

# Investment Grade Fixed Income Overview

March 5, 2015



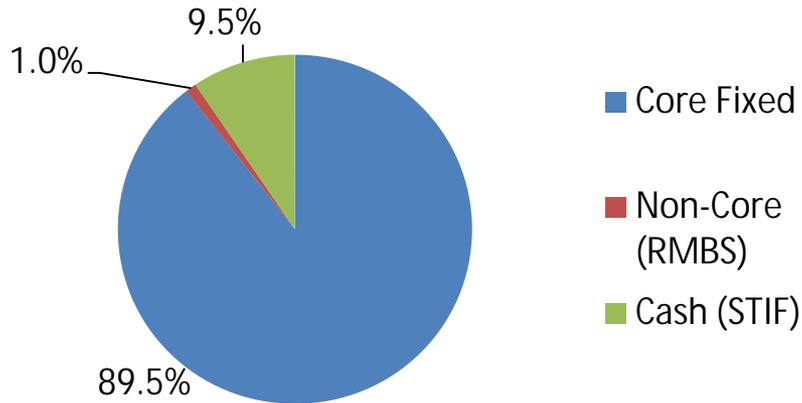
North Carolina Department of State Treasurer  
Investment Management

Learn. Invest. Grow. Prosper.™

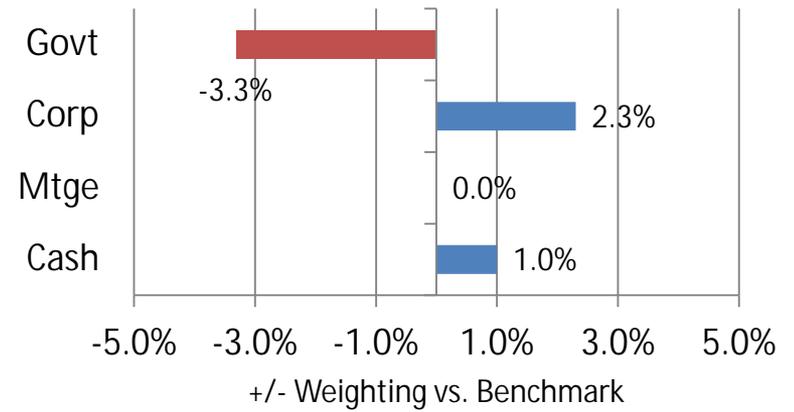
# Investment Grade Fixed Income Profile

As of December 31, 2014

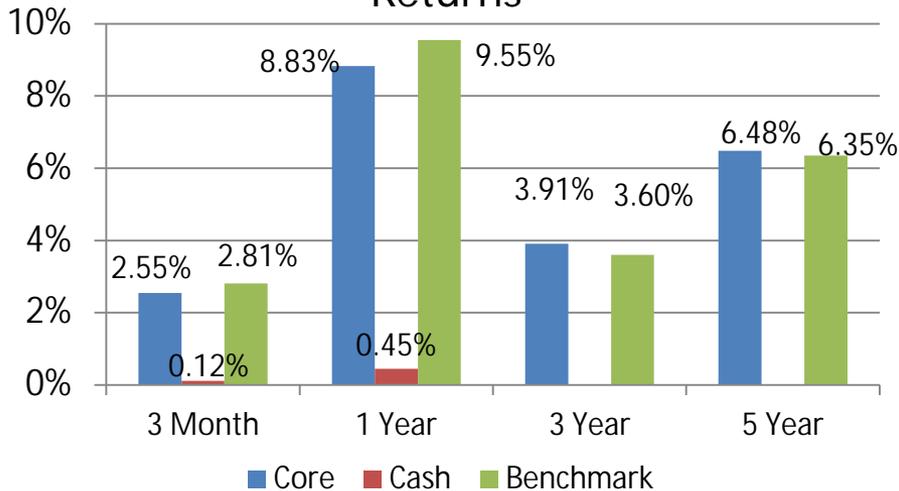
Allocation



Relative Weighting in Core Fixed



