THE OUTLOOK FOR THE U.S. ECONOMY & MONETARY POLICY:

Moderate Growth & Slow Pace of Fed Tightening When it Finally Begins

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A Chapter of the National Association for Business Economics (NABE)

U.S. Economic & Monetary Policy Outlook

- ***Market focus is three-fold, all of which are related:***
  1) **How well underpinned is economic growth?**
  2) **Will inflation show decisive signs of moving back toward the Fed's 2% target?**
  3) **When will the Fed raise interest rates?**

- ***With respect to #1 above:***

  a) **Economic data have been mixed:**

  --Job growth has slowed.

  --Consumers are thus likely to be cautious, although spending data has been firm in recent quarters.

  --Capital spending indicators have weakened.

  --Housing activity is healthy, but growth appears to have slowed.

  --Exports are suffering due to weak global demand and a strong dollar.

- ***Turning to inflation*, evidence is mixed, but certainly not indicative of any threat of an upside breakout anytime soon. Indeed, dollar strength and weak energy prices promise to continue to weigh on headline measures, while core inflation shows little sign of accelerating in a meaningful manner. We think that inflation data will continue to bother "doves" on the FOMC.**

(continued)

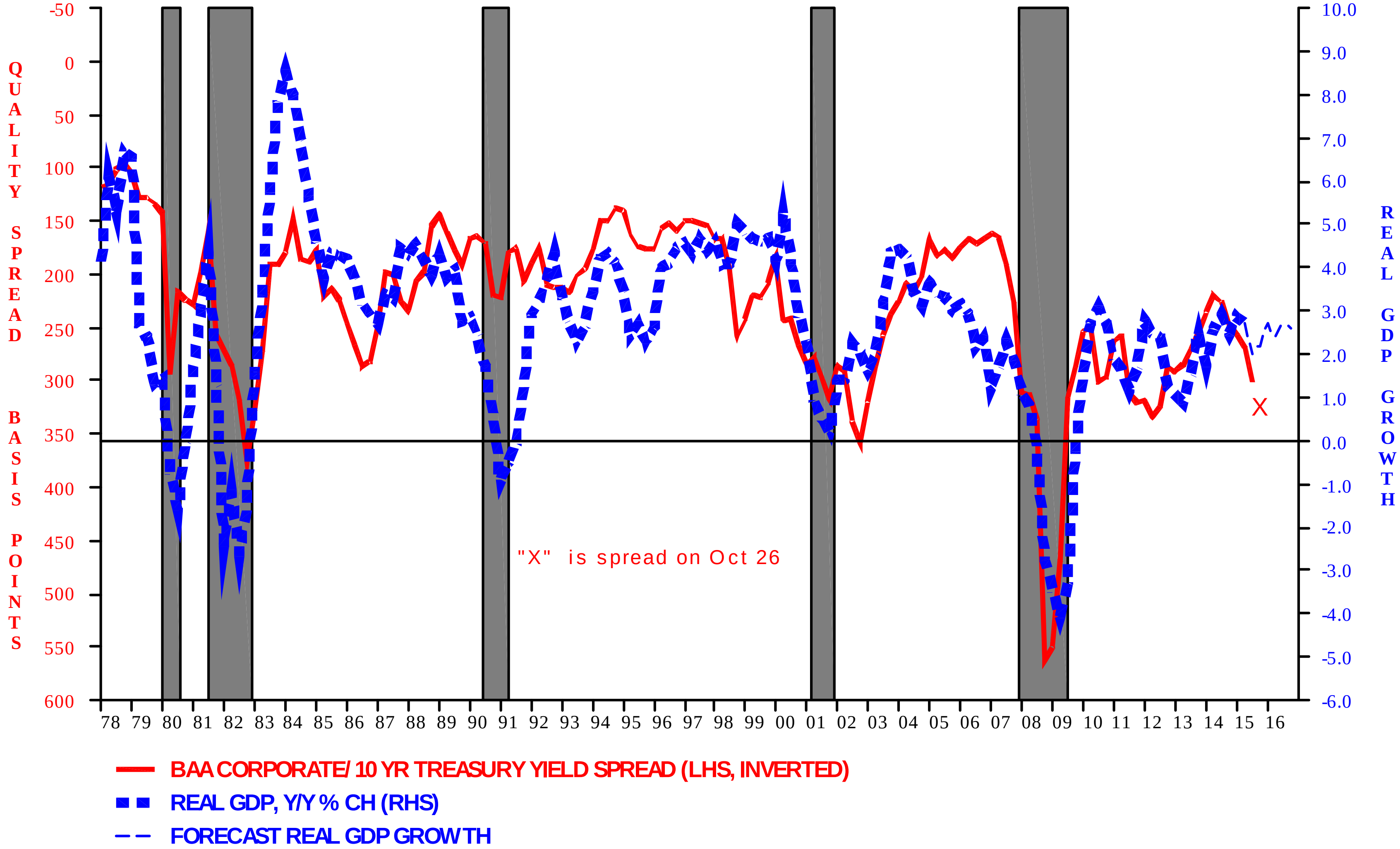
U.S. Economic & Monetary Policy Outlook

- With one hawkish dissension, the FOMC left the Fed funds target unchanged on October 28, which was the unanimously expected outcome. Much more important was that there was a key change to the forward guidance portion of the policy statement. In place of the previous wording of “determining how long to maintain the target range”, the October 28 policy statement spoke of “determining whether it will be appropriate to raise the target range at its next meeting.” While the same host of factors was cited as being the key variables that will feed into the decision, the change of wording seems meant to signify that if economic data continue broadly in line with what we have seen recently, the FOMC would probably be prepared to pull the trigger on December 16.

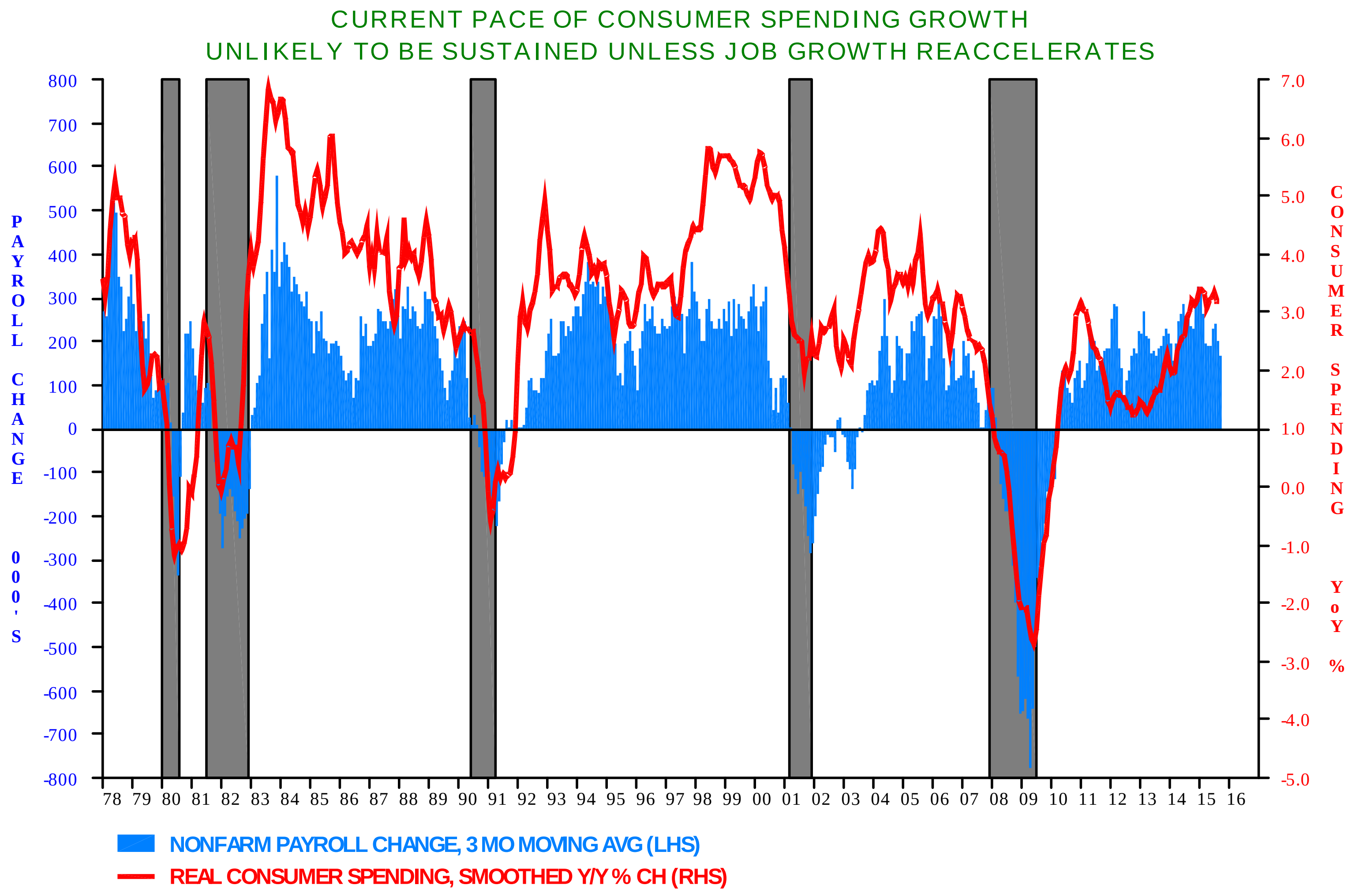
- Prior to the debt ceiling / budget deal being reached, our forecast was that the potential for a December fiscal train-wreck made it a better bet that liftoff would commence in early 2016 rather than on December 16. But, with the fiscal barrier now not an issue, December is not only back on the table, but now seems to be the odds-on favorite for the first tightening move. Data-dependency is now almost 100% the operative theme, and as we approach the December FOMC meeting we would expect Fed officials to use public speaking engagements and interviews to further shape market expectations. This will be especially important if economic data continue to offer a mixed message. Still, by altering guidance as they did, FOMC members sent a clear signal that a continuation of the type of data flow we have been seeing recently would probably be sufficient.

