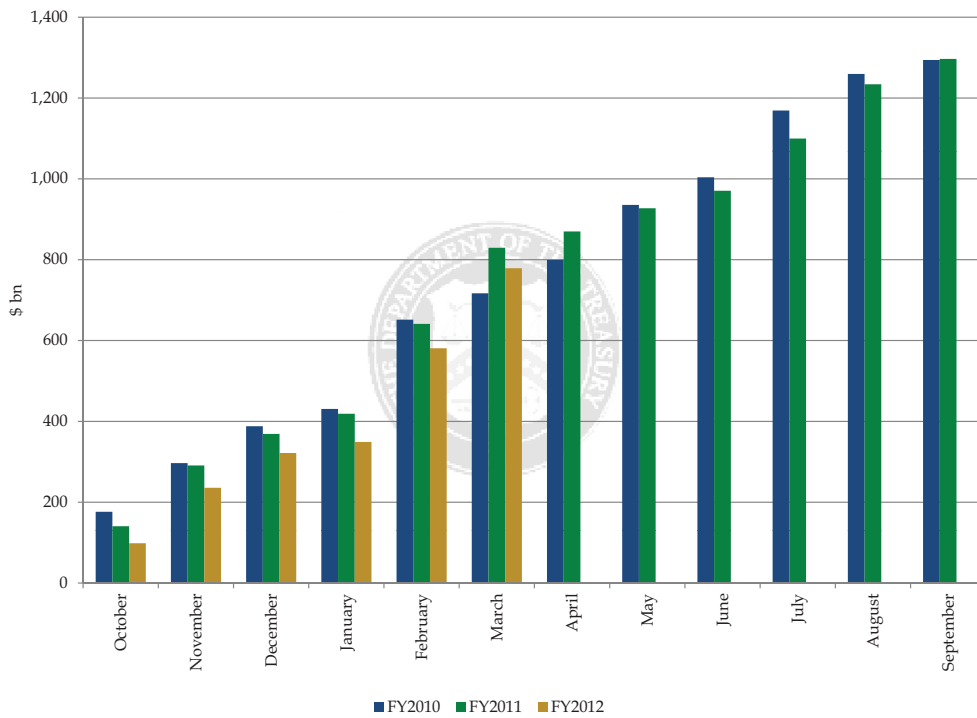


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### Treasury Net Non-Marketable Borrowing



### Cumulative Budget Deficits by Fiscal Year



FY 2012-2014 Deficit and Net Marketable Borrowing Estimates In \$ Billions

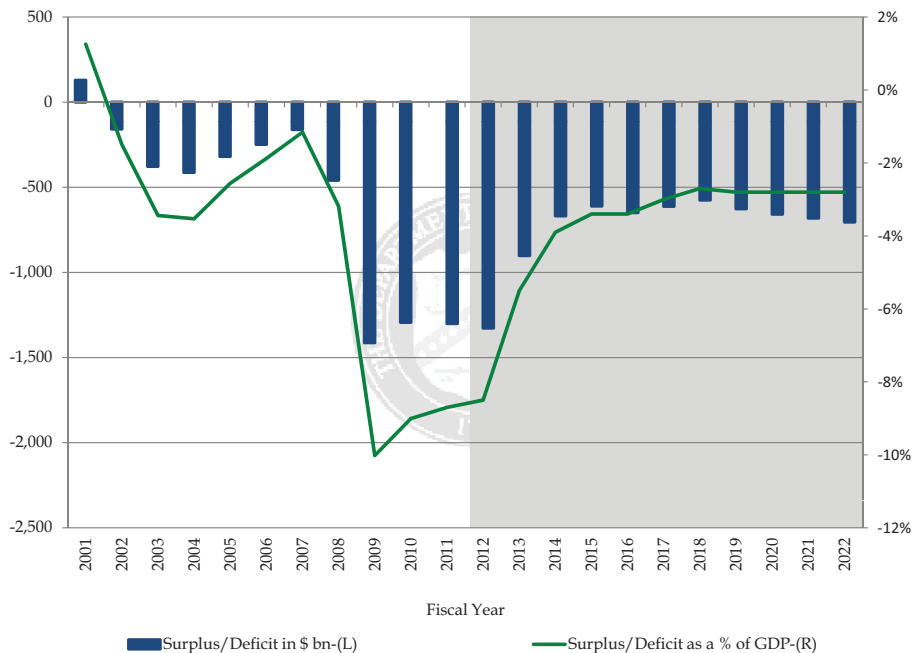
	Primary Dealers <sup>1</sup>	CBO <sup>2</sup>	OMB <sup>3</sup>
FY 2012 Deficit Estimate	1,156	1,171	1,327
FY 2013 Deficit Estimate	924	612	901
FY 2014 Deficit Estimate	795	385	668
FY 2012 Deficit Range	973-1,300		
FY 2013 Deficit Range	650-1,200		
FY 2014 Deficit Range	500-1,100		
FY 2012 Net Marketable Borrowing Estimate	1,182		1,450
FY 2013 Net Marketable Borrowing Estimate	959		1,059
FY 2012 Net Marketable Borrowing Range	1,050-1,281		
FY 2013 Net Marketable Borrowing Range	728-1,100		
Estimates as of:	Apr-12	Mar-12	Feb-12

<sup>1</sup>Based on primary dealer feedback on April 23, 2012. Deficit estimates are averages.

<sup>2</sup>CBO's baseline estimate; assumes current law.

<sup>3</sup>Table S-5 of the February 13, 2012, "Fiscal Year 2013 Budget of the US Government."

Budget Surplus/Deficit



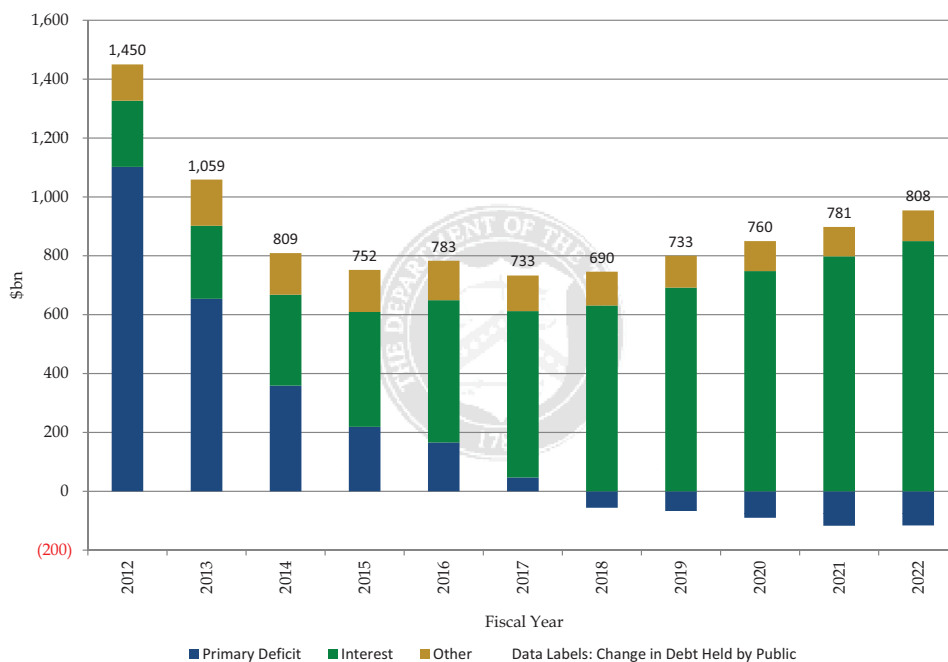
OMB's Projections

Projections are from Table S-5 of the February 13, 2012, "Fiscal Year 2013 Budget of the US Government."

# Section II: Financing

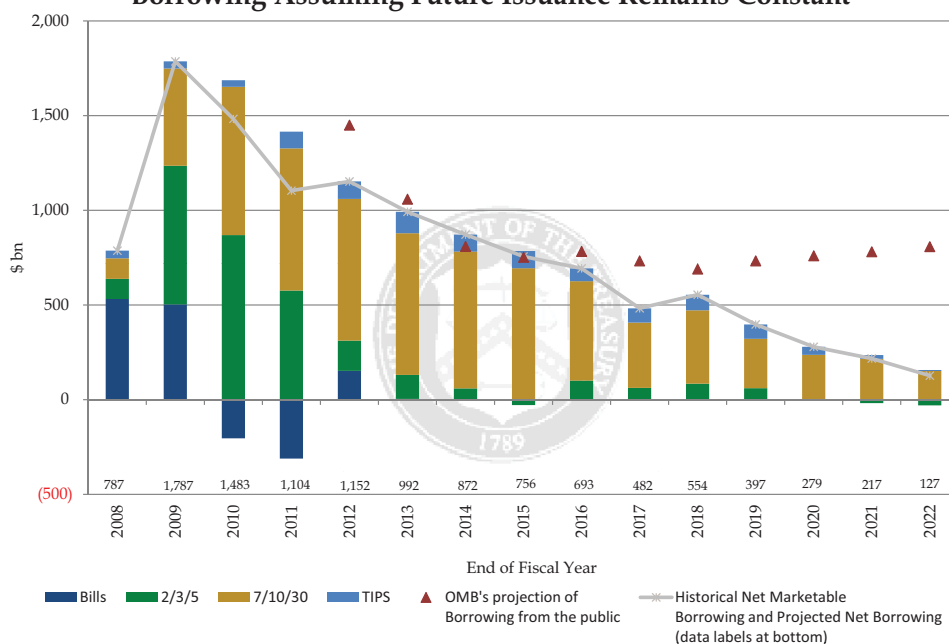


**OMB's Projections of Borrowing from the Public**



OMB's borrowing from the public projections are from Table S-5 and S-15 of the February 13, 2012, "Fiscal Year 2013 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.

### Historical Net Marketable Borrowing and Projected Net Borrowing Assuming Future Issuance Remains Constant



Portfolio & SOMA holdings as of 3/30/2012. Assumes issuance sizes for Bills, Nominal Coupons and TIPS are unchanged from 3/30/2012 levels, along with SOMA reinvestment. 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 borrowing from the public projections are from Table S-5 and S-15 of the February 13, 2012, "Fiscal Year 2013 Budget of the US Government." Data labels represent historical net marketable borrowing and projected net borrowing capacity. See table on the following page for details.

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### 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
2008	532	106	109	40	787	
2009	503	732	514	38	1,787	
2010	(204)	869	783	35	1,483	
2011	(311)	576	751	88	1,104	
2012	152	160	748	92	1,152	1,450
2013	4	127	748	113	992	1,059
2014	0	60	722	90	872	809
2015	0	(29)	694	91	756	752
2016	0	101	525	67	693	783
2017	0	62	344	76	482	733
2018	0	84	388	82	554	690
2019	0	60	261	76	397	733
2020	0	3	233	43	279	760
2021	0	(18)	215	20	217	781
2022	0	(30)	151	6	127	808

Portfolio & SOMA holdings as of 3/30/2012. Assumes issuance sizes for Bills, Nominal Coupons and TIPS are unchanged from 3/30/2012 levels, along with SOMA reinvestment. 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 borrowing from the public projections are from Table S-5 and S-15 of the February 13, 2012, "Fiscal Year 2013 Budget of the US Government." Data labels represent historical net marketable borrowing and projected net borrowing capacity.

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### Sources of Financing in Fiscal Year 2012 Q1

October-December 2011		October-December 2011			Fiscal Year to Date			
Net Funding Need (282)		Bill Issuance						
		Issuance	Gross	Maturing	Net	Gross	Maturing	Net
Net Bill Issuance	43	4-Week	487	474	13	487	474	13
Net Coupon Issuance	267	13-Week	377	367	10	377	367	10
Subtotal: Net Marketable Borrowing	310	26-Week	351	337	14	351	337	14
		52-Week	75	69	6	75	69	6
Plus: Beginning Cash Balance	58	CMBs	10	10	0	10	10	0
Less: Ending Cash Balance	86	Bill Subtotal	1,300	1,257	43	1,300	1,257	43
Subtotal: Funding Adding to Build Up of Cash	(28)							
Total: Net Funding	282							

		October-December 2011			Fiscal Year to Date			
		Coupon Issuance						
		Issue	Gross	Maturing	Net	Gross	Maturing	Net
		2-Year	73	90	(17)	73	90	(17)
		3-Year	100	58	41	100	58	41
		5-Year	73	33	40	73	33	40
		7-Year	60	0	60	60	0	60
		10-Year	69	0	69	69	0	69
		30-Year	44	0	44	44	0	44
		5-Year TIPS	12	0	12	12	0	12
		10-Year TIPS	11	0	11	11	0	11
		30-Year TIPS	7	0	7	7	0	7
		Coupon Subtotal	449	182	267	449	182	267
Total			1,749	1,439	310	1,749	1,439	310

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### Sources of Financing in Fiscal Year 2012 Q2

January-March 2012		January-March 2012			Fiscal Year to Date			
Net Funding Need (443)		Bill Issuance						
		Issuance	Gross	Maturing	Net	Gross	Maturing	Net
Net Bill Issuance	154	4-Week	523	498	25	1,009	971	38
Net Coupon Issuance	247	13-Week	409	377	32	786	744	42
Subtotal: Net Marketable Borrowing	401	26-Week	383	336	47	734	673	61
		52-Week	77	67	10	152	136	16
Plus: Beginning Cash Balance	86	CMBs	40	0	40	50	10	40
Less: Ending Cash Balance	43	Bill Subtotal	1,432	1,278	154	2,731	2,534	197
Subtotal: Funding Provided by Drawdown of Cash	42							
Total: Net Funding	443							

