

Interest Rate Environment and FHLB Advance Strategies

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This webinar is being recorded

FHLBBoston

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Today's topics

- Fed Guidance and FOMC Projections
- Labor Market Update
- Market Expectations of Interest Rates
- Advance Rate Curve
- Advance Strategies: Curve Flattener
- Advance Renewal Discount

FOMC Forward Guidance, September 17, 2015



“economic activity is expanding at a moderate pace...”

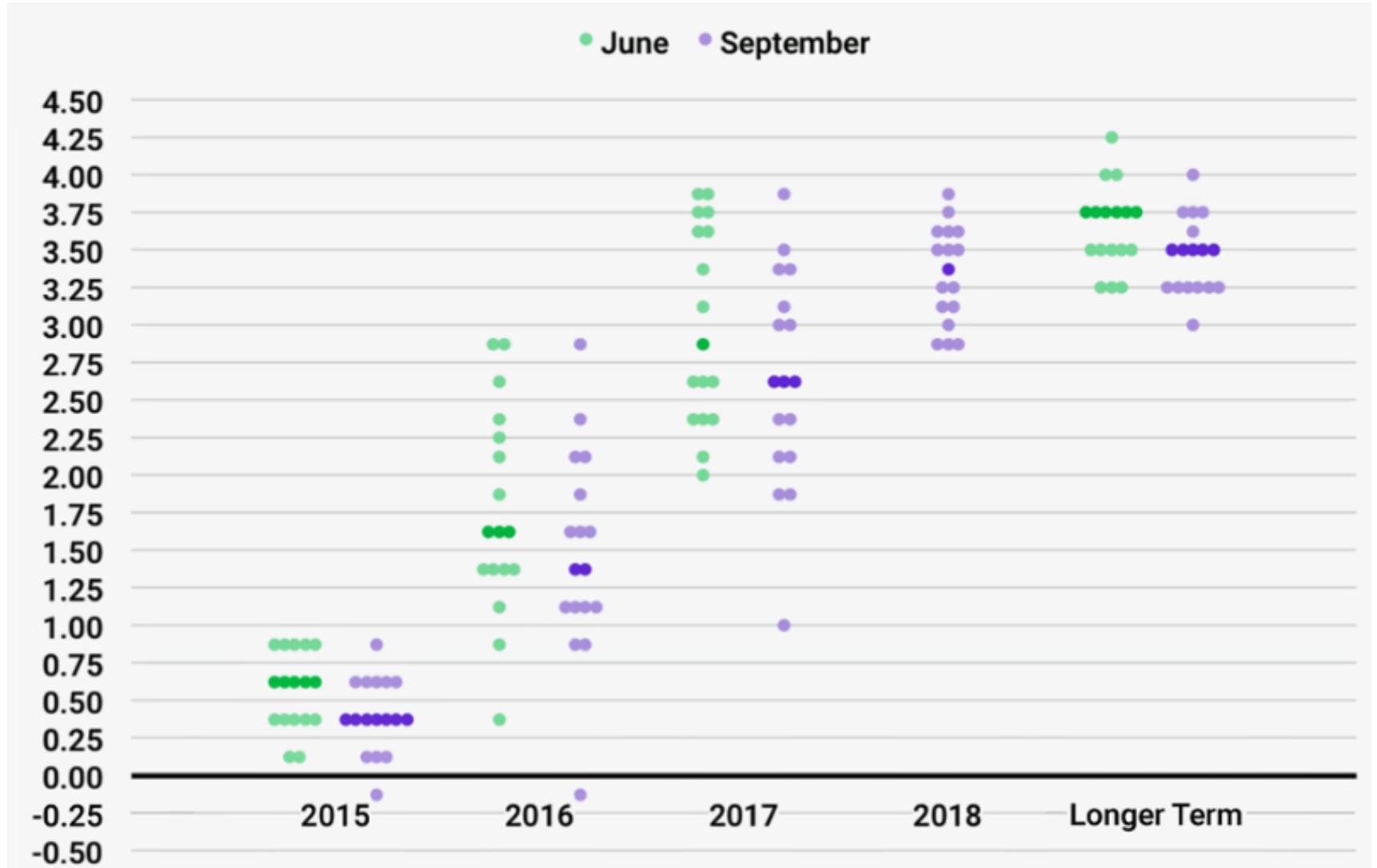
“labor market continues to improve, with solid job gains and declining unemployment...”

“Inflation has continued to run below the Committee’s longer-run objective, partly reflecting declines in energy prices and non-energy imports...”

“The Committee anticipates that it will be appropriate to raise the target range for the federal funds rate when it has seen some further improvement in the labor market and is reasonably confident that inflation will move back to its 2 percent objective over the medium term. .”

FOMC Dot Plot

One 25 Bps Rate Hike Anticipated by Year-End



FOMC Projections

Unemployment target nearly reached while inflation remains below target

Percent

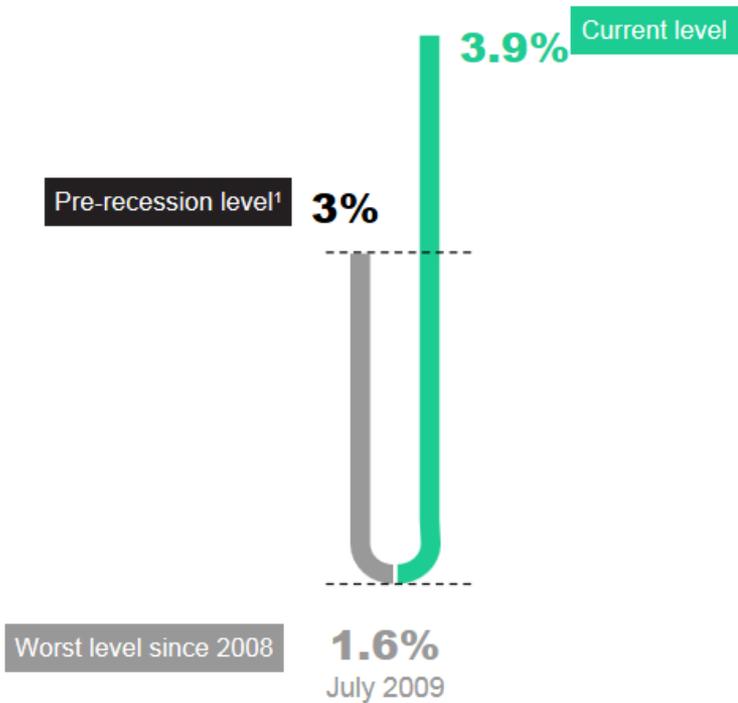
Variable	Median ¹				
	2015	2016	2017	2018	Longer run
Change in real GDP	2.1	2.3	2.2	2.0	2.0
June projection	1.9	2.5	2.3	n.a.	2.0
Unemployment rate	5.0	4.8	4.8	4.8	4.9
June projection	5.3	5.1	5.0	n.a.	5.0
PCE inflation	0.4	1.7	1.9	2.0	2.0
June projection	0.7	1.8	2.0	n.a.	2.0
Core PCE inflation ⁴	1.4	1.7	1.9	2.0	
June projection	1.3	1.8	2.0	n.a.	
Memo: Projected appropriate policy path					
Federal funds rate	0.4	1.4	2.6	3.4	3.5
June projection	0.6	1.6	2.9	n.a.	3.8

Yellen's "Labor Market Dashboard"

Employer behavior consistent with full employment

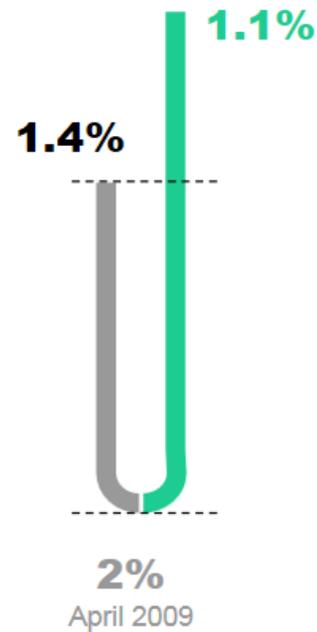
Job openings rate

Job openings as a share of the sum of job openings and paid employment



Layoffs/discharges rate

Layoffs and discharges as a percentage of paid employees



Nonfarm payrolls

Three-month rolling average of change in payrolls based on a survey of employers.