- We continue to expect the tightening process, whenever it begins, to be gradual. The pace we have built into our interest rate forecast is one 25bp move in every three FOMC meetings. Therefore, if the Fed moves by 25bp in December, we would expect to see subsequent similar actions in April and September 2016. Thus, we would still see a cumulative 75bp of tightening in 2016, but it would occur by the September rather than the December meeting as forecast previously.

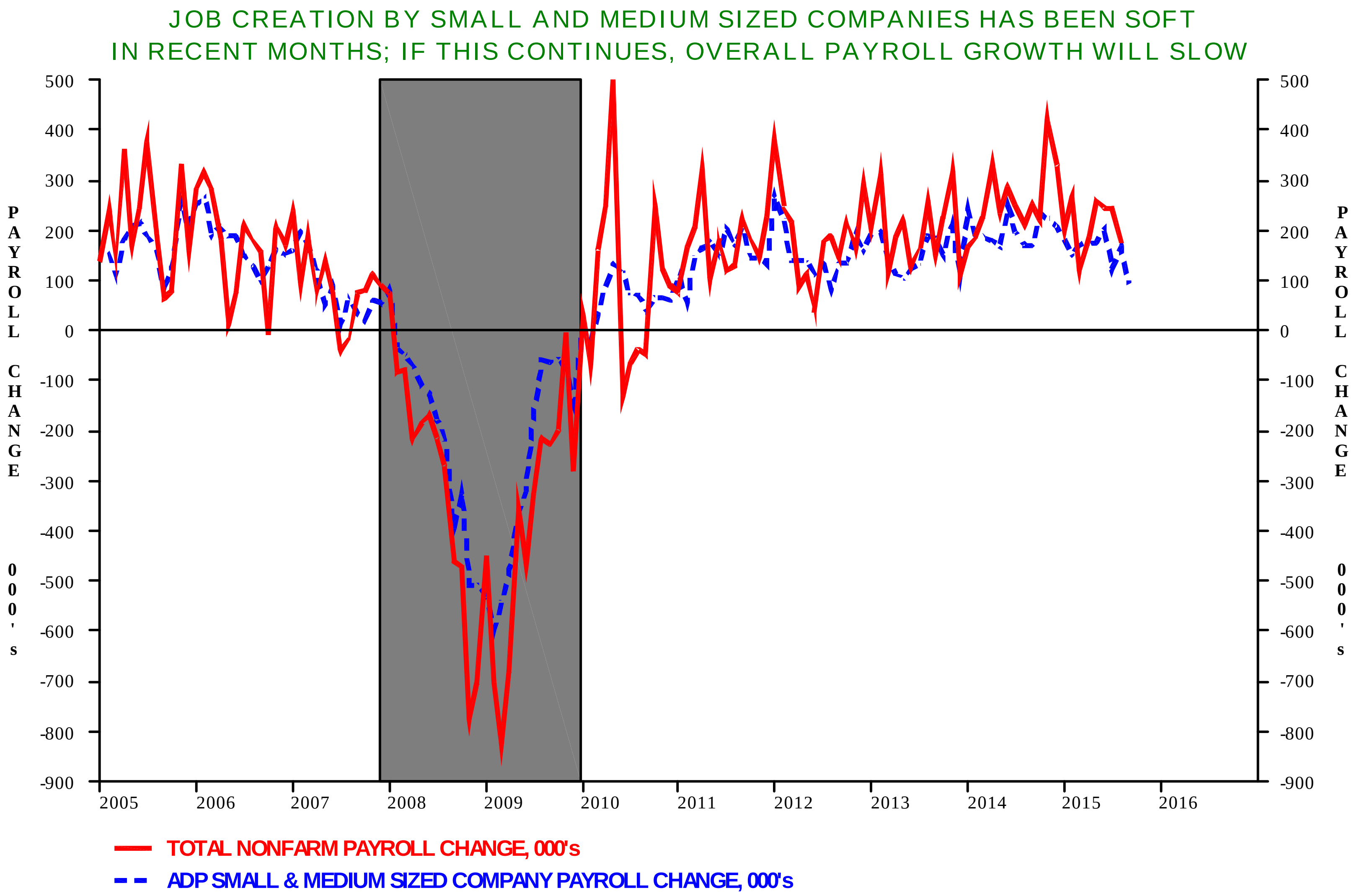
BAA CORP / 10Y TSY SPREAD HAS WIDENED OUT CONSIDERABLY, INDICATIVE OF MARKET FEARS OF GLOBAL ECONOMIC SLUMP



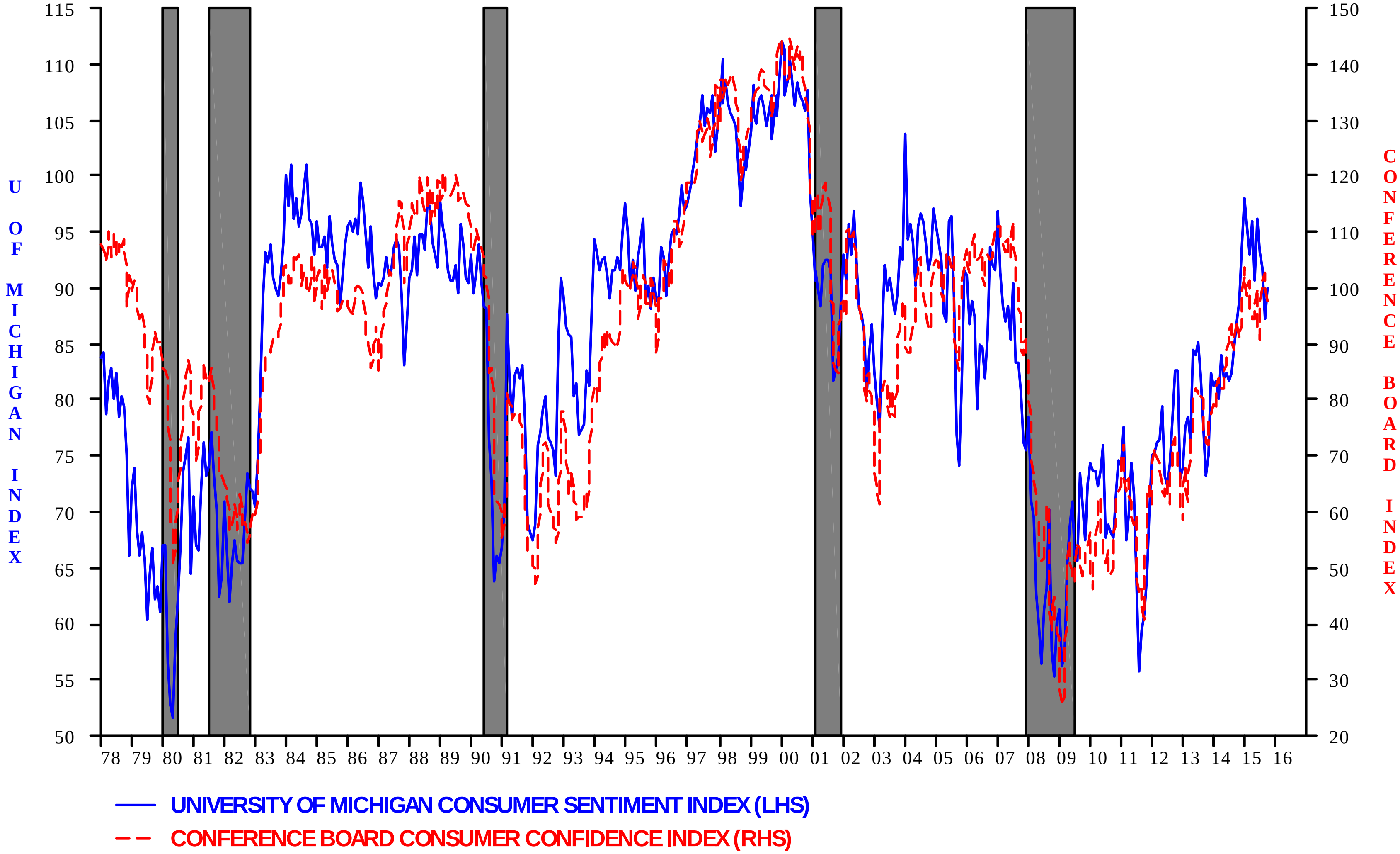
The Labor Market Will Remain a Key to Growth