Returns

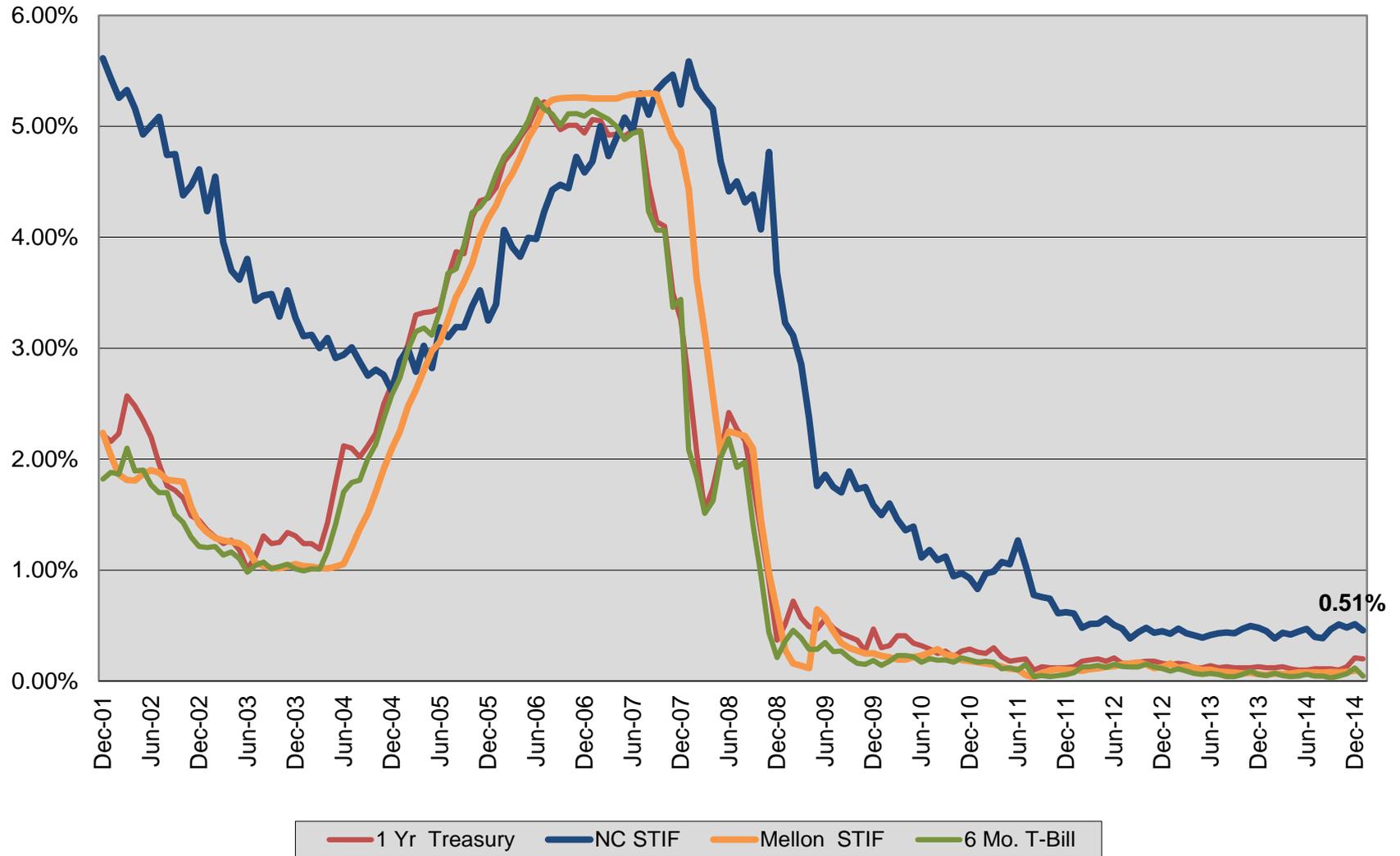


- Near term strategy in core remains focused on an mild overweight to corporate debt and a short relative duration position
- Our defensive fixed income strategy led to underperformance relative to the benchmark as rates experienced a material decline of 85bps on the 10yr and over 120bps on the long end of the curve