Yellen's "Labor Market Dashboard"

Underemployment persists but is declining



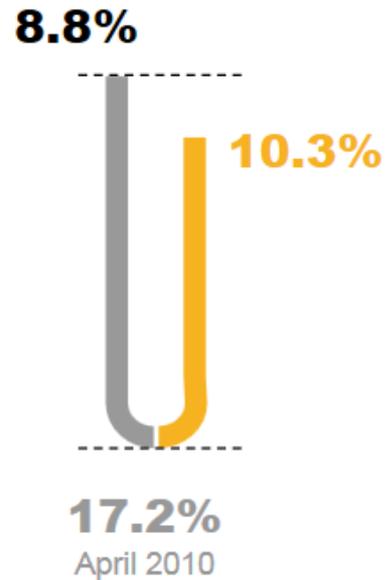
Unemployment rate

Number of unemployed as a percentage of the labor force



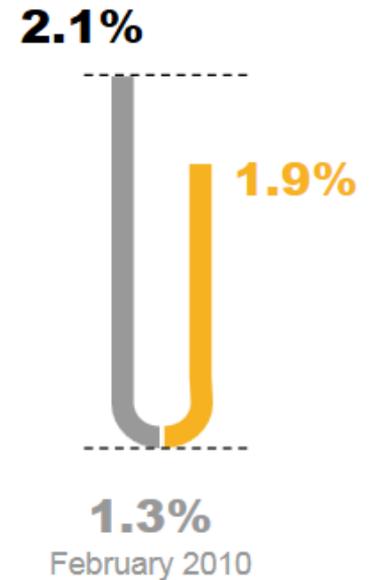
U-6 underemployment rate

Includes part-time workers who want a full-time job and those not in the labor force who would take a job if one were available



Quits rate

Workers who quit their job as a percentage of paid employees

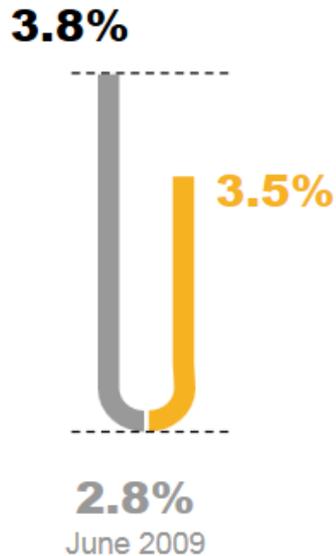


Yellen's "Labor Market Dashboard"

Labor force participation rate continuing to decline

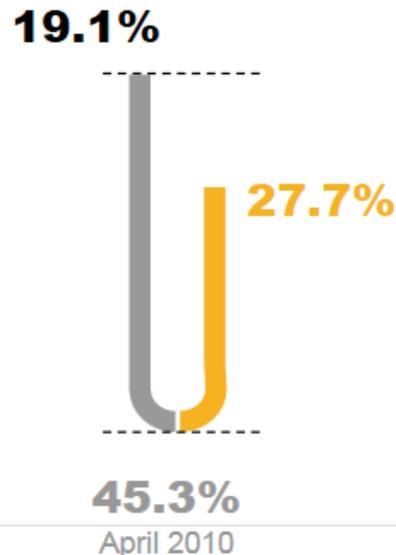
Hires rate

Workers hired as a percentage of paid employees



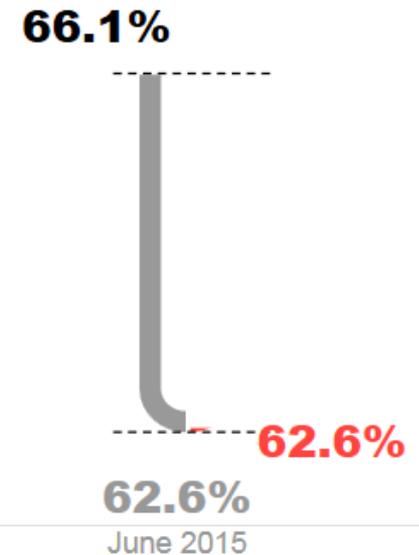
Long-term unemployed share

Share of unemployed who have been out of work for 27 weeks or longer



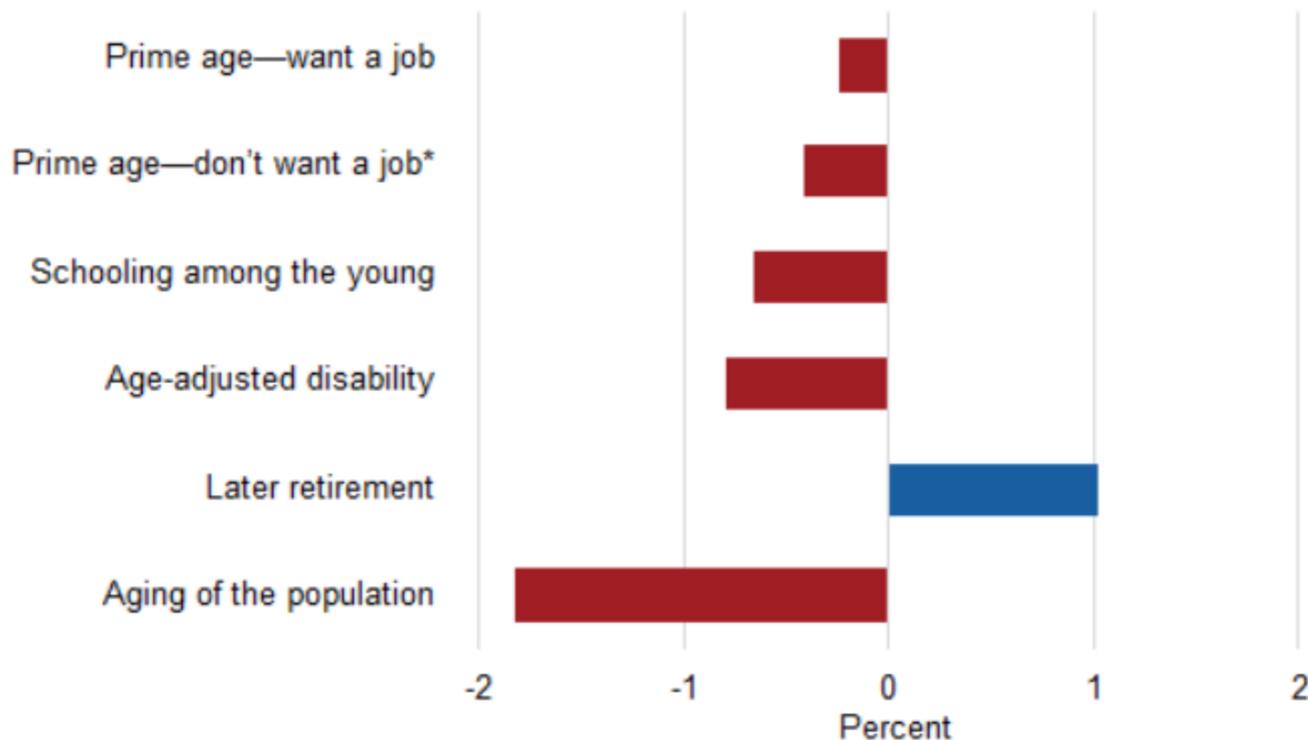
Labor force participation rate

Labor force as a percentage of the working-age civilian, noninstitutional population



Why Does Labor Force Participation Keep Declining?