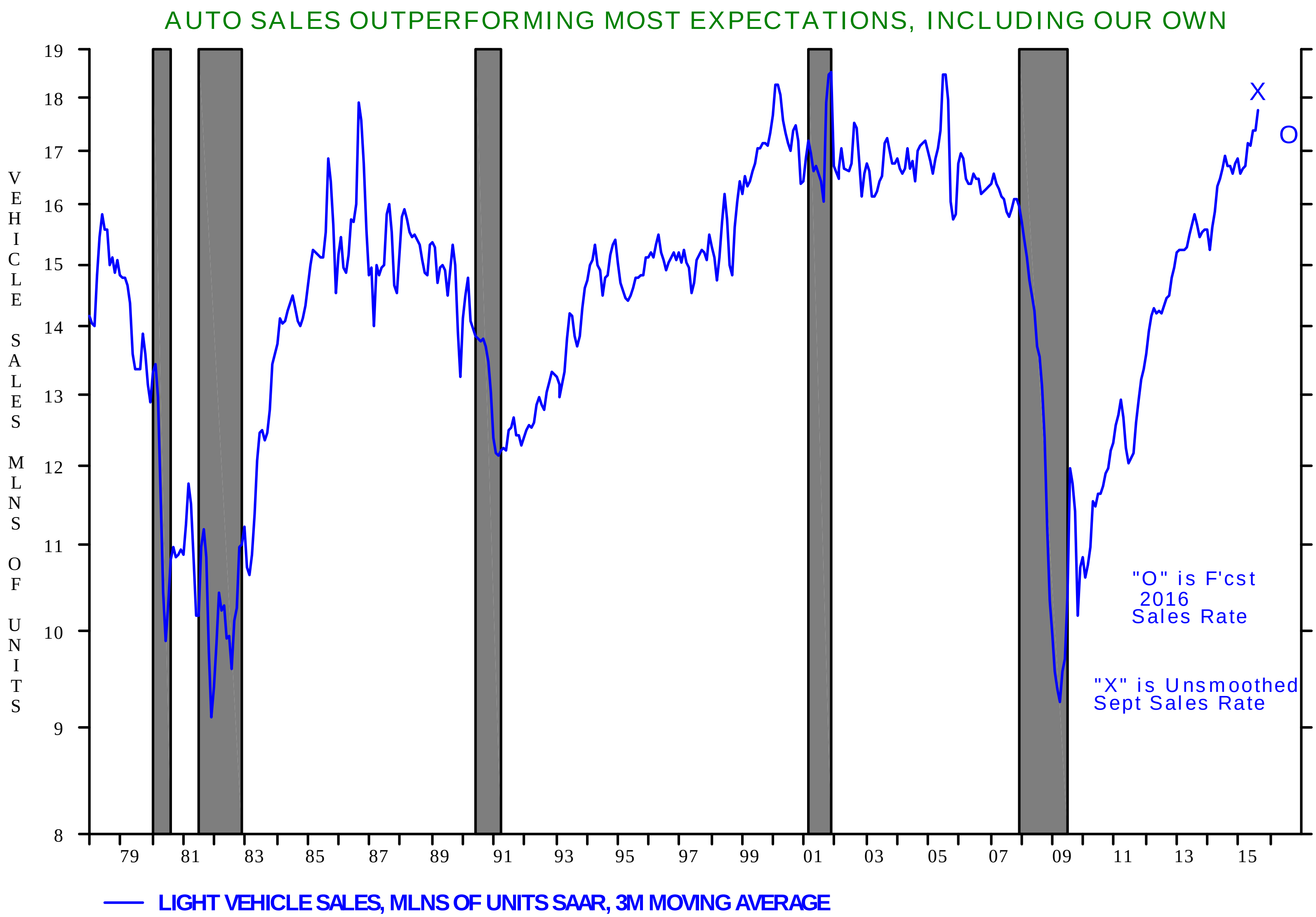


Slower Small & Medium Firm Job Creation Bears Watching



CONSUMER CONFIDENCE AND SENTIMENT INDICES HAVE BEEN ERRATIC IN RECENT MONTHS, BUT REMAIN AT VERY HEALTHY LEVELS




AUTO SALES OUTPERFORMING MOST EXPECTATIONS, INCLUDING OUR OWN
VEHICLE SALES MLNS OF UNITS
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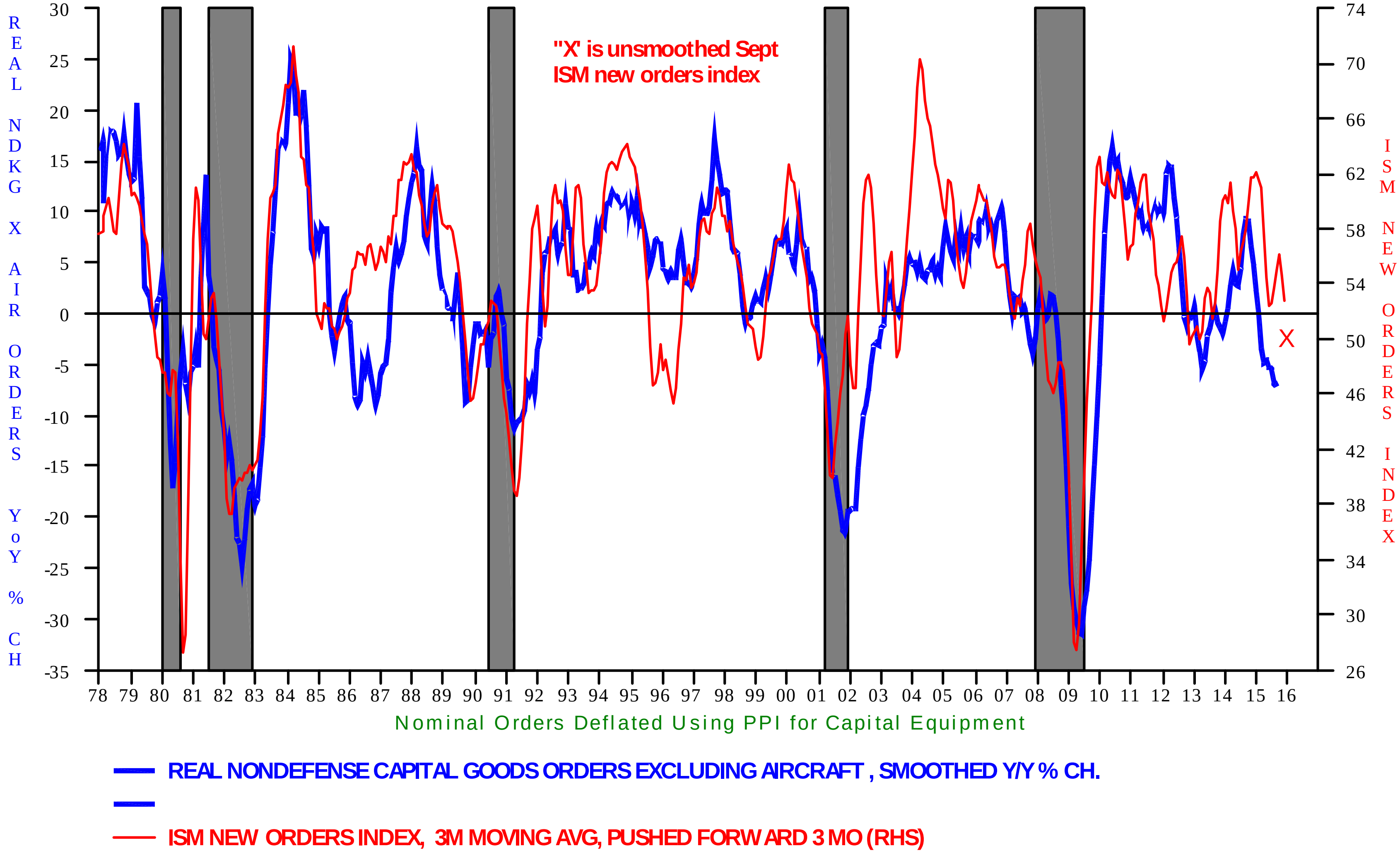
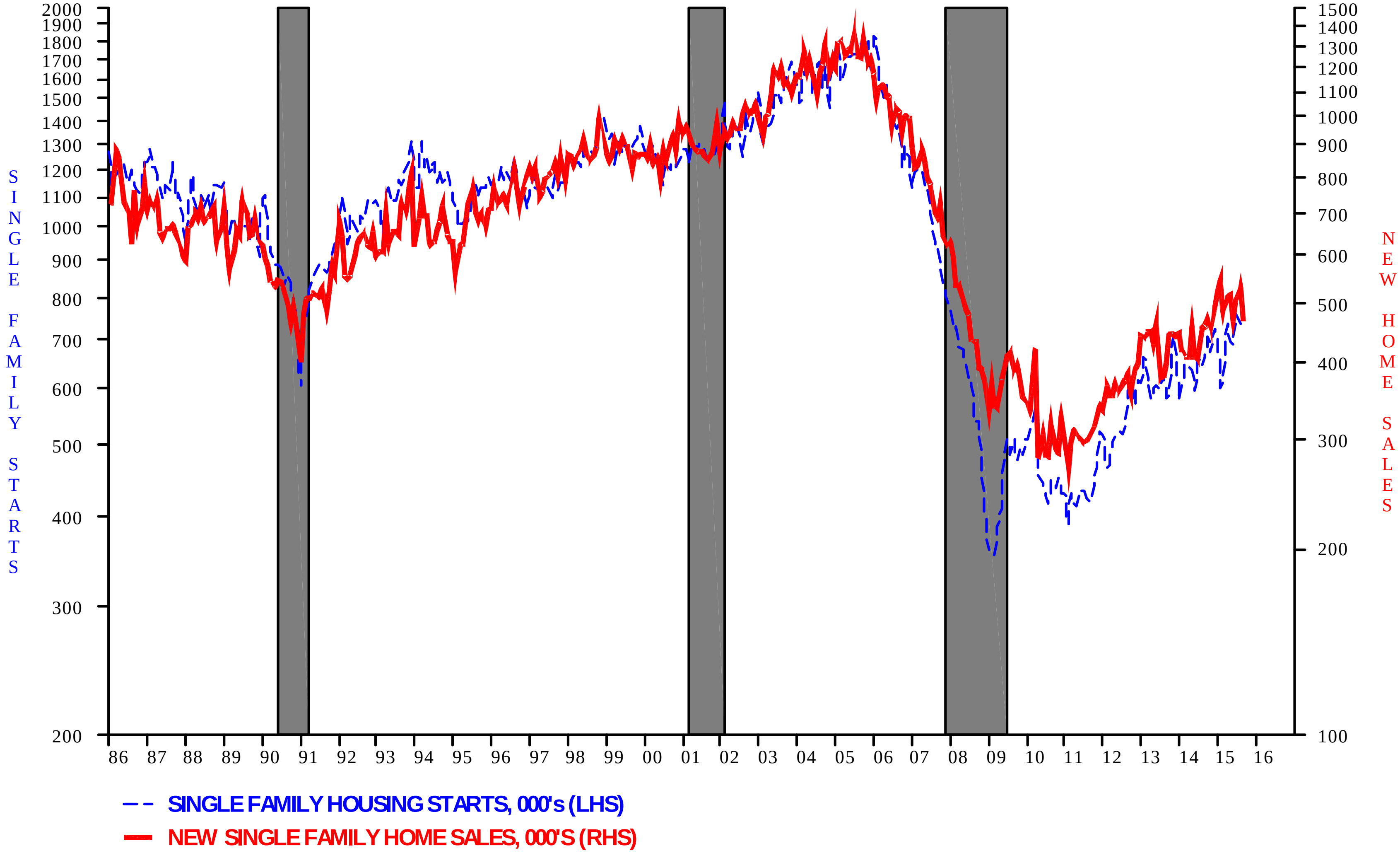
"O" is F'cst 2016 Sales Rate
"X" is Unsmoothed Sept Sales Rate
LIGHT VEHICLE SALES, MLNS OF UNITS SAAR, 3M MOVING AVERAGE

