

# **2016 U.S. Fixed Income Outlook**

**January 7, 2016**

**Tom Tzitzouris**

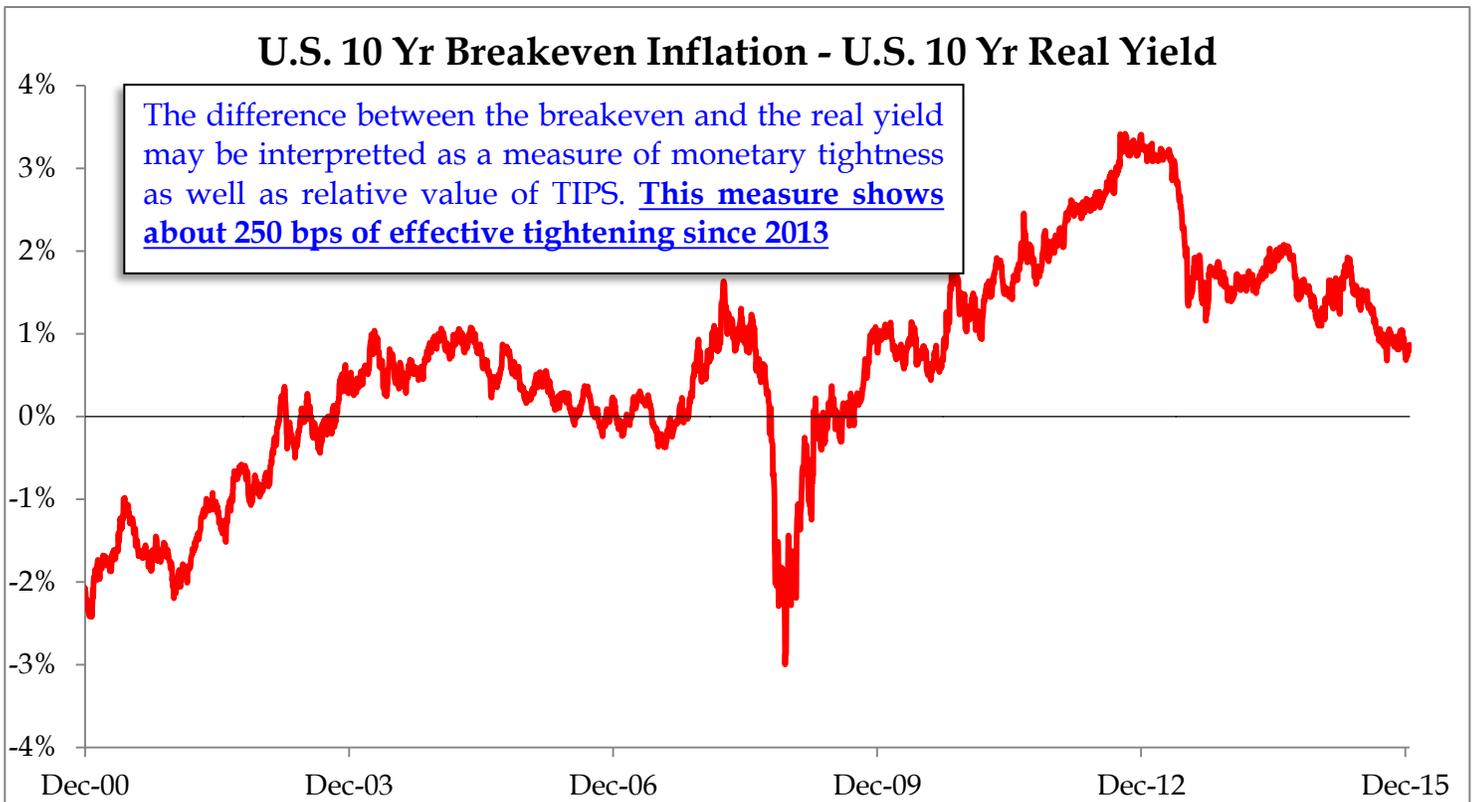
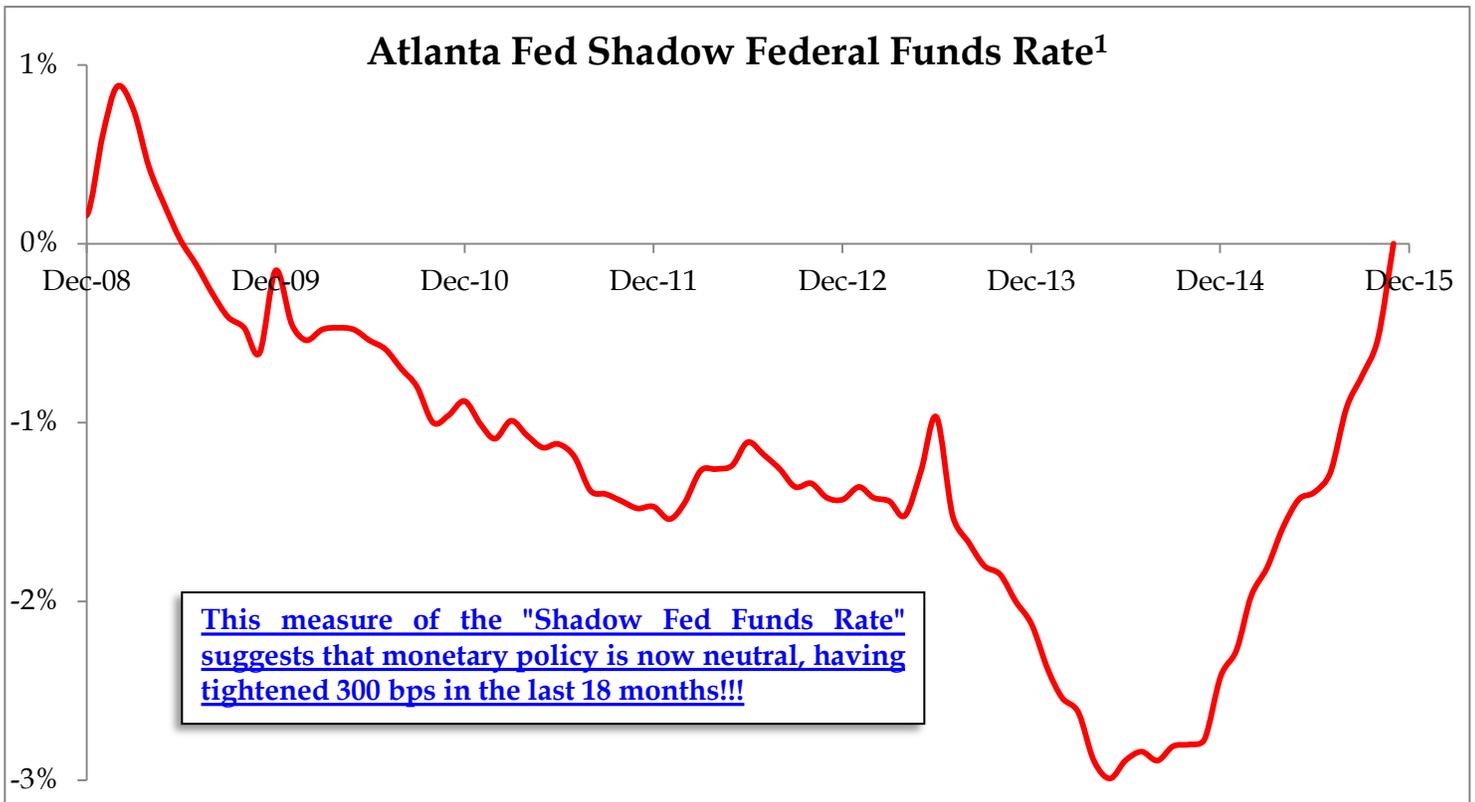
Head of Fixed Income Research

Strategas Research Partners

# Liftoff has Passed, What's Next?

- 1) Financial Conditions Still Tightening
- 2) Yield Curve is More “Concave”
- 3) March Tightening Looks Unlikely
- 4) June Tightening Looks 50-50 to Us
- 5) What's the Blueprint for Tightening
- 6) Strategas Treasury Yield Forecasts
- 7) Staying Up in Quality as Cycle Matures
- 8) Still Leery of HY

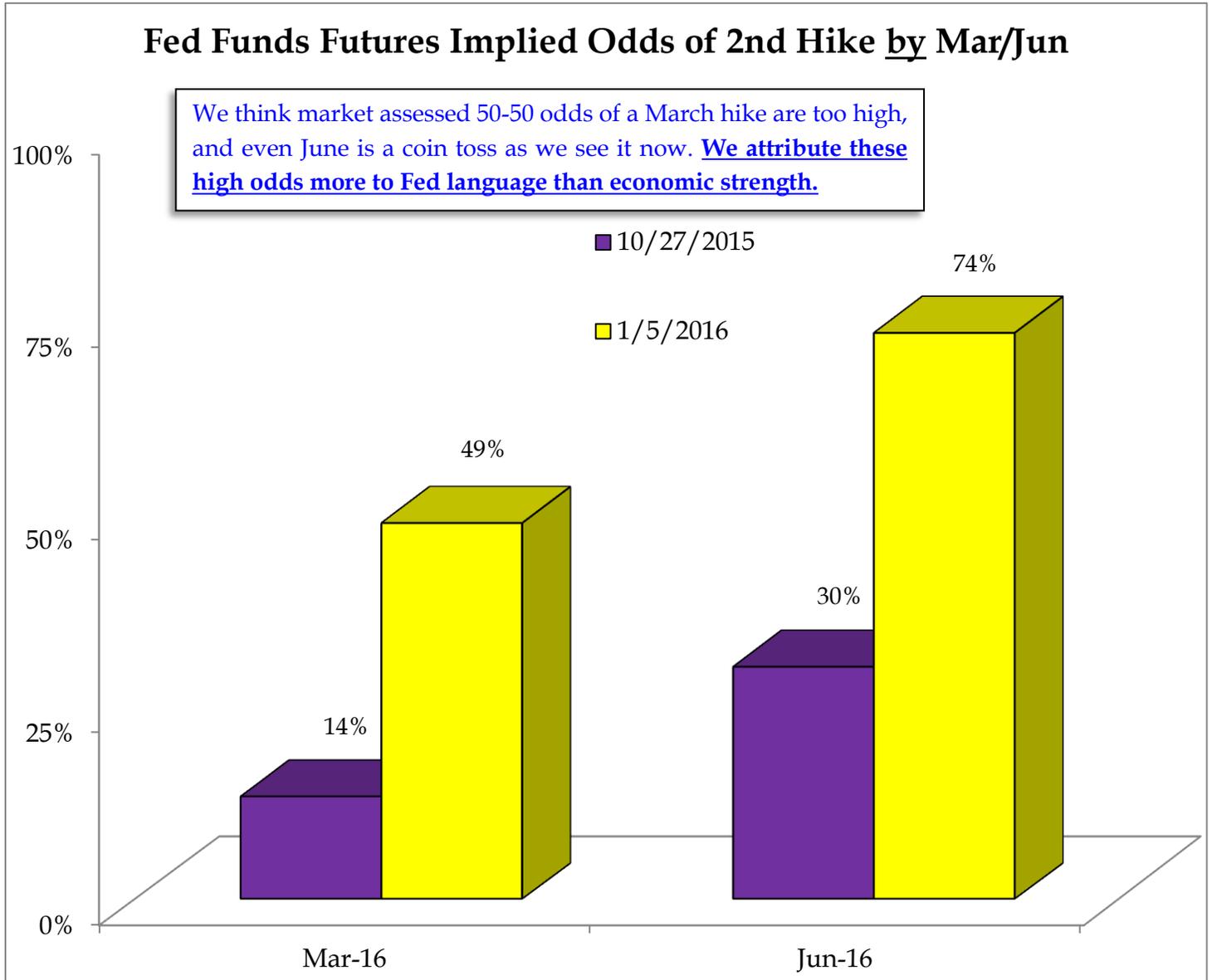
# MONETARY POLICY IS NOW APPROXIMATELY NEUTRAL!!! ACCORDING TO TWO SEPARATE MEASURES IT IS ALREADY



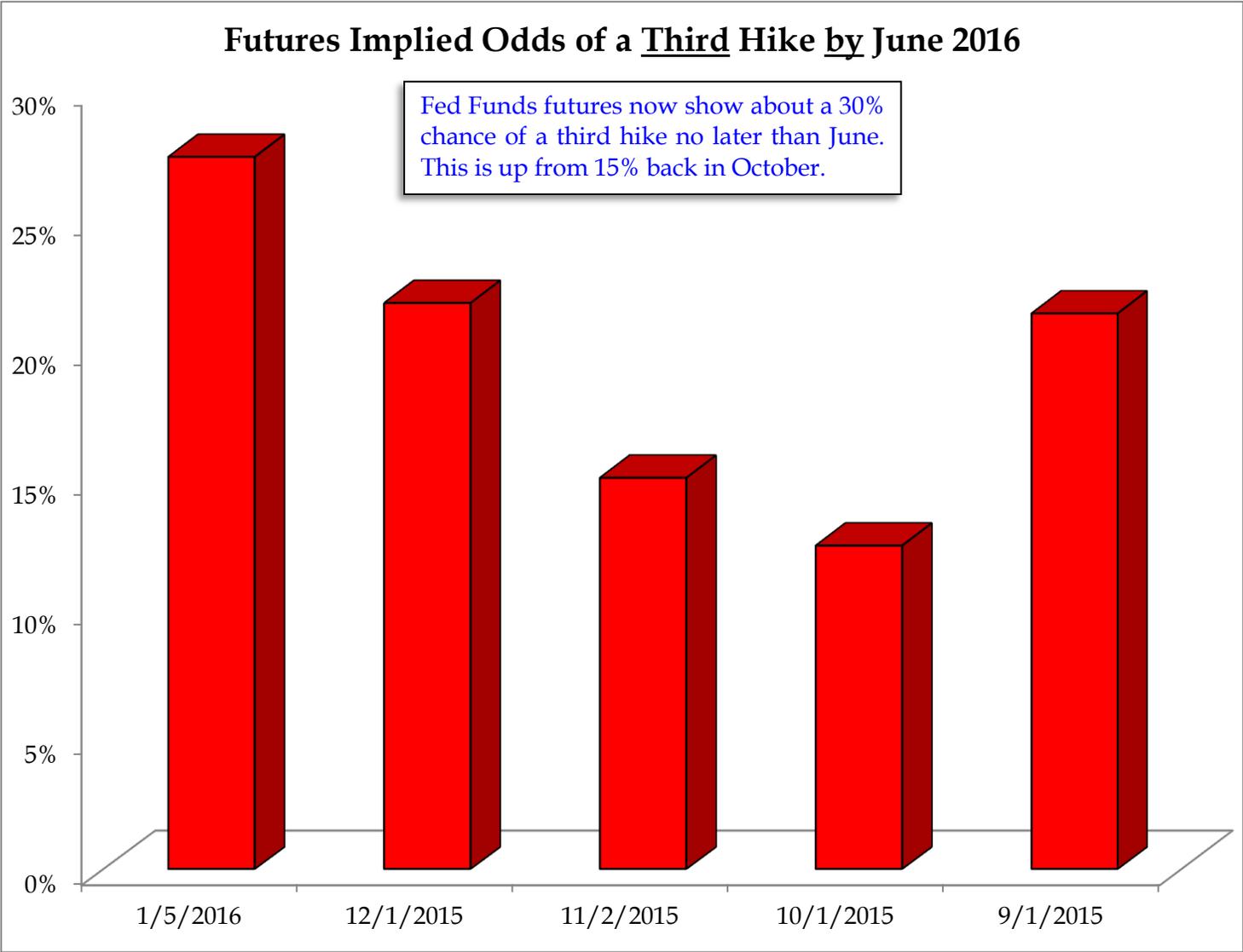
1) [https://www.frbatlanta.org/cqer/research/shadow\\_rate.aspx?panel=1](https://www.frbatlanta.org/cqer/research/shadow_rate.aspx?panel=1)

# FED LANGUAGE KEEPING BOTH MAR AND JUNE LIVE

Fed Funds Futures implied probabilities for a 2<sup>ND</sup> rate hike by March or June are now at, or above 50%, compared to negligible odds just 3 months ago.

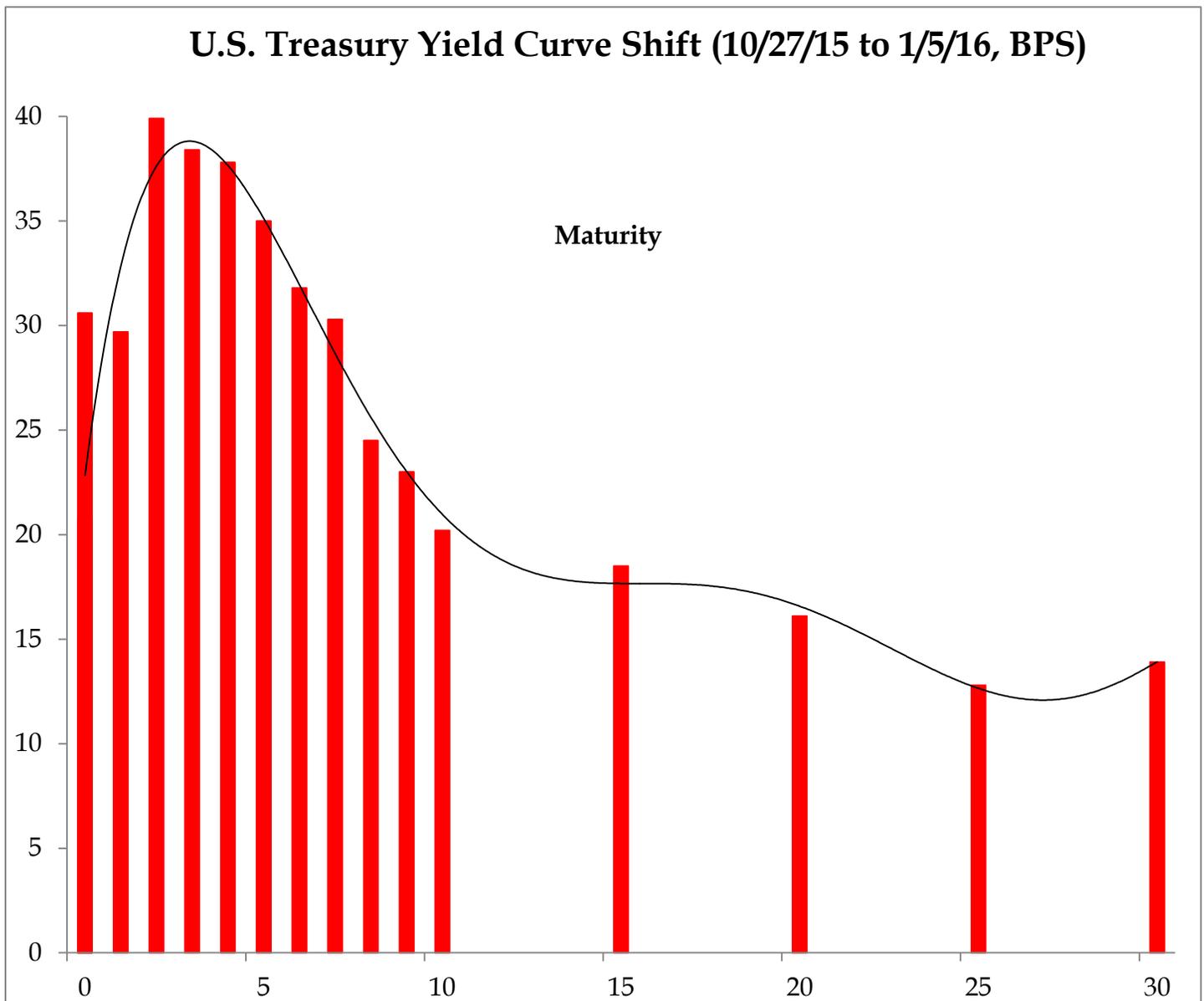


**FED FUNDS FUTURES ALSO NOW SHOW ALMOST  
30% ODDS OF A THIRD HIKE BY JUNE 2016**



## A CURIOUS YIELD CURVE SHIFT HAS RESULTED

The yield curve is more “concave” today than it was 10 weeks ago; that is to say yields are higher in the belly, with less change on the wings. This type of shift in the curve is usually associated with a RISE in uncertainty about the future path of short rates, because it causes term premiums in the belly of the curve to rise.