Contributions to Change in Labor Force Participation between 2007 and 2014

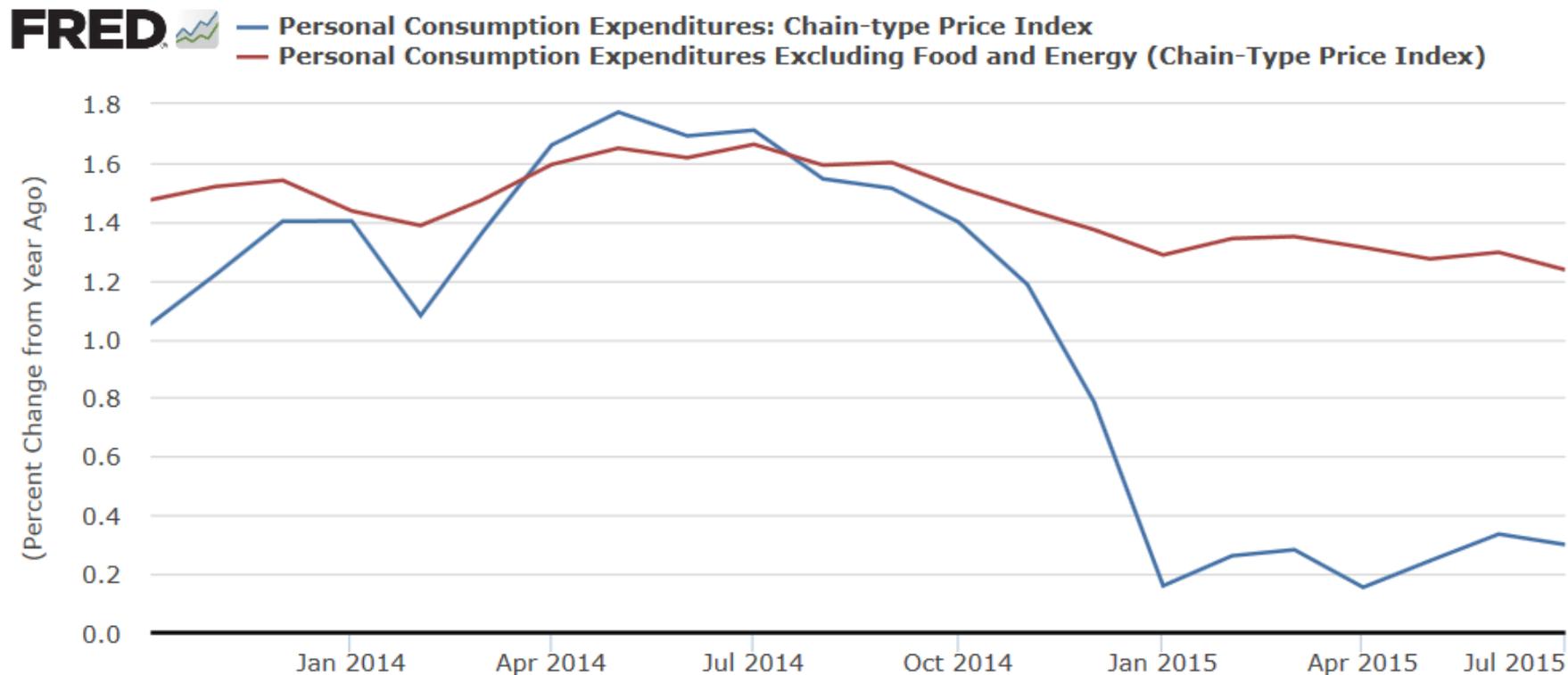


Note: Prime age—don't want a job excludes illness or disability as a reason for not participating

Sources: U.S. Bureau of Labor Statistics Current Population Survey, authors' calculations