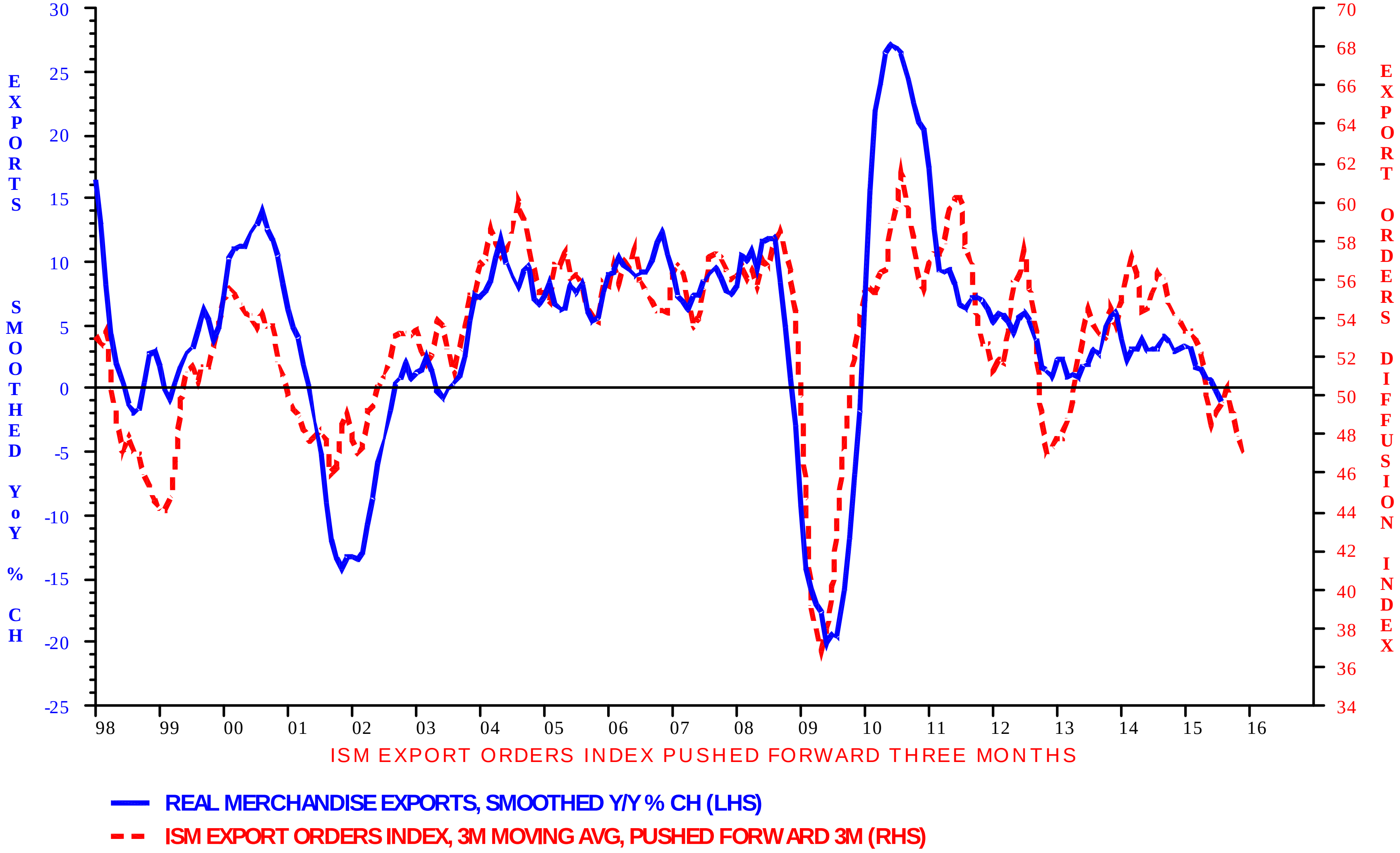
RECENT PLUNGE IN ISM MFG NEW ORDERS SUB-INDEX SUGGESTS
NO IMPROVEMENT IN TREND OF CAPITAL GOODS ORDERS IN COMING MONTHS



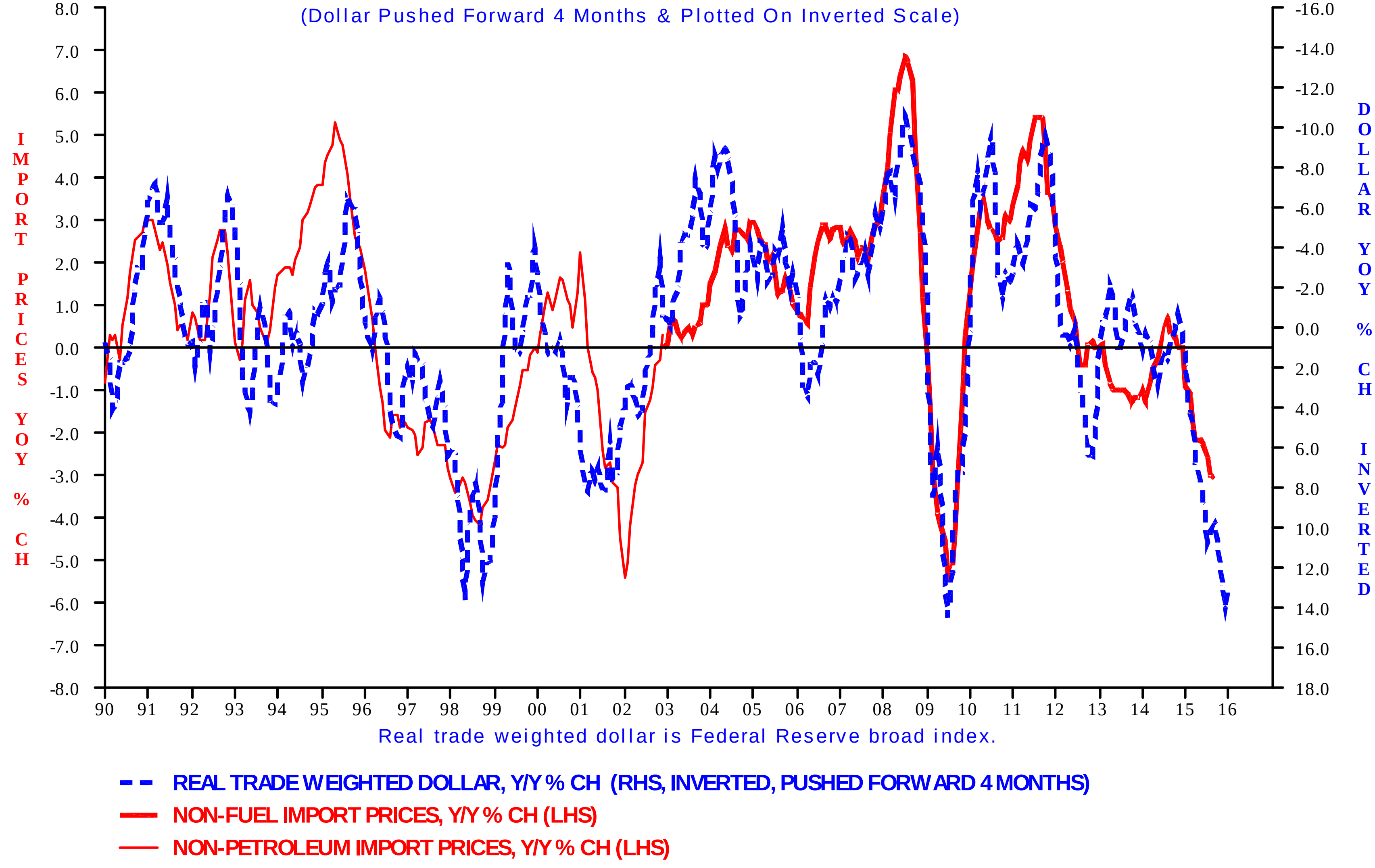
NEW HOME SALES FELL SHARPLY IN SEPTEMBER, RETRACING ALL OF PREVIOUS TWO MONTHLY INCREASES-- FURTHER GAINS NECESSARY TO SUPPORT HOUSING START GROWTH