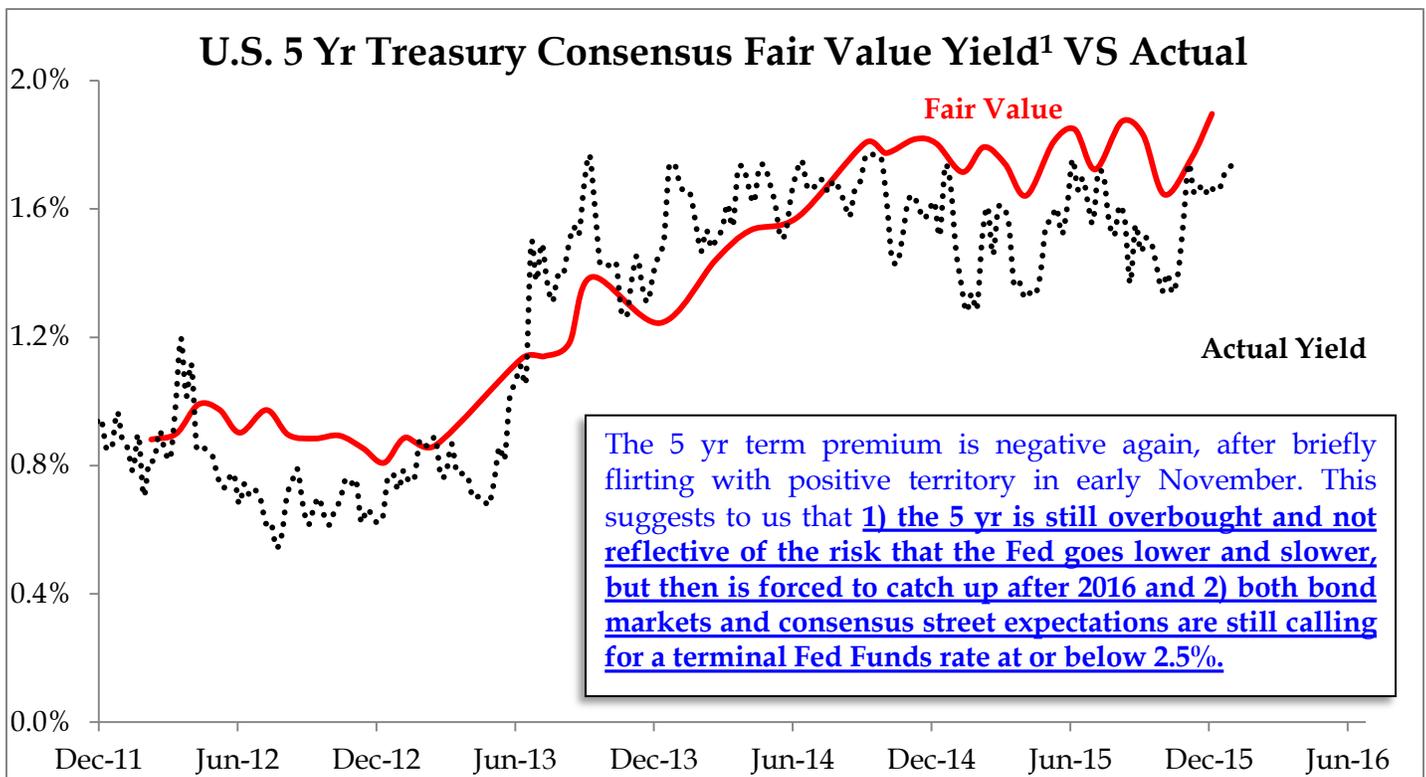
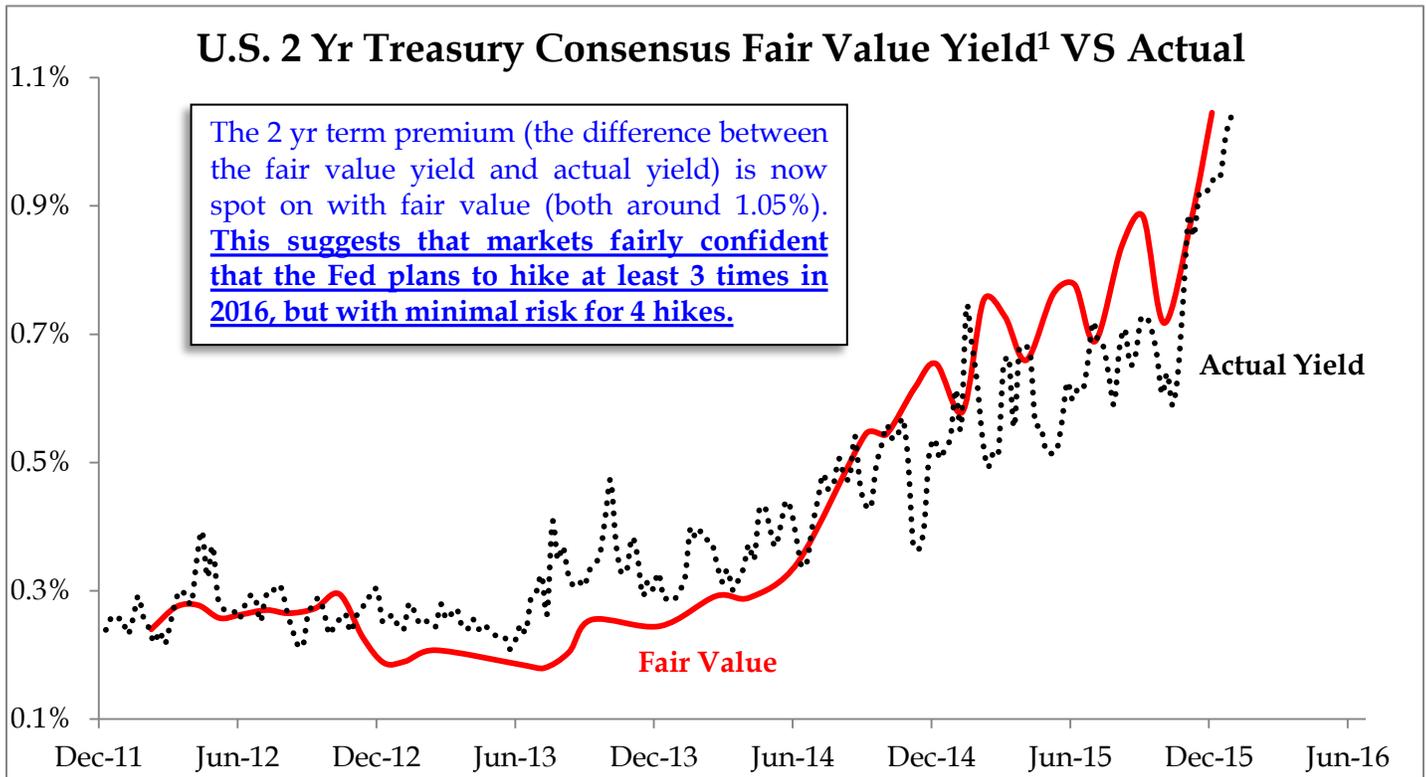


## 2s/5s SPREAD AT YTD LOWS AGAIN, SIGNAL WORRIES THAT FED WILL TIGHTEN TOO EARLY

When it comes to expectations for Fed policy, the 2s/5s spread is a sound indicator. At present, the 2s/5s spread is now below 70 bps, and has continued to creep lower throughout the second half of 2015. Why? One reason for the early move could be that it was coming off of elevated levels and the terminal Fed Funds rate is now expected to plateau closer to 2%, vs 3%+ market expectations not that long ago. But with this explanation in hand, we would still expect to see a 2s/5s spread of about 85 bps today, not 70 bps. The extra 15 bps of compression must then have another meaning, and today it can easily be interpreted as rising odds that the Fed may NOT be one and done. If the Fed still terminates the Fed Funds rate at say 2.5% by early 2018, but gets there quicker by tightening 3 times in 2016 and 4 times in 2017, then the 2s/5s spread could conceivably compress from 85 bps (which is where we were 6 weeks ago), to about 60 (which also happens to be about the long-term average). In contrast, if the Fed backs off from hawkish rhetoric, then the spread should push back towards 80 bps.



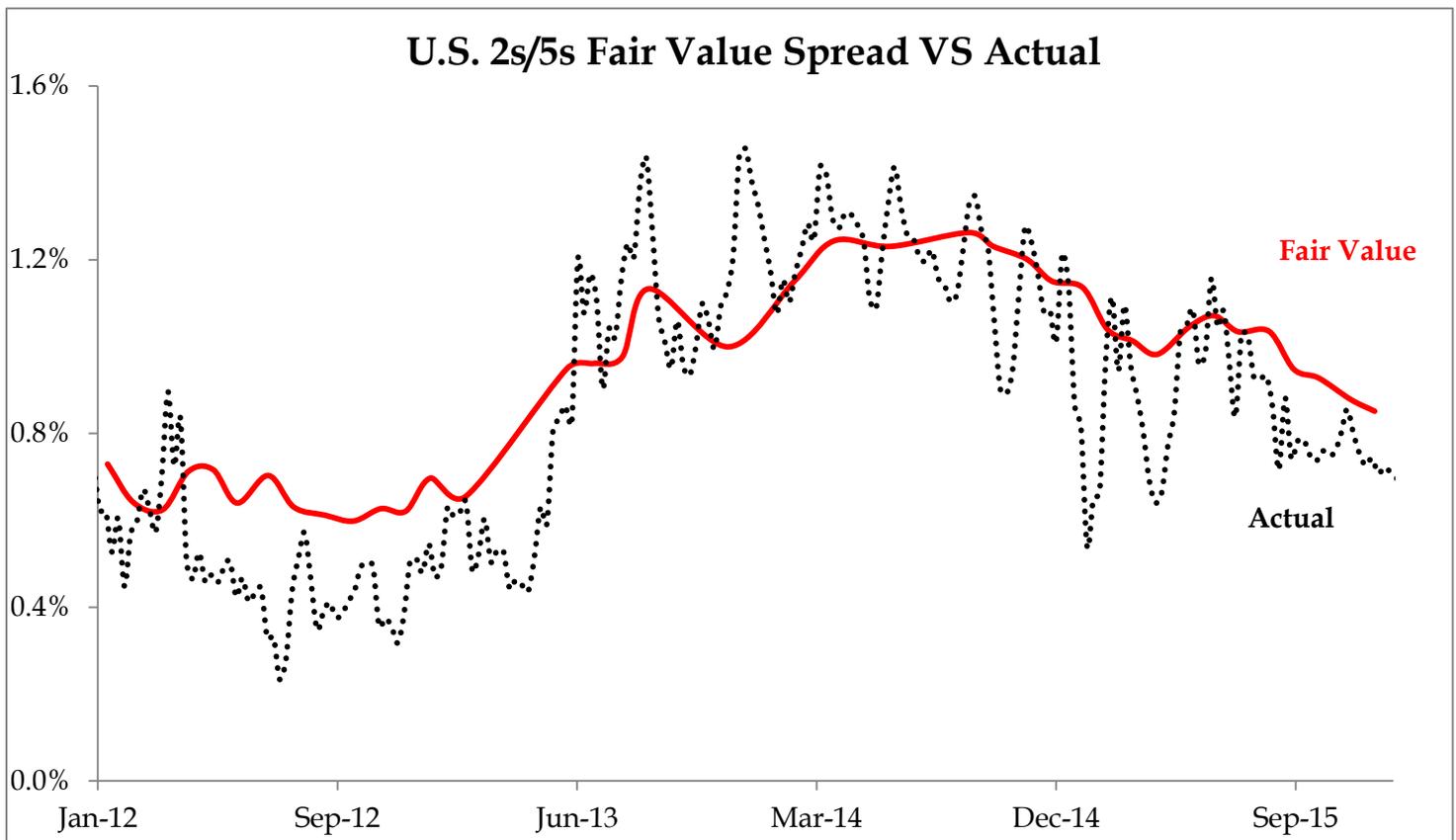
# STRATEGAS' FAIR VALUE YIELD MODEL SHOWS 2 YR SPOT ON WITH FAIR VALUE, 5 YR STILL A BIT LOW



1) The cost of carry fair value is the *expected* cost of buying the 2 year on leverage and borrowing at the Fed Funds rate daily for this term.

## FAIR VALUE YIELD MODEL SUGGESTS 2s/5s SPREAD SHOULD BE WELL NORTH OF 70 BPS

It's worth noting that our fair value model for the 2s/5s spread suggests a proper level of about 85 bps as of the end of 2015. This model, which is calibrated once a month, suggests the spread should have been nearly 90 bps at the start of November. With the 2s/5s spread currently sitting at about 70 bps, we can clearly see the disconnect between actual levels and what would be implied by a less aggressive Fed. **It's quite clear that markets have moved to price risk of an aggressive Fed into the 2 yr note, without similar follow through out towards the 5 yr note or beyond.**



## FLATTER BELLY SHOULDN'T BE ONE OF YELLEN'S NEW YEAR'S RESOLUTIONS

Flatter isn't better in 2016, at least if you're talking about yield curve slope in the belly of the U.S. curve. At present, the FOMC seems undeterred by a 2s/5s spread that's compressed below 70 bps and a 2s/10s spread that's down to a paltry 120 bps. And we don't expect a sudden about face from the Fed now that the curve has flattened towards levels not seen since the last recession. Although we believe that this is a warning sign that the Fed should, and eventually may pay notice too, it seems unlikely that the Central Bank is about to embark on a verbal "operation steepen" any time soon. **Absent a broad campaign from Central Bank leaders to distance themselves from 1H 2016 rate hikes, we expect that the curve will resist further steepening in Q1. Still, with our base case being that the next hike doesn't arrive until June, or later, there's room for some steepening in early Q2, or at least a pause in the pace of flattening.** As we did in Q4, we're showcasing 4 yield curve/economic/Fed scenarios for 2016, with our yield forecast being a weighted average of these 4 scenarios. The decision to use this weighted average method once again for our periodic forecast is a result of the high degree of uncertainty about not only what the Fed is likely to do, but even what it's likely to publicly say in the coming months; for the belly of the U.S. curve, language is just as important as policy decisions, and any verbiage that suggests that March or June are "live meetings" is likely to add flattening pressure on the curve. The 4 scenarios are as follows:

- **Mar Hike with Low Inflation and then Pause until 2017, 15% odds** – Inflation and wage data remain low, but slowly moving higher and Fed chooses to hike in March, but finds economic headwinds are growing faster than inflationary pressures. Curve flattens in Q1.
- **Mar & June Hikes with Inflation Uptick and then Pause until 2017, 10% odds** – Inflation and wage data accelerate modestly in Q1, pushing the Fed to tighten in March and June. Despite the small pickup in inflation, the curve likely flattens further, though long yields rise noticeably and financial conditions tighten further, warranting a pause.
- **June Hike with Low Inflation, 50% odds** – Inflation and wage data remain low, but slowly trending higher and Fed chooses to delay a second hike until June, but chooses to tighten on further reduction in labor market slack. Yield curve steepens slightly from current levels but low inflation keeps back end in check and next step from Fed remains ambiguous. **This is our base case scenario.**

**Persistently Low Inflation with Global Headwinds, no Hike before June, 25% odds** – Inflation and wage data remain in check and global headwinds keep Fed on sidelines indefinitely. Yield curve steepens periodically on dovish Fed talk, but resists a full steepening trend.