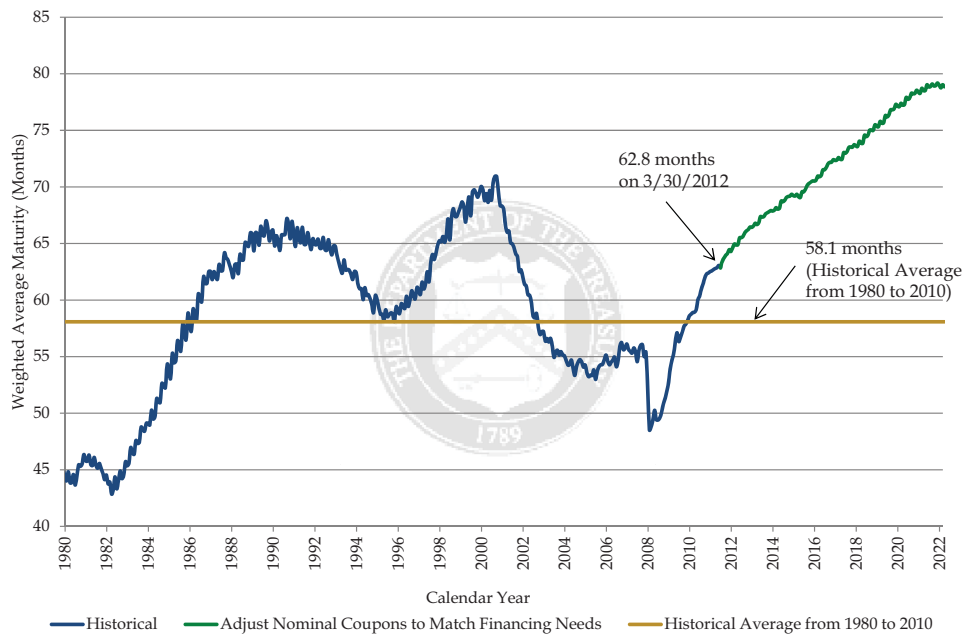
		January-March 2012			Fiscal Year to Date			
		Coupon Issuance						
		Issue	Gross	Maturing	Net	Gross	Maturing	Net
		2-Year	107	135	(28)	180	226	(45)
		3-Year	104	101	4	204	159	45
		5-Year	107	48	60	180	81	99
		7-Year	89	0	89	149	0	149
		10-Year	72	25	47	140	25	116
		30-Year	46	0	46	89	0	89
		5-Year TIPS	0	0	0	12	0	12
		10-Year TIPS	28	8	21	40	8	32
		30-Year TIPS	9	0	9	16	0	16
		Coupon Subtotal	563	316	247	1,012	498	514
Total			1,995	1,594	401	3,743	3,032	711

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# Section III: Portfolio Metrics

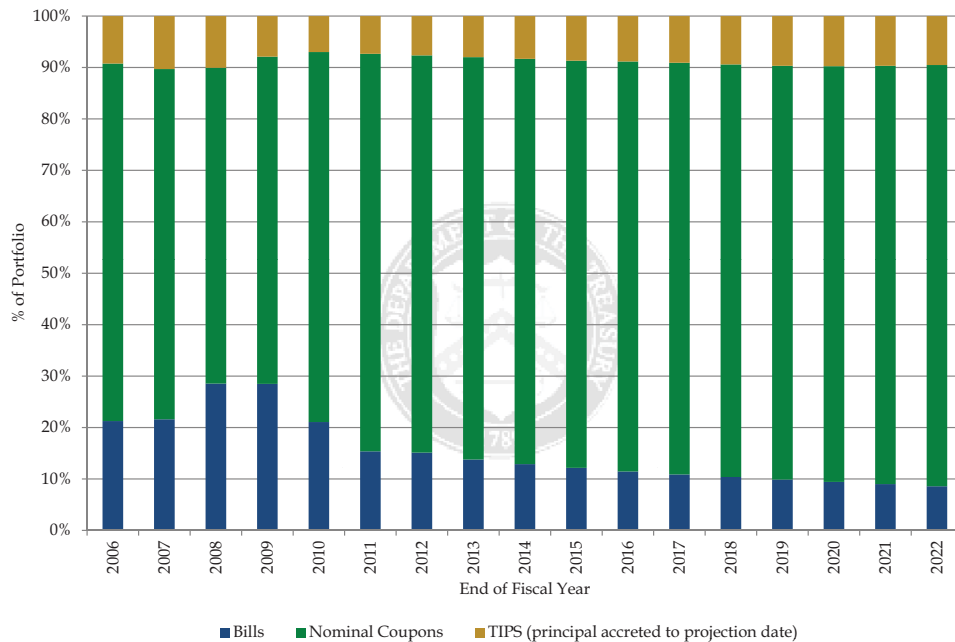


**Weighted Average Maturity of Marketable Debt Outstanding**



Portfolio & SOMA holdings as of 3/30/2012. 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. OMB's borrowing from the public projections are from Table S-5 and S-15 of the February 13, 2012, "Fiscal Year 2013 Budget of the US Government." The principal on the TIPS securities were accreted to each projection date based on market ZCIS levels. 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.

## Recent and Future Portfolio Composition by Issuance Type, Percent



Portfolio & SOMA holdings as of 3/30/2012. 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. OMB's borrowing from the public projections are from Table S-5 and S-15 of the February 13, 2012, "Fiscal Year 2013 Budget of the US Government." The principal on the TIPS securities were accreted to each projection date based on market ZCIS levels. This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the portfolio composition absent changes to the mix of securities issued by Treasury.

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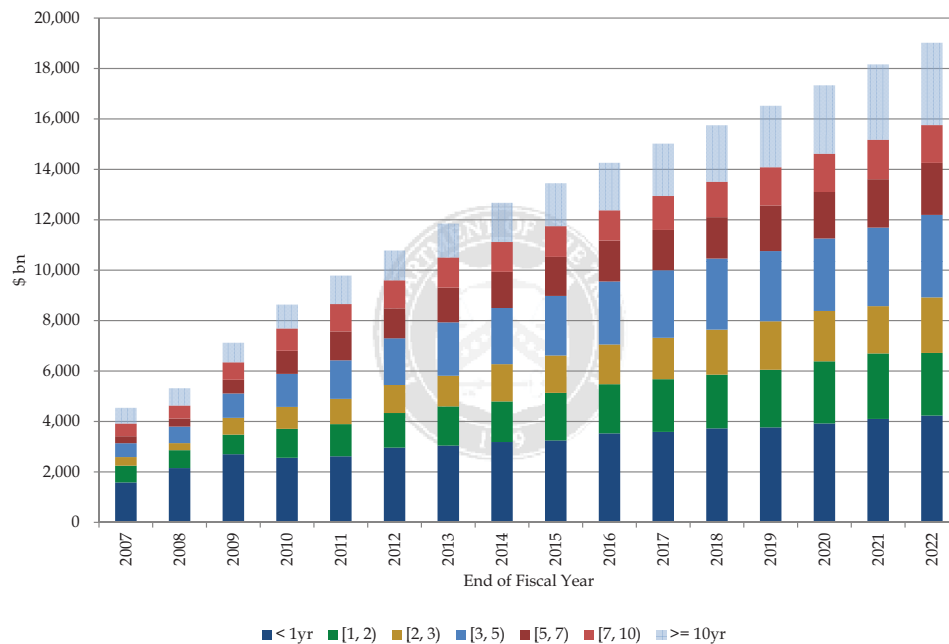
## Recent and Future Portfolio Composition by Issuance Type, Percent

End of Fiscal Year	Bills	Nominal Coupons	TIPS (principal accreted to projection date)
2006	21.3%	69.5%	9.2%
2007	21.6%	68.1%	10.3%
2008	28.5%	61.4%	10.0%
2009	28.5%	63.6%	7.9%
2010	21.1%	71.9%	7.0%
2011	15.4%	77.3%	7.3%
2012	15.1%	77.2%	7.6%
2013	13.8%	78.2%	8.0%
2014	12.9%	78.8%	8.3%
2015	12.1%	79.2%	8.7%
2016	11.5%	79.7%	8.8%
2017	10.9%	80.0%	9.1%
2018	10.4%	80.2%	9.4%
2019	9.9%	80.4%	9.7%
2020	9.4%	80.8%	9.7%
2021	9.0%	81.3%	9.7%
2022	8.6%	81.9%	9.5%

Portfolio & SOMA holdings as of 3/30/2012. 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. OMB's borrowing from the public projections are from Table S-5 and S-15 of the February 13, 2012, "Fiscal Year 2013 Budget of the US Government." The principal on the TIPS securities were accreted to each projection date based on market ZCIS levels. This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the portfolio composition absent changes to the mix of securities issued by Treasury.

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## Recent and Future Maturity Profile, \$ Billion



Portfolio & SOMA holdings as of 3/30/2012. 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. OMB's borrowing from the public projections are from Table S-5 and S-15 of the February 13, 2012, "Fiscal Year 2013 Budget of the US Government." The principal on the TIPS securities were accreted to each projection date based on market ZCIS levels. This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the maturity profile absent changes to the mix of securities issued by Treasury.

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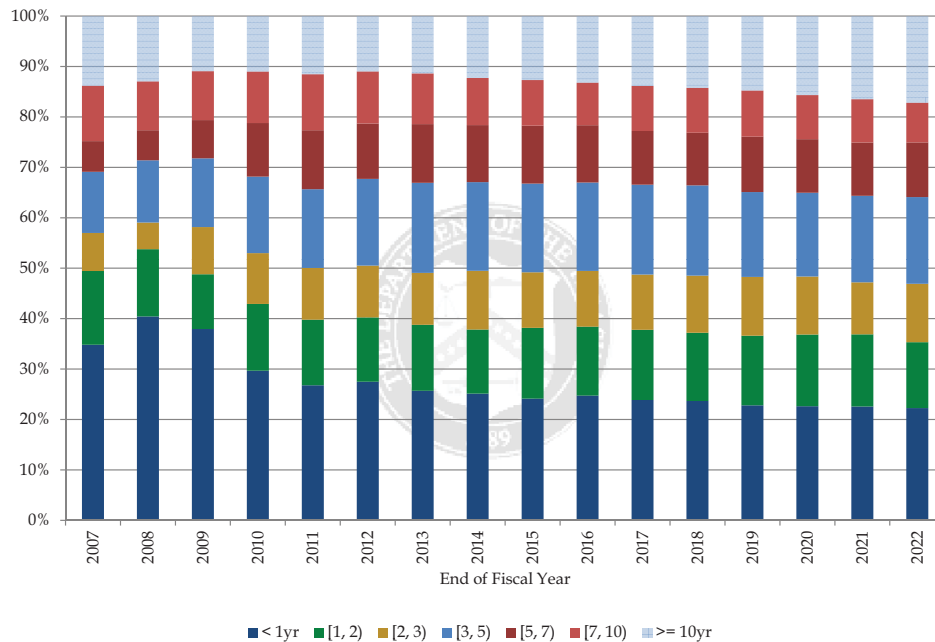
## Recent and Future Maturity Profile, \$ Billion

End of Fiscal Year	< 1yr	[1, 2]	[2, 3]	[3, 5]	[5, 7]	[7, 10]	>= 10yr	Total
2007	1,582	664	342	551	276	499	627	4,541
2008	2,151	710	280	657	318	515	690	5,320
2009	2,702	775	666	970	540	691	779	7,124
2010	2,563	1,143	872	1,310	918	881	952	8,639
2011	2,621	1,273	1,004	1,527	1,146	1,086	1,129	9,786
2012	2,964	1,373	1,109	1,854	1,184	1,112	1,184	10,782
2013	3,045	1,552	1,219	2,116	1,378	1,191	1,349	11,850
2014	3,186	1,611	1,476	2,229	1,432	1,183	1,558	12,675
2015	3,246	1,889	1,483	2,364	1,546	1,215	1,707	13,450
2016	3,528	1,950	1,575	2,500	1,622	1,200	1,884	14,259
2017	3,586	2,090	1,644	2,679	1,598	1,343	2,081	15,022
2018	3,726	2,131	1,787	2,818	1,642	1,399	2,245	15,748
2019	3,768	2,283	1,925	2,782	1,811	1,513	2,441	16,523
2020	3,924	2,463	1,995	2,878	1,841	1,514	2,718	17,332
2021	4,101	2,598	1,876	3,116	1,918	1,560	2,995	18,164
2022	4,236	2,484	2,202	3,271	2,062	1,497	3,269	19,022

Portfolio & SOMA holdings as of 3/30/2012. 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. OMB's borrowing from the public projections are from Table S-5 and S-15 of the February 13, 2012, "Fiscal Year 2013 Budget of the US Government." The principal on the TIPS securities were accreted to each projection date based on market ZCIS levels. This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the maturity profile absent changes to the mix of securities issued by Treasury.

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## Recent and Future Maturity Profile, Percent



Portfolio & SOMA holdings as of 3/30/2012. 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. OMB's borrowing from the public projections are from Table S-5 and S-15 of the February 13, 2012, "Fiscal Year 2013 Budget of the US Government." The principal on the TIPS securities were accreted to each projection date based on market ZCIS levels. This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the maturity profile absent changes to the mix of securities issued by Treasury.