WEAK GROWTH ABROAD WEIGHING HEAVILY ON U.S. EXPORTS;
STRONG DOLLAR NOT HELPING EITHER



DOLLAR STRENGTH POINTS TO FURTHER PRESSURE ON CORE IMPORT PRICES



Philadelphia Region Manufacturing Activity in a Slump

Philly Fed Index -4.5 in October after -6.0 in September

The Philadelphia Fed diffusion index of general business activity improved very modestly to a still weak -4.5 in October from a September result of -6.0 that was almost 12-points below the median forecast at the time. The October tally compared to a median forecast of -2.0. Although the September result was much weaker than expected, we underscored in our commentary last month that the underlying details were much better than the separate headline measure (i.e., the new orders index rose to 9.4 from 5.8 in August, the shipments index remained strong, the employment index rose sharply, and the six-month expectations index improved from an already high level). In October, the details were much more in line with the weak headline result, with the new orders index plunging to -10.6 from 9.4, the shipments index falling to -6.1 from 14.8, the employment index dropping to -1.7 from 10.2, and the six-month expectations index falling to 36.7 from 44.0.

Given that all other manufacturing data point to weakness, which is hardly surprising given soft growth abroad and a need to better balance domestic inventories, the September underlying detail looks like statistical noise. Over time, manufacturing activity ought to pick up modestly on a trend basis as domestic inventories are rebalanced, but we do not anticipate factory output to reach the pace of growth seen during much of 2014 as the foreign demand side is likely to remain weak.

Earlier outcomes for the Philly index were 8.3 in August, 15.7 in July, 5.2 in June, 6.7 in May, 7.5 in April, 5.0 in March, 5.2 in February, and 6.3 in January.

The Philly Fed released the following summary of the report: *"For the second consecutive month, regional manufacturers reported declines in overall activity. Indexes for new orders, shipments, employment, and average work hours all dipped into negative territory this month. On balance, firms reported near-steady prices. Despite the reported deterioration in current conditions, most firms continued to expect growth over the next six months, although the levels of optimism as suggested by the survey's future indexes weakened across all broad indicators this month."*

Steady to Slightly Higher Core Inflation

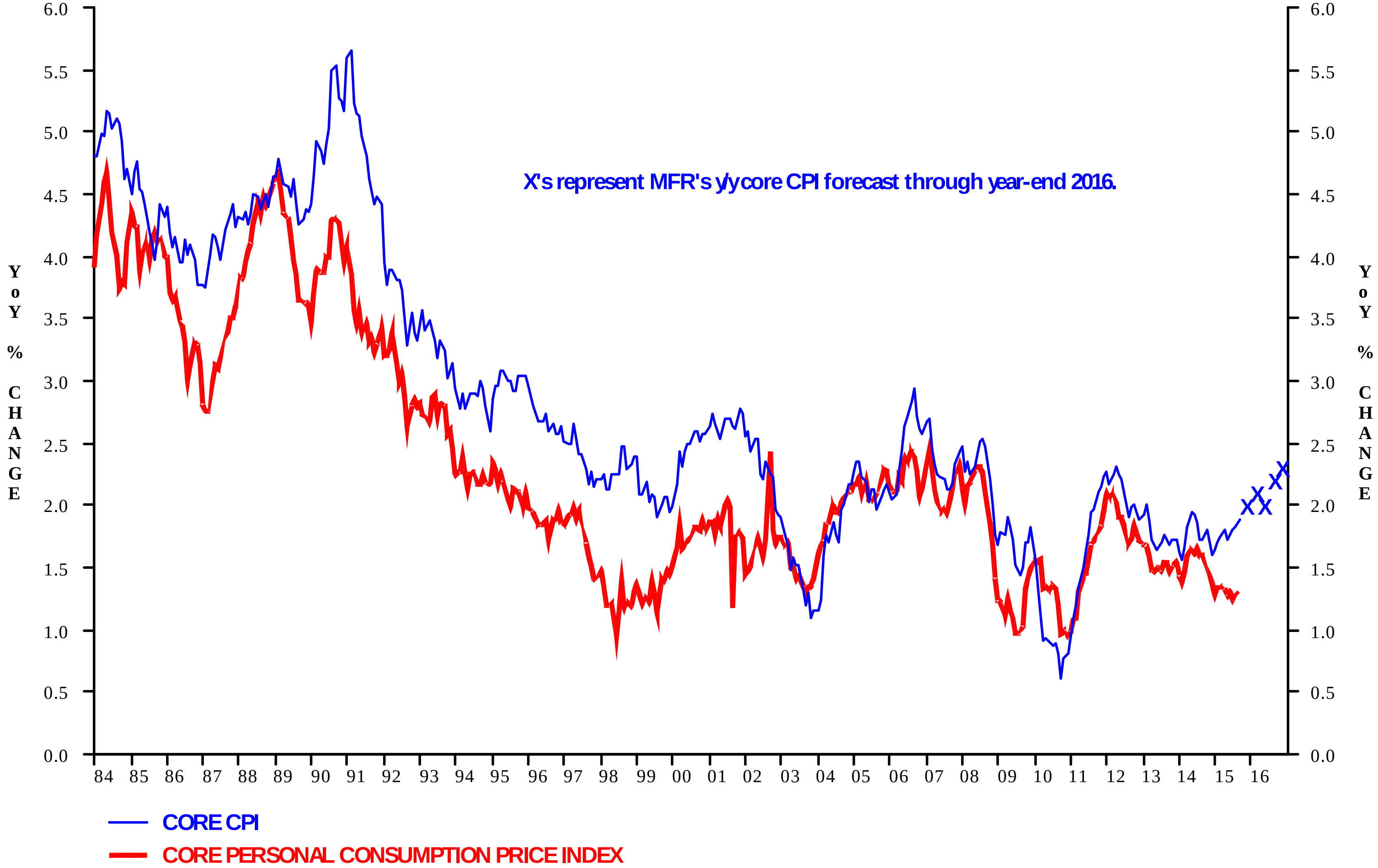
- The steep decline in oil prices dragged headline inflation measures well below the Fed's 2% target. However, core inflation measures remained basically steady even as headline inflation plunged. Moreover, while wage gains have disappointed, the Federal Reserve seems confident in its belief that continuing labor market gains will have some upward effect on wages and core inflation.

- That is also our forecast, but we acknowledge that the timeframe for this to occur keeps being pushed out.

- In the longer run, in addition to questions about the Federal Reserve's ability to manage a $4 trillion balance sheet, the inflation picture is clouded by the temptation for policymakers to try to use inflation as a means of reducing the burden of debt.