## STRATEGAS 2016 & 2017 YIELD FORECASTS: BASE CASE IS NO HIKE BEFORE JUNE, BUT UNCERTAINTY REIGNS

Our updated yield forecasts are weighted averages of the 4 scenarios that follow on the next few pages, with weights corresponding to those assigned on page 1. As we stressed throughout 2014 and 2015, curve shape in 2016 will again ultimately depend on the interplay between wage pressures (very slowly building) and Fed rhetoric (slowly becoming more hawkish). **Our base case scenario (June hike with low inflation and an ambiguous Fed stance from there) would seem to allow for some curve steepening, provided Fed leaders keep their lips from flapping too much between now and the start of summer. But Fed leaders have been insistent that economic strength is likely to broaden and “rate normalization” will proceed in 2016. Because no one is really sure what “rate normalization” means to the Fed, and because inflation and wage pressures are still quite tame, the curve has been predisposed to digest any Fed rhetoric with a steady pace of curve flattening. Until inflation accelerates, or the Fed publicly expresses concern about the pace of growth, the curve is going to be reluctant to steepen, even if the next round of tightening doesn’t come until June or later.**

	<u>2016</u>			
<u>Maturity</u>	<u>1QF</u>	<u>2QF</u>	<u>3QF</u>	<u>4QF</u>
<b>1 Year</b>	0.70%	0.85%	0.95%	1.05%
<b>2 Year</b>	1.15%	1.30%	1.40%	1.50%
<b>5 Year</b>	1.90%	2.00%	2.10%	2.20%
<b>10 Year</b>	2.40%	2.50%	2.60%	2.70%
<b>30 Year</b>	3.15%	3.25%	3.35%	3.45%

F = End of Period Forecast

	<u>2017</u>			
<u>Maturity</u>	<u>1QF</u>	<u>2QF</u>	<u>3QF</u>	<u>4QF</u>
<b>1 Year</b>	1.30%	1.55%	1.80%	2.05%
<b>2 Year</b>	1.75%	2.00%	2.25%	2.50%
<b>5 Year</b>	2.45%	2.60%	2.75%	2.90%
<b>10 Year</b>	2.85%	2.95%	3.00%	3.00%
<b>30 Year</b>	3.60%	3.70%	3.75%	3.75%

F = End of Period Forecast

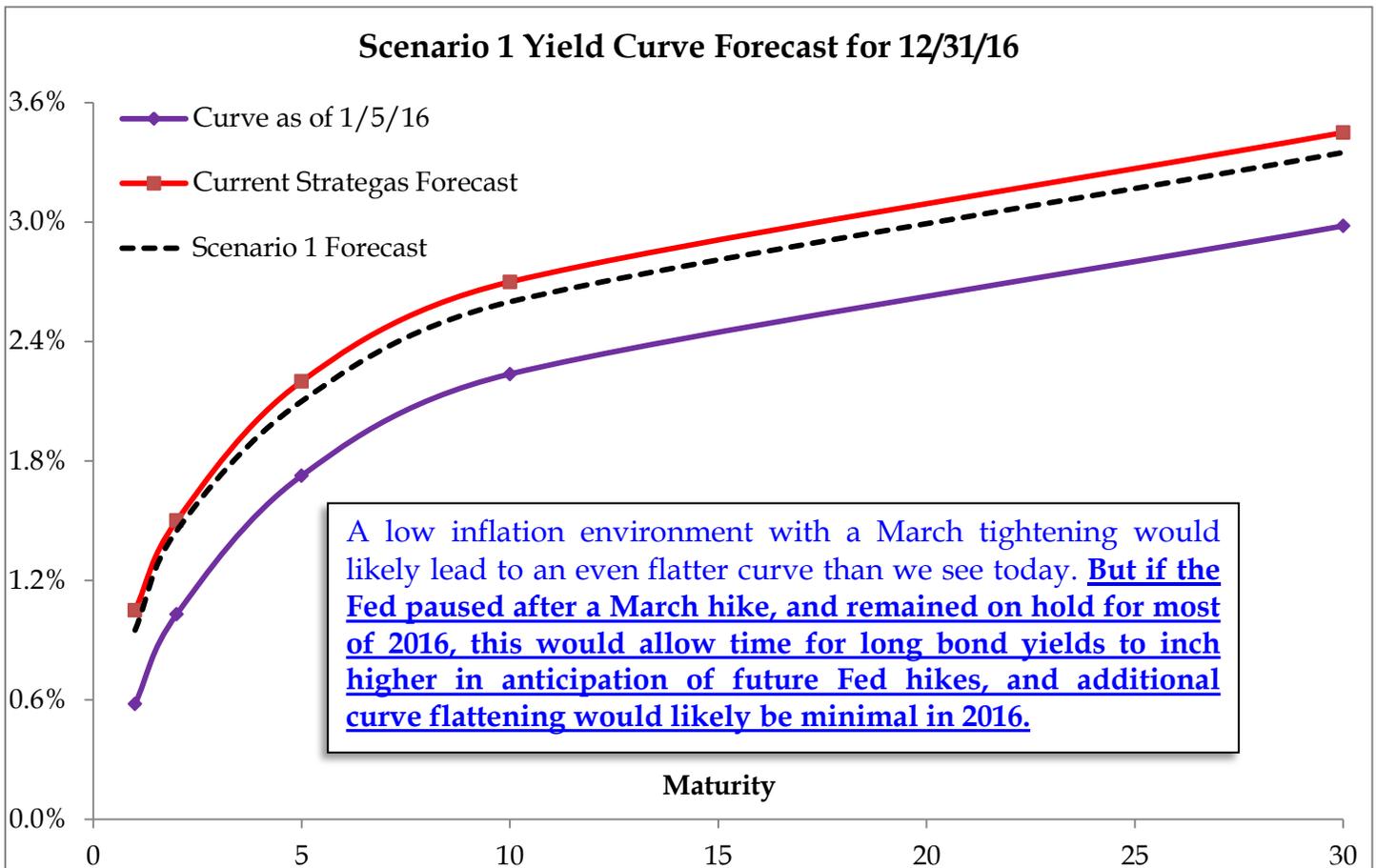
## SCENARIO 1: MAR HIKE, LOW INFLATION, THEN PAUSE UNTIL 2017, 15% ODDS

<u>Maturity</u>	<u>Scenario 1: 2016</u>			
	<u>1QF</u>	<u>2QF</u>	<u>3QF</u>	<u>4QF</u>
<b>1 Year</b>	0.80%	0.85%	0.90%	0.95%
<b>2 Year</b>	1.20%	1.25%	1.35%	1.45%
<b>5 Year</b>	1.85%	1.90%	2.00%	2.10%
<b>10 Year</b>	2.35%	2.40%	2.50%	2.60%
<b>30 Year</b>	3.10%	3.15%	3.25%	3.35%

F = End of Period Forecast

<u>Maturity</u>	<u>Scenario 1: 2017</u>			
	<u>1QF</u>	<u>2QF</u>	<u>3QF</u>	<u>4QF</u>
<b>1 Year</b>	1.20%	1.45%	1.70%	1.95%
<b>2 Year</b>	1.70%	1.95%	2.20%	2.45%
<b>5 Year</b>	2.30%	2.45%	2.60%	2.75%
<b>10 Year</b>	2.75%	2.85%	2.90%	2.90%
<b>30 Year</b>	3.50%	3.60%	3.65%	3.60%

F = End of Period Forecast



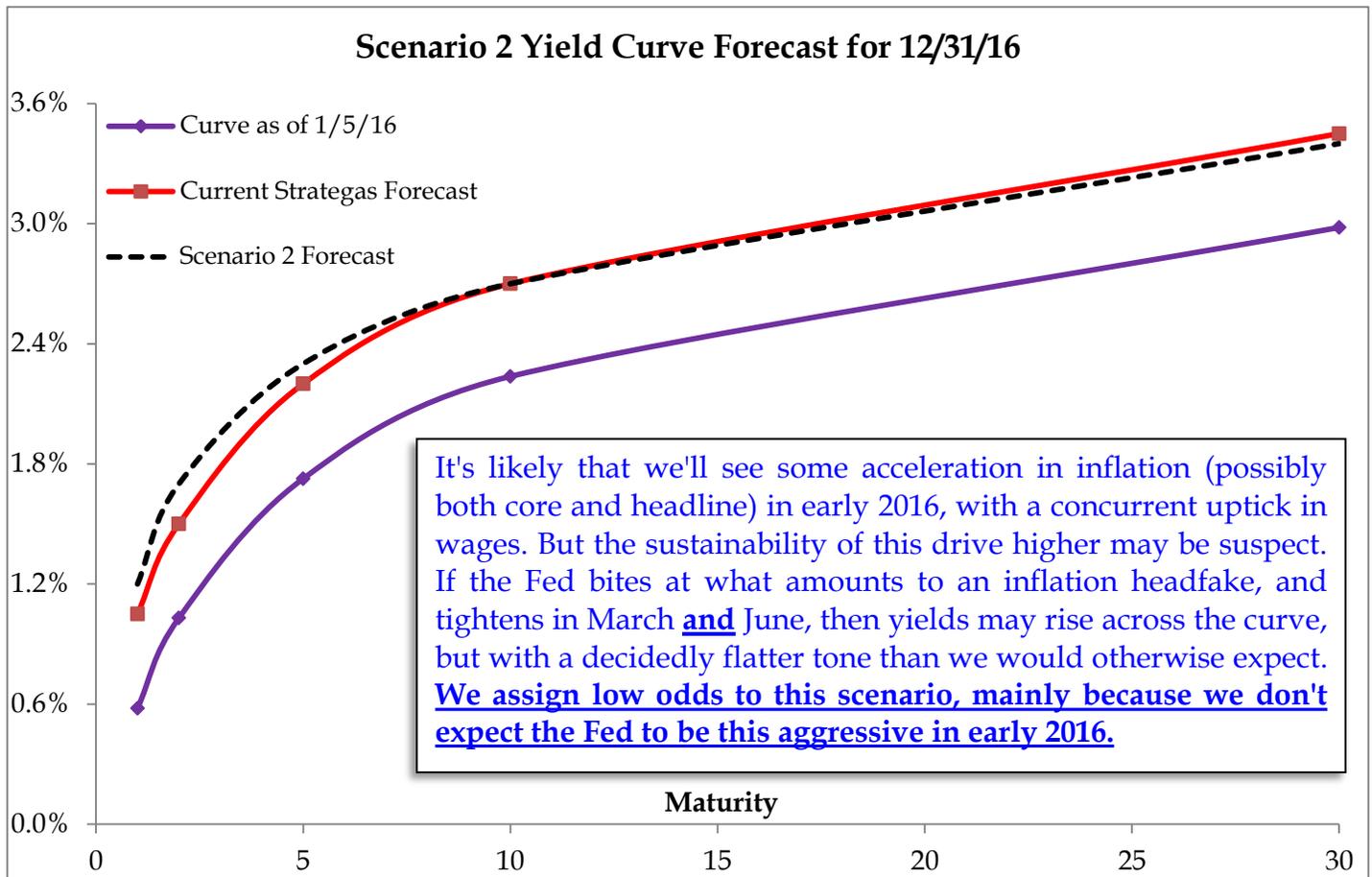
## SCENARIO 2: MAR & JUN HIKES, INFLATION UPTICK, BUT THEN A PAUSE UNTIL 2017, 10% ODDS

<u>Maturity</u>	<u>Scenario 2: 2016</u>			
	<u>1QF</u>	<u>2QF</u>	<u>3QF</u>	<u>4QF</u>
<b>1 Year</b>	0.85%	1.05%	1.10%	1.20%
<b>2 Year</b>	1.30%	1.50%	1.60%	1.70%
<b>5 Year</b>	1.95%	2.10%	2.20%	2.30%
<b>10 Year</b>	2.45%	2.55%	2.60%	2.70%
<b>30 Year</b>	3.20%	3.30%	3.35%	3.40%

F = End of Period Forecast

<u>Maturity</u>	<u>Scenario 2: 2017</u>			
	<u>1QF</u>	<u>2QF</u>	<u>3QF</u>	<u>4QF</u>
<b>1 Year</b>	1.45%	1.70%	1.95%	2.20%
<b>2 Year</b>	1.95%	2.20%	2.45%	2.70%
<b>5 Year</b>	2.50%	2.65%	2.80%	2.95%
<b>10 Year</b>	2.85%	2.95%	3.00%	3.00%
<b>30 Year</b>	3.55%	3.65%	3.70%	3.70%

F = End of Period Forecast



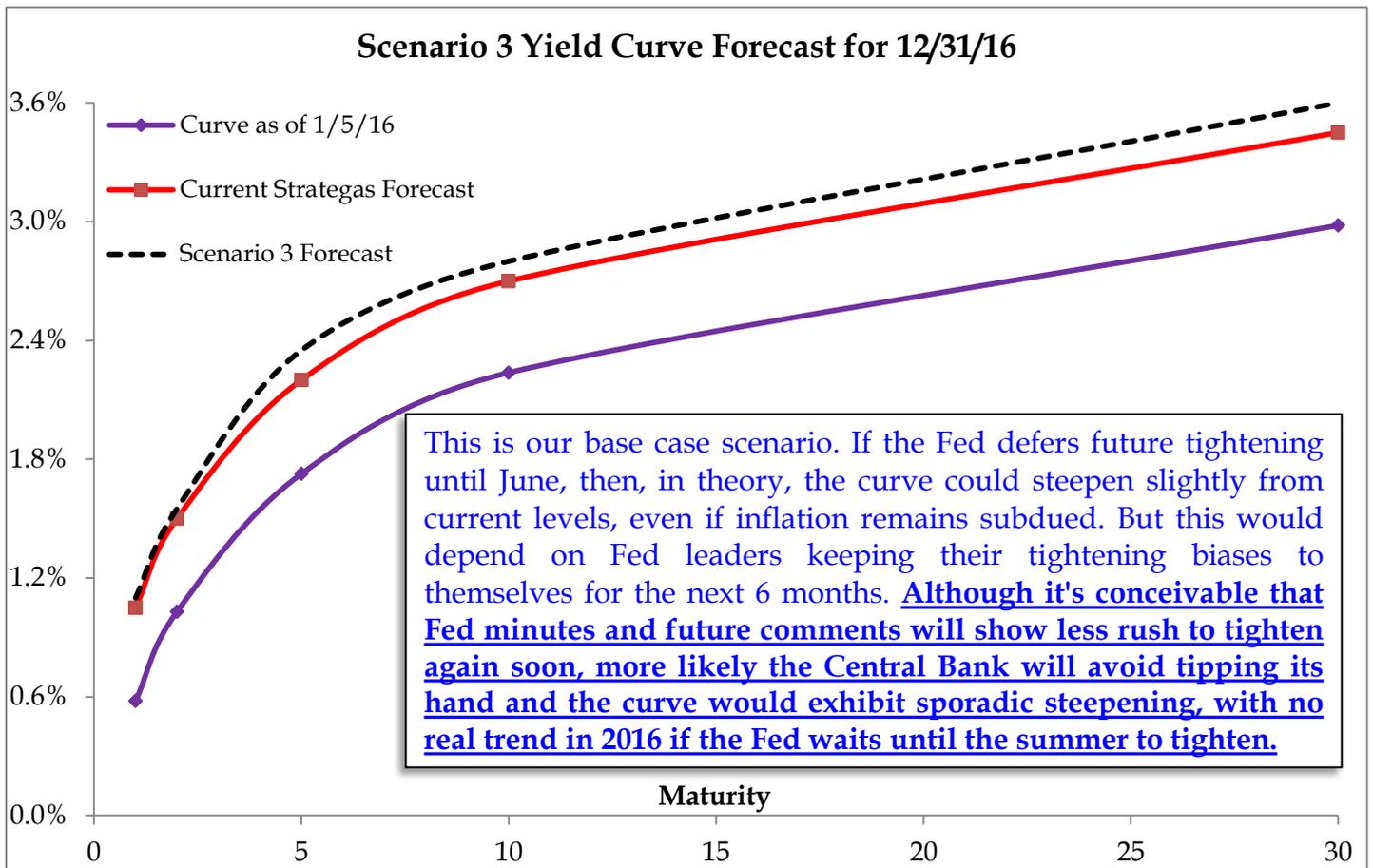
## SCENARIO 3: JUNE HIKE, LOW INFLATION, AMBIGUOUS FED, 50% ODDS

<u>Maturity</u>	<u>Scenario 3: 2016</u>			
	<u>1QF</u>	<u>2QF</u>	<u>3QF</u>	<u>4QF</u>
<b>1 Year</b>	0.65%	0.85%	0.95%	1.10%
<b>2 Year</b>	1.10%	1.30%	1.40%	1.55%
<b>5 Year</b>	1.95%	2.15%	2.25%	2.35%
<b>10 Year</b>	2.45%	2.60%	2.70%	2.80%
<b>30 Year</b>	3.25%	3.40%	3.50%	3.60%

F = End of Period Forecast

<u>Maturity</u>	<u>Scenario 3: 2017</u>			
	<u>1QF</u>	<u>2QF</u>	<u>3QF</u>	<u>4QF</u>
<b>1 Year</b>	1.35%	1.60%	1.85%	2.10%
<b>2 Year</b>	1.80%	2.05%	2.30%	2.55%
<b>5 Year</b>	2.55%	2.70%	2.85%	3.00%
<b>10 Year</b>	2.95%	3.05%	3.10%	3.10%
<b>30 Year</b>	3.75%	3.85%	3.90%	3.90%