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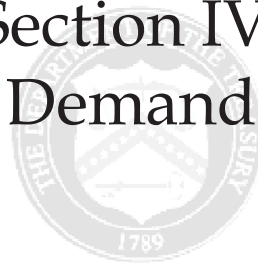
## Recent and Future Maturity Profile, Percent

End of Fiscal Year	< 1yr	[1, 2]	[2, 3]	[3, 5]	[5, 7]	[7, 10]	>= 10yr	[0,3]	[0,5]
2007	34.8%	14.6%	7.5%	12.1%	6.1%	11.0%	13.8%	57.0%	69.1%
2008	40.4%	13.3%	5.3%	12.3%	6.0%	9.7%	13.0%	59.1%	71.4%
2009	37.9%	10.9%	9.3%	13.6%	7.6%	9.7%	10.9%	58.2%	71.8%
2010	29.7%	13.2%	10.1%	15.2%	10.6%	10.2%	11.0%	53.0%	68.2%
2011	26.8%	13.0%	10.3%	15.6%	11.7%	11.1%	11.5%	50.1%	65.7%
2012	27.5%	12.7%	10.3%	17.2%	11.0%	10.3%	11.0%	50.5%	67.7%
2013	25.7%	13.1%	10.3%	17.9%	11.6%	10.1%	11.4%	49.1%	66.9%
2014	25.1%	12.7%	11.6%	17.6%	11.3%	9.3%	12.3%	49.5%	67.1%
2015	24.1%	14.0%	11.0%	17.6%	11.5%	9.0%	12.7%	49.2%	66.8%
2016	24.7%	13.7%	11.0%	17.5%	11.4%	8.4%	13.2%	49.5%	67.0%
2017	23.9%	13.9%	10.9%	17.8%	10.6%	8.9%	13.9%	48.7%	66.6%
2018	23.7%	13.5%	11.3%	17.9%	10.4%	8.9%	14.3%	48.5%	66.4%
2019	22.8%	13.8%	11.6%	16.8%	11.0%	9.2%	14.8%	48.3%	65.1%
2020	22.6%	14.2%	11.5%	16.6%	10.6%	8.7%	15.7%	48.4%	65.0%
2021	22.6%	14.3%	10.3%	17.2%	10.6%	8.6%	16.5%	47.2%	64.4%
2022	22.3%	13.1%	11.6%	17.2%	10.8%	7.9%	17.2%	46.9%	64.1%

Portfolio & SOMA holdings as of 3/30/2012. 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. OMB's borrowing from the public projections are from Table S-5 and S-15 of the February 13, 2012, "Fiscal Year 2013 Budget of the US Government." The principal on the TIPS securities were accreted to each projection date based on market ZCIS levels. This scenario does not represent any particular course of action that Treasury is expected to follow. Instead, it is intended to demonstrate the maturity profile absent changes to the mix of securities issued by Treasury.

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# Section IV: Demand



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## Summary Statistics for Fiscal Year 2012 Q2 Auctions

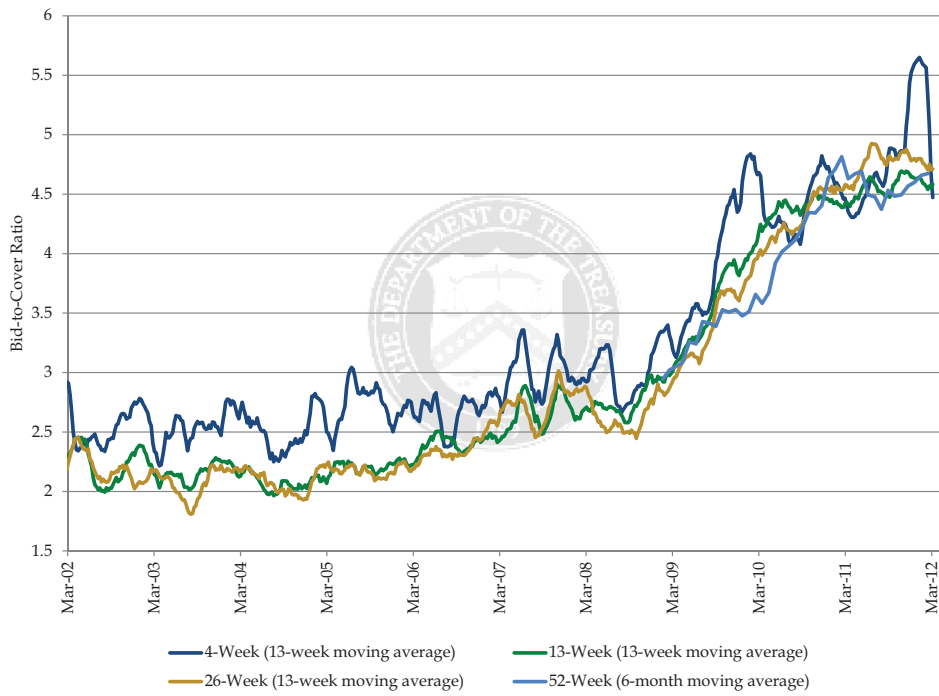
Security Type	Term	Stop Out Rate (%)	Bid-to-Cover Ratio	Competitive Awards (\$ bn)	% Primary Dealer	% Direct	% Indirect	Non-Competitive Awards (\$ bn)	SOMA Add Ons (\$ bn)	10-Yr Equivalent (\$ bn)
Bill	4-Week	0.059	4.4	460.9	64.8%	10.0%	25.2%	3.1	57.7	3.99
Bill	13-Week	0.069	4.6	395.5	68.7%	7.3%	24.0%	9.7	0.0	11.32
Bill	26-Week	0.109	4.7	366.5	64.2%	7.7%	28.2%	8.6	0.0	20.97
Bill	52-Week	0.139	4.7	76.4	61.6%	10.0%	28.5%	0.5	0.0	8.57
Coupon	2-Year	0.300	3.7	104.4	52.6%	13.1%	34.3%	0.6	2.0	23.40
Coupon	3-Year	0.391	3.5	95.9	58.8%	7.6%	33.6%	0.1	8.4	31.92
Coupon	5-Year	0.946	3.0	104.9	44.5%	13.1%	42.4%	0.1	2.0	57.48
Coupon	7-Year	1.456	2.9	86.9	46.4%	14.8%	38.8%	0.1	1.6	64.65
Coupon	10-Year	2.000	3.2	65.8	43.2%	18.2%	38.6%	0.1	5.9	65.92
Coupon	30-Year	3.205	2.6	41.9	57.7%	12.4%	30.0%	0.1	3.8	90.75
TIPS	10-Year	(0.066)	2.9	27.8	44.8%	17.0%	38.2%	0.2	0.3	31.12
TIPS	30-Year	0.770	2.5	9.0	45.8%	13.6%	40.6%	0.0	0.1	26.15

Total Bills	0.081	4.6	1,299.4	65.6%	8.5%	25.9%	21.9	57.7	44.85
Total Coupons	1.122	3.2	500.0	50.2%	12.9%	36.9%	1.0	23.7	334.12
Total TIPS	0.138	2.8	36.7	45.0%	16.2%	38.8%	0.2	0.4	57.27

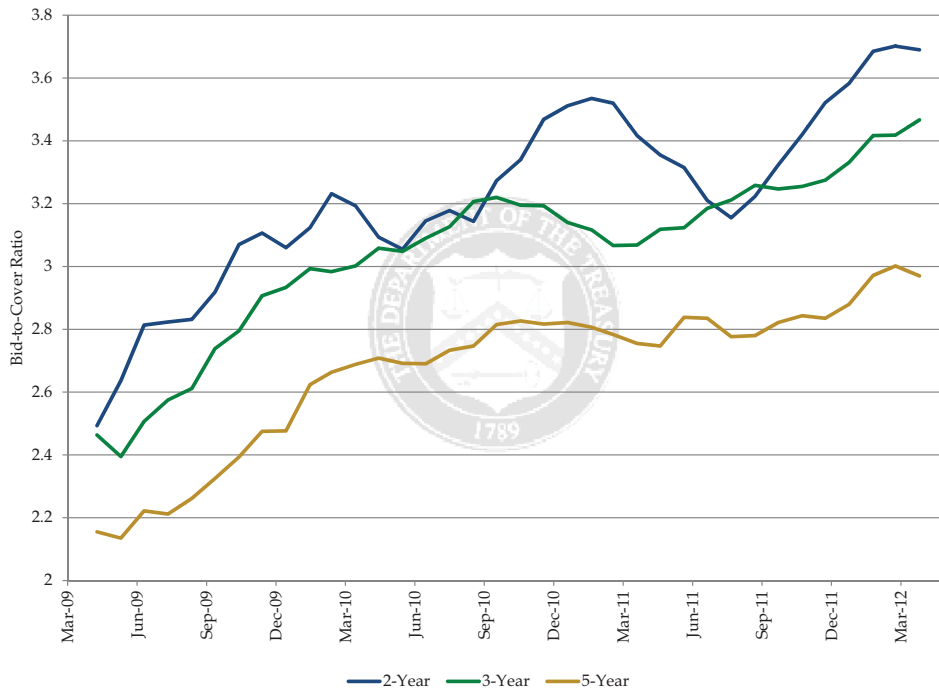
Stop Out Rate, Bid-to-Cover Ratio, % Primary Dealer, % Direct and % Indirect are weighted averages of Competitive Awards. 10-Yr equivalent is approximated using prices at settlement and includes both Competitive and Non-Competitive Awards. For TIPS 10-Yr equivalent, a constant auction BEI is used as the inflation assumption.

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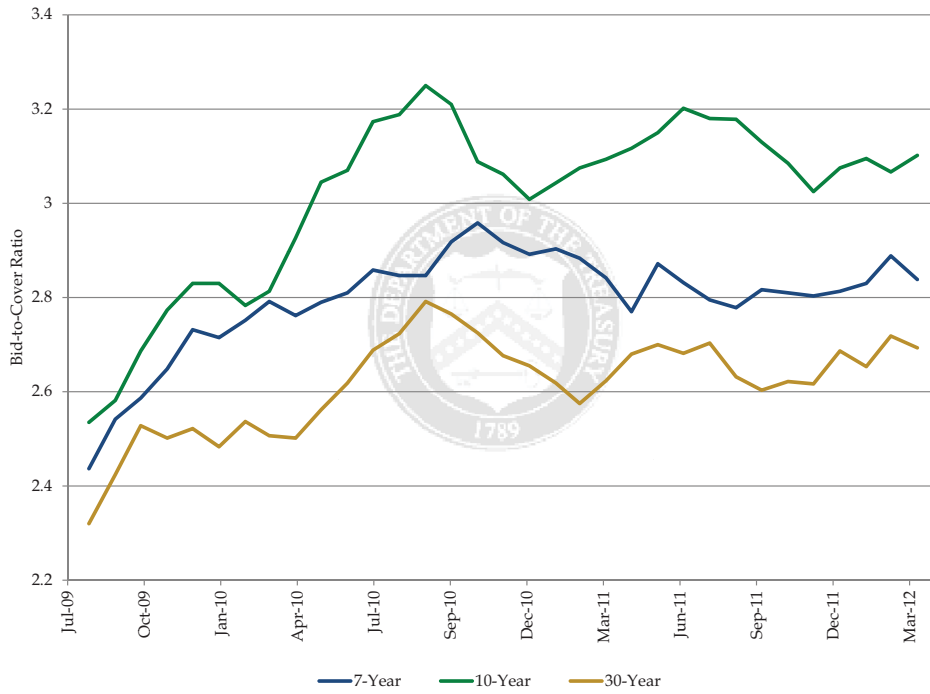
### Bid-to-Cover Ratios for Treasury Bills