	2015:Q3 (actual)	2015:Q4	2016:Q1	2016:Q2	2016:Q3	2016:Q4	2014 q4/q4 (actual)	2015 q4/q4	2016 q4/q4
CPI y/y	+0.1%	+0.9%	+2.2%	+2.0%	+2.1%	+2.2%	+1.2%	+0.9%	+2.2%
Core CPI y/y	+1.8%	+2.0%	+2.1%	+2.0%	+2.2%	+2.3%	+1.7%	+2.0%	+2.3%

CORE CPI INCREASES ARE FORECAST TO CONTINUE TO PICK UP MODESTLY



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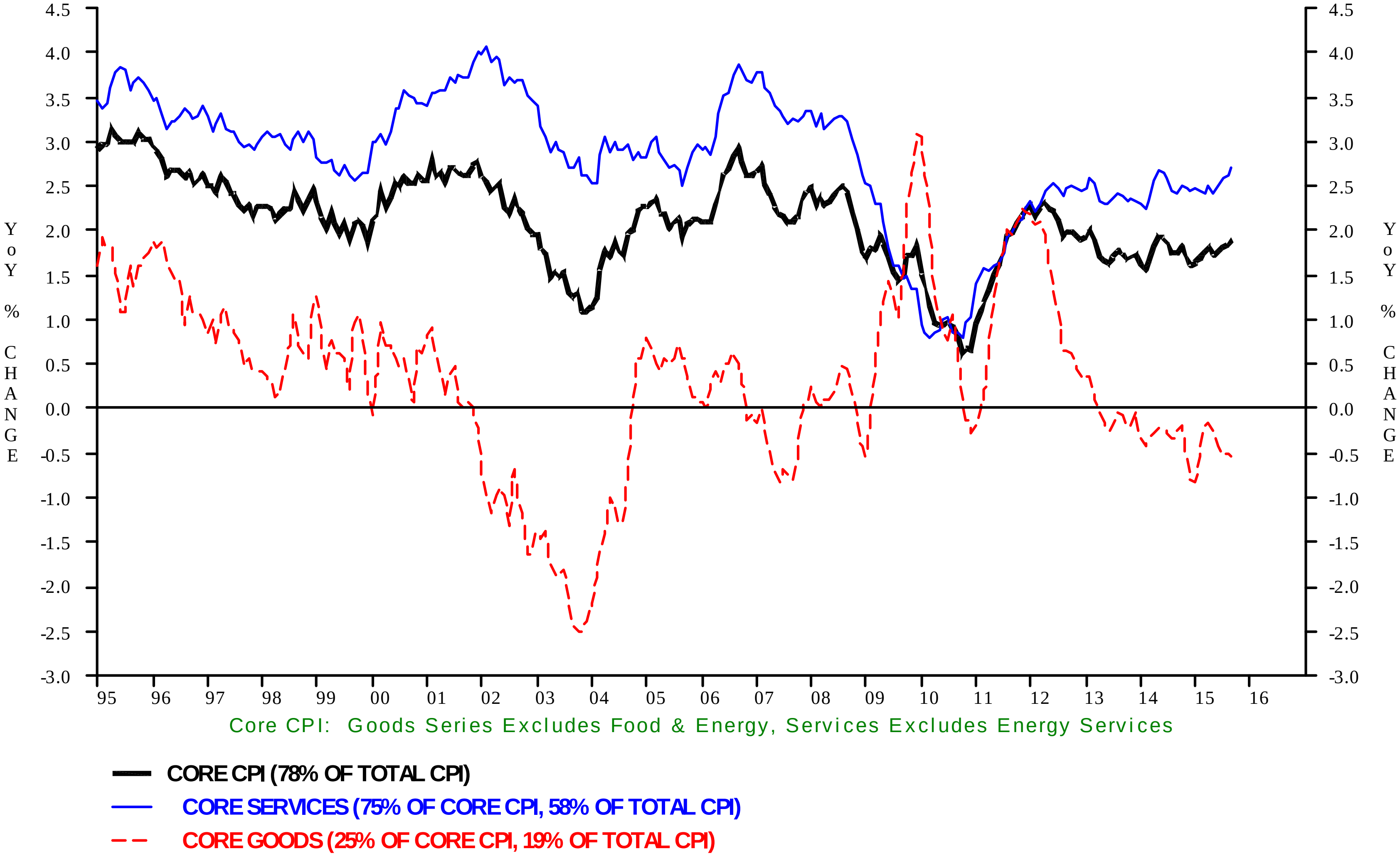
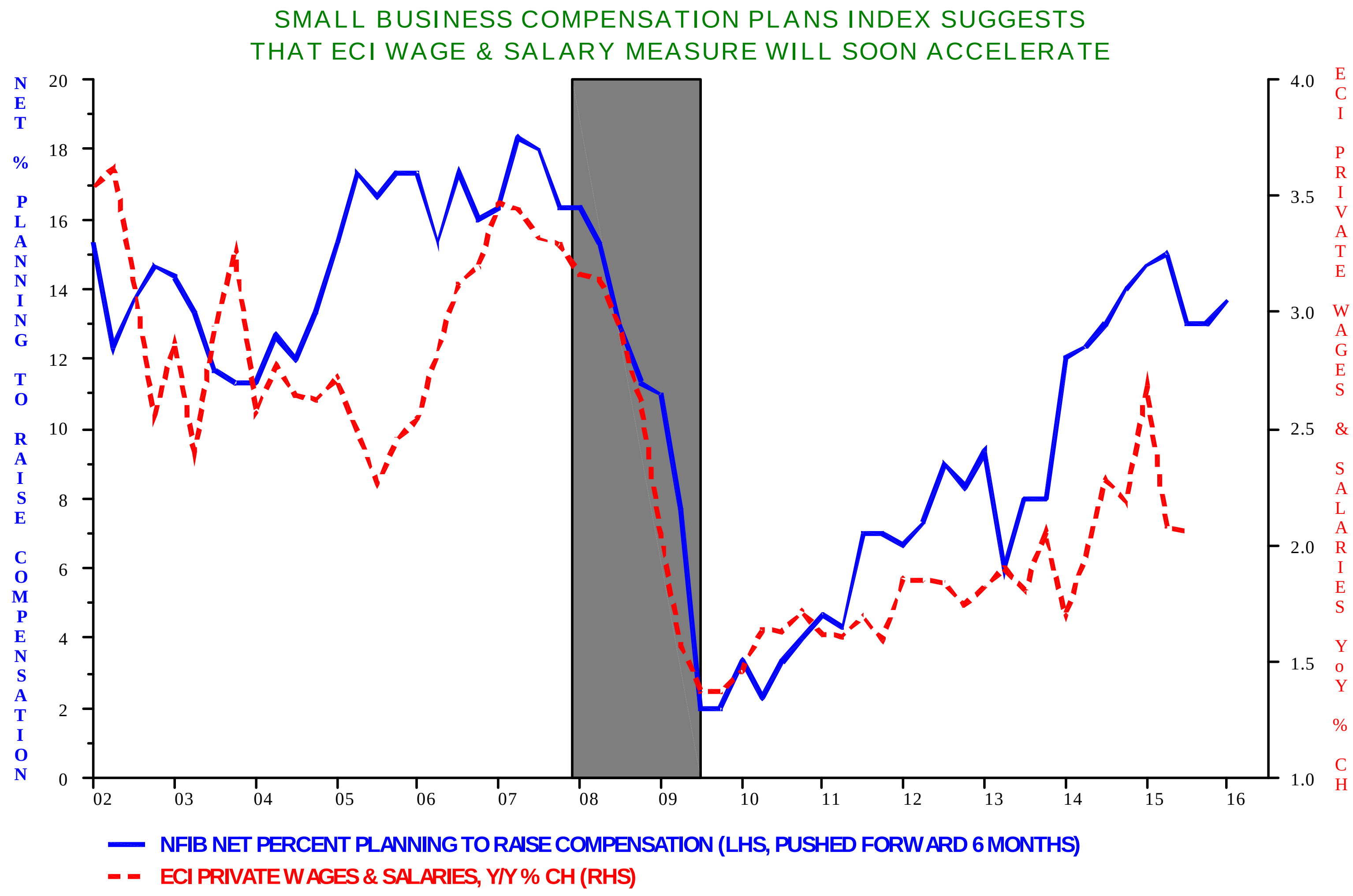
WITH CORE GOODS PRICES UNDER CONTINUED DOWNWARD PRESSURE, ANY ACCELERATION IN CORE CPI WILL HAVE TO EMANATE FROM THE SERVICE SECTOR



Watch Small Business Survey for Signal on Wage Direction



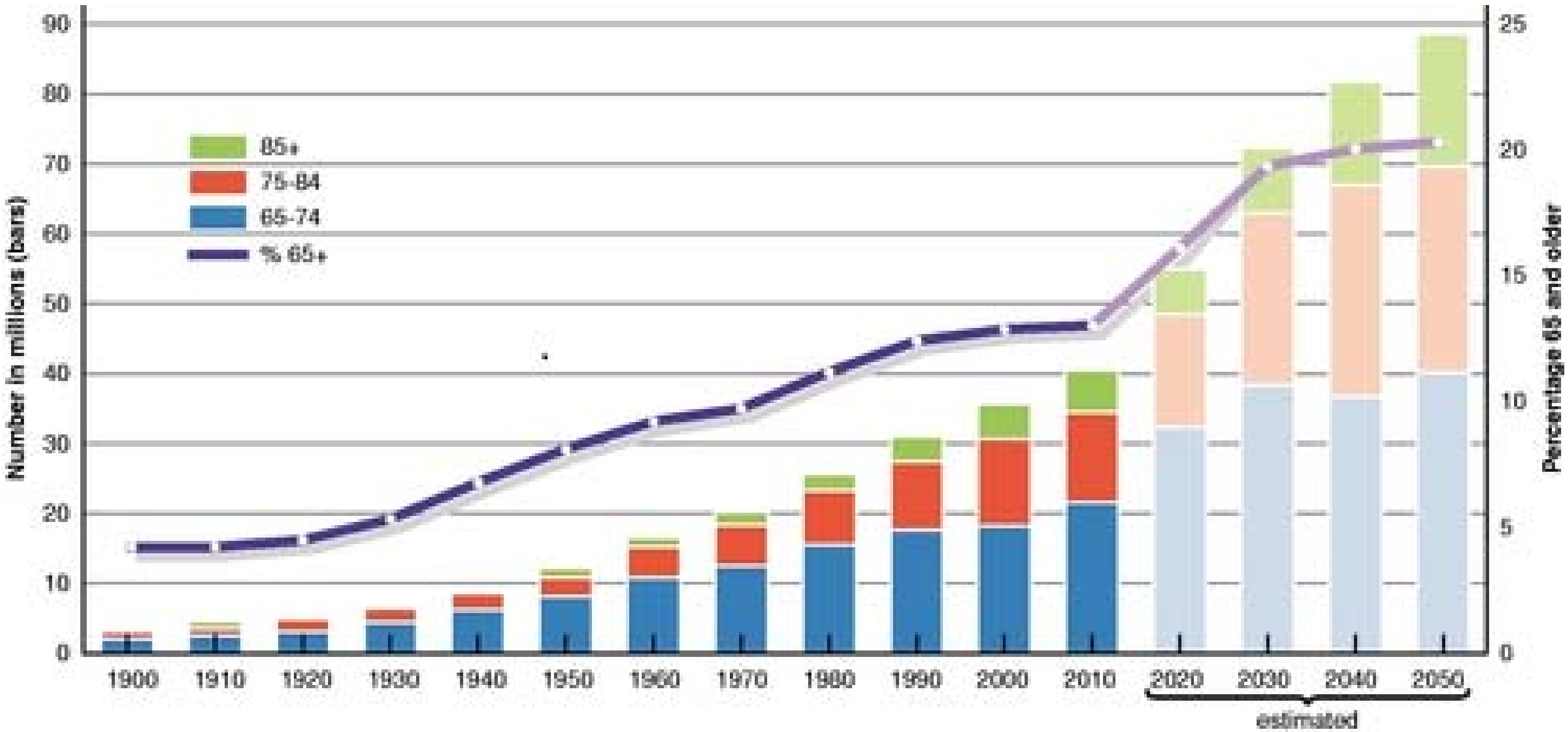
Longer-Term Demographic Realities Will Create Fiscal Policy Imperatives