F = End of Period Forecast



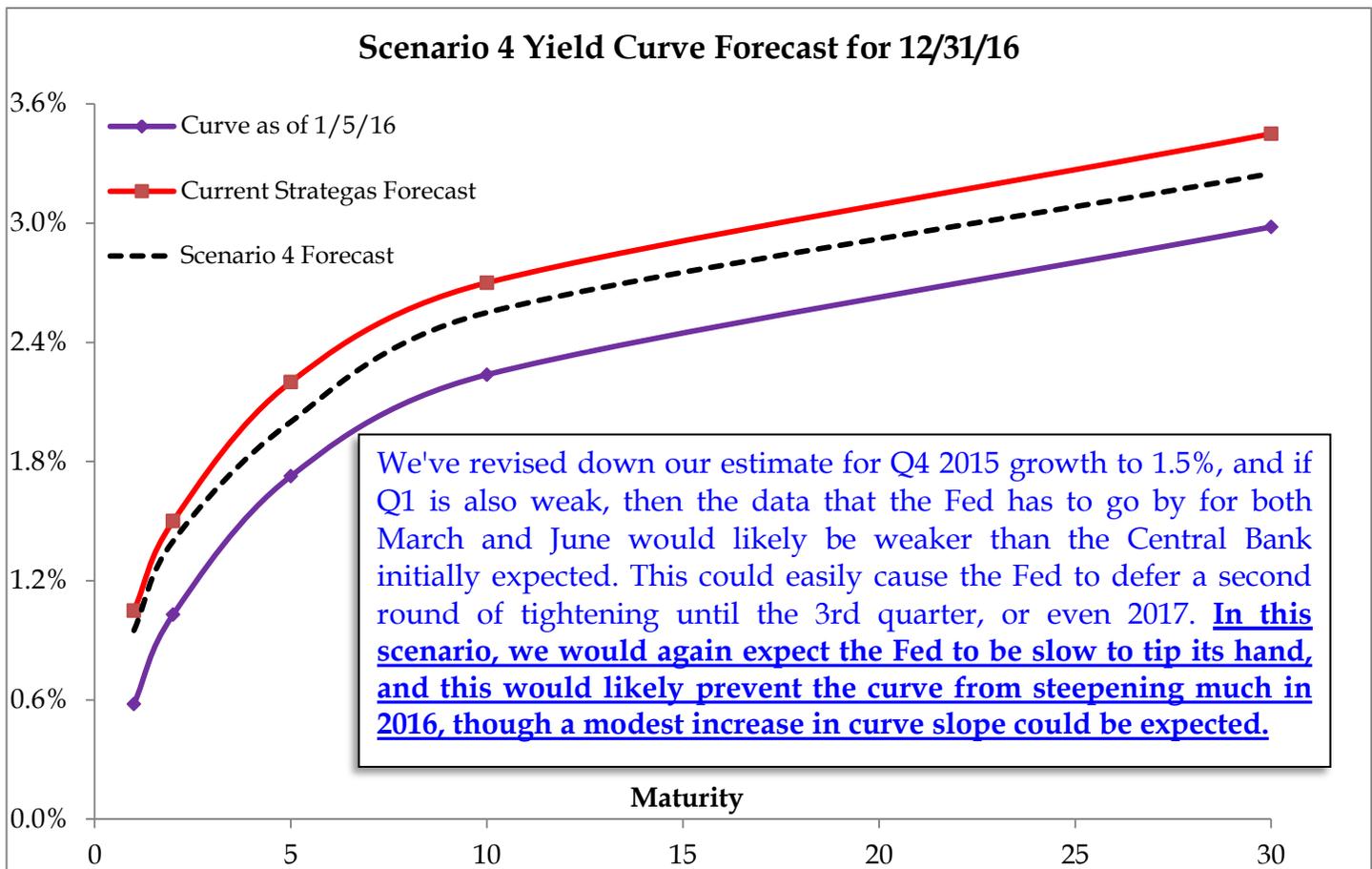
# SCENARIO 4: PERSISTENTLY LOW INFLATION, GLOBAL HEADWINDS, NO HIKE BEFORE JUNE, 25% ODDS

<u>Maturity</u>	<u>Scenario 4: 2016</u>			
	<u>1QF</u>	<u>2QF</u>	<u>3QF</u>	<u>4QF</u>
<b>1 Year</b>	0.65%	0.70%	0.80%	0.95%
<b>2 Year</b>	1.10%	1.15%	1.25%	1.40%
<b>5 Year</b>	1.75%	1.80%	1.90%	2.00%
<b>10 Year</b>	2.30%	2.45%	2.50%	2.55%
<b>30 Year</b>	3.00%	3.15%	3.20%	3.25%

F = End of Period Forecast

<u>Maturity</u>	<u>Scenario 4: 2017</u>			
	<u>1QF</u>	<u>2QF</u>	<u>3QF</u>	<u>4QF</u>
<b>1 Year</b>	1.20%	1.45%	1.70%	1.95%
<b>2 Year</b>	1.65%	1.90%	2.15%	2.40%
<b>5 Year</b>	2.25%	2.40%	2.55%	2.70%
<b>10 Year</b>	2.75%	2.85%	2.90%	2.90%
<b>30 Year</b>	3.45%	3.55%	3.60%	3.60%

F = End of Period Forecast



## **FED'S NEXT STEP(S) LOOK MORE CLOUDED THAN EVER**

If we thought the decision to tighten once in 2015 was clouded and filled with financial market potholes, the decision to tighten a second, third, or fourth time will likely prove even more volatility inducing. What's more, the Fed has once again muddied the waters on portfolio runoff, by suggesting at the last meeting that runoff is unlikely to commence in 2016. This leaves balance sheet normalization (a key yield curve steepening event), ambiguously off in the future, while near-term rate hikes are coin tosses. As such, the Fed's exit plan has become needlessly clouded when compared to how tepid the global (and U.S.) expansion is. So what's our base case exit plan now?

### **A MODIFIED TIGHTEN AND PAUSE FED EXIT PLAN**

**Stage 1: Begin to Taper Purchases;**

**Timing: Done**

**Stage 2: Halt Purchases Entirely;**

**Timing: Done**

**Stage 3: Raise Short Rates/Increase Interest on Excess Reserves;**

**Timing: Done**

**Stage 4: Pause Tightening and Communicate a Neutral Stance;**

**Timing: Early 2016, with neutral communication in coming months.**

**Stage 5: Begin Rate Hikes Again**

**Timing: Late Q2 or early Q3 2016 with hawkish tone throughout the period**

**Stage 6: Continue Tightening and Discuss Portfolio Runoff**

**Timing: Early to Middle of 2017, with communication on runoff beginning in early 2017**

**Stage 7: Begin Portfolio Runoff (Likely both MBS and TSY);**

**Timing: Middle of 2017, with communication throughout late 2017 pace of runoff**

**Stage 7: Asset Sales, if Needed;**

**Timing: Early to mid-2018 with potential sales of between \$0 and \$1 trillion.**

# SECTOR STRATEGY: Q4 2015 STRATEGAS CORE PORTFOLIO

## Strategas Core Model Portfolio Highlights:

- 1) Portfolio duration of about 4.25 years (1.35 years short vs the Agg) and short convexity versus the Agg.
- 2) About 40 bps yield advantage vs Agg.
- 3) Underweight Treasuries. Neutral MBS and agencies. Overweight investment grade U.S. corps.
- 4) Intermediate maturity concentration in U.S. investment grade corporate bucket.
- 5) Allocations to the following out of index sectors: short duration BB U.S. HY, LOC Mexico, LOC short duration Brazil, U.S. convertibles, U.S. bank loans, and AAA CLO tranches.
- 6) Neutral ABS and CMBS, with some exposure to RMBS. We prefer to take structured credit risk in high quality CLOs. Would consider adding to CMBS weighting on further spread widening in Q4.

## Q4 Updates:

- 7) Decreased Treasury exposure to 20.0% and increased MBS exposure to 28.0%.
- 8) Maintained HY at 2.0% (BB only) and increased IG corporates to 33.0%
- 9) Kept Rising Rate portfolio and EMD at 5.0%

	% of Agg	Over/Under	Strategas Wgt	OAS	Duration	Convexity	YTM
<b>U.S. Aggregate</b>	-----	-----	-----	<b>0.59%</b>	<b>5.60</b>	<b>0.01</b>	<b>2.31%</b>
U.S. Treasury	36.49%	Under	20.00%	0.00%	5.83	0.78	1.36%
Agencies	4.46%	Neutral	4.50%	0.17%	3.49	-0.15	1.32%
Corporate	24.01%	Over	33.00%	1.44%	4.40	0.27	2.78%
CMBS	1.89%	Neutral	2.00%	1.08%	4.82	0.33	2.45%
ABS	0.57%	Neutral	0.50%	0.69%	2.42	0.05	1.47%
U.S. MBS	28.36%	Neutral	28.00%	0.31%	4.20	-1.96	2.61%
U.S. HY	0.00%	Over	2.00%	3.80%	1.84	-0.02	4.84%
Rising Rate Portfolio	0.00%	Over	5.00%	4.84%	1.19	0.00	4.34%
EMD	0.00%	Over	5.00%	6.56%	2.01	0.06	7.28%
<b>Strategas Core</b>	-----	-----	<b>100%</b>	<b>1.24%</b>	<b>4.25</b>	<b>-0.30</b>	<b>2.71%</b>

# SECTOR STRATEGY: 2015 Q4 GO ANYWHERE PORTFOLIO

## Strategas Go Anywhere Model Portfolio Highlights:

- 1) Portfolio duration of about 3.85 years (0.41 years short vs Core) and short convexity versus Core.
- 2) About 40 bps yield advantage vs the Core strategy (80 vs Agg).
- 3) Underweight Treasuries vs Core. Overweight investment grade U.S corps and neutral agencies and agency MBS vs Core.
- 4) Intermediate maturity concentration in U.S. investment grade corporate bucket.
- 5) Higher allocations to the following out of index sectors: short duration BB U.S. HY, LOC Mexico, LOC short duration Brazil, U.S. convertibles, U.S. bank loans, and AAA CLO tranches.
- 6) Neutral ABS and CMBS, with some exposure to RMBS. We prefer to take structured credit risk in high quality CLOs. Would consider adding to CMBS weighting on further spread widening in Q4.

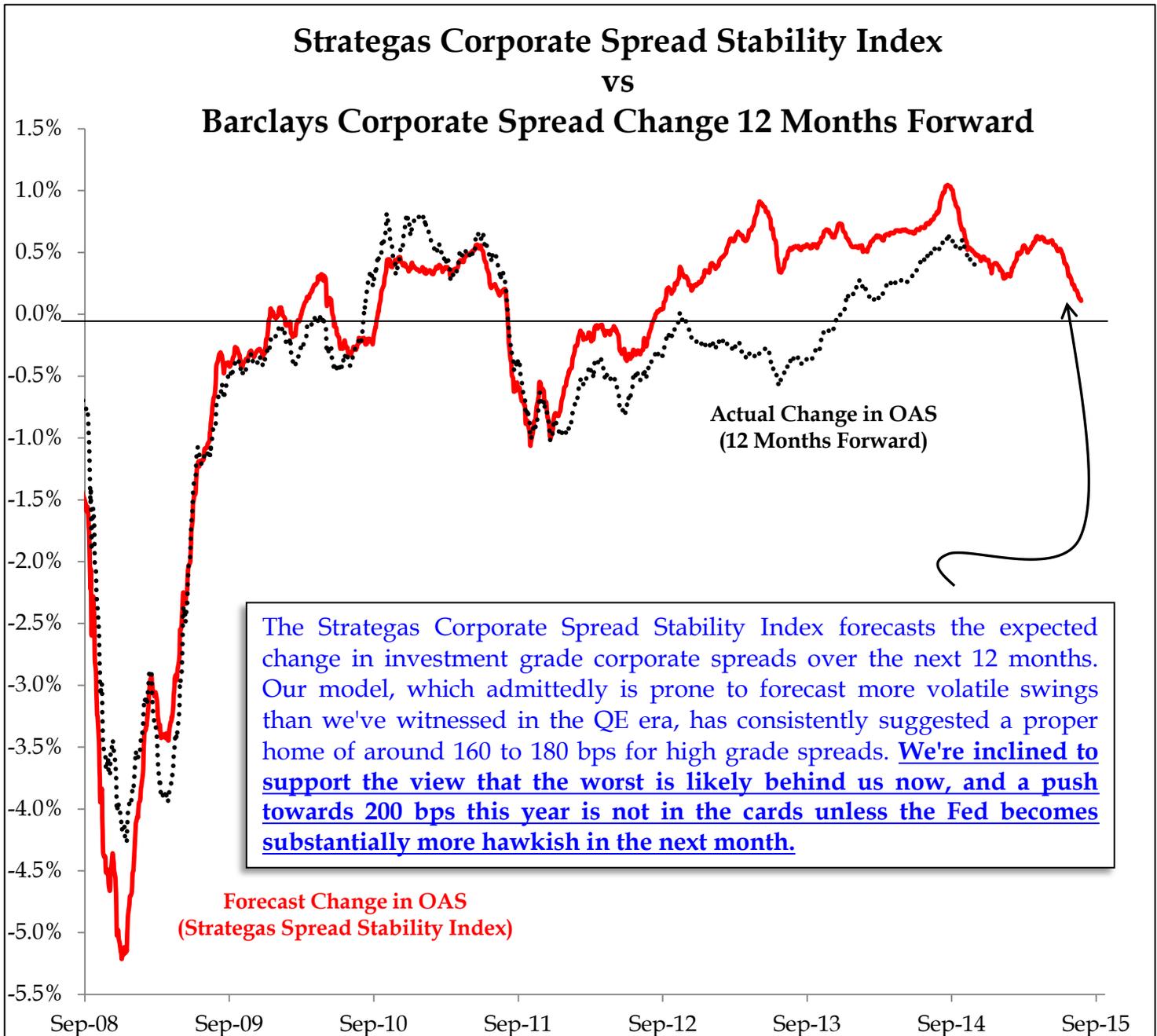
## Q4 Updates:

- 7) Increased MBS exposure to 28.0%.
- 8) Kept IG corporates at 34.0%.
- 9) Reduced Treasury allocation to 9.5%

	% of Model Core	Over/Under	Strategas Wgt	OAS	Duration	Convexity	YTM
<b>Strategas Core</b>	----	----	----	1.24%	4.25	-0.30	2.71%
U.S. Treasury	20.00%	Under	9.50%	0.00%	5.83	0.78	1.36%
Agencies	4.50%	Neutral	4.50%	0.17%	3.49	-0.15	1.32%
Corporate	33.00%	Over	34.00%	1.44%	4.40	0.27	2.78%
CMBS	2.00%	Neutral	2.00%	1.08%	4.82	0.33	2.45%
ABS	0.50%	Neutral	0.50%	0.69%	2.42	0.05	1.47%
U.S. MBS	28.00%	Neutral	28.00%	0.31%	4.20	-1.96	2.61%
U.S. HY	2.00%	Over	5.50%	3.80%	1.84	-0.02	4.84%
Rising Rate Portfolio	5.00%	Over	8.00%	4.84%	1.19	0.00	4.34%
EMD	5.00%	Over	8.00%	6.56%	2.01	0.06	7.28%
<b>Strategas Go Anywhere</b>	----	----	100%	1.73%	3.85	-0.38	3.12%

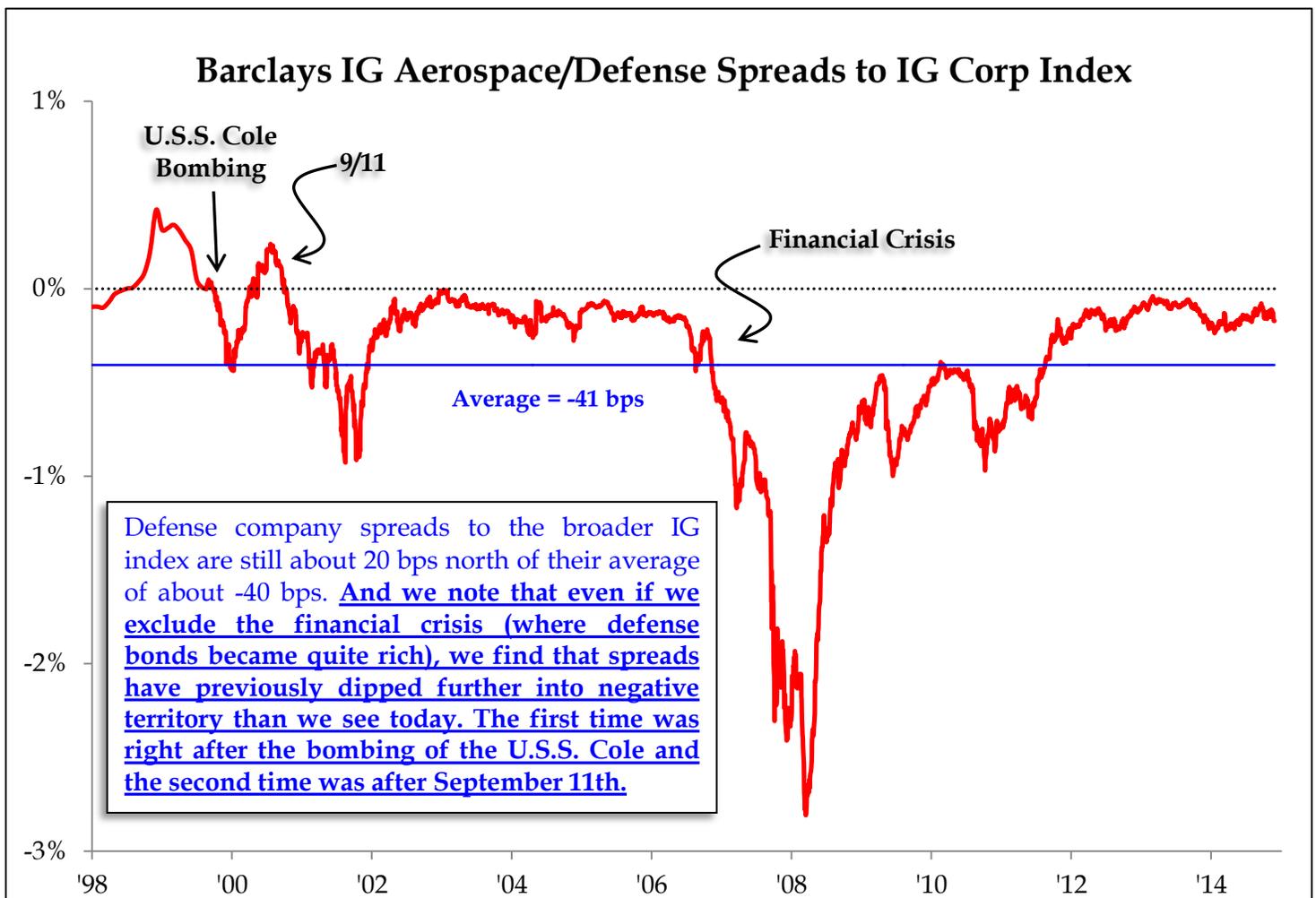
# PRESSURE ON IG SPREADS SEEMS TO BE STABILIZING

Our mean reversion-based model of the expected trajectory of investment grade corporate spreads has consistently suggested that the proper future home for IG corp spreads was likely to be around 160 to 180 bps. With investment grade spreads now around 160 bps, our model is suggesting a more peaceful drift higher from here, with the worst behind us.



## DEFENSE COMPANY BONDS ARE RALLYING IN Q4, MAY BE A CHEAPER “SAFE HAVEN” AS CYCLE MATURES

Every now and then, a quality sector may begin to look a bit too cheap relative to other sectors. This may be the case now as aerospace & defense has cheapened slightly YTD, while consumer products and some other consumer sectors have richened in 2015. And as we noted in our recent [Policy](#) and [Investment Strategy Reports](#), defense spending is likely to rise in light of the terrorist attacks in Paris, potentially turning this sector into a quality AND growth sector for the remainder of the business cycle. We expect to see the defense sector continue to richen for the remainder of 2015 and into early 2016, albeit gradually. This argues for some modest rebalancing in investment grade corporates away from some of the outperforming consumer names and into defense related names. At present, defense names are spread at about 25 bps north of the consumer products sector, which is about 13 bps cheaper versus the start of the year, though it’s about 8 bps tighter on the quarter, suggesting that there’s still some room for defense to compress further.