# Short Term Portfolio (STIF) Rate History

\$14.9 Billion AUM as of 12/31/14

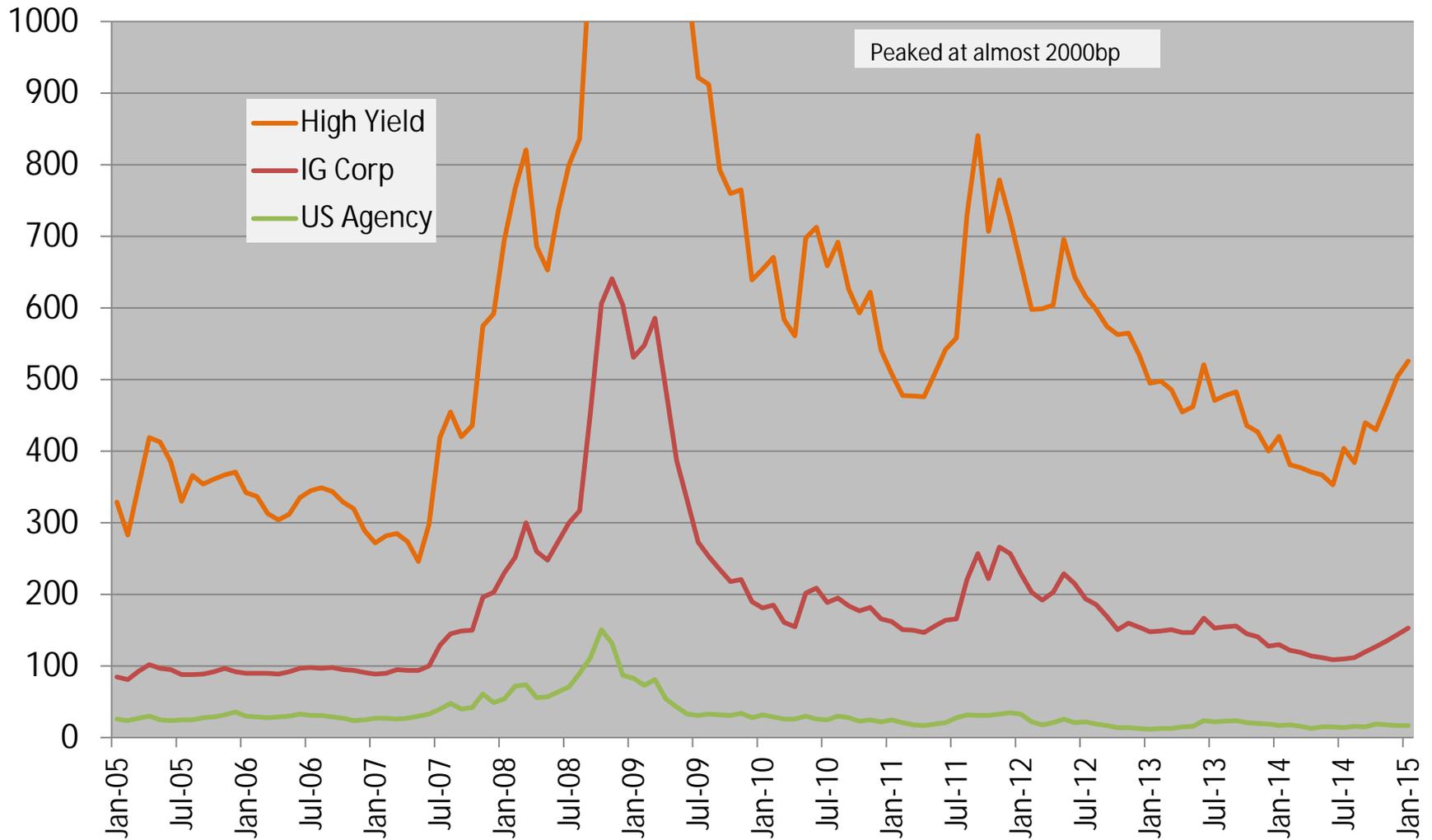