Given the aging of the population and rising costs for health care, attaining a sustainable federal budget will require the United States to deviate from the policies of the past in at least one of the following ways:

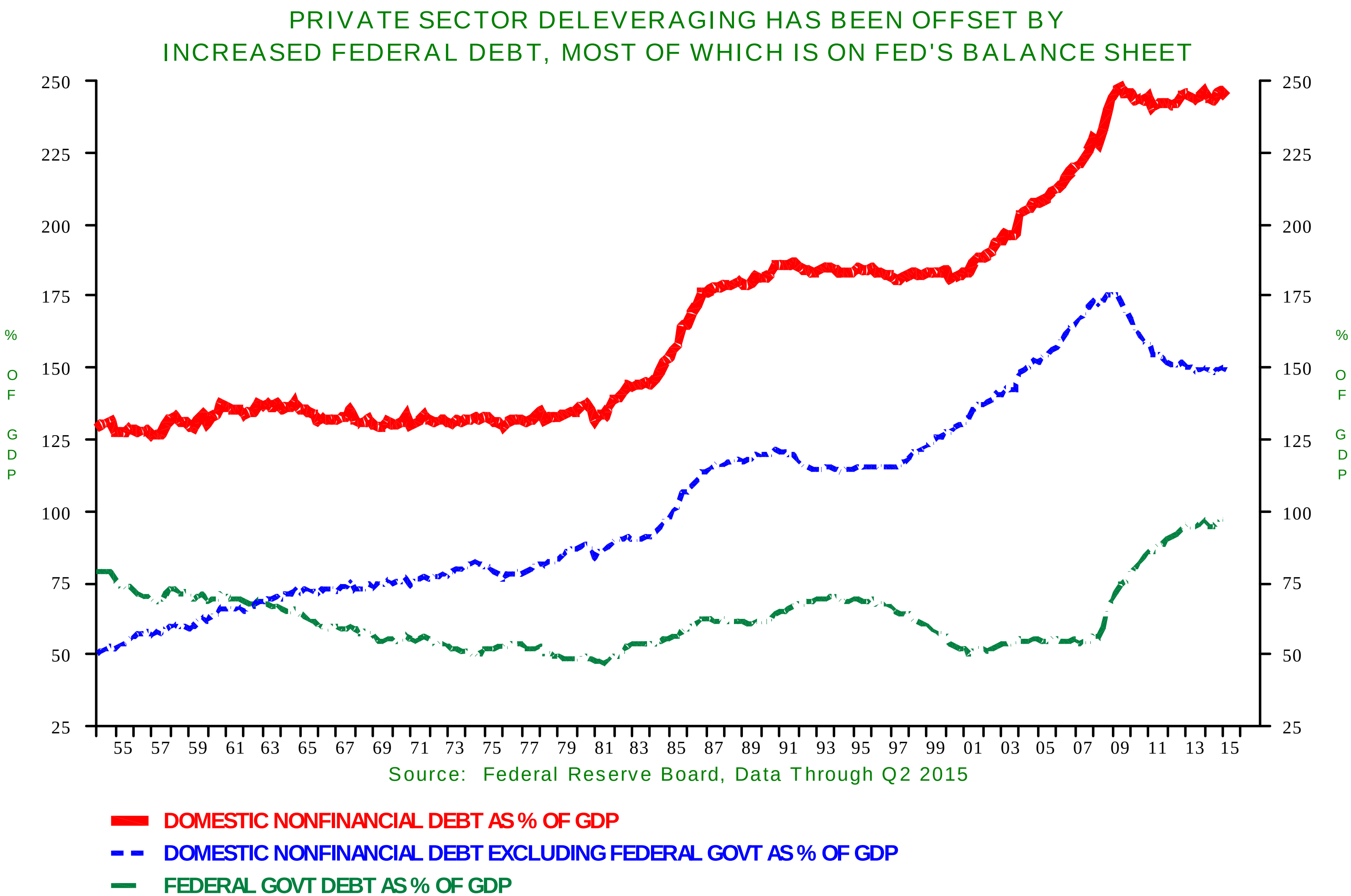
- ***Raise federal revenues significantly above their historical average share of GDP;***
- ***Make major changes to the benefits provided for Americans when they become older; or***
- ***Substantially reduce the role of the rest of the federal government relative to the size of the economy.***

The most likely eventual outcome is some combination of all three of the above. The political, social, and economic consequences from the battle over how this will occur promise to be substantial and long-lasting.

AGING BABY-BOOMERS WILL PUT INCREASED BURDEN ON ENTITLEMENT PROGRAMS – EXISTING BENEFIT LEVELS, COSTS, AND METHODS OF FINANCING ARE UNSUSTAINABLE



Source: U.S. Census Bureau



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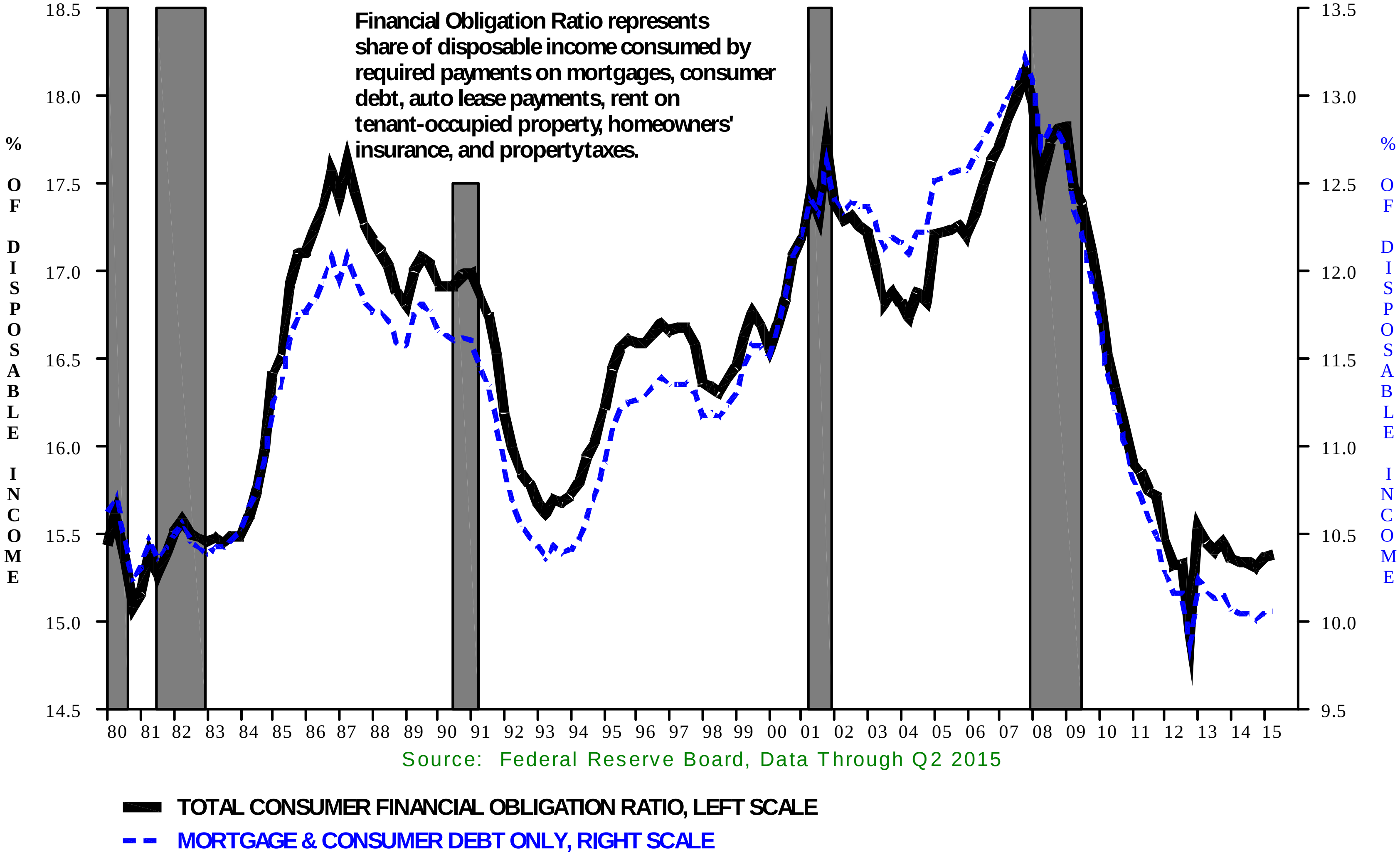
HOUSEHOLDS HAVE SIGNIFICANTLY CLEANED UP THEIR BALANCE SHEETS, BUT A NEED TO SUBSTANTIALLY BOOST RETIREMENT SAVINGS SUGGESTS CONTINUED CAUTIOUS STANCE