## IG CORPORATE CREDIT HEAT MAP SHOWS AEROSPACE/DEFENSE GETTING A BID IN Q4

Reading from left to right, the table below shows a “heat map” for 22 IG corporate sectors, with those sectors (rows) showing the most widening vs other sectors (columns) in dark blue while those sectors with the largest tightening are in dark red. **Defense has tightened by about 3 bps QTD vs the broader corporate index and about 8 bps vs consumer products. Meanwhile, consumer products have given up about 5 bps vs the corp index this quarter.** Also of interest is that, within energy, oil field services has tightened the most in Q4, while midstream has actually widened the most. Metals & mining are tighter on the quarter, as are airlines, telecom, and most financials. Restaurants, retail, lodging, railroads, and chemicals were all wider in Q4.

IG Corp Relative OAS Change (QTD, as of 11/20)																							
	Corp Ind	Chem	Met /Min	Aero /Def	Tele	Auto	Lodg	Retail	Rest	Cons Prods	Food & Bev	Hth Care	Phrm	Oil Svcs	Refin	Mid	Tech	Air	RR	BNKS	Brk /AM	Life Ins	P&C Ins
<b>Corp Index</b>	<b>0</b>	<b>-10</b>	<b>15</b>	<b>3</b>	<b>12</b>	<b>1</b>	<b>-3</b>	<b>-8</b>	<b>-7</b>	<b>-5</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>81</b>	<b>1</b>	<b>-36</b>	<b>-13</b>	<b>16</b>	<b>-5</b>	<b>4</b>	<b>1</b>	<b>-3</b>	<b>1</b>
Chem	10	0	24	12	21	11	7	2	2	5	10	11	13	90	10	-26	-3	26	4	14	10	6	10
Met & Min	-15	-24	0	-12	-3	-13	-17	-22	-22	-19	-14	-13	-11	66	-14	-51	-27	1	-20	-10	-14	-18	-14
<b>Aero/Def</b>	<b>-3</b>	<b>-12</b>	<b>12</b>	<b>0</b>	<b>9</b>	<b>-2</b>	<b>-6</b>	<b>-10</b>	<b>-10</b>	<b>-8</b>	<b>-2</b>	<b>-2</b>	<b>1</b>	<b>78</b>	<b>-2</b>	<b>-39</b>	<b>-15</b>	<b>13</b>	<b>-8</b>	<b>2</b>	<b>-2</b>	<b>-6</b>	<b>-2</b>
Telecom	-12	-21	3	-9	0	-11	-15	-19	-19	-17	-11	-11	-8	69	-11	-48	-24	4	-17	-7	-11	-15	-11
Autos	-1	-11	13	2	11	0	-4	-9	-9	-6	0	0	2	79	-1	-37	-14	15	-7	3	-1	-5	0
Lodging	3	-7	17	6	15	4	0	-5	-5	-2	4	4	6	83	3	-33	-10	19	-2	7	3	-1	4
Retail	8	-2	22	10	19	9	5	0	0	3	8	9	11	88	8	-29	-5	24	2	12	8	4	8
Restaurants	7	-2	22	10	19	9	5	0	0	3	8	8	11	88	8	-29	-5	23	2	12	8	4	8
<b>Cons Prods</b>	<b>5</b>	<b>-5</b>	<b>19</b>	<b>8</b>	<b>17</b>	<b>6</b>	<b>2</b>	<b>-3</b>	<b>-3</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>8</b>	<b>85</b>	<b>5</b>	<b>-31</b>	<b>-8</b>	<b>21</b>	<b>-1</b>	<b>9</b>	<b>5</b>	<b>1</b>	<b>6</b>
Food/Bev	-1	-10	14	2	11	0	-4	-8	-8	-6	0	0	3	80	0	-37	-14	15	-6	4	0	-4	0
Health Care	-1	-11	13	2	11	0	-4	-9	-8	-6	0	0	2	80	-1	-37	-14	15	-6	3	0	-4	0
Pharma	-3	-13	11	-1	8	-2	-6	-11	-11	-8	-3	-2	0	77	-3	-40	-16	12	-9	1	-3	-7	-3
Oil Field Svcs	-81	-90	-66	-78	-69	-79	-83	-88	-88	-85	-80	-80	-77	0	-80	-117	-93	-65	-86	-76	-80	-84	-80
Refiners	-1	-10	14	2	11	1	-3	-8	-8	-5	0	1	3	80	0	-37	-13	15	-6	4	0	-4	0
Midstream	36	26	51	39	48	37	33	29	29	31	37	37	40	117	37	0	23	52	31	40	37	33	37
Tech	13	3	27	15	24	14	10	5	5	8	14	14	16	93	13	-23	0	29	7	17	13	9	13
Airlines	-16	-26	-1	-13	-4	-15	-19	-24	-23	-21	-15	-15	-12	65	-15	-52	-29	0	-21	-12	-15	-19	-15
Railroads	5	-4	20	8	17	7	2	-2	-2	1	6	6	9	86	6	-31	-7	21	0	10	6	2	6
Banks	-4	-14	10	-2	7	-3	-7	-12	-12	-9	-4	-3	-1	76	-4	-40	-17	12	-10	0	-4	-8	-4
Brk/AM	-1	-10	14	2	11	1	-3	-8	-8	-5	0	0	3	80	0	-37	-13	15	-6	4	0	-4	0
Life Ins	3	-6	18	6	15	5	1	-4	-4	-1	4	4	7	84	4	-33	-9	19	-2	8	4	0	4
P&C Ins	-1	-10	14	2	11	0	-4	-8	-8	-6	0	0	3	80	0	-37	-13	15	-6	4	0	-4	10

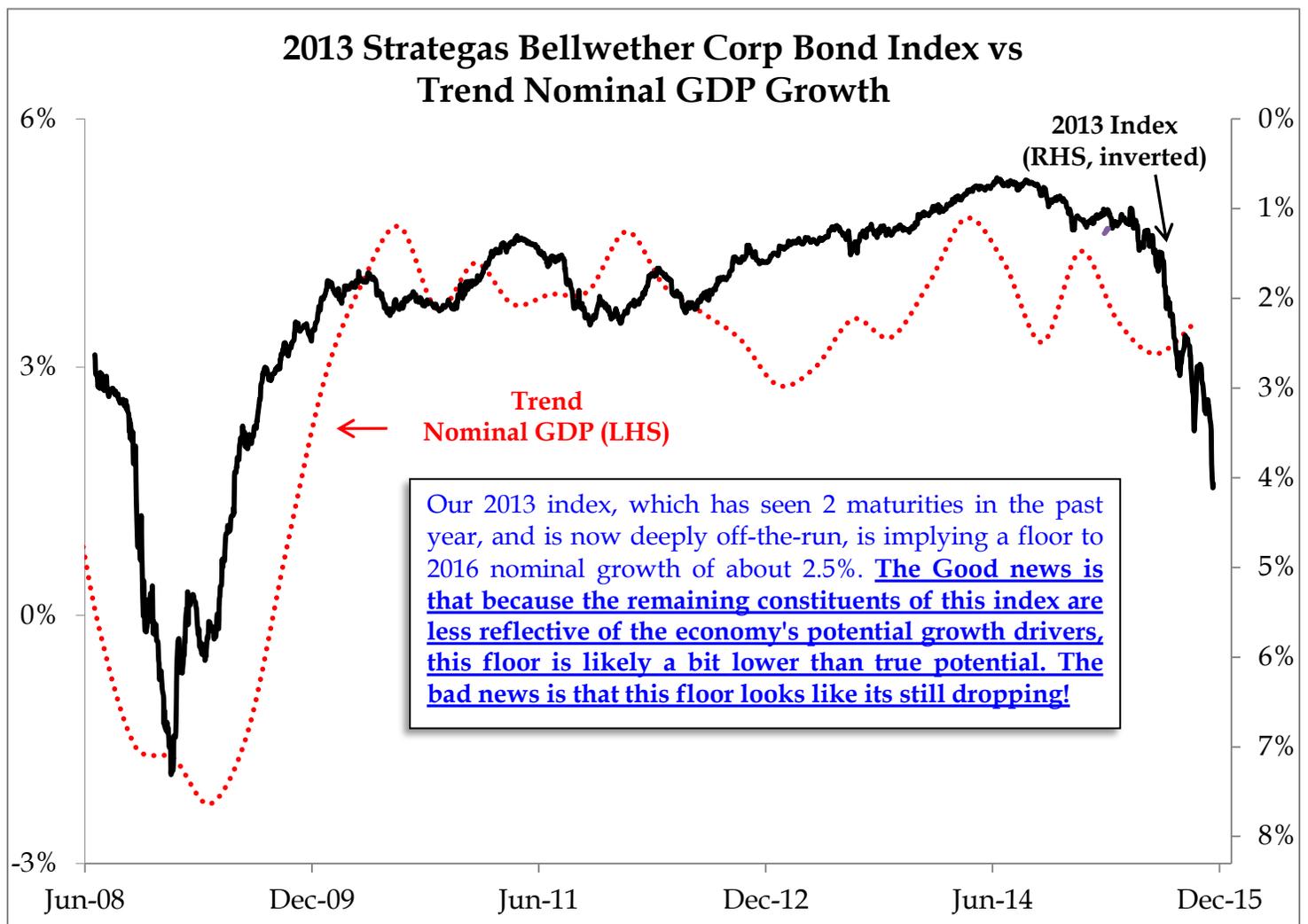
# DEFENSE IS ABOUT 1 BPS WIDER YTD, WITH CONSUMER SECTORS AND FINANCIALS STEADY OUTPERFORMERS

YTD, defense is still 1 bps wider to the broader index and about 13 bps wider to consumer products, suggesting that any potential uptick in defense spending has yet to fully reverse the underperformance of the defense space in 2015. Though we're still bullish on the U.S. consumer, we nonetheless argue that this is a chance to take some profit in a few of these outperforming consumer related sectors, and rotate into the higher yielding, though still high quality defense space.

IG Corp Relative OAS Change (YTD, as of 11/20)																							
	Corp Ind	Chem	Met /Min	Aero /Def	Tele	Auto	Lodg	Retail	Rest	Cons Prods	Food & Bev	Hth Care	Phrm	Oil Svcs	Refin	Mid	Tech	Air	RR	BNKS	Brk /AM	Life Ins	P&C Ins
<b>Corp Index</b>	<b>0</b>	<b>-13</b>	<b>-119</b>	<b>-1</b>	<b>5</b>	<b>-21</b>	<b>-15</b>	<b>5</b>	<b>7</b>	<b>12</b>	<b>3</b>	<b>8</b>	<b>3</b>	<b>22</b>	<b>13</b>	<b>-96</b>	<b>-6</b>	<b>28</b>	<b>-4</b>	<b>13</b>	<b>17</b>	<b>6</b>	<b>9</b>
Chem	13	0	-106	12	18	-8	-2	18	20	25	16	21	16	35	26	-83	7	41	9	26	30	19	22
Met & Min	119	106	0	118	124	99	105	124	126	131	123	127	122	141	132	24	113	147	115	132	136	126	129
<b>Aero/Def</b>	<b>1</b>	<b>-12</b>	<b>-118</b>	<b>0</b>	<b>6</b>	<b>-19</b>	<b>-13</b>	<b>6</b>	<b>8</b>	<b>13</b>	<b>5</b>	<b>9</b>	<b>4</b>	<b>24</b>	<b>14</b>	<b>-94</b>	<b>-5</b>	<b>30</b>	<b>-3</b>	<b>15</b>	<b>18</b>	<b>8</b>	<b>11</b>
Telecom	-5	-18	-124	-6	0	-26	-20	0	2	7	-2	3	-3	17	8	-101	-11	23	-9	8	12	1	4
Autos	21	8	-99	19	26	0	6	26	27	33	24	29	23	43	33	-75	14	49	17	34	37	27	30
Lodging	15	2	-105	13	20	-6	0	20	21	27	18	23	17	37	27	-81	8	43	11	28	31	21	24
Retail	-5	-18	-124	-6	0	-26	-20	0	2	7	-2	3	-3	17	8	-101	-11	23	-9	8	12	1	4
Restaurants	-7	-20	-126	-8	-2	-27	-21	-2	0	6	-3	1	-4	16	6	-102	-13	22	-10	7	10	0	3
<b>Cons Prods</b>	<b>-12</b>	<b>-25</b>	<b>-131</b>	<b>-13</b>	<b>-7</b>	<b>-33</b>	<b>-27</b>	<b>-7</b>	<b>-6</b>	<b>0</b>	<b>-9</b>	<b>-4</b>	<b>-10</b>	<b>10</b>	<b>1</b>	<b>-108</b>	<b>-18</b>	<b>16</b>	<b>-16</b>	<b>1</b>	<b>5</b>	<b>-6</b>	<b>-3</b>
Food/Bev	-3	-16	-123	-5	2	-24	-18	2	3	9	0	5	-1	19	9	-99	-10	25	-7	10	13	3	6
Health Care	-8	-21	-127	-9	-3	-29	-23	-3	-1	4	-5	0	-5	14	5	-104	-14	20	-12	5	9	-2	1
Pharma	-3	-16	-122	-4	3	-23	-17	3	4	10	1	5	0	20	10	-98	-9	26	-6	11	14	4	7
Oil Field Svcs	-22	-35	-141	-24	-17	-43	-37	-17	-16	-10	-19	-14	-20	0	-9	-118	-28	6	-26	-9	-5	-16	-13
Refiners	-13	-26	-132	-14	-8	-33	-27	-8	-6	-1	-9	-5	-10	9	0	-108	-19	15	-17	0	4	-6	-3
Midstream	96	83	-24	94	101	75	81	101	102	108	99	104	98	118	108	0	89	124	92	109	112	102	105
Tech	6	-7	-113	5	11	-14	-8	11	13	18	10	14	9	28	19	-89	0	34	2	19	23	13	16
Airlines	-28	-41	-147	-30	-23	-49	-43	-23	-22	-16	-25	-20	-26	-6	-15	-124	-34	0	-32	-15	-11	-22	-19
Railroads	4	-9	-115	3	9	-17	-11	9	10	16	7	12	6	26	17	-92	-2	32	0	17	21	10	13
Banks	-13	-26	-132	-15	-8	-34	-28	-8	-7	-1	-10	-5	-11	9	0	-109	-19	15	-17	0	4	-7	-4
Brk/AM	-17	-30	-136	-18	-12	-37	-31	-12	-10	-5	-13	-9	-14	5	-4	-112	-23	11	-21	-4	0	-10	-7
Life Ins	-6	-19	-126	-8	-1	-27	-21	-1	0	6	-3	2	-4	16	6	-102	-13	22	-10	7	10	0	3
P&C Ins	-9	-22	-129	-11	-4	-30	-24	-4	-3	3	-6	-1	-7	13	3	-105	-16	19	-13	4	7	-3	0

# STRATEGAS BELLWETHER CORPORATE BOND INDICES SHOW BIFURCATION OF U.S. ECONOMY, SLOW GROWTH

Our Strategas Bellwether Corporate Bond Indices are a group of 1 on-the-run and 2 off-the-run fixed rate, senior, mostly unsecured, and generally non-callable bonds, where the issuers are largely middle tier credits, with spreads highly correlated with nominal growth expectations. Each of these indices has shown weakness for much of the past year, with the off-the-run 2013 index showing almost 300 bps of spread widening since December. What's even more interesting is how our on-the-run 2015 index, which is more consumer and financials focused than our 2013 and 2014 indices, has materially diverged from these off-the-run indices, and is once again suggesting that nominal growth trends may be headed back above 4% in 2016. When combined with our 2014 index, which has a sizeable energy and industrials exposure, we get a picture which still suggests a muted, 3.25% - 4.25% nominal growth trend for 2016.