PCE Inflation

Inflation remains below 2% target and may be declining

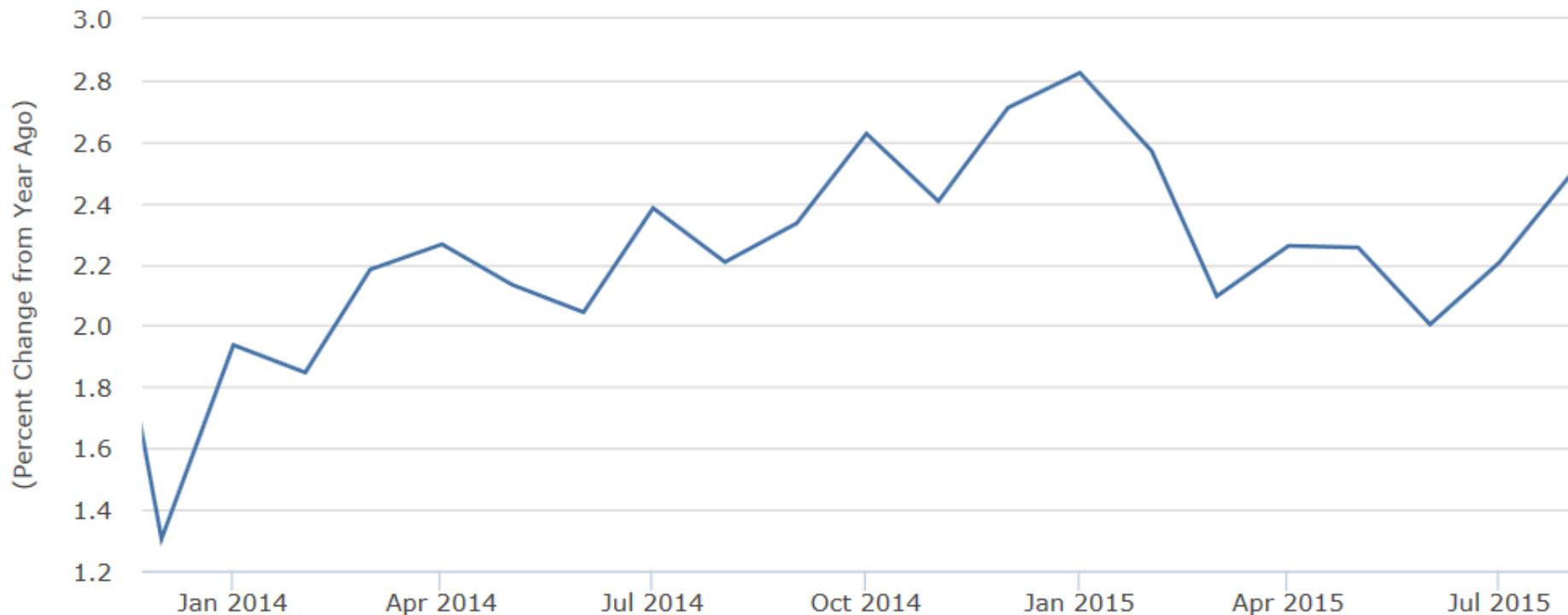


Wages

Steady following upward trend in 2014



— Average Weekly Earnings of All Employees: Total Private

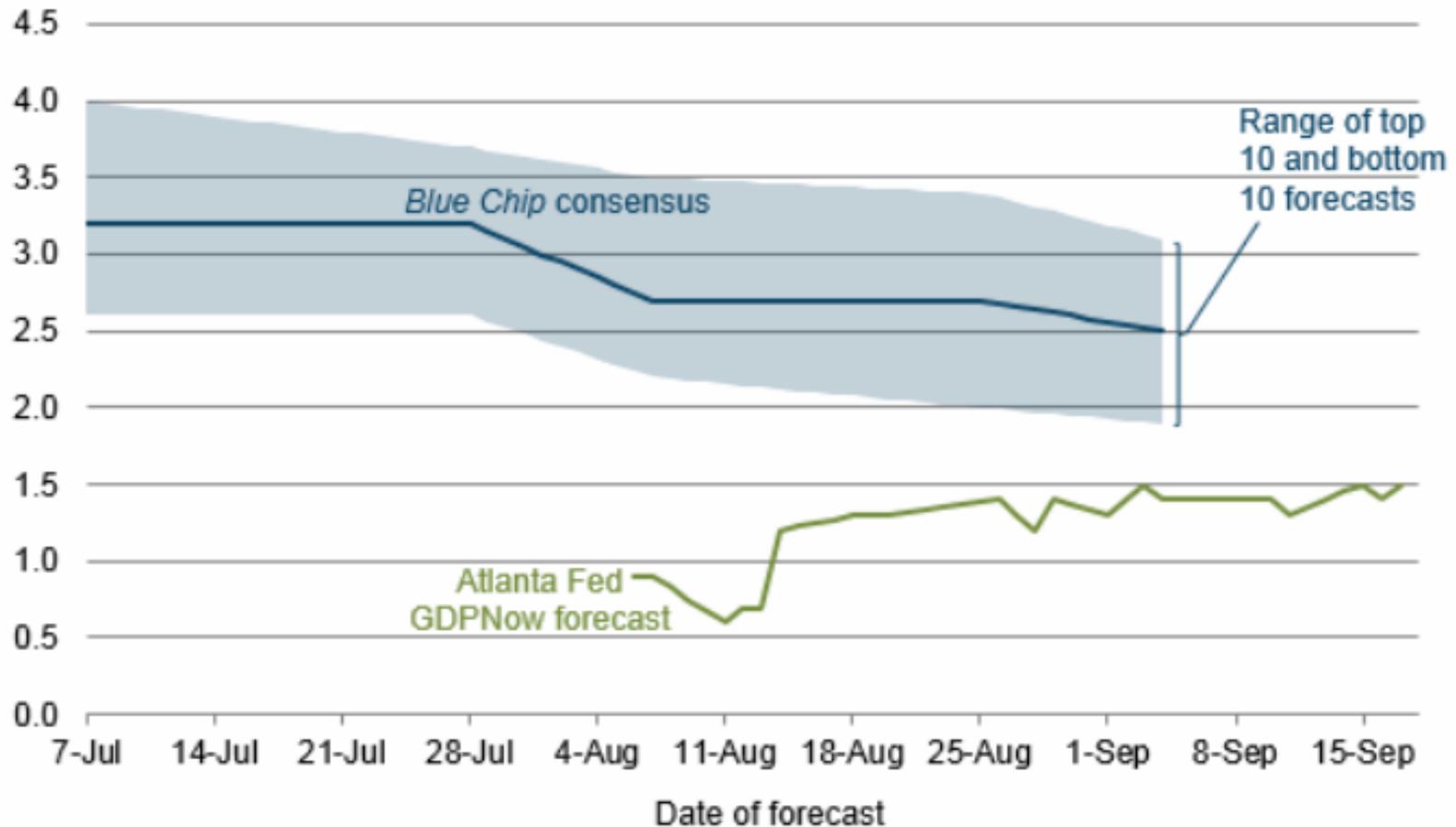


Atlanta Fed Projections of 3Q GDP Growth



**Evolution of Atlanta Fed GDPNow real
GDP forecast for 2015: Q3**
Quarterly percent change (SAAR)

GDPNow™



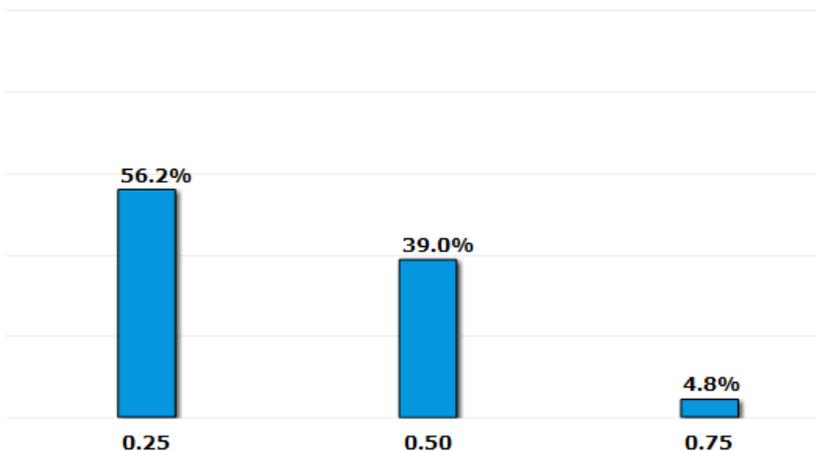
Market Expectation of Fed Funds Rate as of 9/21/15

One rate hike by March 2016 anticipated; market continuing to second-guess fed



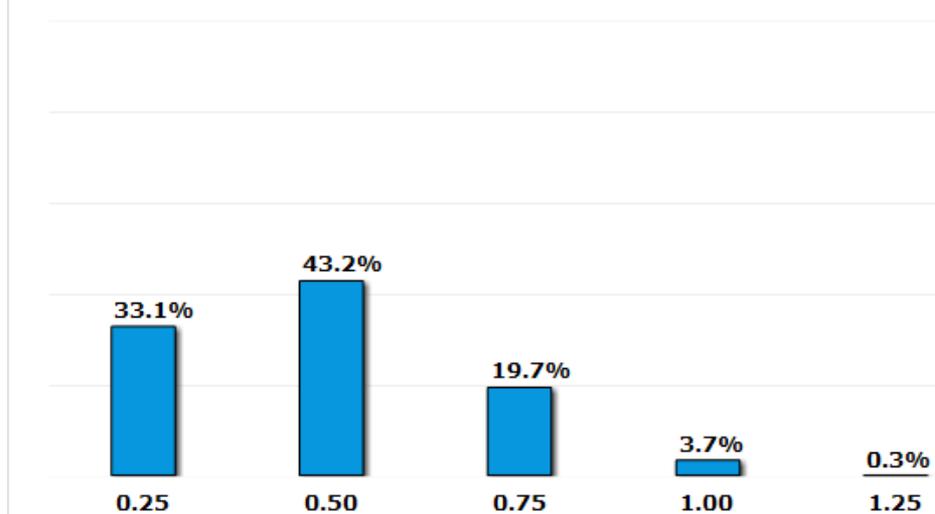
Meeting Date:	Wednesday, December 16, 2015	
Futures Expiry:	December 2015	Previous Day
Futures Price:	99.7850	Volume:
Probability of Rate Hike:	44%	Open Interest:

Implied Probability



Meeting Date:	Wednesday, March 16, 2016	
Futures Expiry:	March 2016	Previous Day
Futures Price:	99.6800	Volume:
Probability of Rate Hike:	67%	Open Interest:

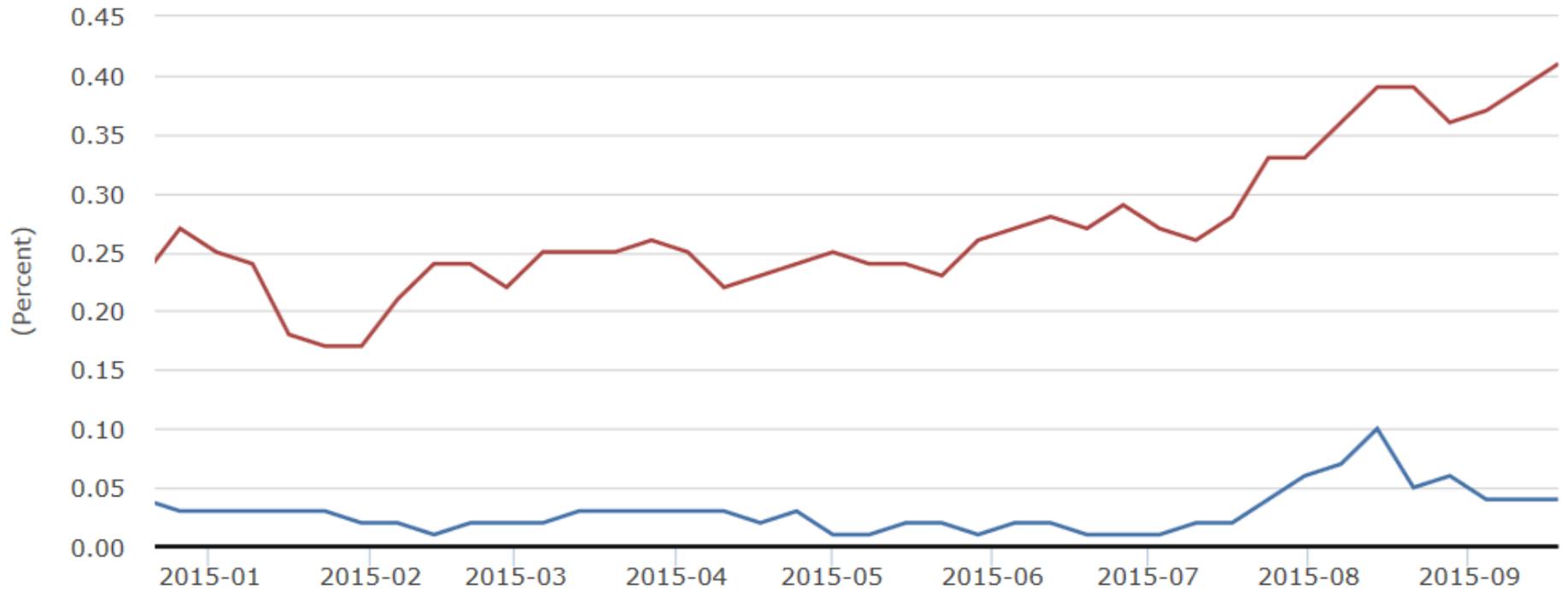
Implied Probability



Treasury Rates

6-month, 1-year, 2-year rates at multi-year highs

FRED  — 3-Month Treasury Constant Maturity Rate
— 1-Year Treasury Constant Maturity Rate