# Intermediate and Long Treasury Yields Decline in 2014

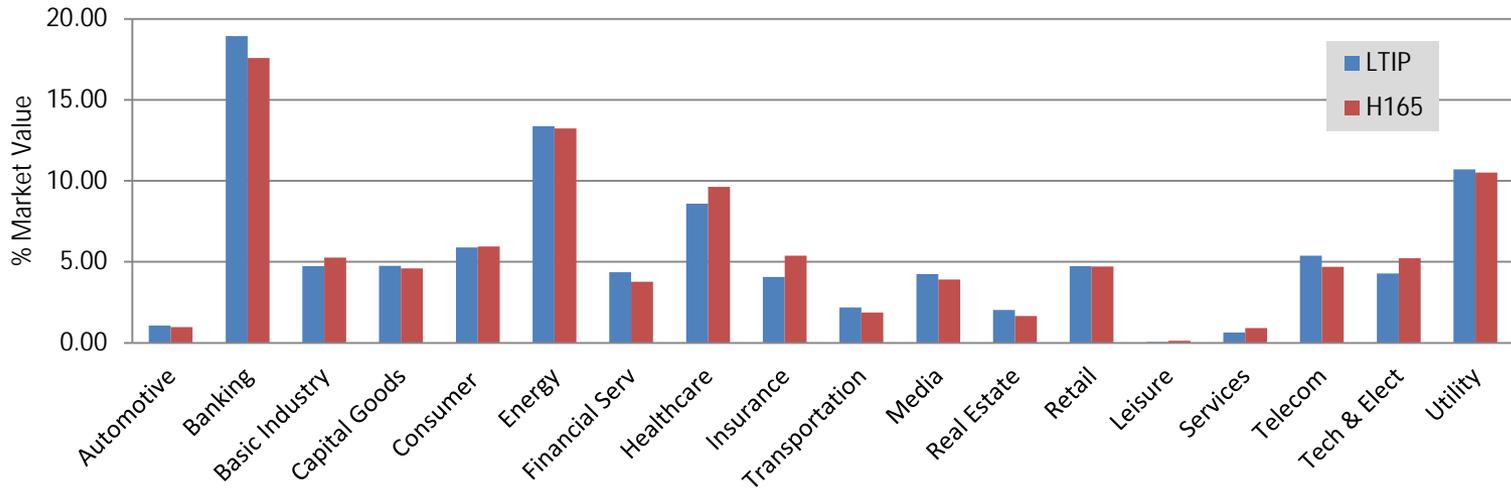
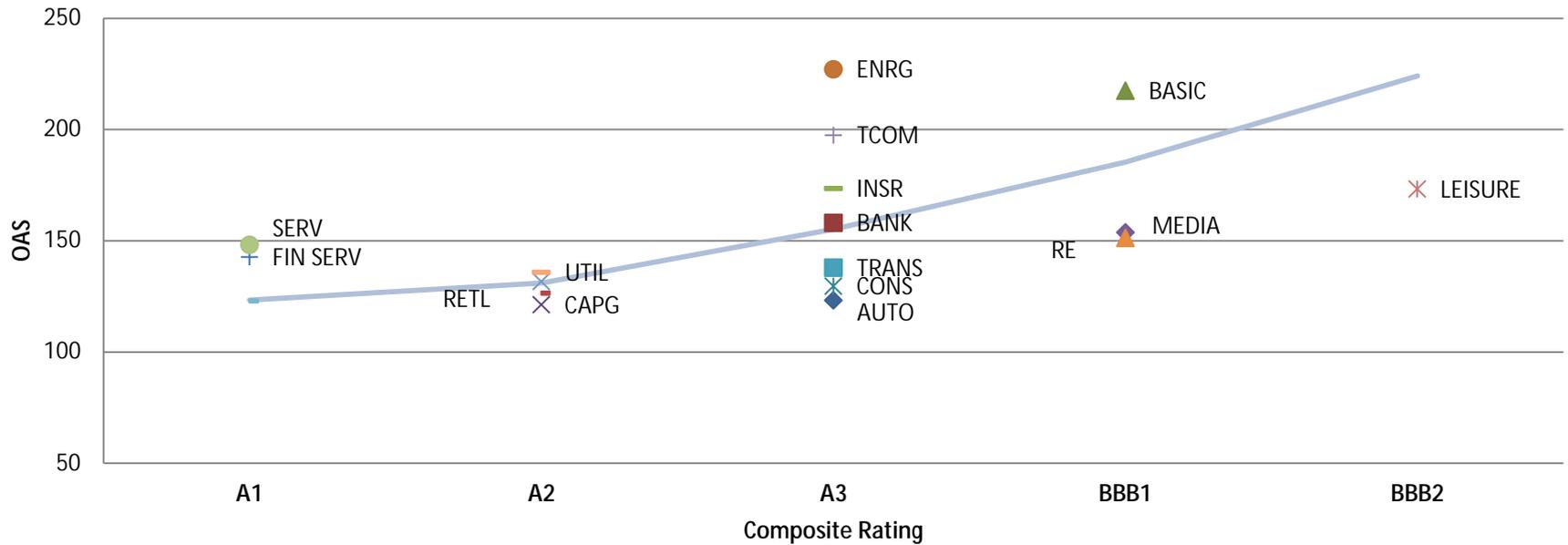