## 2015 INDEX IS MORE TECH AND RETAILER HEAVY AND LESS ENERGY FOCUSED

With the plunge in energy prices and the related expected drop in energy capex, we rebalanced the 2015 index at the start of the year to be more retailer and “experience” oriented, by adding names like Target, Costco, Netflix, and Amazon. **Our view is that if nominal growth is to return to the 5% to 6% level that most would consider to be full potential, the consumer likely needs to be the driver of this rebound as this business cycle matures.** This tends to introduce names that might otherwise be richer (lower spreads) than the 2014 index, but should otherwise show greater sensitivity to the emerging growth drivers in the coming quarters. **It’s worth noting that at the start of the year, our newly minted 2015 index was actually flat to the 2013 index (excluding issues that matured in 2015), but it’s now 250 bps tight to the 2013 index!!**

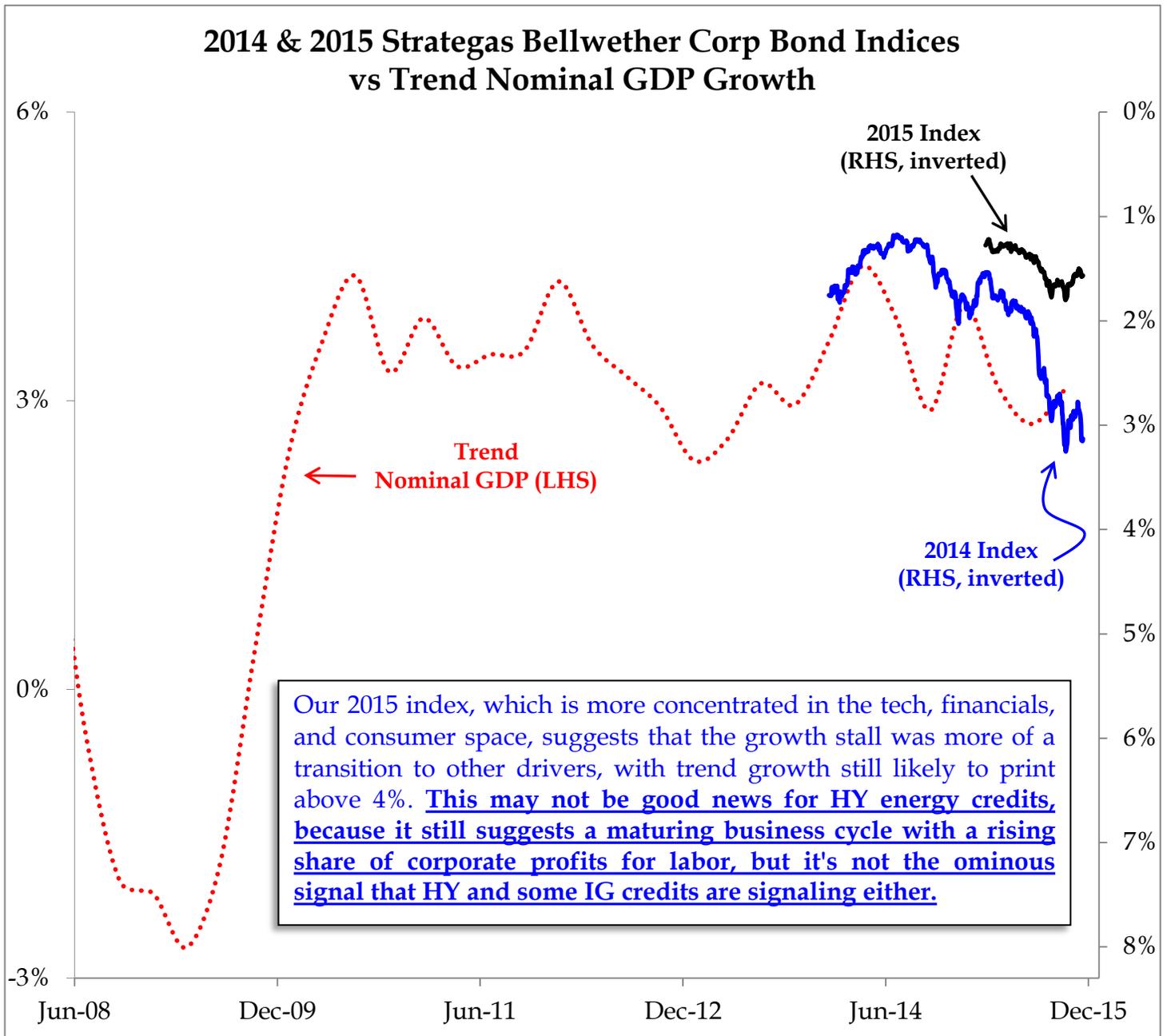
2013 Index	2014 Index	
FedEx 8% 1/15/19	Gilead 2.05% 4/1/19	Chesapeake Energy 5.75% 3/15/23
Marriott 6.375% 6/15/17	FedEx 4% 1/15/24	Kinder Morgan 4.15% 2/1/24
Union Pacific 5.65% 5/1/17	Union Pacific 2.25% 2/15/19	United Continental 6% 12/1/20
Metlife 5% 6/15/15	Sabine Pass 5.75% 5/15/24	Advcd Micro Devices 7.5% 8/15/22
Chesapeake Energy 7.25% 12/15/18	Boeing 4.875% 2/15/20	Apple 2.4% 5/3/23
Kinder Morgan 6% 2/1/17	Metlife 3.6% 4/10/24	Dover 4.3% 3/1/21
Southwest Air 5.75% 12/15/16	Marriott 3.375% 10/15/20	Google 3.375% 2/25/24
Dover 4.875% 10/15/15	ABBVIE 2.9% 11/6/22	
	Halliburton 3.5% 8/1/23	

We’ve added traditional retail names like Costco, Target, and Lowe’s, as well as ecommerce names like Amazon, eBay, and Netflix, as we believe that low interest rates and low energy prices will eventually result in a jump in consumer spending in the middle to latter third of 2015. We’ve also added a midsized regional bank in a growth region in Silicon Valley Bank, and have balanced the consumer side with KMB.

2015 Index	
Gilead 3.5% 2/1/25	Verizon 3.5% 11/1/24
FedEx 3.2% 2/1/25	Kinder Morgan 4.3% 6/1/25
Union Pacific 3.25% 1/15/25	Amazon 3.8% 12/5/24
Sabine Pass 5.625% 3/1/25	Abbott Labs 2.95% 3/15/25
Boeing 2.5% 3/1/25	Apple 2.5% 2/9/25
Metlife 3.0% 3/1/25	Kimberly Clark 2.65% 3/1/25
Lowe's 3.125% 9/15/24	Google 3.375% 2/25/24
Netflix 5.875% 2/15/25	Costco 2.25% 2/15/22
Target 3.5% 7/1/24	Motorola 4.0% 9/1/24
eBay 3.45% 8/1/24	Silicon Valley Bank 3.5% 1/29/25

## USING OUR 2014 & 2015 INDICES AS A GUIDE, WE SEE 2016 NOMINAL GROWTH IN THE 3.25% TO 4.25% RANGE

This is by no means robust growth, though it is in line with the 3.75% trend since 2010. But it's also worth noting that our 2015 index, which should be more representative of the pace of growth in 2016, is suggesting a nominal growth trend of 4.25% or higher in the coming year. This is up from about a 4% implied trend as of the last quarter.



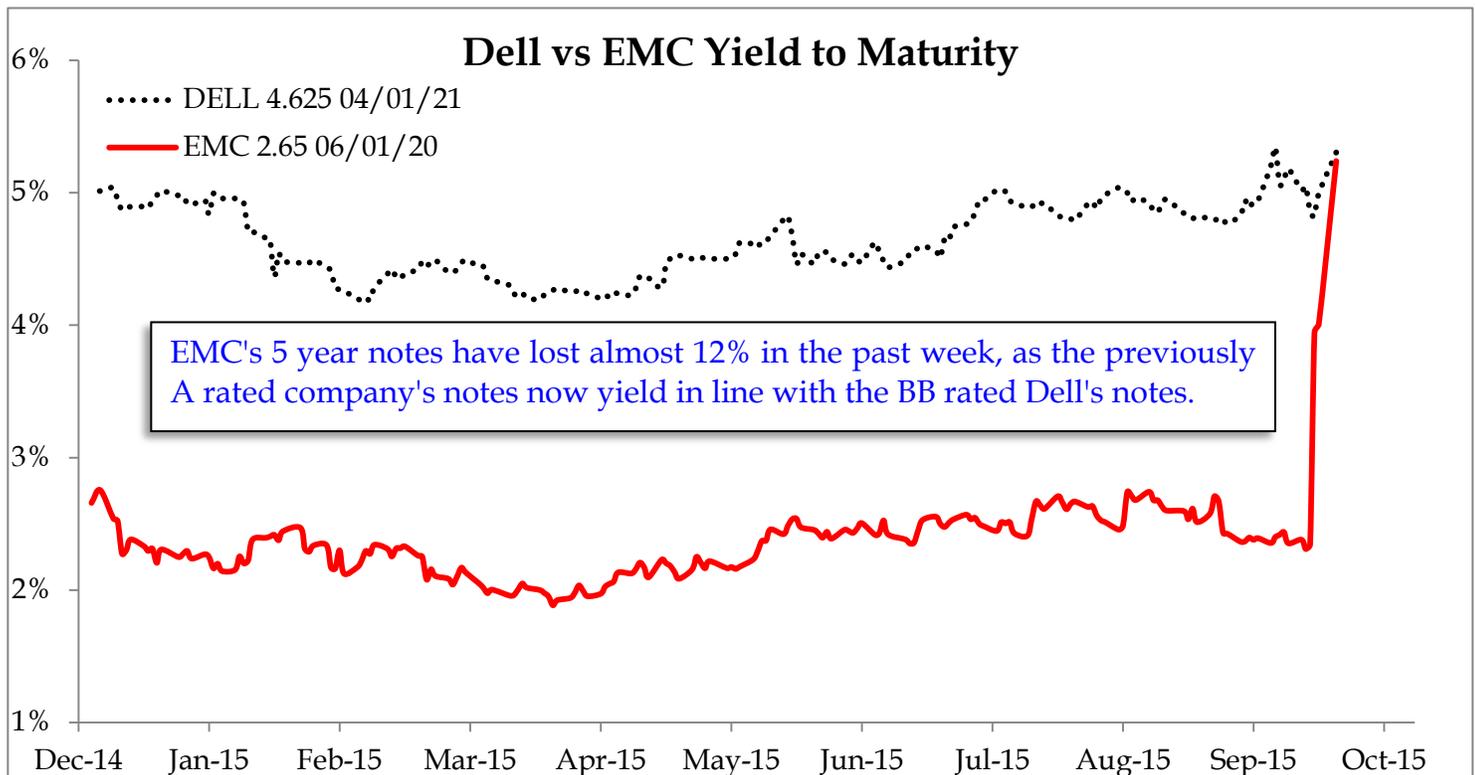
## HY SPREADS AGAIN ABOVE THEIR LONG-TERM AVG, BUT WE'RE NOT READY TO ADD EXPOSURE ANYTIME SOON

As the business (and credit cycle) matures, we'd rather hold names and sectors that are a little rich, but getting richer, as these are likely to be names that have avoided adding leverage throughout the cycle and/or are late cycle growth drivers, such as those found in our 2015 Bellwether Index. Among other reasons, this made us reluctant to add exposure to lower quality names in the most recent round of HY spread widening, and it's keeping us on the sidelines still as HY spreads have begun to inch higher from here. For the time being, our outlook on spreads is still fairly benign, though we do expect to see HY spreads retest their 2015 highs again in early 2016, before leveling off for a pause by Q2 2016.



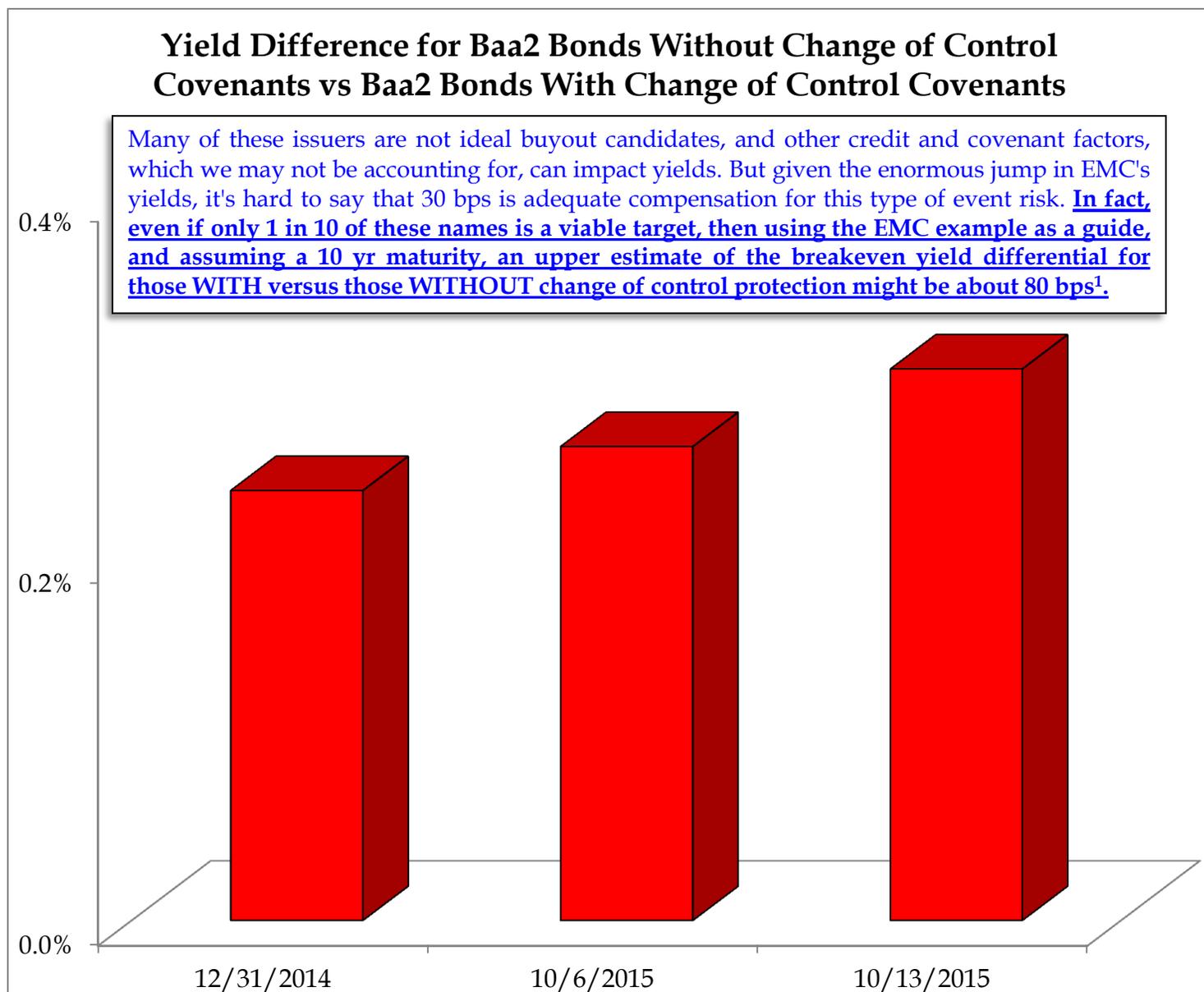
## DELL/EMC MERGER HIGHLIGHTS A KEY RISK FACING INVESTMENT GRADE CREDITS

IG firms that cash out and lever up have always been a risk to bond investors, particularly those who invest in bonds without *change of control covenants*. Such covenants usually allow bondholders to put bonds back to the company at or above par on any change in institutional ownership. The purpose of this is to keep LBO investors from buying up cash flow rich, middle and lower tier investment grade shops, and subordinating existing bondholders with now, effectively junior, unsecured junk bonds. With news that Dell is looking to proceed with a \$60 billion deal to purchase EMC, with potentially \$15 billion of junk debt being issued to finance the deal, investors in those EMC bonds without change of control covenants have seen yields surge. These bonds, which are currently A rated, have seen yields nearly double in one week and now match yields on Dell's existing bonds. **The lesson is that with corporate credit markets open for business, and investors still starved for yield, middle/lower tier IG names that are free cash flow rich are going to remain ideal candidates for merger/LBO activity.** A quick inspection of Baa2 credits that have been actively traded in the past year (based on TRACE data), shows some increase in the yield difference between bonds with and bonds without change of control covenants, with bonds carrying protection yielding about 30 bps less than those without. This is up from 24 bps at the start of the year and 26 bps a week ago. **But in light of the 300 bps jump in EMC's yields over the past week, 30 bps of additional yield seems to be slim compensation for very real risks!**



## BUT VERY LITTLE AGITATION SO FAR IN IG NAMES WITHOUT CHANGE OF CONTROL COVENANTS

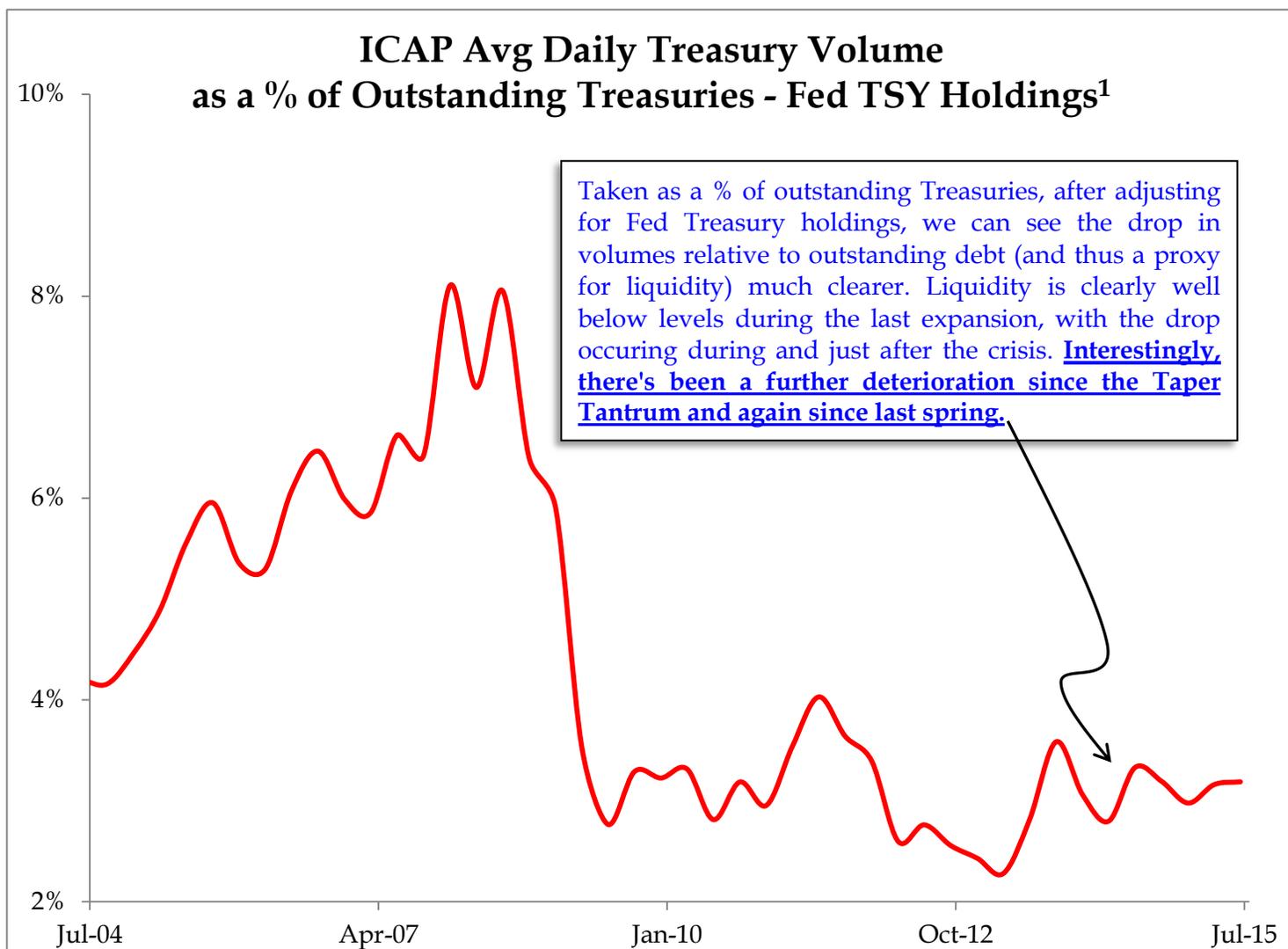
We sampled over 500 Baa2 rated, unsecured, generally noncallable, USD denominated notes and bonds and sorted based on those with and those without change of control covenants. We then tracked the yield differential from the start of the year, to the day before the announcement of the Dell/EMC merger (Oct. 6<sup>th</sup>), to yesterday. Though there has been some increase in yield compensation for those bonds without change of control protection, the increase since the start of the year has been a paltry 6 bps.