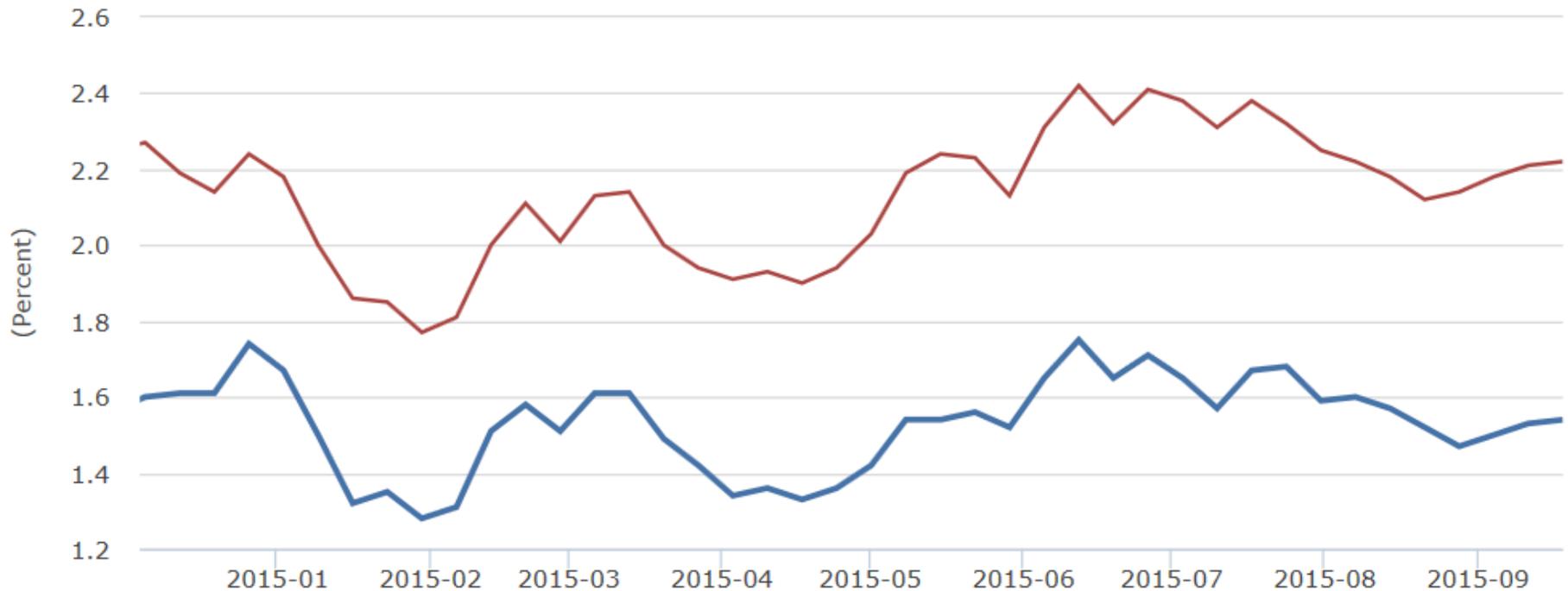
Treasury Rates

Long-term rates have been stable

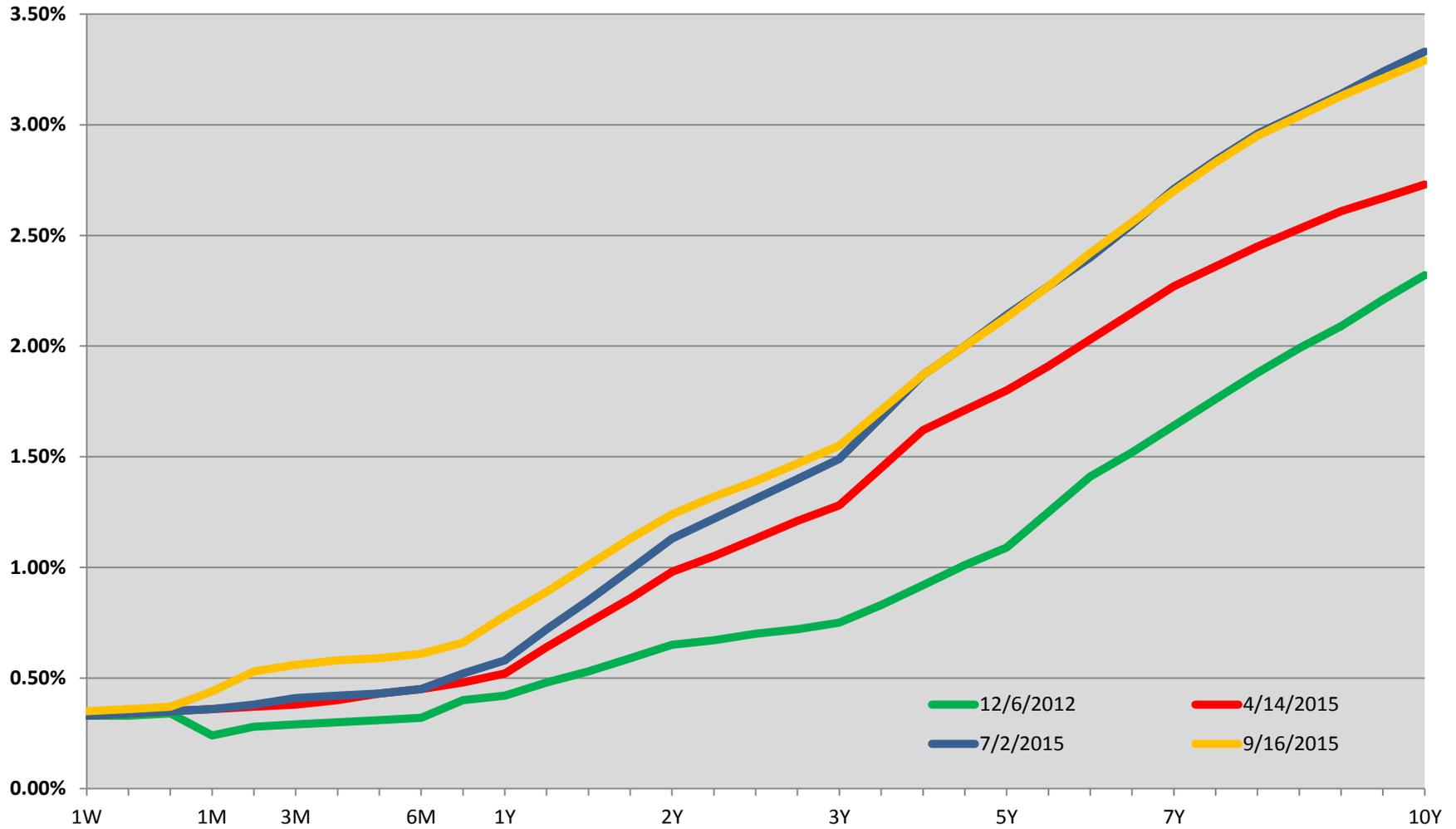


FRED 

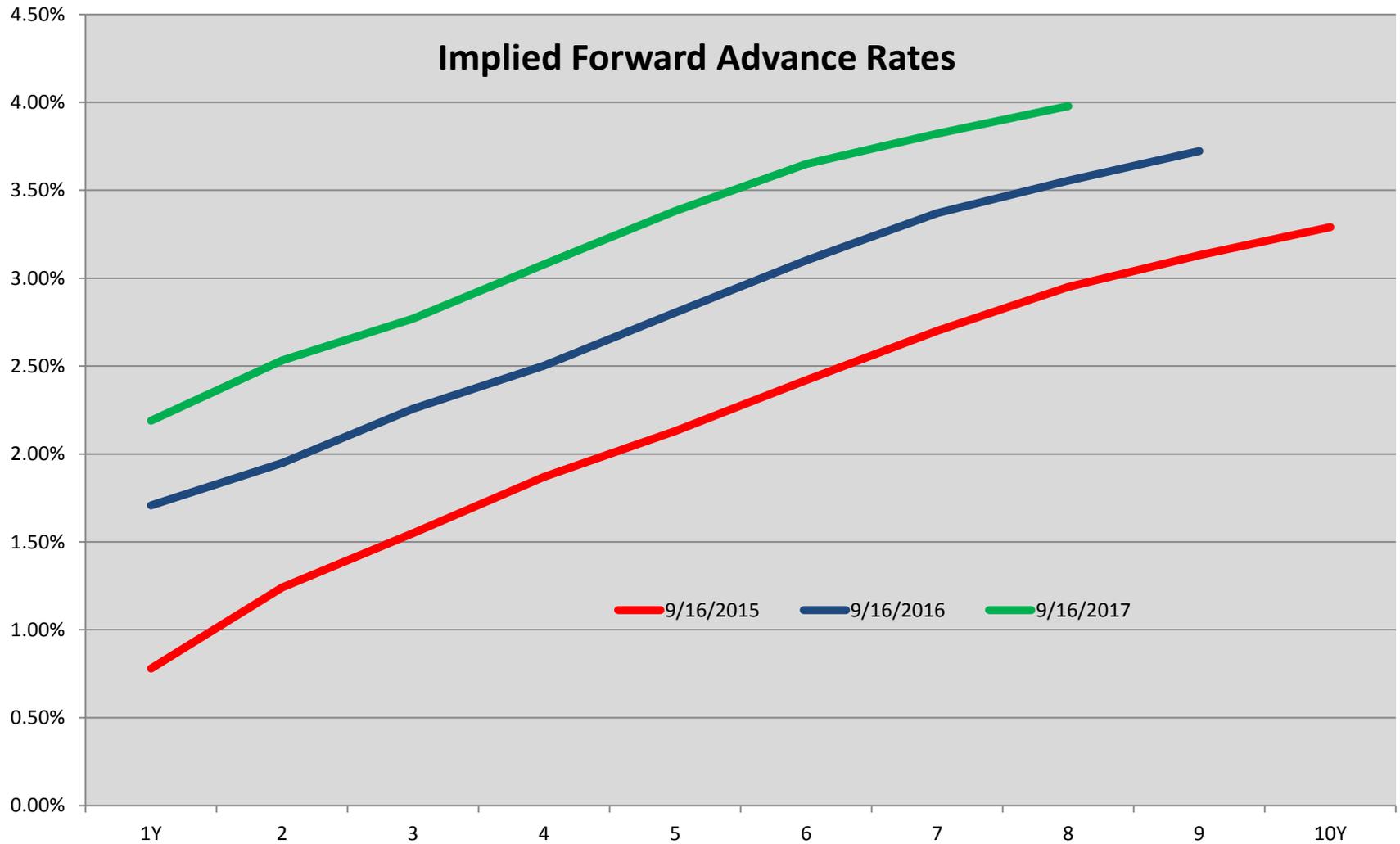
— 5-Year Treasury Constant Maturity Rate
— 10-Year Treasury Constant Maturity Rate