# Fixed Income Credit Markets

## 10 Year Spread History



# Corporate Relative Value and LTIP Allocation by Sector



# Investment Grade Fixed Income Discussion Items

---

- Comfort level with short relative duration position?
  - Costs of maintaining position (relative returns)
- Limited conviction on timing/pacing of rate increases
- Hidden Illiquidity in Investment Grade Credit
  - Liquidity is relative (defined by the cost)
- Potential opportunity from future illiquidity
- Name/sector specific M&A risks



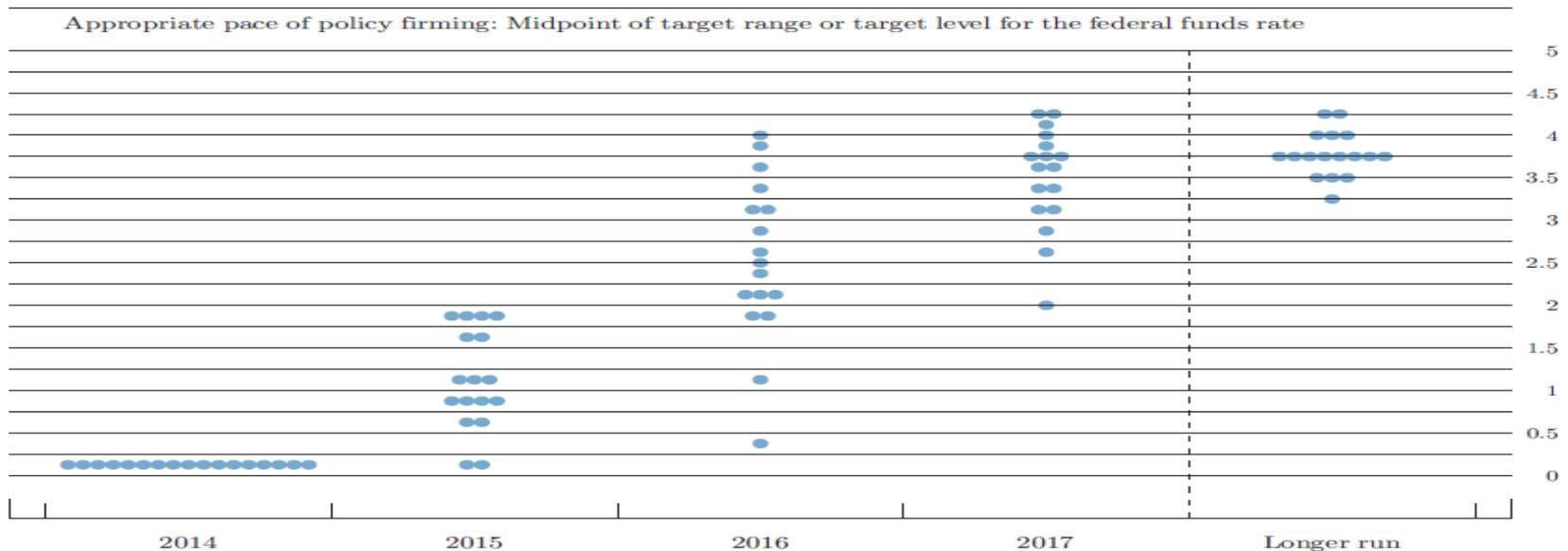
# FOMC Projections

## Economic Projections of Federal Reserve Board Members and Federal Reserve Bank Presidents, December 2014

Advance release of table 1 of the Summary of Economic Projections to be released with the FOMC minutes