1) We crudely assumed that 1 in 10 issuers are viable targets, and that there's a 10% chance that all of these targets will be taken out in any one of the next 10 years, assuming that it wasn't taken out the previous year. We then calculate the required yield on bonds without protection for all 10 years, so that the return of bonds with and without protection is identical in that year. We conclude by taking the expected value of these yearly yields. This method likely overestimates the breakeven, but should be a good approximation.

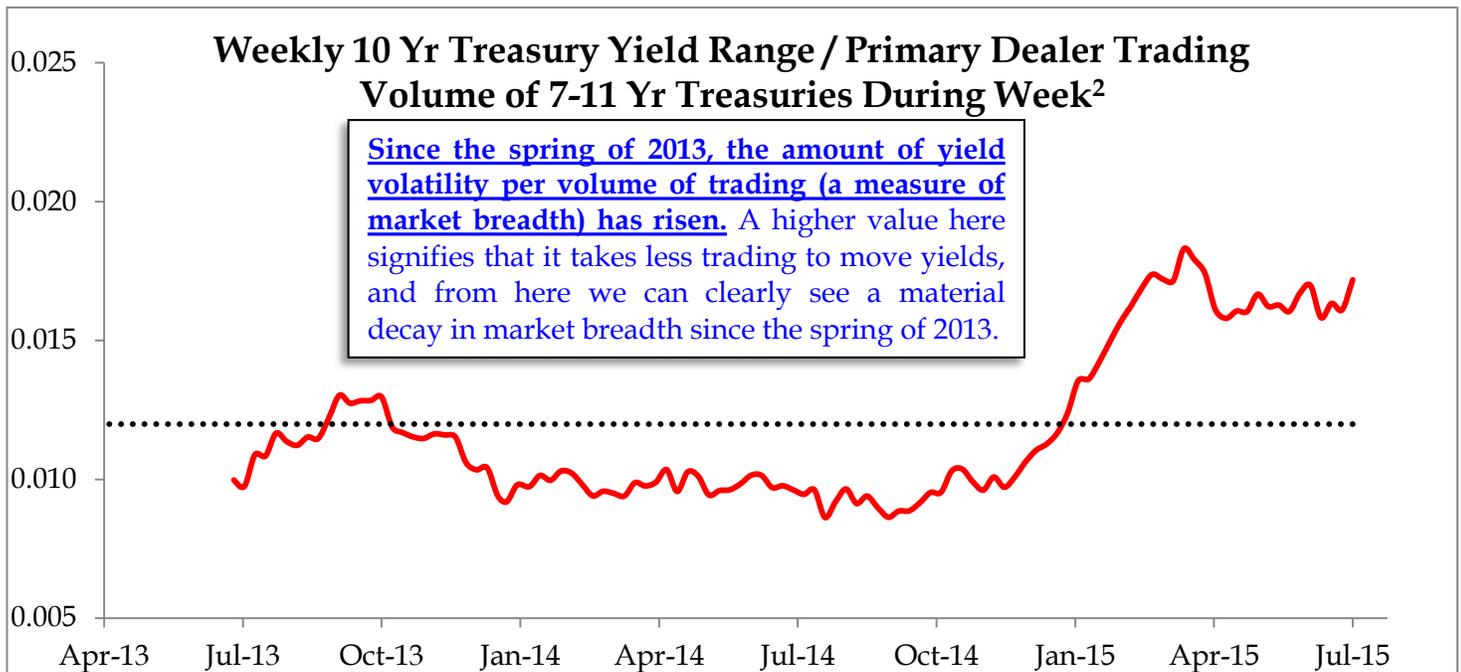
## THE TREASURY MARKET ISN'T MADE THE WAY IT USE TO BE, BUT LIQUIDITY MEASURES SHOW MIXED PICTURE

Has liquidity in the bond market deteriorated all that much since the last recession? Well it depends on which measures of liquidity you look at, and which markets, for that matter. For example, Treasury markets actually may show more deterioration in liquidity since 2013 than corporate bond markets, and what's more, some measures of both markets show no deterioration at all. So what's the reality? The reality is that Treasury and corporate markets likely HAVE seen liquidity deteriorate in the last 7 years, though we won't truly know how bad this has been until we have a "rush for the exits" event. For now, it seems that the threshold for liquidity strain in the Treasury market is about \$400 billion daily (based on ICAP volumes), with volumes above \$500 billion beginning to witness visible signs of enhanced yield volatility.

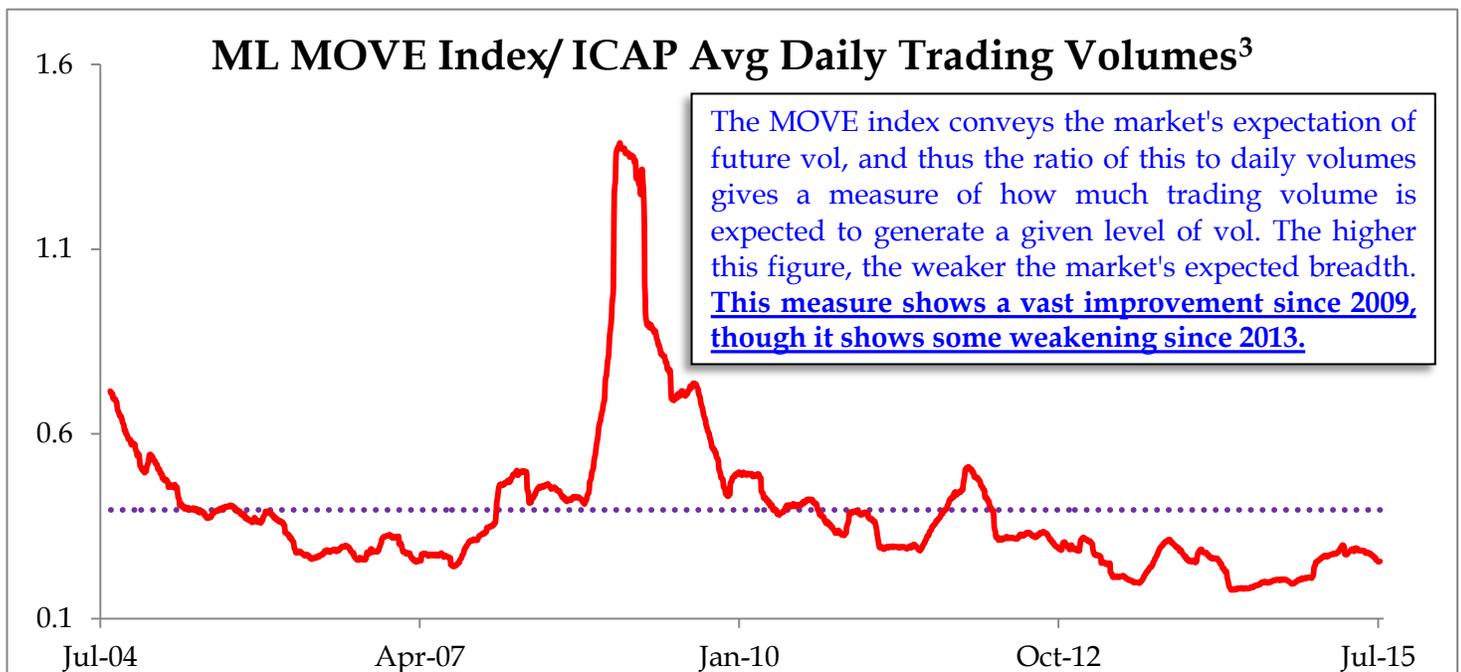


1) We've calculated this figure and then taken a 3 month rolling average to smooth what is otherwise a noisy data series.

## ANOTHER MEASURE OF TREASURY MARKET LIQUIDITY SHOWS THIS DETERIORATION SINCE 2013 QUITE WELL



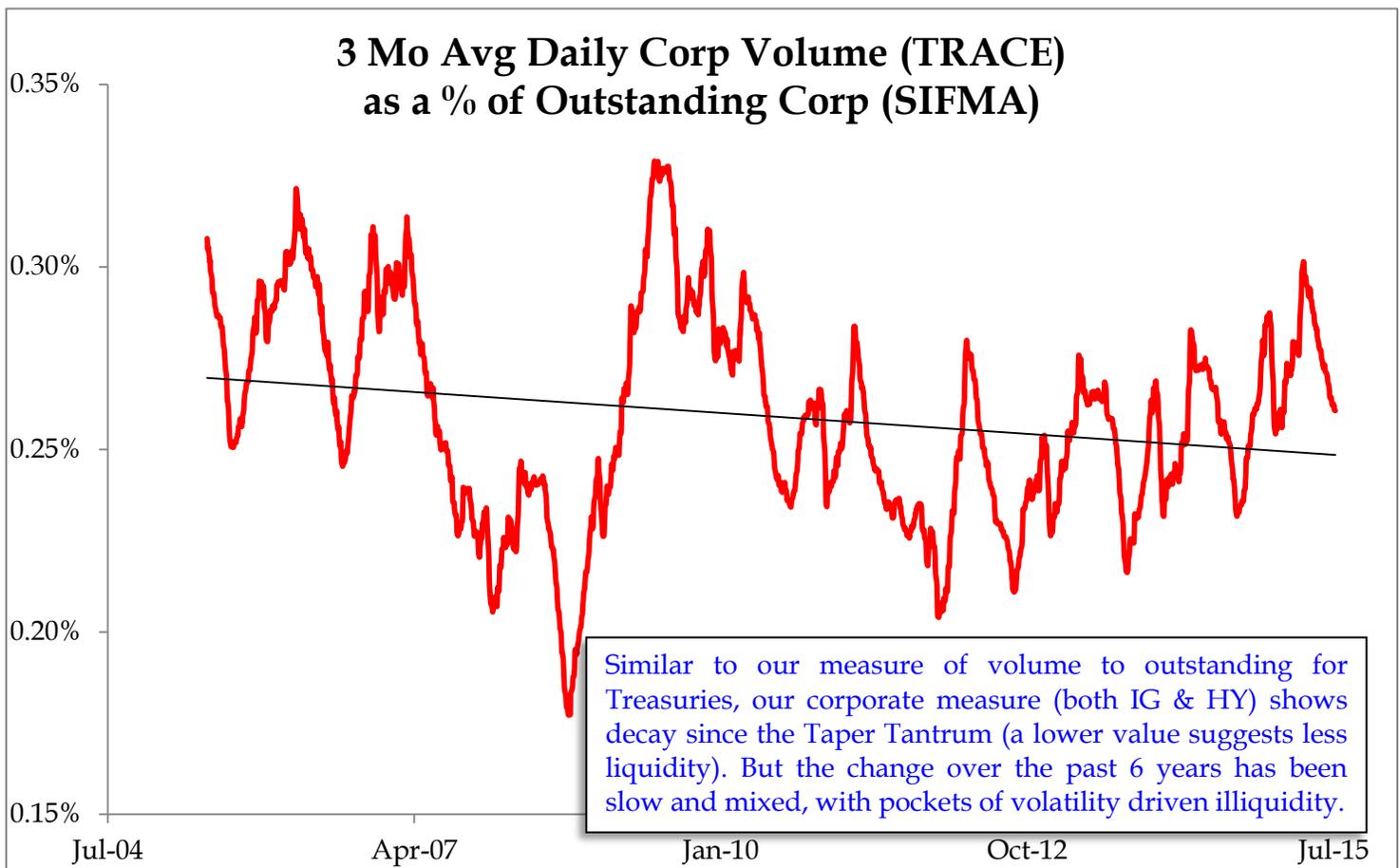
## ANOTHER MEASURE SHOWS DETERIORATION SINCE 2013, BUT IMPROVEMENT SINCE 2009



- 2) We've calculated the max yield over the preceding 5 days – the min yield during this time and divided by primary dealer avg daily trading volumes during that week, then multiplied by 1000. We've then taken a 3 month rolling average to smooth this data series.
- 3) We've divided the ML MOVE index daily level by the ICAP avg daily trading volumes. We've then taken a 3 month rolling average to smooth this data series.

## WHAT ABOUT CORPORATE BOND MARKETS? ONE MEASURE OF VOLUME TO OUTSTANDING LOOKS MIXED

Corporate bond markets are perhaps of greatest concern, at least to investors who have been carrying elevated overweights to investment grade and high yield corporates as the reach for yield has spread to all corners of the globe. In the past, corporate spreads have shown little, and sometimes even negative correlation to Treasury yields, but that was in an era when liquidity was ample, or at least presumed to be ample in corporate bond markets. So, has liquidity dried up for corporate bond investors? The answer seems to be..... Maybe? It's tough to tell, since much like trench warfare, corporate bonds have witnessed long intervals of boredom, punctuated by moments of sheer terror! So measures of liquidity show peaks and troughs. The conclusion that we come too is not a particularly benign one; investors in corporate bonds, particularly high yield, are effectively short yield volatility, and are at the mercy of a Treasury market that could hiccup at any moment. This is to say that as long as volatility in Treasury markets remains limited, liquidity in corporate markets will stay ample. But the long-term trend is lower, and low volatility in Treasuries has likely obscured how much liquidity has decayed in corporate markets.



# THE STRATEGAS 15 CITY MUNI MACRO INDEX

The municipal bond landscape is as diverse in credits as the corporate bond sector, and with equally sizeable macroeconomic implications for overall economic health. Yet, the issue specific intricacies of the muni sector make corporate bonds look fairly vanilla in nature, and it adds a layer of difficulty in extrapolating U.S. macro themes from broad municipal credit or spread trends. But city debt, particularly non-callable, general obligation debt, of the largest urban centers (ex-NYC), should offer some intuitively logical macro implications for the broader economy and financial markets. **Today we introduce the “Strategas 15 City Muni Macro Index”, which is one part economic/credit health index, which will be updated yearly (as financials are released), and one part general obligation spread to Treasuries index, which can be updated daily.**

The goals of these indices are threefold; 1) to pinpoint emerging macro trends in the financial health of major U.S. cities 2) to observe changes in city borrowing costs, and 3) to pinpoint

richness/cheapness in the larger urban metro markets that are most covered by our clients. From the standpoint of total debt outstanding, these 15 cities had roughly \$120 billion of primary government debt outstanding as of 2013 financials, or only about 3% of total muni sector debt, but the MSA of these 15 cities encompass a full 1 in 4 U.S. citizens. As a consequence, the economic and financial health of these cities can be thought of as a bellwether for a large portion of the U.S. economy, and the credit spread index should provide as close to a real time indicator of this health as is possible. **Although the data set is limited (the spread index is only available back to early March and the overall city health index is a single data point for each city), both sets would seem to coincide with the**

Strategas 15 City Muni Macro Index	
City CUSIP	
Atlanta	047772YR3 muni
Boston	100853VJ6 muni
Charlotte	161035FP0 muni
Chicago	167486TA7 muni
Cleveland	186343YS2 muni
Dallas	235219KG6 muni
Denver	249164MW1 muni
Houston	442331E59 muni
Los Angeles	544351HK8 muni
Philadelphia	717813QK8 muni
Pittsburgh	725209KF6 muni
San Francisco	797646A48 muni
San Jose	798135A58 muni
Seattle	812626U2 muni
Washington	25476A8H5 muni

**observation that city fiscal health is generally stable (for now), with historically low borrowing costs, but with looming risks in the retiree benefit space, particularly for cities like Chicago and Atlanta.** Noticeably absent from this index is NYC, which we believe to be too large, and too unique an issuer for the macro purposes of this index.

## 15 CITIES FINANCIAL & ECONOMIC COMPARISON

City fiscal solvency is a function of long run revenues and expenditure needs and short run liquidity. Numerous factors determine city economic quality and fiscal solvency, so to assess economic quality and fiscal health, we score each city across various demographic, economic, and financial metrics in our 15-City Economic & Fiscal Health Index. Two immediate observations that standout are that it seems to coincide very well with agency ratings (Pittsburgh appears to be the outlier here due to a stronger economic base in our model) and it has a strong r-squared versus spreads (roughly 55% - 60% on a daily basis).