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

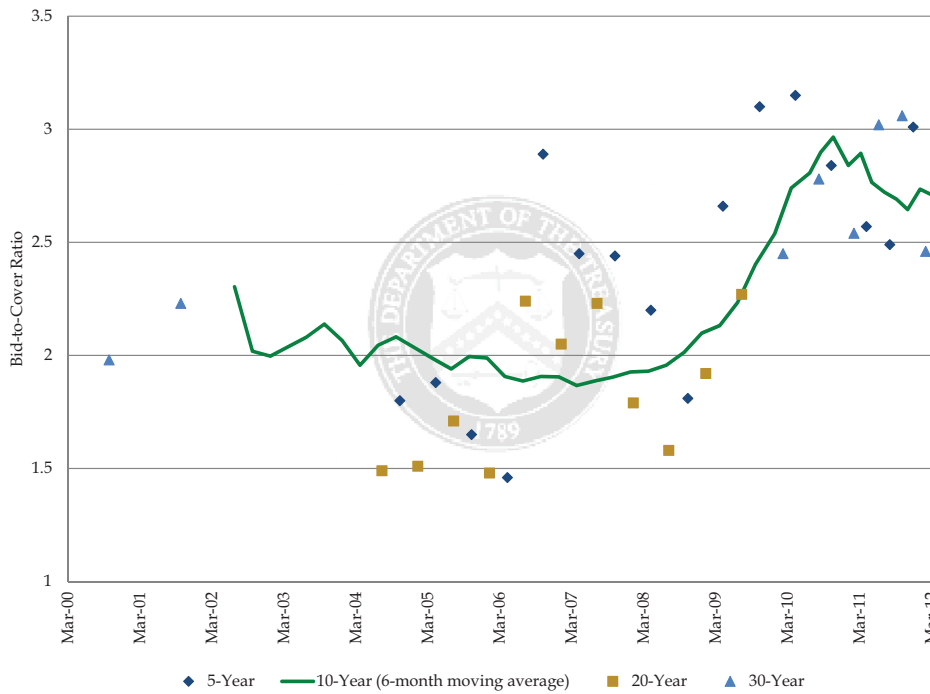


### Bid-to-Cover Ratios for 7-, 10-, and 30-Year Nominal Securities (6-Month Moving Average)



31

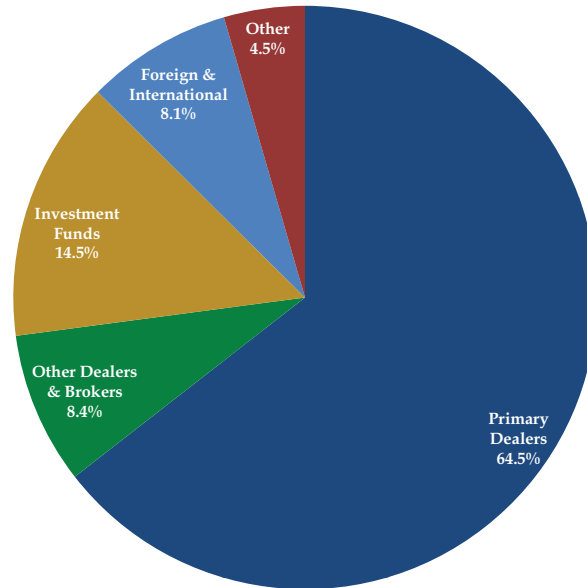
### Bid-to-Cover Ratios for TIPS



32

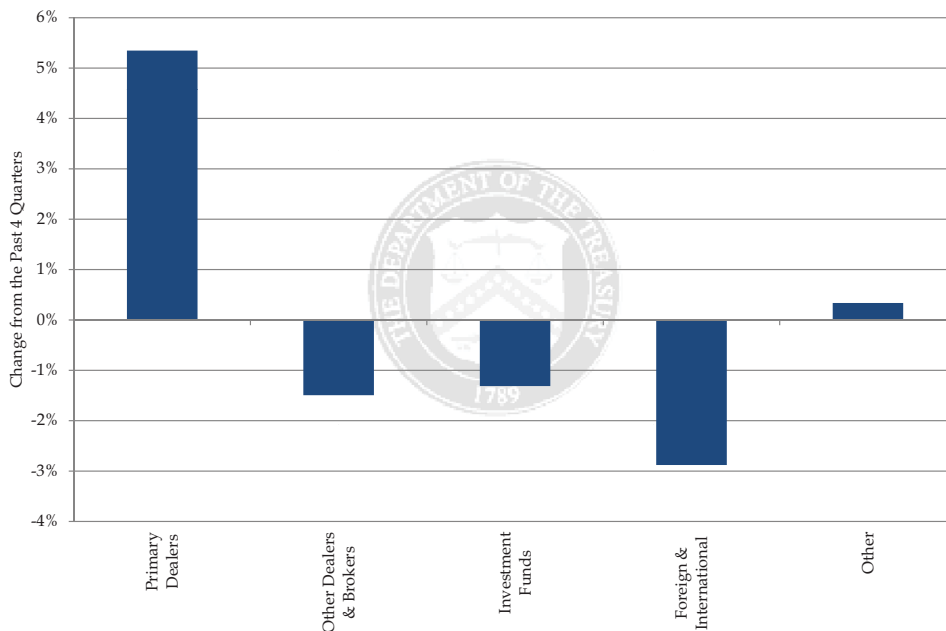


## Investor Class Auction Awards: Bills Fiscal Year 2012 Q2



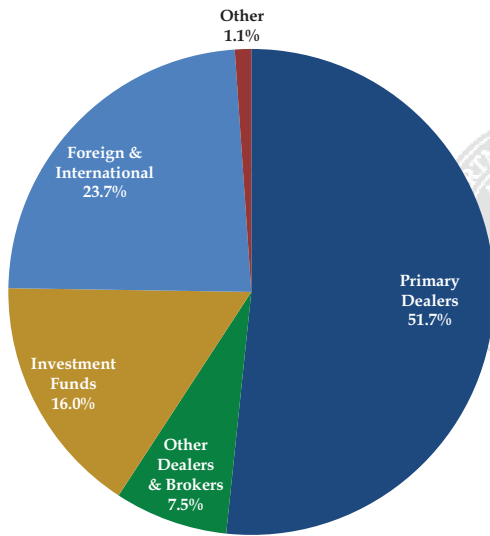
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance. 33

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

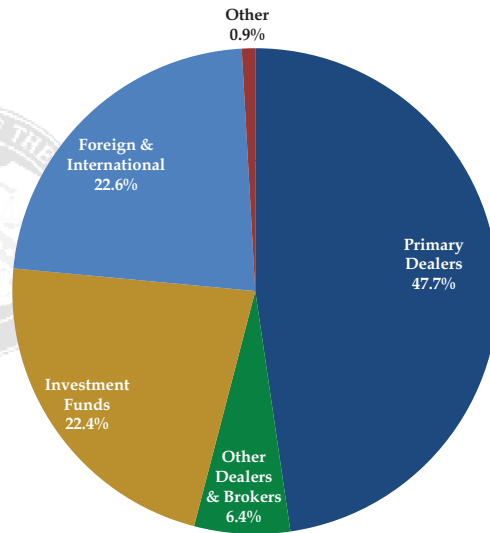


Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance. 34

**Investor Class Auction Awards:  
2-, 3-, and 5-Year Nominal Securities  
Fiscal Year 2012 Q2**

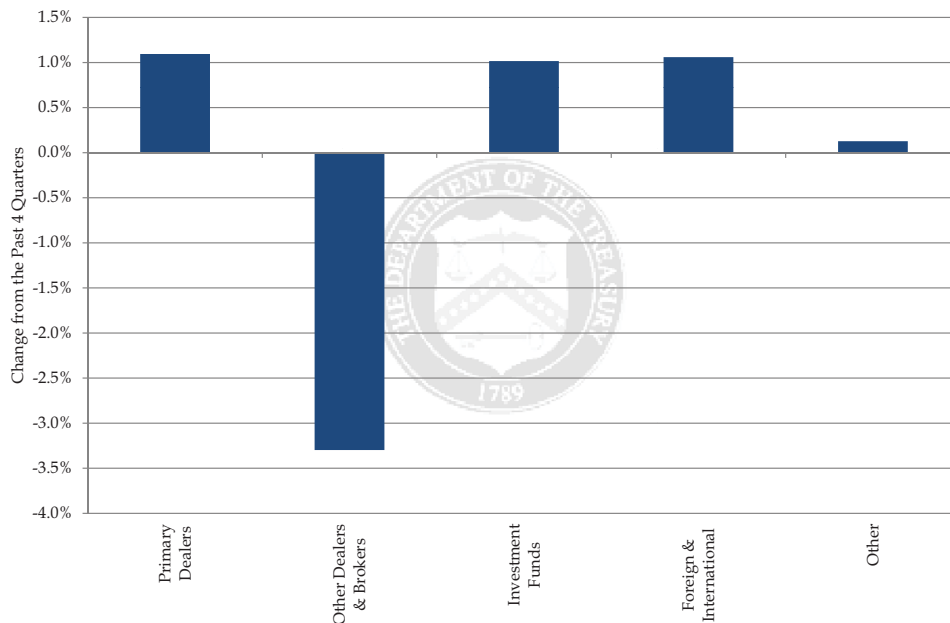


**Investor Class Auction Awards:  
7-, 10-, and 30-Year Nominal Securities  
Fiscal Year 2012 Q2**



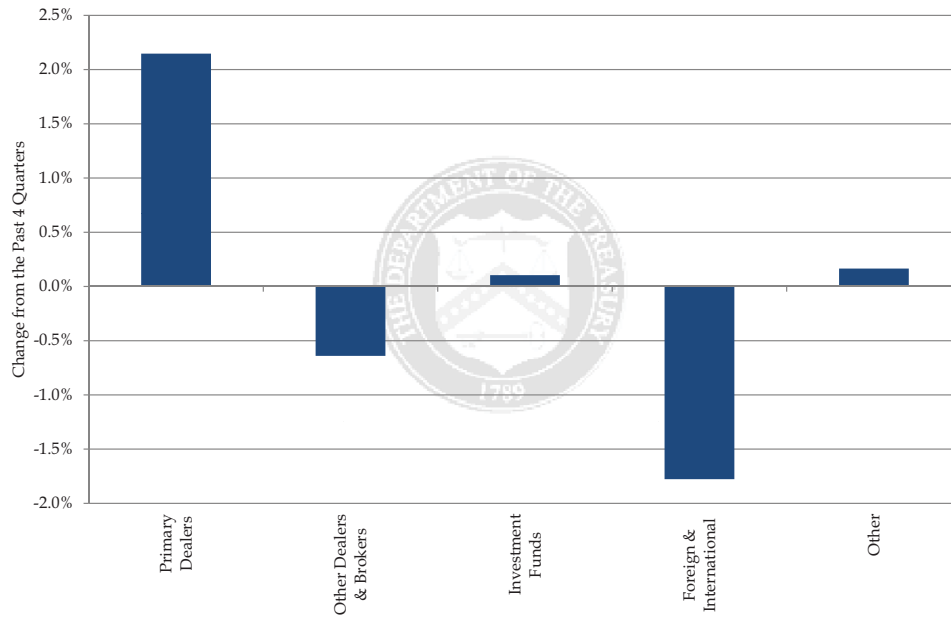
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance. 35

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



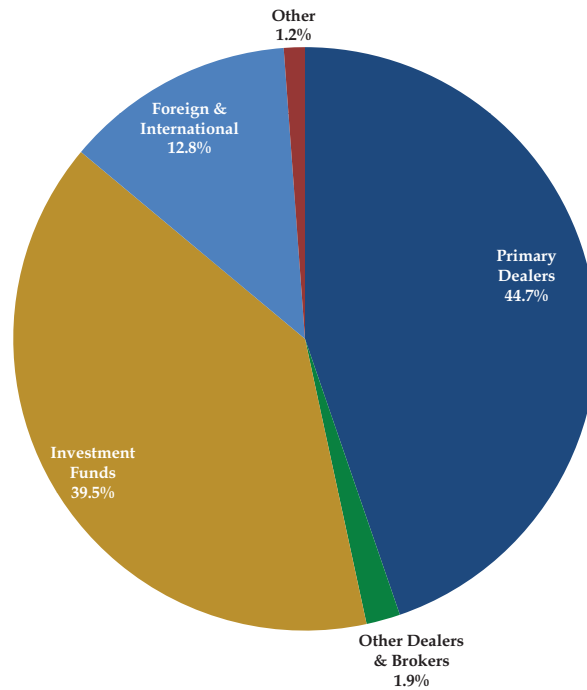
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance. 36

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



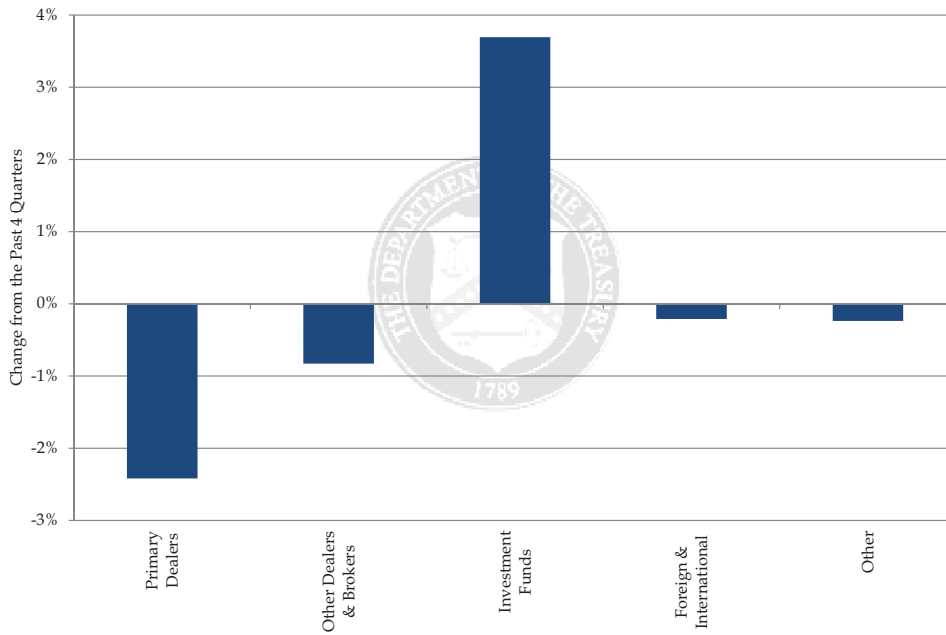
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance. 37