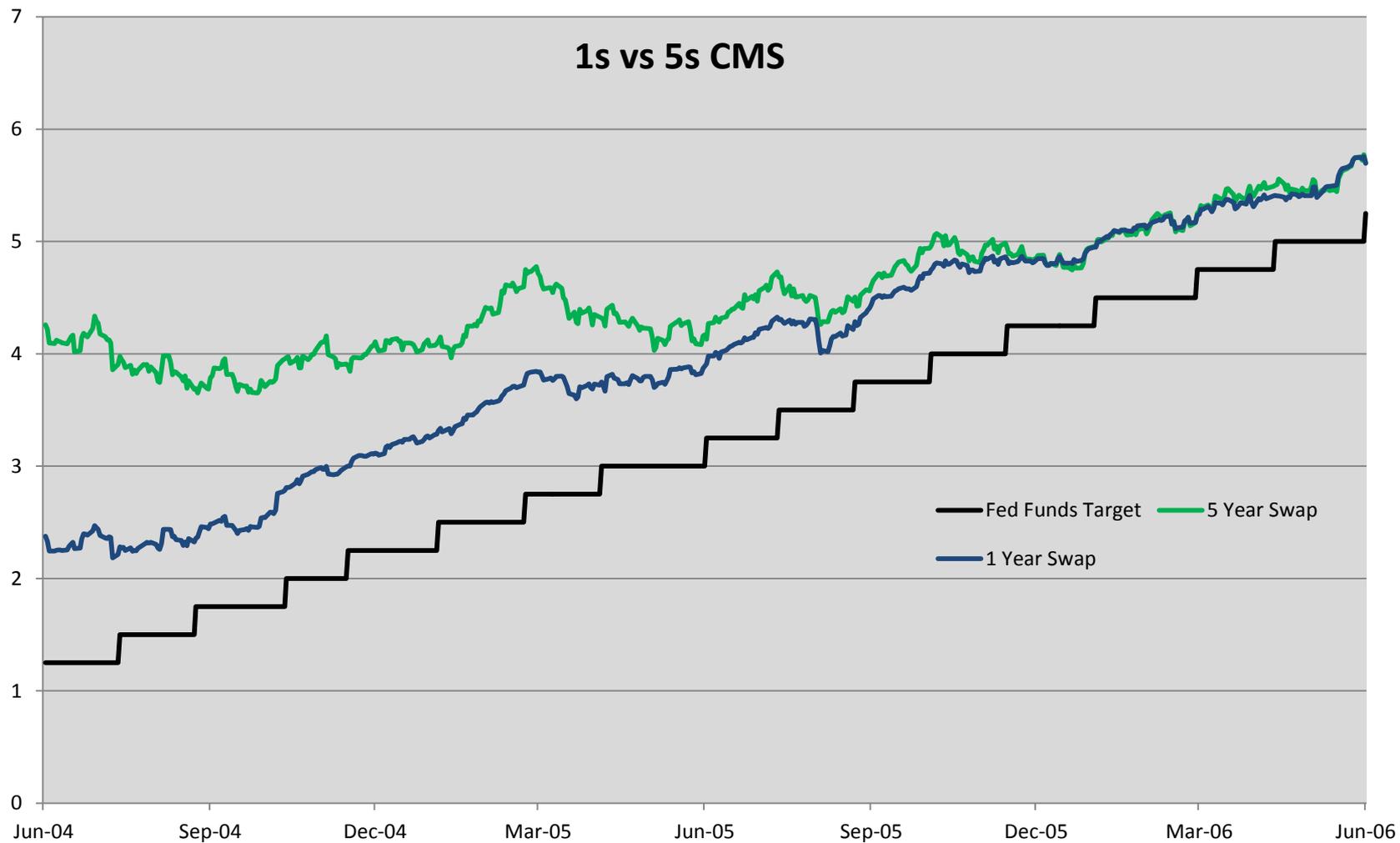
FHLB Boston Classic Advance Curves



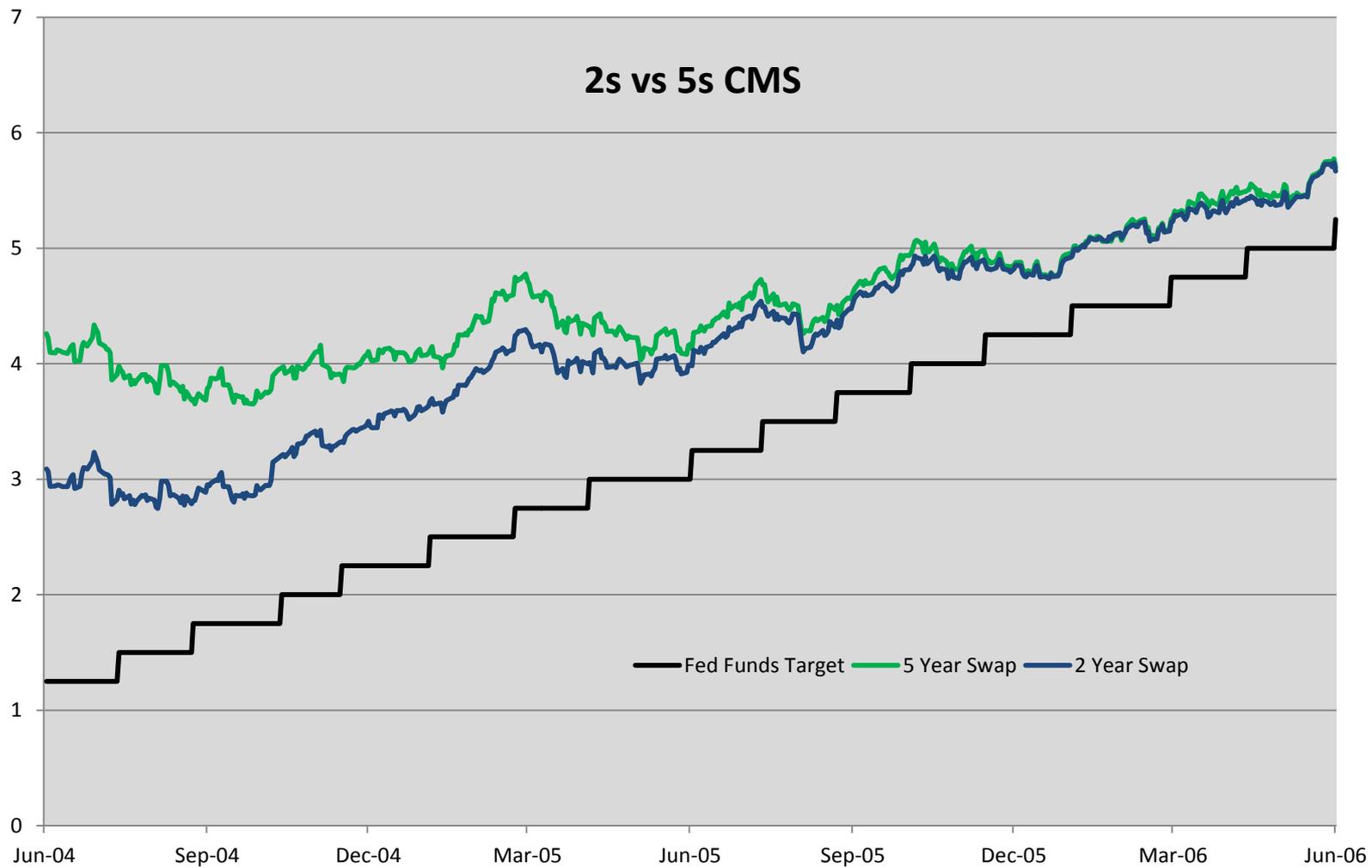
FHLB Boston – Implied Forward Advance Rates