Variable	Central tendency <sup>1</sup>					Range <sup>2</sup>				
	2014	2015	2016	2017	Longer run	2014	2015	2016	2017	Longer run
Change in real GDP.....	2.3 to 2.4	2.6 to 3.0	2.5 to 3.0	2.3 to 2.5	2.0 to 2.3	2.3 to 2.5	2.1 to 3.2	2.1 to 3.0	2.0 to 2.7	1.8 to 2.7
September projection.....	2.0 to 2.2	2.6 to 3.0	2.6 to 2.9	2.3 to 2.5	2.0 to 2.3	1.8 to 2.3	2.1 to 3.2	2.1 to 3.0	2.0 to 2.6	1.8 to 2.6
Unemployment rate.....	5.8	5.2 to 5.3	5.0 to 5.2	4.9 to 5.3	5.2 to 5.5	5.7 to 5.8	5.0 to 5.5	4.9 to 5.4	4.7 to 5.7	5.0 to 5.8
September projection.....	5.9 to 6.0	5.4 to 5.6	5.1 to 5.4	4.9 to 5.3	5.2 to 5.5	5.7 to 6.1	5.2 to 5.7	4.9 to 5.6	4.7 to 5.8	5.0 to 6.0
PCE inflation.....	1.2 to 1.3	1.0 to 1.6	1.7 to 2.0	1.8 to 2.0	2.0	1.2 to 1.6	1.0 to 2.2	1.6 to 2.1	1.8 to 2.2	2.0
September projection.....	1.5 to 1.7	1.6 to 1.9	1.7 to 2.0	1.9 to 2.0	2.0	1.5 to 1.8	1.5 to 2.4	1.6 to 2.1	1.7 to 2.2	2.0
Core PCE inflation <sup>3</sup> .....	1.5 to 1.6	1.5 to 1.8	1.7 to 2.0	1.8 to 2.0		1.5 to 1.6	1.5 to 2.2	1.6 to 2.1	1.8 to 2.2	
September projection.....	1.5 to 1.6	1.6 to 1.9	1.8 to 2.0	1.9 to 2.0		1.5 to 1.8	1.6 to 2.4	1.7 to 2.2	1.8 to 2.2	

Percent



# Modest Rate Increases Expected in the Near Term (Again)

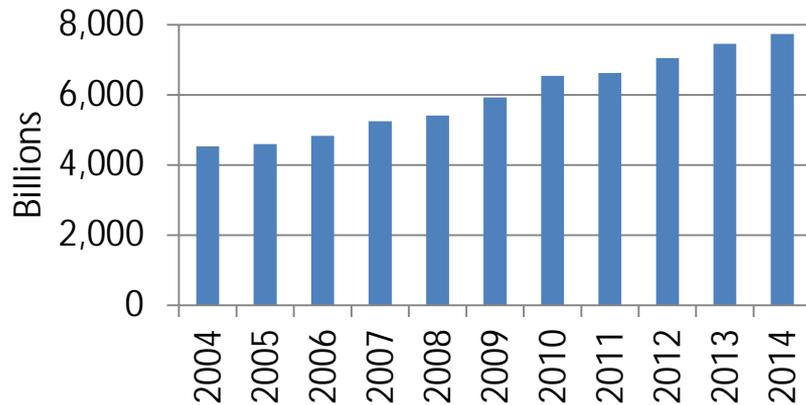
Rate	Market Yield	Q1 15	Q2 15	Q3 15	Q4 15	Q1 16	Q2 16
<b>United States</b>							
US 30-Year	2.69	2.56	2.79	3.00	3.21	3.43	3.58
US 10-Year	2.07	1.97	2.18	2.41	2.62	2.82	3.01
US 2-Year	0.60	0.65	0.88	1.16	1.43	1.69	1.95
US 3-Month Libor	0.26	0.28	0.42	0.65	0.91	1.21	1.53
Federal Funds Target Rate - Upper Bound	0.25	0.25	0.35	0.60	0.90	1.15	1.50
Federal Funds Target Rate - Lower Bound	0.00	0.00	0.11	0.39	0.67	0.96	1.27
2 Year - 10 Year Spread	1.47	1.32	1.29	1.25	1.19	1.14	1.06