### Investor Class Auction Awards: TIPS Fiscal Year 2012 Q2



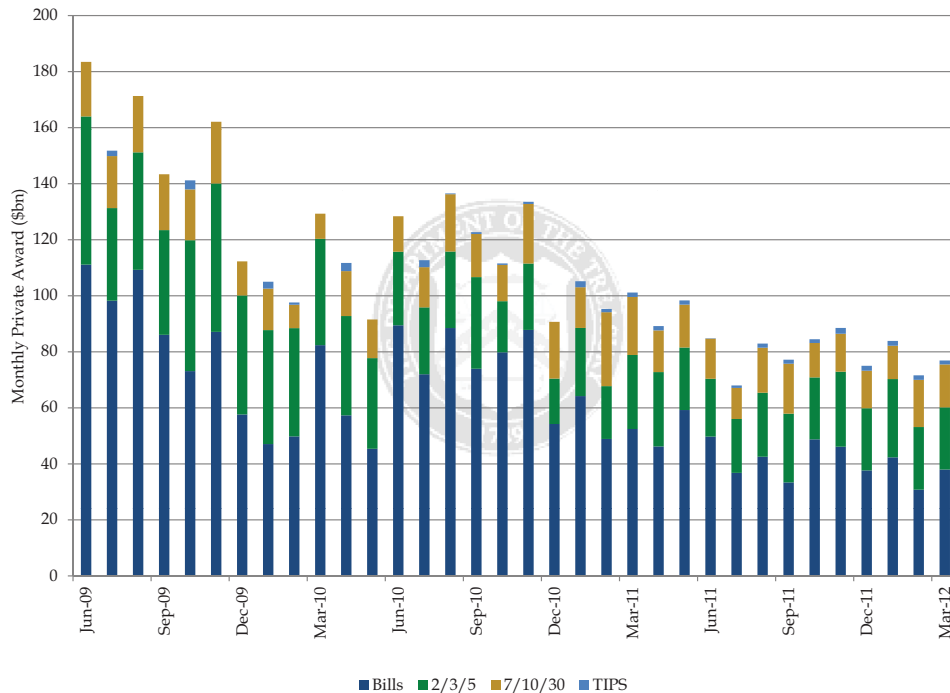
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance. 38

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



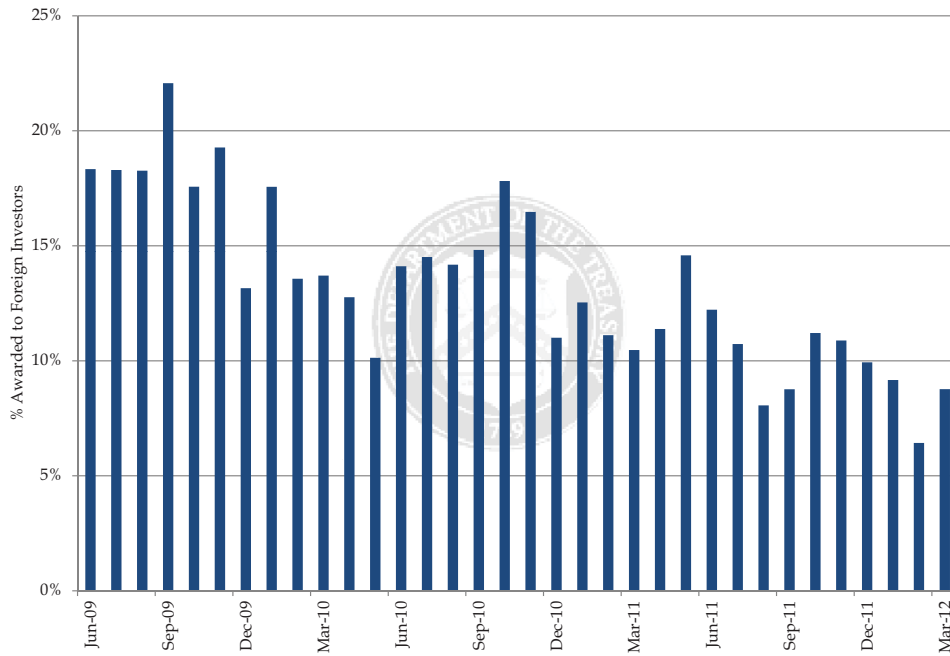
Excludes SOMA add-ons. The "Other" category includes categories that are each less than 2%, which include Depository Institutions, Individuals, Pension and Insurance. 39

### Total Foreign Awards of Treasuries at Auction, \$ Billion



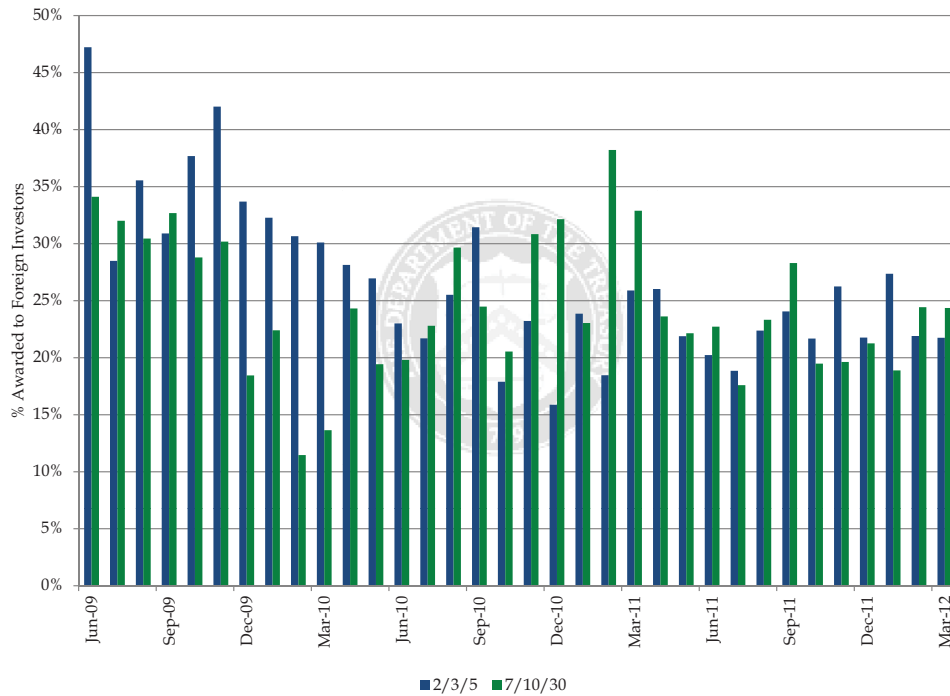
Foreign includes both private sector and official institutions.

### Foreign Awards of Bills at Auction, Percent



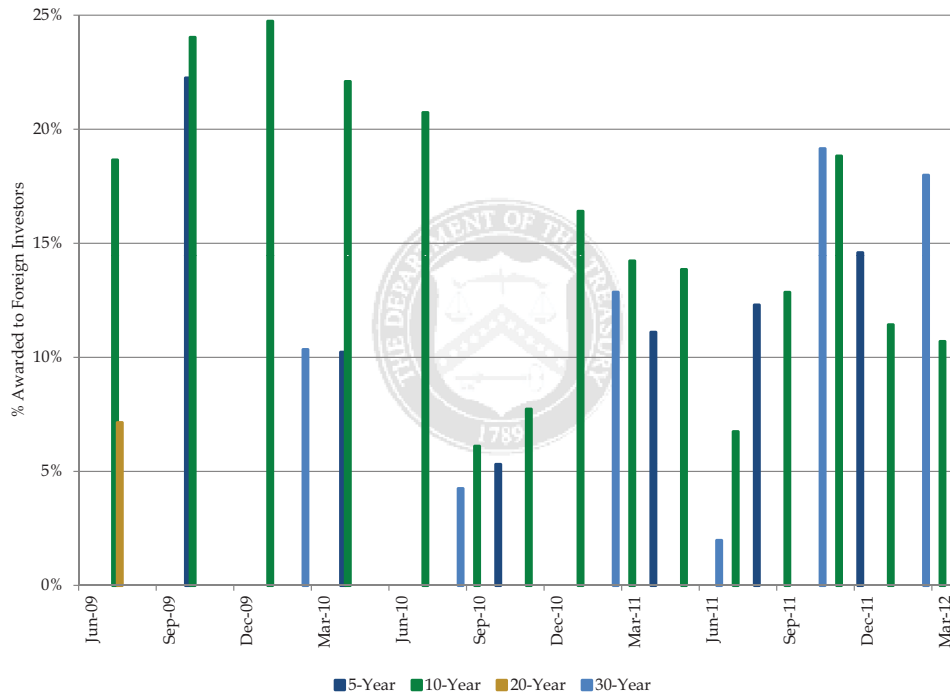
Excludes SOMA add-ons. Foreign includes both private sector and official institutions.

### Foreign Awards of Nominal Coupons at Auction, Percent



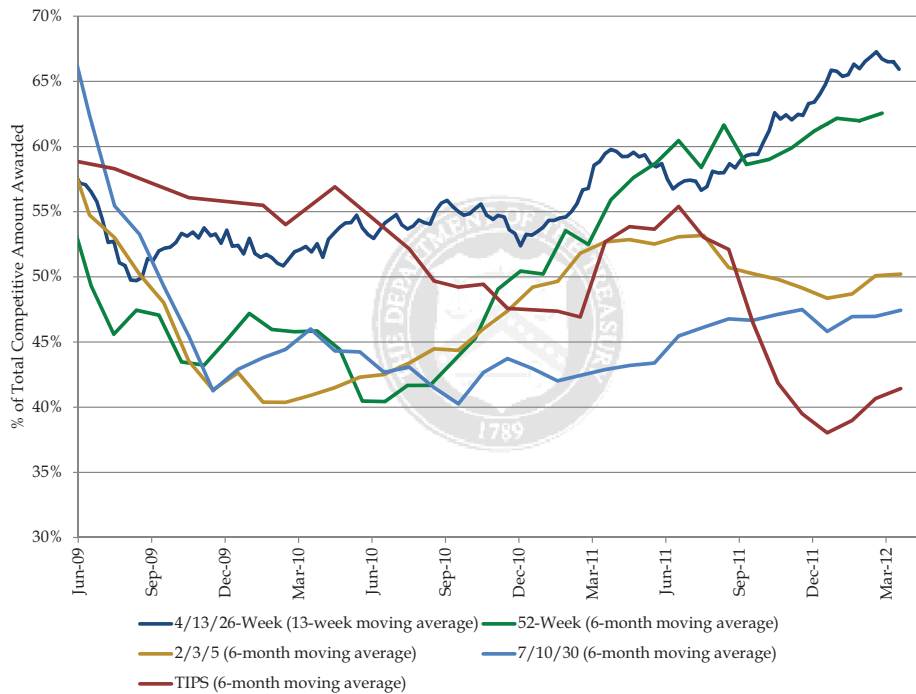
Excludes SOMA add-ons. Foreign includes both private sector and official institutions.

### 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

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Issue	Settle Date	Stop Out Rate (%)	Bid-to-Cover Ratio	Competitive Awards (\$ bn)	Bill Issues			Non-Competitive Awards (\$ bn)	SOMA Add Ons (\$ bn)	10-Yr Equivalent (\$ bn)
					% Primary Dealer	% Direct	% Indirect			
4-Week	01/04/12	0.000	5.34	29.42	75.8%	4.2%	19.9%	0.20	2.42	0.25
4-Week	01/10/12	0.000	5.09	29.72	78.4%	5.4%	16.2%	0.28	5.94	0.26
4-Week	01/18/12	0.015	4.66	29.78	56.2%	4.3%	39.5%	0.22	3.78	0.26
4-Week	01/24/12	0.020	4.77	29.19	72.7%	9.5%	17.8%	0.24	6.29	0.25
4-Week	01/31/12	0.050	4.94	32.82	59.1%	7.4%	33.5%	0.18	2.42	0.28
4-Week	02/07/12	0.060	4.37	36.75	60.3%	11.6%	28.0%	0.25	5.94	0.32
4-Week	02/14/12	0.110	3.97	39.80	52.6%	7.0%	40.4%	0.20	3.78	0.34
4-Week	02/22/12	0.060	4.11	39.76	68.2%	11.5%	20.3%	0.24	6.29	0.34
4-Week	02/28/12	0.100	4.20	39.75	62.1%	14.8%	23.1%	0.25	2.42	0.34
4-Week	03/06/12	0.060	4.50	39.71	49.2%	12.9%	38.0%	0.29	5.94	0.34
4-Week	03/13/12	0.070	4.05	39.79	69.5%	14.5%	16.0%	0.21	3.78	0.35
4-Week	03/20/12	0.100	3.99	39.77	73.2%	10.9%	15.9%	0.23	6.29	0.35
4-Week	03/27/12	0.065	4.15	34.59	70.2%	11.5%	18.2%	0.25	2.42	0.30
13-Week	01/03/12	0.015	4.93	27.38	77.4%	9.1%	13.4%	0.76	0.00	0.78
13-Week	01/09/12	0.010	5.03	28.11	66.3%	3.8%	29.9%	0.74	0.00	0.80
13-Week	01/17/12	0.025	4.41	28.22	69.4%	7.4%	23.2%	0.77	0.00	0.81
13-Week	01/23/12	0.040	4.98	27.56	75.0%	6.5%	18.5%	0.81	0.00	0.79
13-Week	01/30/12	0.050	4.56	30.29	70.1%	6.6%	23.3%	0.71	0.00	0.86
13-Week	02/06/12	0.080	4.63	32.05	74.4%	6.7%	19.0%	0.76	0.00	0.92
13-Week	02/13/12	0.095	4.31	32.03	77.1%	8.1%	14.7%	0.77	0.00	0.90
13-Week	02/21/12	0.085	4.33	32.28	74.5%	10.1%	15.3%	0.72	0.00	0.91
13-Week	02/27/12	0.115	4.24	31.76	79.8%	5.7%	14.6%	0.71	0.00	0.90
13-Week	03/05/12	0.080	4.41	31.97	67.1%	8.2%	24.7%	0.73	0.00	0.91
13-Week	03/12/12	0.095	4.83	32.24	42.4%	5.8%	51.8%	0.76	0.00	0.94
13-Week	03/19/12	0.095	4.30	32.15	61.4%	9.7%	28.9%	0.75	0.00	0.94
13-Week	03/26/12	0.085	4.62	29.51	59.4%	7.1%	33.5%	0.74	0.00	0.86
26-Week	01/03/12	0.055	5.23	25.43	66.6%	9.8%	23.8%	0.57	0.00	1.45
26-Week	01/09/12	0.050	4.84	25.59	62.4%	7.2%	30.5%	0.70	0.00	1.46
26-Week	01/17/12	0.060	4.67	25.81	56.5%	9.4%	34.0%	0.69	0.00	1.48
26-Week	01/23/12	0.070	5.01	25.55	57.5%	7.6%	34.9%	0.73	0.00	1.46
26-Week	01/30/12	0.075	4.78	27.59	58.3%	7.0%	34.7%	0.61	0.00	1.56
26-Week	02/06/12	0.100	4.76	29.72	67.3%	6.5%	26.2%	0.68	0.00	1.71
26-Week	02/13/12	0.130	4.36	29.84	71.6%	8.6%	19.8%	0.76	0.00	1.68
26-Week	02/21/12	0.125	4.43	29.90	62.3%	8.2%	29.4%	0.72	0.00	1.69
26-Week	02/27/12	0.145	4.32	29.63	67.8%	6.8%	25.4%	0.70	0.00	1.68
26-Week	03/05/12	0.130	4.54	29.90	69.3%	7.3%	23.4%	0.60	0.00	1.69
26-Week	03/12/12	0.145	5.10	30.07	68.8%	5.3%	25.9%	0.63	0.00	1.76
26-Week	03/19/12	0.150	4.42	30.11	67.1%	8.5%	24.4%	0.59	0.00	1.75
26-Week	03/26/12	0.150	4.79	27.39	55.5%	8.1%	36.4%	0.65	0.00	1.59
52-Week	01/10/12	0.105	4.82	24.76	59.2%	12.2%	28.6%	0.14	0.00	2.76
52-Week	02/07/12	0.140	4.61	25.83	65.8%	9.7%	24.5%	0.17	0.00	2.92
52-Week	03/06/12	0.170	4.74	25.85	59.5%	8.1%	32.4%	0.15	0.00	2.89