### 15-City Economic & Fiscal Health Index Formula Weights

Metric	Economic	Reserves	Budget	Debt	Overall
city reported homicides per 100k people	3.33%				1.67%
city reported violent crime per 100k people	1.67%				0.83%
city reported property crime per 100k people	1.67%				0.83%
% of MSA population age 25+ with a high school degree	6.67%				3.33%
% of MSA population age 25+ with a bachelor's degree	6.67%				3.33%
city median household income as % of US	13.33%				6.67%
MSA mean travel time to work	6.67%				3.33%
city labor force participation rate	6.67%				3.33%
city median gross rent as % of median household income	6.67%				3.33%
city poverty rate	13.33%				6.67%
Industry Employment Diversity Index	13.33%				6.67%
5yr % change in MSA employment	6.67%				3.33%
5yr avg. annual % change in city population	6.67%				3.33%
MSA unemployment rate	6.67%				3.33%
unrestricted fund balance as % of GF expenditures		100.00%			16.67%
GF net results			10.00%		1.67%
total governmental funds net results			10.00%		1.67%
overall property tax rate			1.43%		0.24%
overall sales tax rate			2.86%		0.48%
overall individual income tax rate			2.86%		0.48%
overall business income tax rate			2.86%		0.48%
presence of other business taxes			10.00%		1.67%
10yr avg. annual % change in total city revenue			10.00%		1.67%
avg. absolute value difference from 10yr avg. annual % change in total city revenue			10.00%		1.67%
city tax as % of GF revenue			10.00%		1.67%
city property tax as % of GF revenue			10.00%		1.67%
city tax as % of total revenue			10.00%		1.67%
city property tax as % of total revenue			10.00%		1.67%
net direct debt & pension & OPEB UAAL as % of total revenue				40.00%	6.67%
debt service & annual pension & OPEB costs as % of total revenue				40.00%	6.67%
per capita primary government debt, overlapping debt, & pension & OPEB UAAL				20.00%	3.33%

\*Source: US Census Bureau, BLS, City CAFRs, and Moody's, S&P, and Fitch press releases

## CITY BY CITY SCORES SHOW DEBT SERVICE WEIGHING DOWN MANY MAJOR CITIES DESPITE ECONOMIC HEALTH

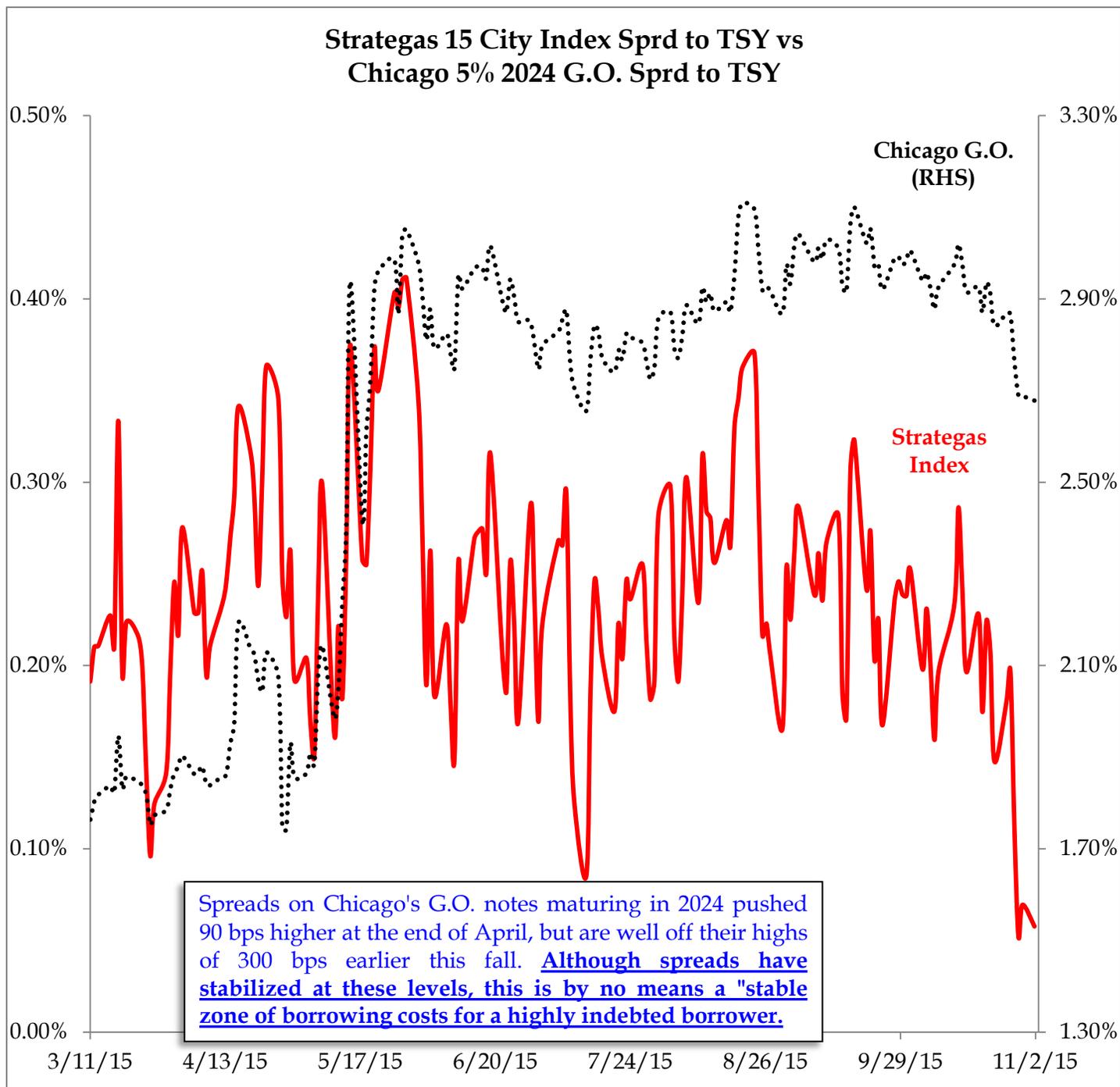
We break our overall city scores into into 4 submetrics; Economic, Reserves, Budget, and Debt Service. Cities like Chicago, Atlanta, and Philadelphia witness punitive effects in our index from factors like low reserves and weak pension funding metrics. In some cases (Chicago and Atlanta), these negative debt or reserve factors are so pronounced, that they completely offset what is otherwise a strong regional economic picture. In other cases, cities like Charlotte, Seattle, and Denver exhibit strong economic forces which have helped to keep debt service demands low, and budgets reasonably stable throughout the post crisis years. But what makes for a vibrant, and sustainable city government is part science, part art, and part good luck, and although we hope to capture much of the first part (science) in these metrics, we acknowledge that there's little we can do to effectively predict or even hope to track the art and luck part of city fiscal and economic health.

### 15-City Economic & Fiscal Health Index and City GO Debt Ratings Comparison

City	Overall	Economic	Reserves	Budget	Debt	Moody's	S&P	Fitch
Charlotte	64.5	75.7	41.7	49.0	69.3	Aaa	AAA	AAA
Seattle	62.1	70.4	43.4	50.3	67.8	Aaa	AAA	AAA
Denver	61.3	69.0	49.0	47.9	64.0	Aaa	AAA	AAA
Boston	60.7	64.0	58.1	60.9	53.3	Aaa	AAA	AAA
Washington	60.5	66.5	23.2	59.9	80.3	Aa2	AA-	AA-
San Jose	58.8	69.9	63.5	42.7	36.9	Aa1	AA+	AA+
San Francisco	58.0	72.4	35.1	53.6	41.7	Aa1	AA+	AA
Dallas	50.2	61.8	26.6	43.7	45.5	Aa1	AA+	
Pittsburgh	49.2	57.7	36.4	42.4	43.3	A1	A+	A
Houston	48.7	58.8	22.7	56.4	36.9	Aa2	AA	AA
Los Angeles	48.2	54.4	29.7	48.2	47.8	Aa2	AA-	AA-
Atlanta	48.0	56.1	52.4	49.7	17.4	Aa2	AA	
Cleveland	47.1	44.7	36.7	39.0	72.9	A1	AA	A+
Philadelphia	44.5	52.4	10.4	39.5	59.7	A2	A+	A-
Chicago	36.7	55.9	9.2	38.2	5.3	Baa1	A+	A-
<b>Avg.</b>	<b>53.2</b>	<b>62.0</b>	<b>35.9</b>	<b>48.1</b>	<b>49.5</b>			

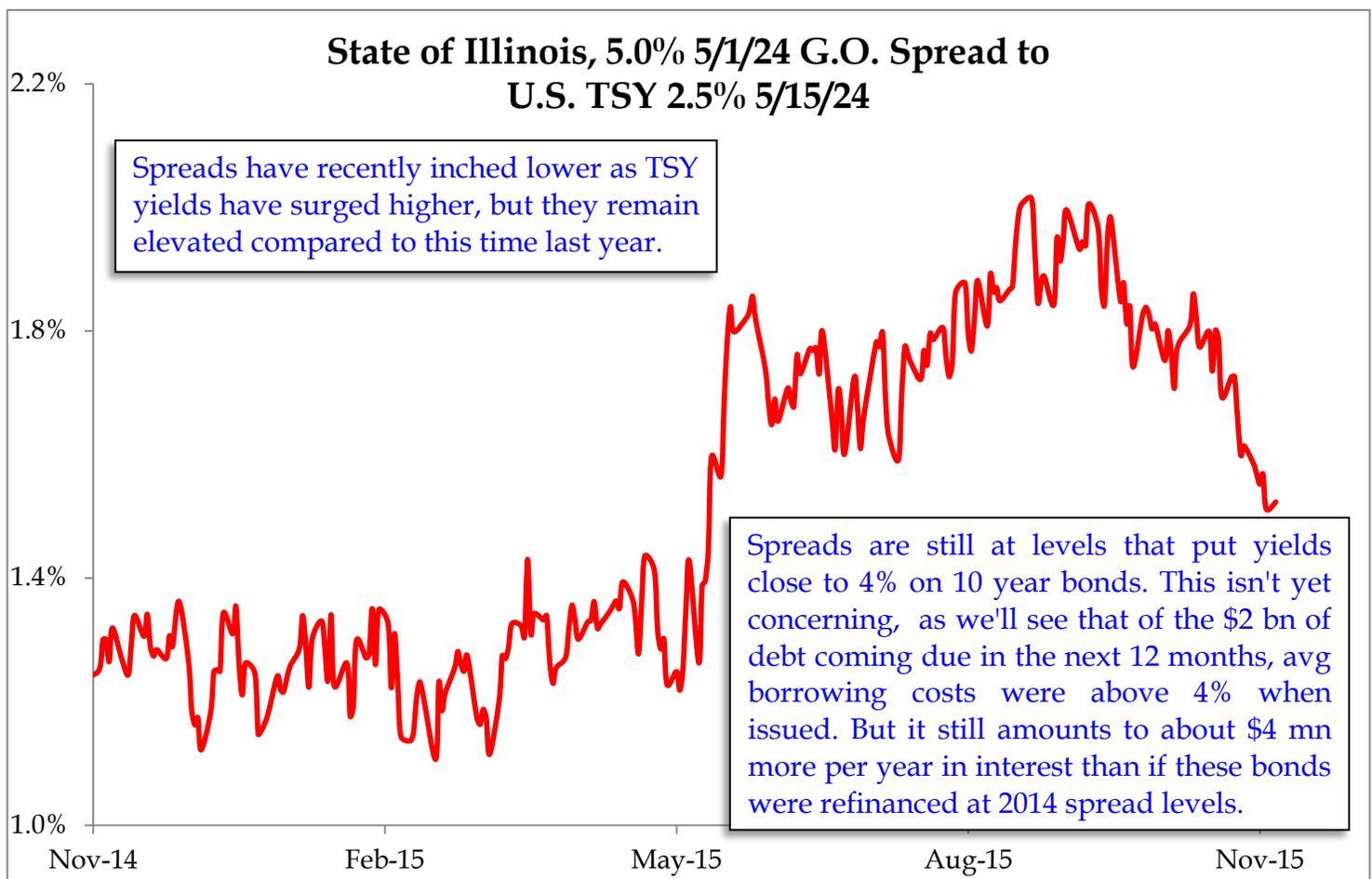
# CHICAGO'S PROBLEMS HAVEN'T GONE AWAY & AS A KEY MEMBER OF OUR MUNI INDEX, CHICAGO MATTERS

Chicago's spreads are stable, for now, but the city's spread could push higher again, either in sympathy with Puerto Rico, or because of its own doings. If S&P or Fitch bump the city into junk status, that could be the catalyst needed to break this temporary calm. And unlike Puerto Rico, Chicago's stress has immediate impacts on nearby and similar credits.



## ILLINOIS STILL MORE HEADACHE THAN HEARTBREAK, BUT IT'S A RISK THAT KEEPS GROWING

Illinois' problems may be about to get worse in the next 12 months. In October, the state announced a delay in a \$560 million pension payment that was slated for November, which helped to push Illinois' spreads to Treasuries up about 15 bps in short notice. A few days later, Moody's cut Illinois' credit rating to Baa1, placing the nation's 5<sup>th</sup> largest state just 3 steps above junk. This all comes as the state's debt service is about to ramp up in the next 3 years against the backdrop of generally rising interest rates and a continuation in the state's budget standoff. All of these factors point to a growing risk of more stress to come for the Land of Lincoln in 2016, even if the Governor's office can bridge some of the spending gaps that have kept the two sides apart in 2015. For now, Illinois poses little to no threat to broader credit markets in 2016, but as we saw with Puerto Rico, a negative credit surprise, concurrent with rising global interest rates, can quickly spiral into deeper problems, especially when debt service and pension payments are slated to rise. As such, we're continuing to monitor Illinois as one of the emerging risks to financial stability in 2016.



# STANDOFF HAS SPILLED OVER INTO CREDIT COSTS AND FURTHER DOWNGRADES WOULD WORSEN THAT

## Illinois Faces Millions in Extra Debt Costs from Budget Fiasco

11/5/15 (Bloomberg) -- When Illinois returns to the municipal market after its unprecedented 18-month borrowing drought, it may find its budget impasse will cost taxpayers millions of dollars in the coming decades.

On a \$1 billion offering of 25-year tax-exempt bonds, it would cost about \$175 million more now than if an equal amount was issued with spreads at 2014 levels, based on data compiled by Bloomberg that assumes the yield equals the interest rate paid. Now in its fifth month without a spending plan, signs are mounting that debt sales for cash-strapped Illinois are only going to get more expensive.

After initially planning to sell \$1.25 billion in general obligations for capital needs, the governor's office said in September that it wasn't ready to announce any amounts or sale dates. The state's credit rating has been cut by two of the three largest rating companies, it's missing pension payments, and yield premiums demanded by investors are hovering near the highest since 2013. Illinois last sold debt in April 2014 for a top yield of 4.5 percent, about 1.1 percentage points more than benchmark securities. That spread has widened by about 70 basis points.

The sad reality

A glimmer of hope?

## Rauner Makes Deals on Child Care, Unemployment: Change in Weather or Temporary Thaw?

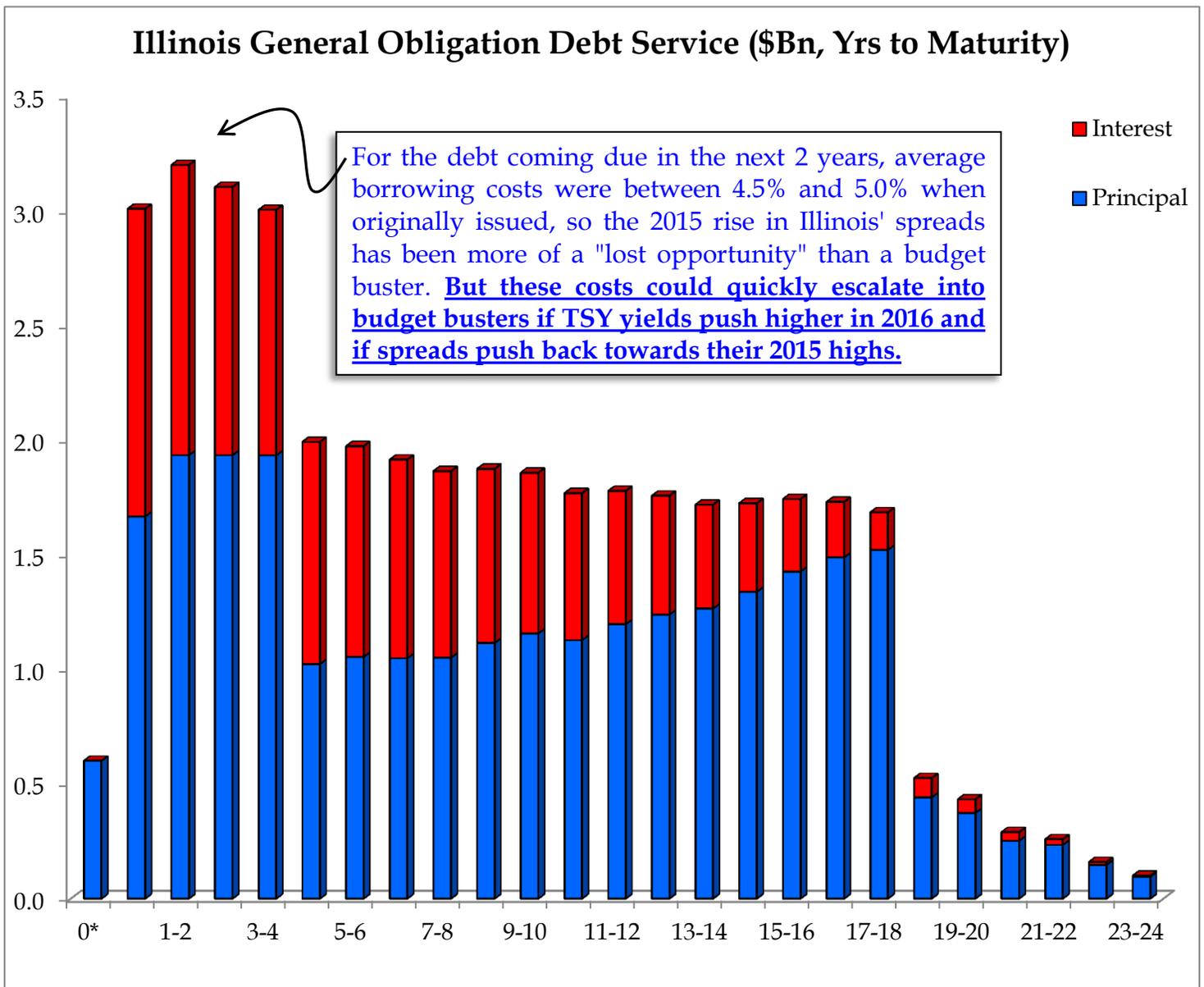
11/9/15 (Reboot Illinois) -- When New Year's Day arrives and news outlets are writing those "Year in Review" stories for 2015, Nov. 9 might earn special recognition as the beginning of the end of the state budget impasse. On that day, Gov. Bruce Rauner announced a pair of agreements forged with Democratic support and a third action halting a move that was bound to stir another round of fighting in Springfield. Whether this is just a momentary warm front passing through the Capitol or a seasonal shift remains to be seen, but it's as encouraging a sign of cross-aisle cooperation as we've seen in state government this year. Thus, we choose to err on the side of optimism, if only for a day.

In short, Rauner:

- 1) Announced a deal with Democrats to undo most of his tightening of eligibility requirements for low-income, working parents to qualify for state child care subsidies.
- 2) Announced a bipartisan reform of the Illinois unemployment insurance system that won the blessing business and labor groups.
- 3) Canceled his plan to tighten requirements for home health care services for the elderly and disabled.

# ILLINOIS' BORROWING COSTS COULD RISE FOR THE NEXT 3 YEARS AS DEBT SERVICE DEMAND BEGINS TO GROW

Excluding about \$600 million of immediately puttable notes, Illinois has about \$1.7 billion maturing in the next 12 months, \$3.5 billion due in the next 24 months, and about \$8.5 billion due in the next 5 years. What's more, this is exclusive of any future budget financing gaps or required pension contributions. Altogether, Illinois could easily see more than \$5 billion of new issuance in the next 2 years, with progressively higher costs associated with those borrowings.



\* These are bonds that are immediately puttable, but would otherwise have maturities around 2033.

# FY 2016 DEFICIT COULD ADD \$2 TO \$5 BILLION MORE DEBT TO ILLINOIS' DEBT LOAD NEXT YEAR