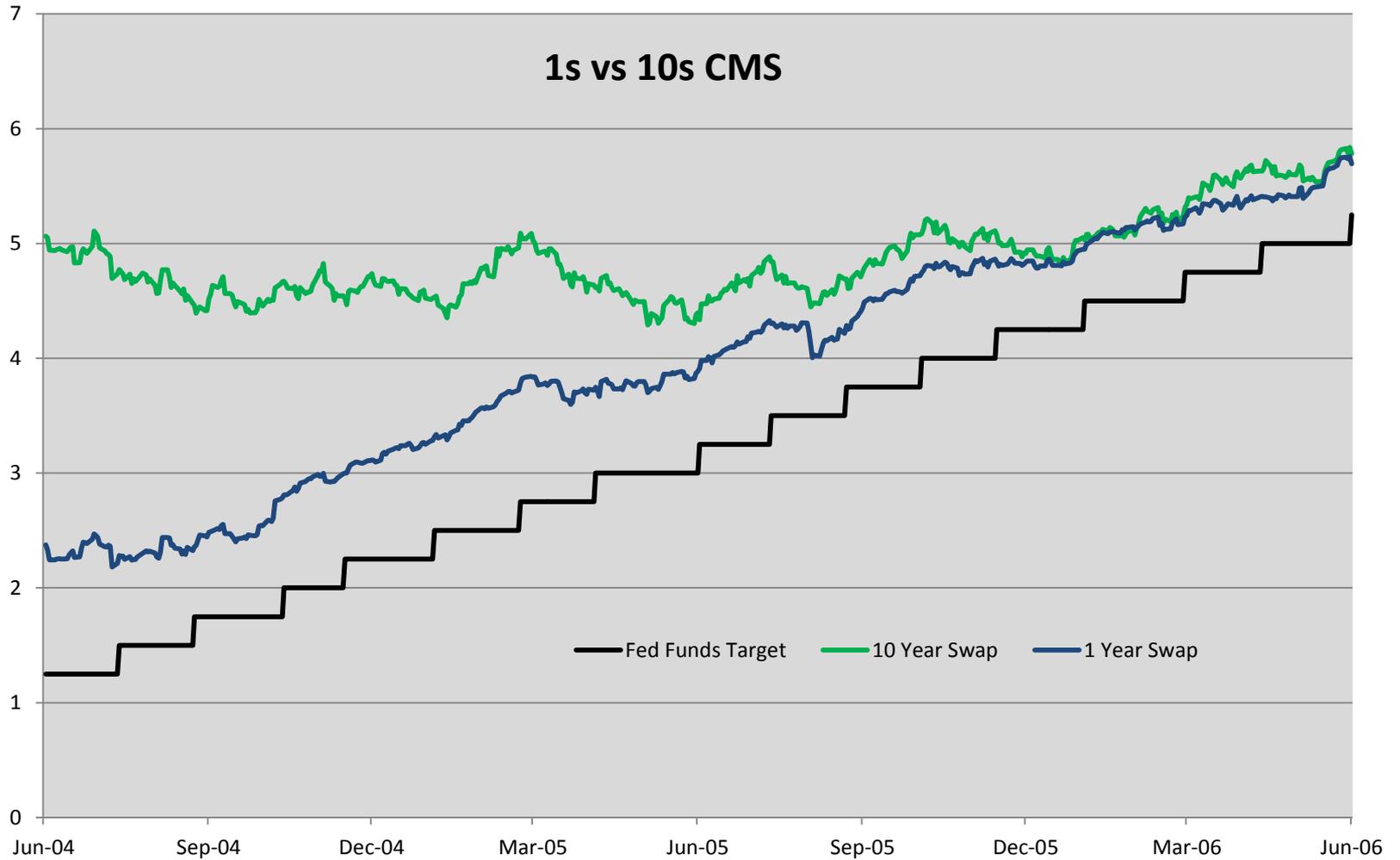
1s vs 5s CMS



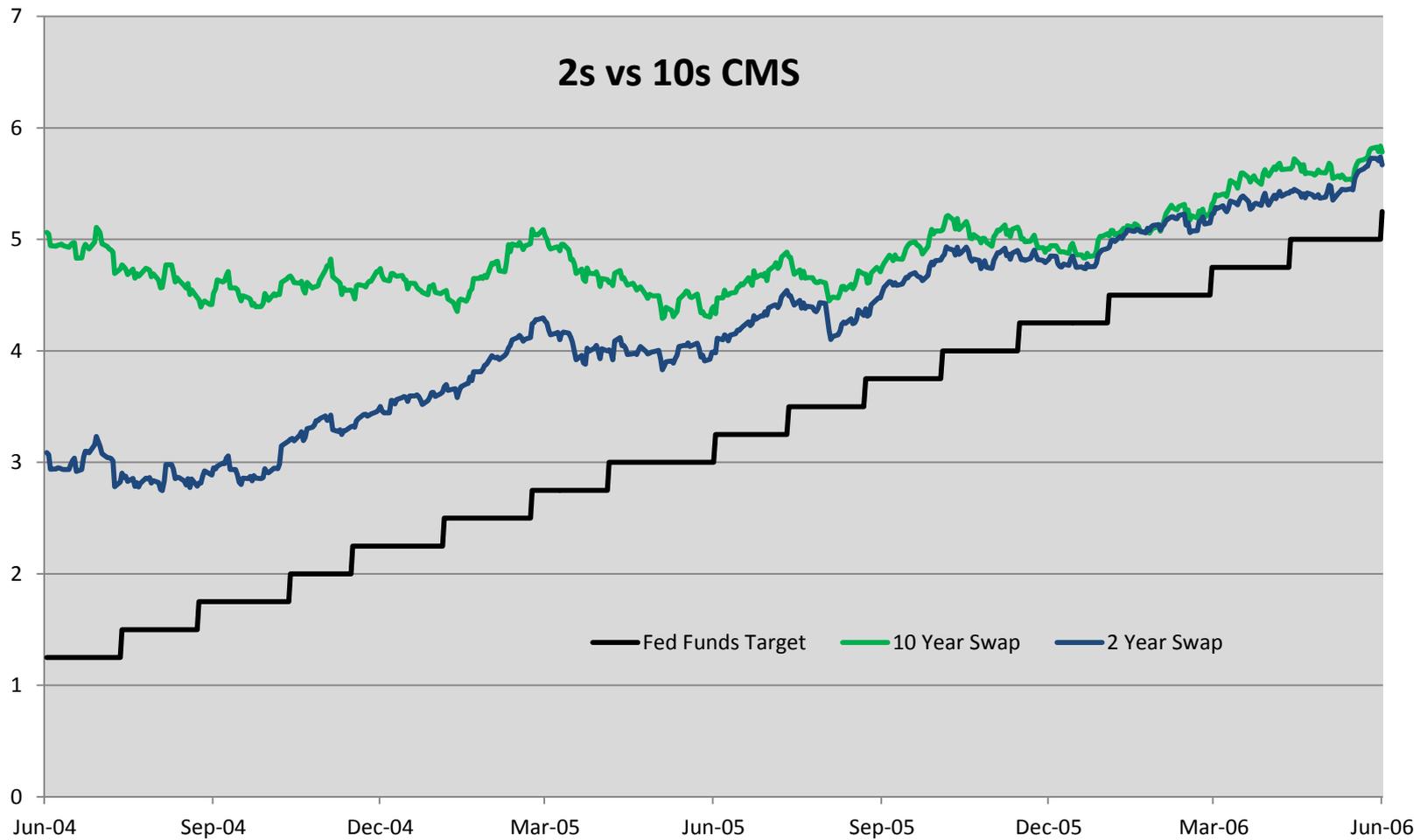
2s vs 5s CMS



1s vs 10s CMS



2s vs 10s CMS



Curve Flattener Advance

- Financial institutions are exposed to changes in the shape of the yield curve
 - Especially vulnerable to a flattening yield curve
 - Difference between long-term and short-term interest rates declines
- How will your net interest margin be impacted if the Fed increases short-term rates by 50 to 100 basis points?
 - Will you be able to control the increase in core deposit costs?
 - Will you be forced to match the competition?
 - How will loan pricing be effected?

Curve Flattener Advance

- Fixed-term, floating-rate advance
- Member chooses:
 - Final maturity – out to 20 years
 - Two points on CMS yield curve (1-, 2-, 5-, 10-, and 30 year points available). These are used as part of the rate reset calculation.
- Advance reprices quarterly
 - Advance rate will DECLINE if the curve FLATTENS
 - Advance rate will INCREASE if the curve STEEPENS
 - **Advance rate can reset below zero**
- No optionality to cancel the advance

Curve Flattener Advance - Indications



Term	Fixed Component	5s vs 1s					Initial Rate	Fixed Component	5s vs 2s				Initial Rate
		+	Curve			+			Curve				
			(5s	-	1s)				(5s	-	2s)		
1Y	-0.11%	+	1.64%	-	0.58%	0.95%	0.19%	+	1.64%	-	0.90%	0.93%	
2Y	0.42%	+	1.64%	-	0.58%	1.48%	0.70%	+	1.64%	-	0.90%	1.44%	
3Y	0.82%	+	1.64%	-	0.58%	1.88%	1.06%	+	1.64%	-	0.90%	1.80%	

Curve Flattener Advance – Rate Reset Formula

Curve Flattener Advance

2 Year Term
5Y CMS & 1Y CMS

Fixed Component	(5Y CMS	– 1Y CMS)	Rate Differential Component ¹	Advance Rate ²	
0.42%	1.04%	2.25%	–1.21%	–0.79%	} Flatter (or inverted)
0.42%	1.24%	1.58%	–0.34%	0.08%	
0.42%	1.44%	1.08%	0.36%	0.78%	
0.42%	1.64%	0.58%	1.06%	1.48%	START
0.42%	1.89%	0.53%	1.36%	1.78%	} Steeper
0.42%	2.14%	0.48%	1.66%	2.08%	
0.42%	2.39%	0.43%	1.96%	2.38%	

¹ Rate differential component equals longer-term CMS less shorter-term CMS

² Advance rate equals the sum of the fixed component and the rate differential component

Advance Renewal Discount

- New discounted pricing program, available for a limited time
- Members have \$13 billion in advance maturities through year-end
- Members can receive an automatic discount if they roll a maturing advance into a new advance if:
 - New advance is a classic advance of one year or longer in maturity
 - New advance is at least 50% of the maturing advance amount and a minimum of \$1 million
 - Member calls two days in advance of maturity to book the new advance
- Discounts
 - **3 basis points** for new advance with a maturity of one year to under two years
 - **8 basis points** for new advance with a maturity of two years or greater

Questions?



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