Stop Out Rate, Bid-to-Cover Ratio, % Primary Dealer, % Direct and % Indirect are weighted averages of Competitive Awards. 10-Yr equivalent is approximated using prices at settlement and includes both Competitive and Non-Competitive Awards.

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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	01/24/12	0.250	3.75	34.80	58.8%	8.3%	32.9%	0.20	0.66	7.74
2-Year	02/21/12	0.310	3.54	34.83	54.7%	9.5%	35.8%	0.17	0.50	7.73
2-Year	03/27/12	0.340	3.69	34.81	44.3%	21.4%	34.3%	0.19	0.83	7.93
3-Year	01/10/12	0.370	3.73	31.97	56.1%	5.3%	38.5%	0.03	2.27	10.56
3-Year	02/07/12	0.347	3.30	31.96	63.8%	8.5%	27.7%	0.04	3.90	10.47
3-Year	03/12/12	0.456	3.44	31.97	56.5%	8.9%	34.6%	0.03	2.22	10.88
5-Year	01/25/12	0.899	3.17	34.96	41.5%	15.1%	43.4%	0.04	0.66	19.10
5-Year	02/22/12	0.900	2.89	34.97	45.3%	12.9%	41.8%	0.03	0.50	18.97
5-Year	03/28/12	1.040	2.85	34.97	46.8%	11.3%	41.9%	0.03	0.83	19.42
7-Year	01/26/12	1.359	2.73	28.97	56.6%	11.6%	31.8%	0.03	0.55	21.48
7-Year	02/23/12	1.418	3.11	28.98	38.9%	19.3%	41.8%	0.02	0.41	21.38
7-Year	03/29/12	1.590	2.72	28.99	43.8%	13.4%	42.8%	0.01	0.69	21.79
10-Year	01/11/12	1.900	3.29	20.98	44.3%	17.4%	38.3%	0.02	1.49	21.00
10-Year	02/08/12	2.020	3.05	23.87	43.3%	17.9%	38.9%	0.05	2.93	23.92
10-Year	03/13/12	2.076	3.24	20.98	42.0%	19.4%	38.6%	0.02	1.46	21.00
30-Year	01/12/12	2.985	2.60	12.99	60.9%	7.2%	31.9%	0.01	0.92	29.51
30-Year	02/09/12	3.240	2.47	15.96	56.1%	14.7%	29.2%	0.04	1.95	34.42
30-Year	03/14/12	3.383	2.70	12.99	56.3%	14.7%	29.0%	0.01	0.90	26.82

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)
10-Year	01/19/12	(0.046)	2.91	14.83	50.3%	13.4%	36.3%	0.14	0.28	16.50
10-Year	03/22/12	(0.089)	2.81	12.95	38.5%	21.1%	40.4%	0.05	0.00	14.62
30-Year	02/16/12	0.770	2.46	8.96	45.8%	13.6%	40.6%	0.04	0.13	26.15

Stop Out Rate, Bid-to-Cover Ratio, % Primary Dealer, % Direct and % Indirect are weighted averages of Competitive Awards. 10-Yr equivalent is approximated using prices at settlement and includes both Competitive and Non-Competitive Awards. For TIPS 10-Yr equivalent, a constant auction BEI is used as the inflation assumption.

## Presentation for:

The Treasury  
Borrowing  
Advisory  
Committee

May 1, 2012



## The Charge

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*Treasury regularly studies the evolution of fixed income markets, particularly with regard to the changing roles of financial institutions, technological advances, behavior of market participants and regulation.*

*We would like the Committee's views on how fixed income markets have changed over the last few years and how they may evolve in the future. Please comment on both positive and negative developments. Are there any specific market structure concerns that warrant discussion?*

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1

## Changes to the Fixed Income Markets over the Past Few Years

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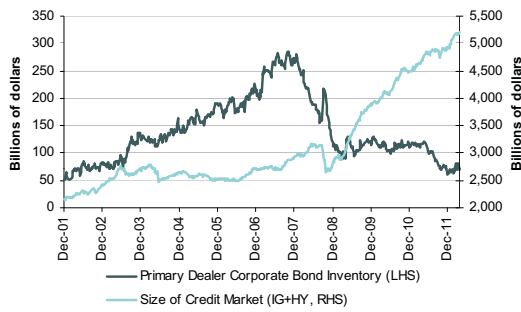
1. Reduced liquidity of spread product
  - Likely a consequence of investor risk aversion and regulatory reform. Treasuries remain liquid
2. Prevalence of “risk on / risk off” mentality
  - Extreme valuations, correlations rising, excess returns becoming more volatile
3. Role of government
  - Extraordinary monetary policy (ZIRP, balance sheet growth, communication/transparency)
  - Regulatory reform
4. Changes in market participant behavior
  - Cyclical (risk tolerance) and secular (demographics / LDI strategies), customized solutions
5. Growing role of electronic trading
  - Driven by increased efficiency and regulatory reform

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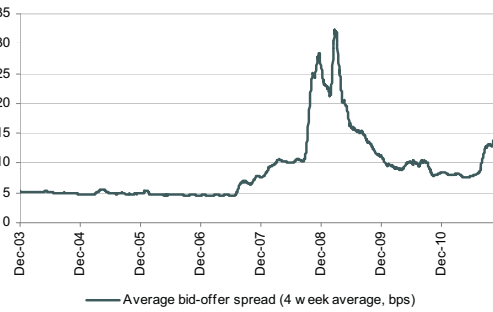
2

# Reduced Corporate Bond Liquidity

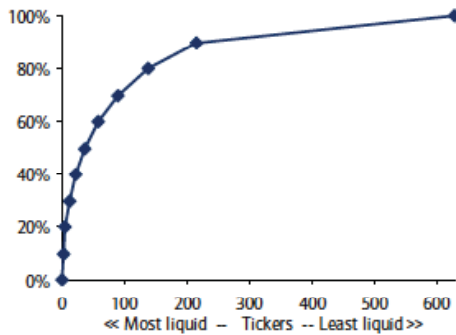
Dealer inventories of corporate bonds have declined by more than 70% since 2007, while the credit market has grown



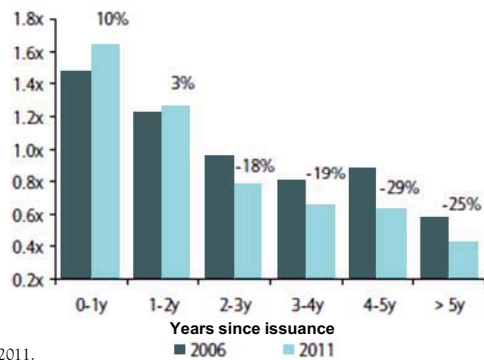
Investment grade corporate bid-offer spreads have increased



Trading is concentrated in a limited number of issuers  
37 credits account for 50% of IG corporate trading volume



Relative to 2006, turnover is better for on-the-run IG corporate bonds but significantly worse for off-the-run bonds



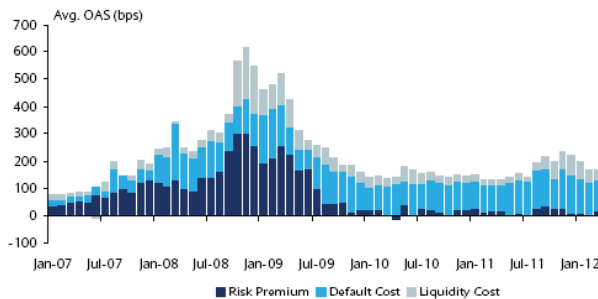
Source: Barclays, JP Morgan. The bottom charts are for the 9 months ending September 2011.

3

# Implications of Reduced Corporate Bond Liquidity

- A reduction in liquidity / wider bid-offer spreads has both an upfront cost to existing investors (who have to mark their existing holdings at wider levels) as well as an ongoing cost for issuers and investors
  - Per a recent study\*, a strict implementation of the Volcker Rule for the corporate bond market may cost \$90-315bn upfront plus \$12-43bn/yr for issuers and \$1-4bn/yr for investors in future transactions
  - Analysis by Barclays\*\* indicates that the liquidity premium has risen from ~20bps in Jan '07 to ~40bps in Mar '12
- Policy makers should carefully consider the impact on market liquidity when introducing new financial regulations, such as the Volcker Rule
  - SIFMA, the Credit Roundtable (a group of large fixed income money managers), and other market participants have submitted comments on this topic
  - Given the size of the bond markets, it would be difficult, if not impossible, for the banking sector to re-intermediate the capital markets (replacing bonds with loans) in response to a prolonged market dislocation

Decomposition of Investment Grade Corporate Bond Spreads



\* Study conducted by Oliver Wyman at the request of SIFMA

\*\* Barclays analysis regresses corporate bond spreads on bid-offer spreads and CDS spreads

Source: Oliver Wyman, Barclays

4

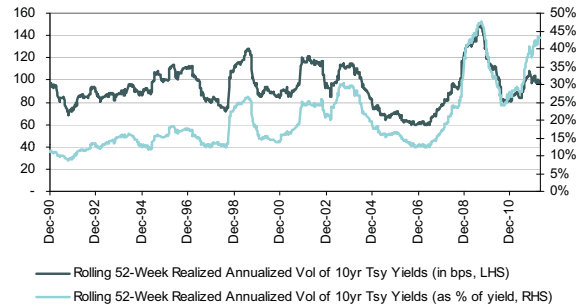
# Fixed Income Market Dynamics – Risk On / Risk Off

## Performance of “Safe” and “Risky” Securities: Dec '07 – Mar '12

Gold	+100%
Japanese Yen	+35%
10-Year US Treasury	+34%
Swiss Franc	+26%
S&P 500	+5%
Euro Stoxx 50	-32%

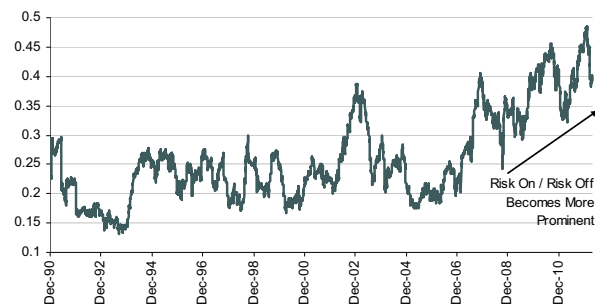
Note: All returns are measured in dollars, except for Euro Stoxx 50 which is measured in Euros. Gold, Swiss Franc, and Japanese Yen returns are calculated based on spot rate changes; all other returns include reinvestment of interest/dividends.