95) Chart Analysts		96) Forecast Histogram		Bond Yield Forecasts: Analysts					
US 10-Year				Q1 15	Q2 15	Q3 15	Q4 15	Q1 16	Q2 16
 <b>Market Yield</b> 2.07	Bloomberg Wgt Avg			1.97	2.18	2.41	2.62	2.82	3.01
	Implied Forward Yield			2.09	2.15	2.22	2.27	2.33	2.37
	Median Forecast			2.00	2.20	2.37	2.58	2.73	2.90
	Average Forecast			2.00	2.21	2.43	2.63	2.83	3.01
	High Forecast			2.50	2.90	3.50	3.90	4.25	4.60
Recent Updates	Low Forecast			1.50	1.50	1.80	1.84	1.85	1.70
A. Rajadhyaksha	Responses			66	66	66	66	56	54
H. Bandholz	Feb. Survey Median			2.00	2.20	2.39	2.60	2.77	2.90
T. Costerg	Jan. Survey Median			2.22	2.40	2.66	2.80	2.85	3.03
R. Carnell	Change in Medians			-0.21	-0.20	-0.27	-0.20	-0.08	-0.13

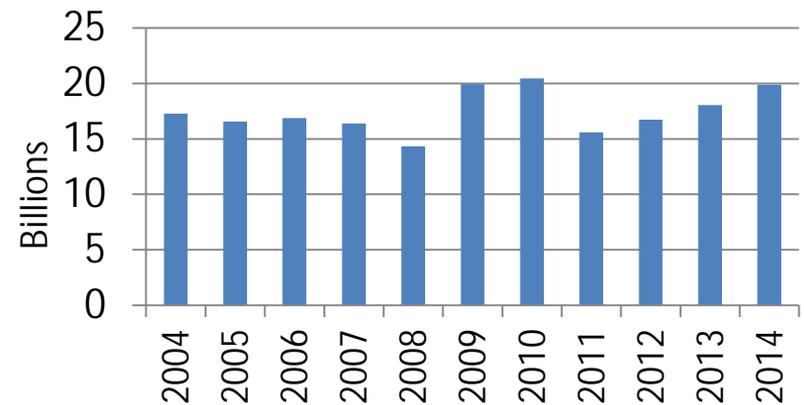


# Market Growth vs. Liquidity

Outstanding US Corporate Debt



Avg. Daily Corporate Trading Volume

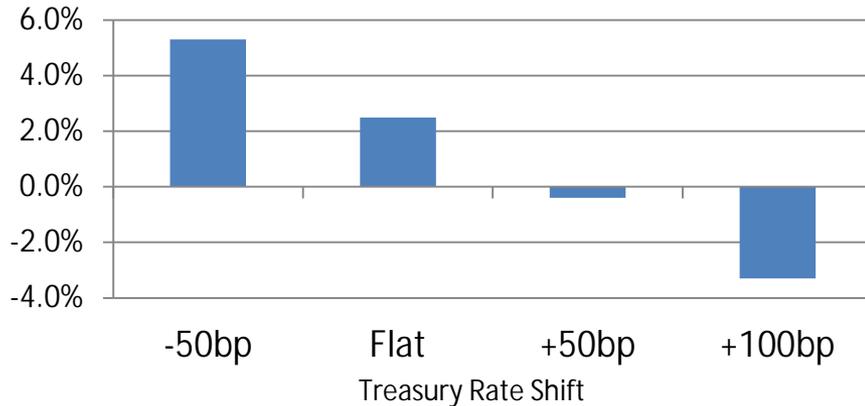


- Increased regulation has resulted in smaller dealer inventories and a shallow market
- Even in a benign market, trade inquiry responses are very limited due to smaller balance sheets
- Liquidity to be defined by the cost (bid/offer spreads)
- Market stress could present opportunities for long term investors to be a liquidity provider



# Fixed Income Expectations

1 Year Parallel Simulation for Core Fixed  
(As of 1/31/15)



- Expectations are for rates to rise modestly during 2015
- Near term inflationary pressures remain modest
- Return expectations over the next five years remain in the 2% to 4% range



Note: The following disclaimer was added on April 17, 2015.

BOFAML IS LICENSING THE BOFAML INDICES "AS IS," MAKES NO WARRANTIES REGARDING SAME, DOES NOT GUARANTEE THE SUITABILITY, QUALITY, ACCURACY, TIMELINESS, AND/OR COMPLETENESS OF THE BOFAML INDICES OR ANY DATA INCLUDED IN, RELATED TO, OR DERIVED THEREFROM, ASSUMES NO LIABILITY IN CONNECTION WITH THEIR USE, AND DOES NOT SPONSOR, ENDORSE, OR RECOMMEND THE DEPARTMENT OF STATE TREASURER, OR ANY OF ITS PRODUCTS OR SERVICES.