## Recently, US Treasuries have been volatile when compared to the low level of yields (1sd move = 97bps vs. 10yr yield of ~2%)

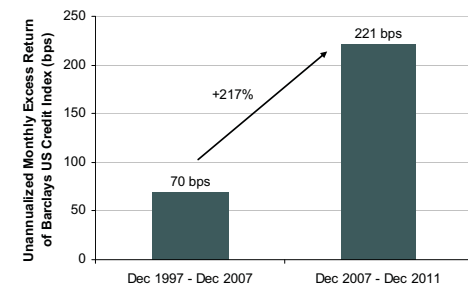


## HSBC Risk On - Risk Off Index

Based on movements of 34 asset classes . Higher = more co-movement



## Corporate excess returns have become more volatile



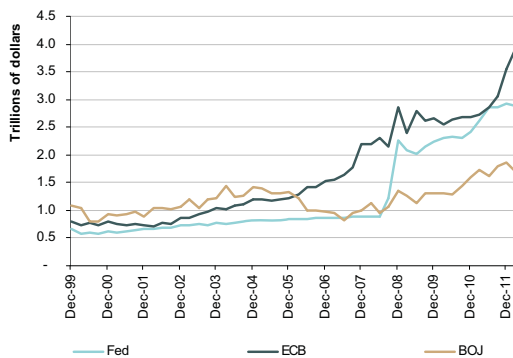
Source: Bloomberg, Barclays, HSBC

5

# Role of Government – Changes in Monetary Policy

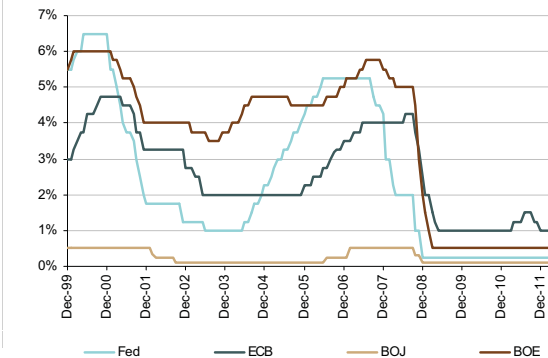
- Global central banks have taken extraordinary actions in response to the financial crisis
  - Monetary policy rates cut to near zero
  - Balance sheet expansion and composition
  - Federal Reserve’s communication strategy / level of transparency
  - Interest on Excess Reserves
- Anticipation of central bank behavior has become a significant driver of market sentiment
- Exit strategy uncertain

## Central bank balance sheets have expanded significantly



Source: Bloomberg

## Policy rates have been cut to near zero



6

## Role of Government – Regulatory Reform Overview

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- A significant amount of regulatory reform has occurred and rules continue to be written
  - Movement toward Basel III in the United States
    - Higher capital requirements
    - Liquidity requirements
  - Dodd-Frank bill enacted. Many rulemakings still in progress
    - Volcker Rule
    - Derivatives Reform
    - Risk Retention – “skin in the game” for securitizations
    - Orderly Liquidation Authority
    - Consumer Financial Protection Bureau
    - Financial Stability Oversight Council
  - Money market reform
    - New holdings restrictions enacted in 2010
    - Additional reforms (floating NAV, holdback requirement, capital buffer) currently being analyzed
- While these reforms are well-intentioned and will likely increase the soundness of large US financial institutions, these benefits are not cost-free and may, in fact, create new vulnerabilities in the financial system
  - Lower market liquidity, decreased credit availability
  - Central clearing may create entities that are “too big to fail” and suffer from moral hazard
  - Banks may engage in higher risk (higher ROA) activities to compensate for higher capital requirements

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7

## Impact of Regulatory Reform on Investment Banking

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- Investment banks are being pressured by a number of forces
  - Basel 2.5 and 3
  - Volcker Rule
  - Electronic Trading
  - Centralized Clearing
- In order to earn their cost of capital, investment banks increasingly need to differentiate themselves
  - Services offered to investors
    - Willingness to commit balance sheet to facilitate trades
    - Research, analytics, and technology
    - Access to issuers, companies, and market experts
    - Collateral management services
  - Services offered to issuers
    - Balance sheet commitments (e.g. revolvers)
    - Breadth of distribution network
    - Transaction banking
    - Risk management

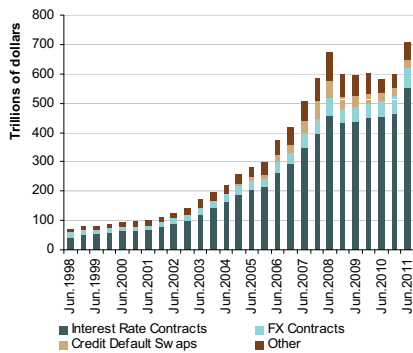
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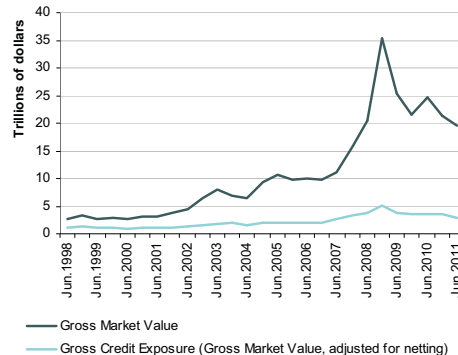
## Reforming the OTC Derivative Markets

- In recent years, several reforms to reduce risk / improve disclosure have been implemented
  - At the end of 2010, ~50% of interest rate swaps and <10% of CDS were centrally cleared
  - Trillions of dollars of partially offsetting trades (both CDS & interest rate swaps) have been compressed
  - Outstanding CDS notional + trading volume published weekly by the DTCC
- In September 2009, G-20 leaders committed to reforming the OTC market
  - “All standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at the latest. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements.”
- Dodd-Frank + subsequent rulemakings by regulators will implement these reforms

Gross notional outstanding exceeds \$700trn, but is a poor measure of risk posed to the financial system



Gross credit exposure, a more accurate assessment of risk, is ~\$3trn



Source: Bank for International Settlements (BIS)

Gross market value = Cost of replacing all existing contracts

Gross credit exposure = Gross market value adjusted for netting agreements

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## Implications of OTC Derivative Reform

“As Mark Twain’s character Pudd’nhead Wilson once opined, if you put all your eggs in one basket, you better watch that basket.” – Chairman Ben Bernanke speaking about clearinghouses, April 2011

- Implications of central clearing
  - Clearinghouses are likely too-big-to-fail
  - Moral hazard could be substantial, depending on structure
    - Profits accrue to shareholders, while losses are borne by clearing members
    - Competition among clearinghouses could lead to degradation of standards
    - Regulators should consider setting minimum margin and shareholder equity requirements to ensure incentives are aligned
  - Collateral posting requirements could trigger a liquidity squeeze during a market panic
    - A recent BIS study found that although major derivatives dealers likely have sufficient unencumbered assets to meet initial margin requirements, dealers could face large variation margin calls (a 1-in-200 day event could require ~\$60bn in collateral posting by the 14 largest dealers)
- Implications of exchange trading
  - Volumes likely to increase
  - Growth of electronic and algorithmic trading
  - Reduced liquidity / higher cost of non-standard contracts?

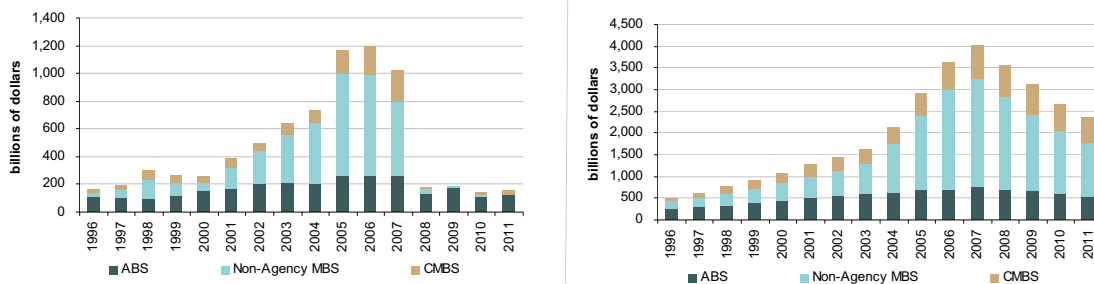
Source: Federal Reserve, JP Morgan, BIS

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## Impact of Regulation on Securitization Markets

- Depending on the final rules, regulatory reform may adversely affect issuance volumes, investor demand, and pricing of securitizations
  - Risk retention
    - 5% risk retention might be too large / make securitization uneconomical for certain asset classes
    - If final rules mandate a “horizontal slice,” then trusts would likely be consolidated on balance sheet
    - Premium capture rules (securitization proceeds worth more than par are retained and become a first loss piece) seriously harm the economics of issuing CMBS and non-agency RMBS
  - Proposed RWA calculation is pro-cyclical
    - Under the Simplified Supervisory Formula Approach, capital charges on securitizations increase as a function of realized losses (with sharp cliff effects at certain thresholds)
  - Reg AB II requires more disclosure, increasing costs for 144A deals (currently >40% of ABS issuance)
  - Volcker Rule likely to reduce secondary market liquidity
- On a positive note, the Basel III Liquidity Coverage Ratio requirement may encourage banks to replace short-term funding with securitizations

ABS, Non-Agency MBS, and CMBS issuance have declined sharply The amount outstanding has dropped by ~40% since 2007

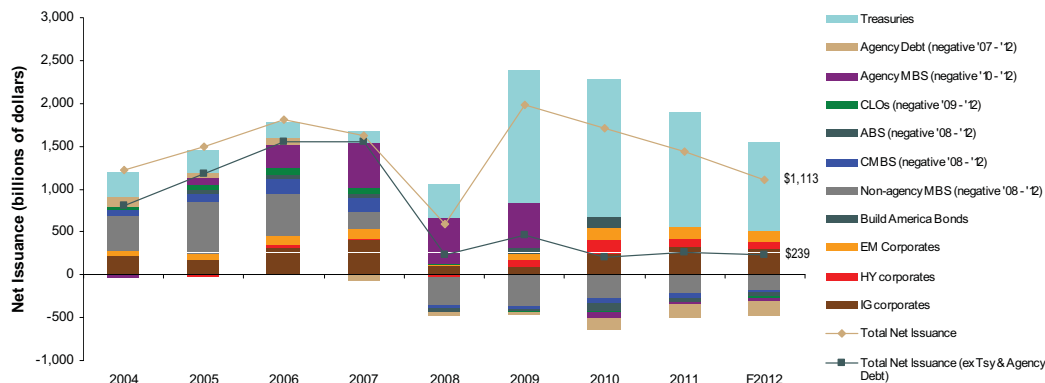


Source: JP Morgan, Merrill Lynch, Federal Reserve, Commercial Mortgage Alert, Loan Performance

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## Fixed Income Market Dynamics – Supply & Demand

- Supply
  - Positive net new issuance (new issuance > redemptions) from US govt. and corporations
  - Negative net new issuance of securitized products (especially non-agency MBS)



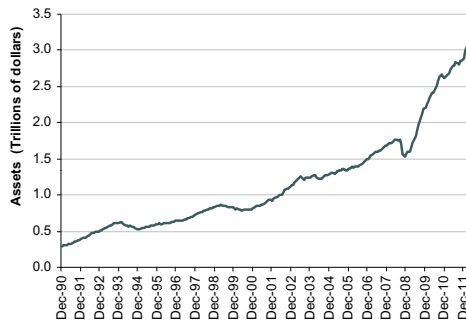
- Demand
  - Mutual Funds and ETFs – Significant inflows into fixed income funds
  - Money Market Funds – Assets stabilizing, prime funds continue to move up in quality
  - Corporate Defined Benefit Plans – Shifting into fixed income, particularly long-duration assets
  - Rest of World – Buying treasuries, GSE holdings declining
  - Federal Reserve – Acquired treasuries, agency bonds, and agency MBS via QE
  - Growth of customized and non-traditional solutions – Global, credit-focused, unconstrained
  - Movement from active to passive equity strategies

Source: JP Morgan

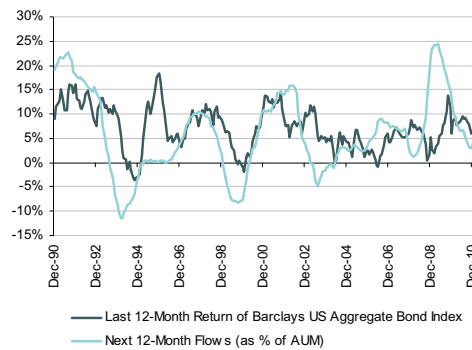
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# Fixed Income Mutual Funds

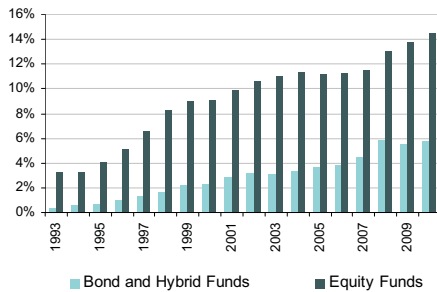
Fixed income mutual funds are experiencing strong inflows



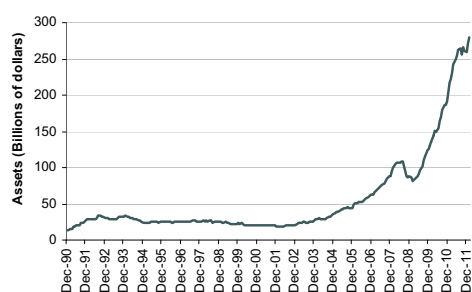
Fixed income flows have been correlated with performance



The share of mutual fund assets that are passively managed has risen



Global and world bond funds have been growing quickly



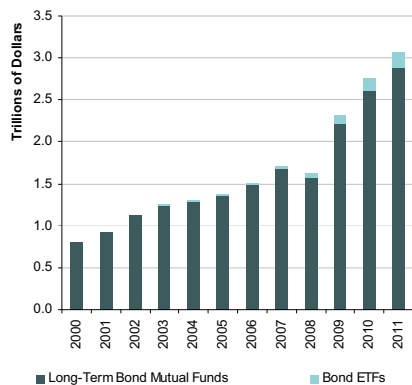
Source: Investment Company Institute (ICI), Barclays

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# Growing Popularity of Fixed Income ETFs

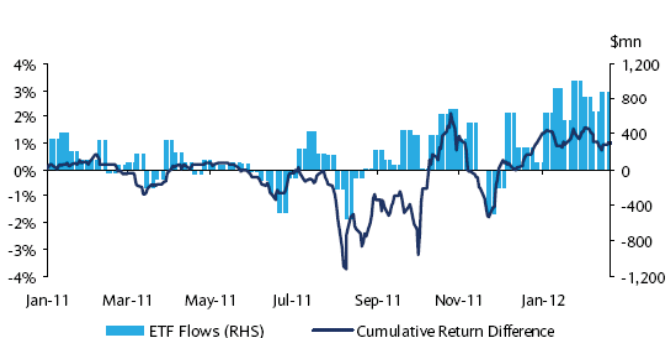
- While still small relative to fixed income mutual funds, fixed income ETFs have grown quickly over the past few years
  - ~\$4bn AUM as of 12/31/2002, ~\$21bn as of 12/31/2005, and ~\$184bn as of 12/31/2011
- High Yield ETFs have grown especially fast and now hold over 3% of outstanding HY bonds, while High Grade ETFs hold ~1% of outstanding bonds
- High Yield ETF fund flows have begun to exert technical forces on the bond market, with benchmark-eligible bonds outperforming non-benchmark bonds during periods of HY ETF inflows (and vice versa)

AUM of Fixed Income Mutual Funds and ETFs



Source: ICI, Barclays

Benchmark-eligible bonds tend to outperform when HY ETFs have inflows



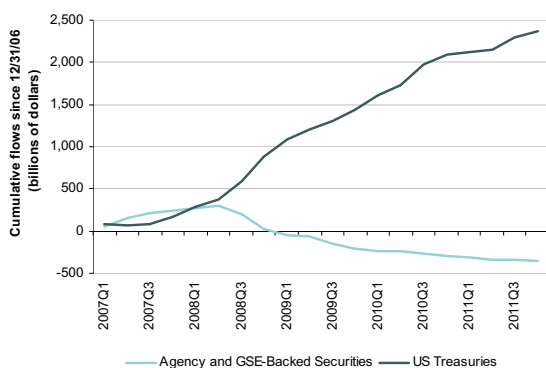
Cumulative Return = Cumulative return on bonds in the Barclays U.S. High Yield Very Liquid Index minus return on HY bonds that are outside of the index but have comparable liquidity

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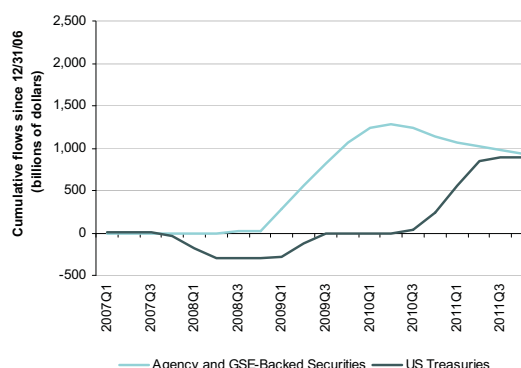
## Demand from the Rest of World and the Federal Reserve

- Demand from international investors (primarily foreign central banks)
  - Following the conservatorship of Fannie Mae and Freddie Mac, international investors have become net sellers of GSE securities
  - International investors continue to accumulate Treasuries
- Demand from the Federal Reserve
  - As of result of QE1, QE2, and Operation Twist, the Federal Reserve has accumulated a large portfolio of Treasury and GSE MBS securities

Cumulative flows of international investors since 12/31/06



Cumulative flows of the Federal Reserve since 12/31/06



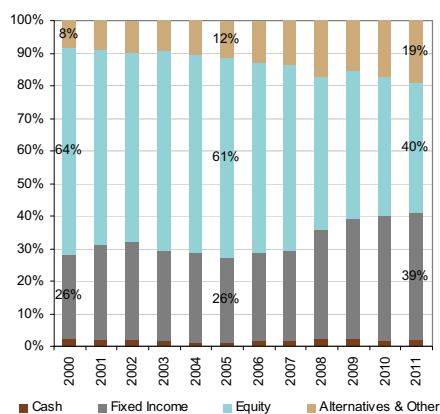
Source: Federal Reserve

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## Corporate Defined Benefit Plans

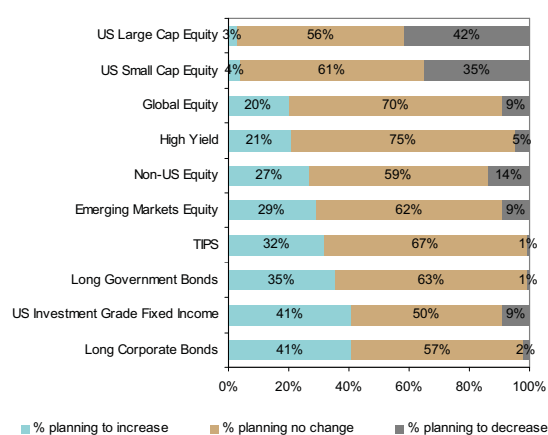
- In contrast to retail investors, who are more focused on preservation of capital, corporate DB plans are more concerned with matching their assets and liabilities
  - As a result of the financial crisis, corporate DB plans have both increased their allocation to fixed income and lengthened their duration
- There is a supply-demand mismatch for long-dated corporate bonds
  - Issuance of >10yr investment grade corporate bonds has dropped from ~\$220bn in 2007 to ~\$100bn in 2011

Asset Allocation of Corporate DB Plans



Source: Barclays, Pensions & Investments, Pyramis

Asset Allocation of Corporate DB Plans over Next 1 – 2 Years



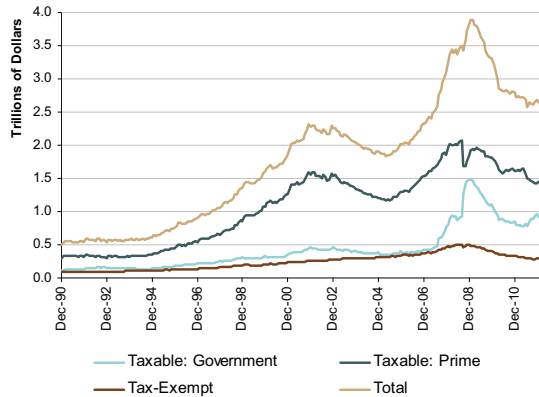
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## Money Market Funds

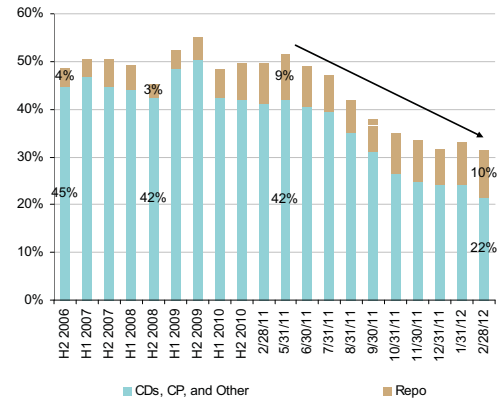
- In September 2008, prime funds experienced their worst-ever month of outflows (-\$391bn) after a prominent fund “broke the buck”
  - Many of these assets appear to have been transferred into government MMFs (+\$347bn in Sep 2008)
  - Assets in money market funds subsequently peaked in January 2009 at ~\$3.9trn
- Prime money market fund managers have become increasingly conservative
  - Exposure to European banks has dropped from 52% as of May 2011 to 31% as of Feb 2012
    - This decrease has been accomplished entirely via reducing exposure to unsecured debt

Money Market Fund AUM



Source: ICI, Fitch

European Bank Exposure in Prime Money Market Funds



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## Electronic Trading in the Treasury Market

- The treasury market is characterized by high turnover and strong liquidity
  - ~\$140 trillion of trading volume reported by primary dealers in 2011
  - This equates to turnover of over 14x the outstanding volume
- Dealer-Dealer Trades
  - Interdealer trades are the largest segment of the market
  - The vast majority of interdealer trades of on-the-run treasuries occur electronically, while off-the-run treasuries generally trade via voice
  - Many interdealer trades are executed with the assistance of computer algorithms, which break large orders into smaller pieces or automatically execute trades to hedge trading-book risks
    - ICAP Plc, the largest interdealer broker and whose electronic platform accounts for ~25% of all Treasury trading volume, reported that ~45% of their 2009 trading volume in Treasuries was executed via algorithms
- Customer-Dealer Trades
  - Electronic trading continues to increase in prevalence
  - Customers can trade electronically with a variety of banks via Tradeweb and Bloomberg
  - Prices for smaller-sized electronic trades can be automatically quoted via dealer algorithms
  - Voice trading remains the only option for large trades

Source: SIFMA, ICAP, conversations with market participants, Federal Reserve Bank of St Louis

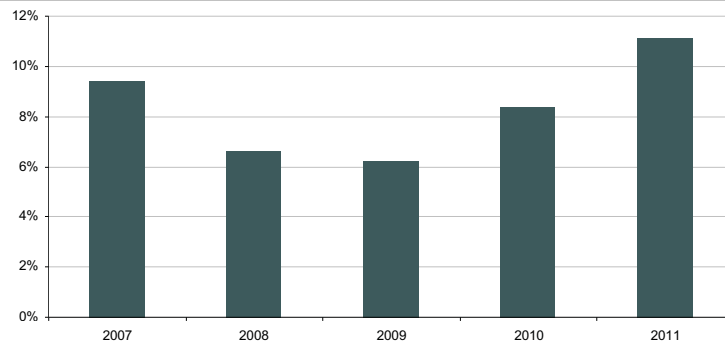
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## Electronic Trading in the Corporate Bond Market

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- Electronic trading plays a small, but growing, role in the corporate bond market
- MarketAxess reports market share of ~11% in investment grade corporate bond trading and ~2% in the high yield corporate market
  - MarketAxess is believed to represent over 90% of electronic trading volume in those markets
  - These trades are primarily between dealers and customers
  - While these trades are executed electronically, the dealer manually determines a price

MarketAxess Estimated Market Share of U.S. Investment Grade Corporate Trading Volume



Source: MarketAxess

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## Electronic Trading in the Derivatives Market

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- The mandated shift of derivatives from the OTC market to exchanges or Swap Execution Facilities represents a significant change to market structure
- It is possible that trading dynamics of derivatives in the future will begin to resemble the equity or FX markets of today
  - Higher volumes and lower bid-offer spreads
  - Significant shift toward electronic trading
  - Increased use of computer algorithms by (1) banks and high-frequency traders to automatically quote prices and (2) investors to source liquidity / seek best execution
- This change is not without risks
  - Shifting from voice to electronic trading introduces “fat finger” risk
    - For instance, in 2002, the Dow dropped 100 points when a Bear Stearns trader accidentally entered a sell order for \$4bn, rather than \$4mm.
  - The use of algorithms to implement trades can have adverse consequences
    - The CFTC-SEC study of the 2010 “Flash Crash” concluded that a mutual fund who tried to sell ~\$4bn of E-Mini S&P 500 futures contracts via an algorithm was a contributor to the crash. The sell algorithm was set to target 9% of trading volume over the previous minute (without regard to price or time).
  - High frequency trading may become more prevalent
    - Analyses of the impact of high frequency traders (HFTs) reach mixed conclusions
    - HFTs generally enhance market liquidity. However, it has been observed that some (but not all) HFTs withdraw liquidity from the market during periods of stress, possibly leading to price volatility

Source: Federal Reserve Bank of Chicago, CFTC, SEC, BIS, Risk.net

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## For Further Consideration

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- There are several market structure developments that we believe warrant further analysis
  1. Impact of pending regulations on credit availability / liquidity
    - Is secondary market liquidity (outside of the treasury sector) permanently impaired?
    - Will the securitization market (particularly non-agency MBS , CMBS, and ABS) be a viable source of term funding going forward?
    - Will the flow of credit to “Main Street” be adversely affected?
  2. Clearinghouses
    - Are we putting all of our eggs in too few baskets?
    - Are incentive structures aligned to promote market stability?
  3. Movement of derivatives trading from OTC to exchanges / Swap Execution Facilities
    - What will the new derivatives market look like? How will the mix of investors change?
    - Will appropriate safeguards (i.e. pre, during, and post trade controls) be in place?
    - Will the likely rise in cost / decrease in liquidity of non-standardized derivatives adversely affect end users with legitimate hedging needs?
  4. Systemic threats posed by reduced banking sector profitability
    - If regulatory reform reduces the ability of banks to cover their cost of capital, what new activities will they undertake? What will be the consequences?