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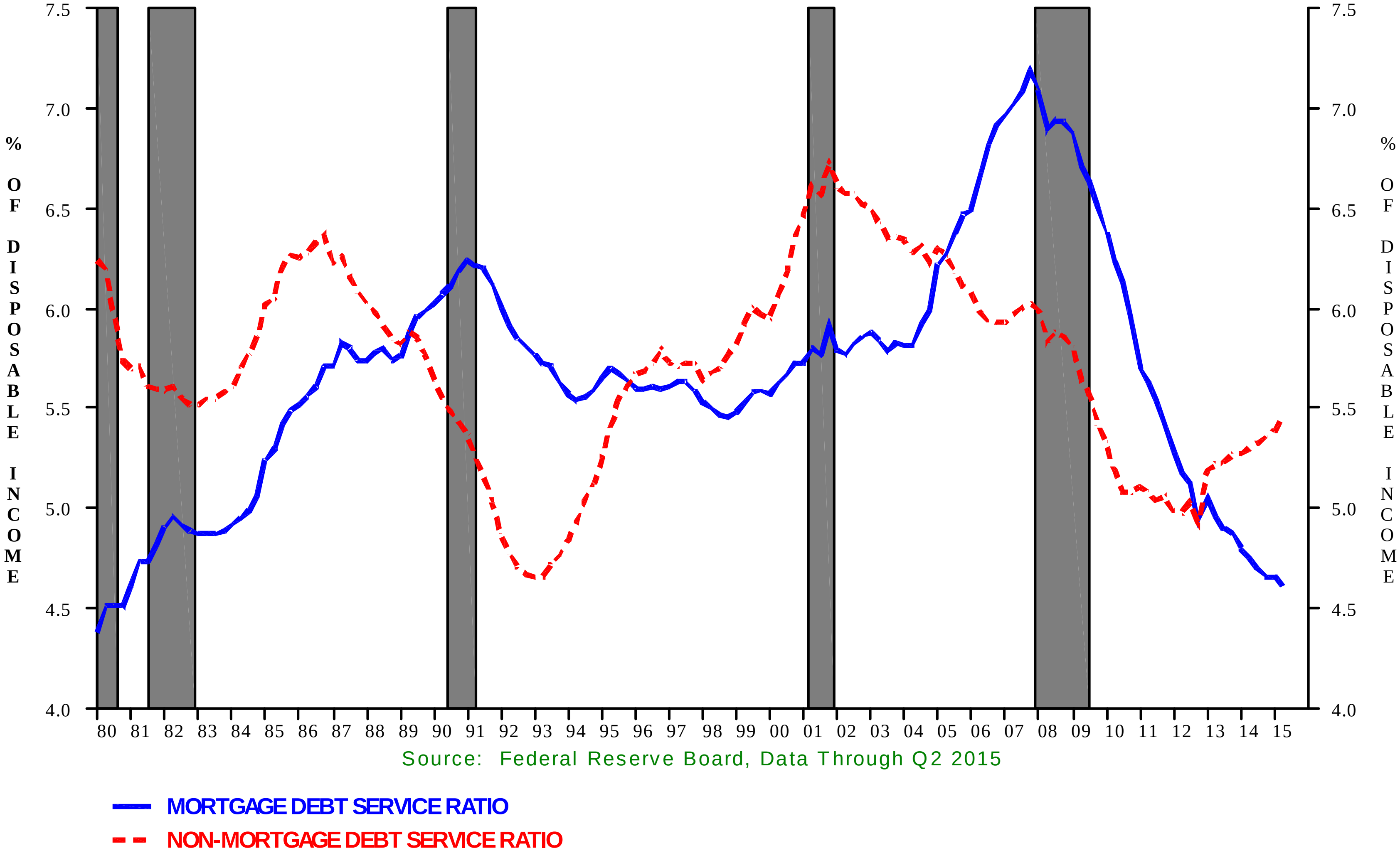
REDUCTION IN HOUSEHOLD MORTGAGE DEBT BURDEN
LEAVES SCOPE FOR INCREASED NON-MORTGAGE LEVERAGE



Source: Federal Reserve Board, Data Through Q2 2015

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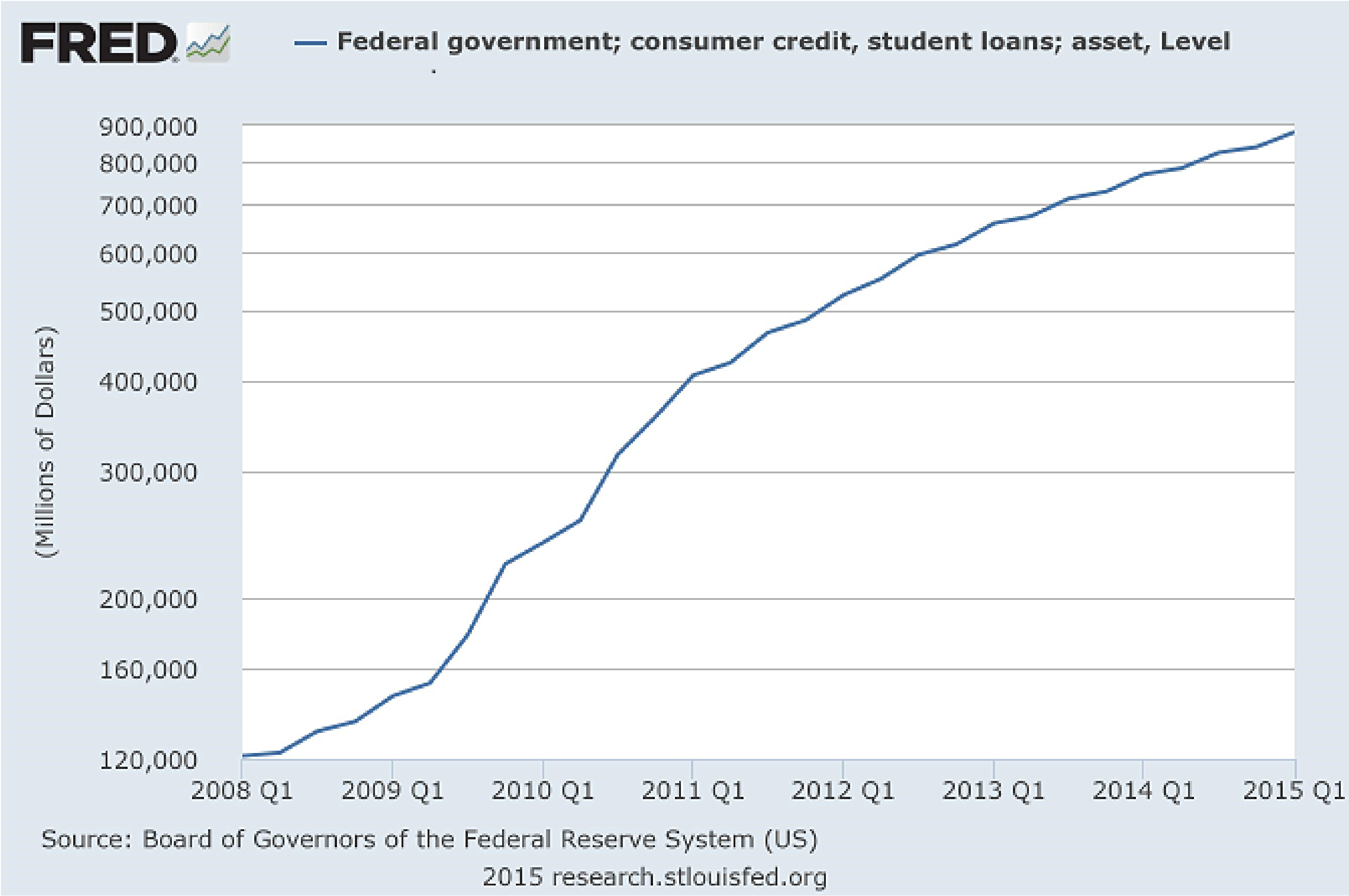
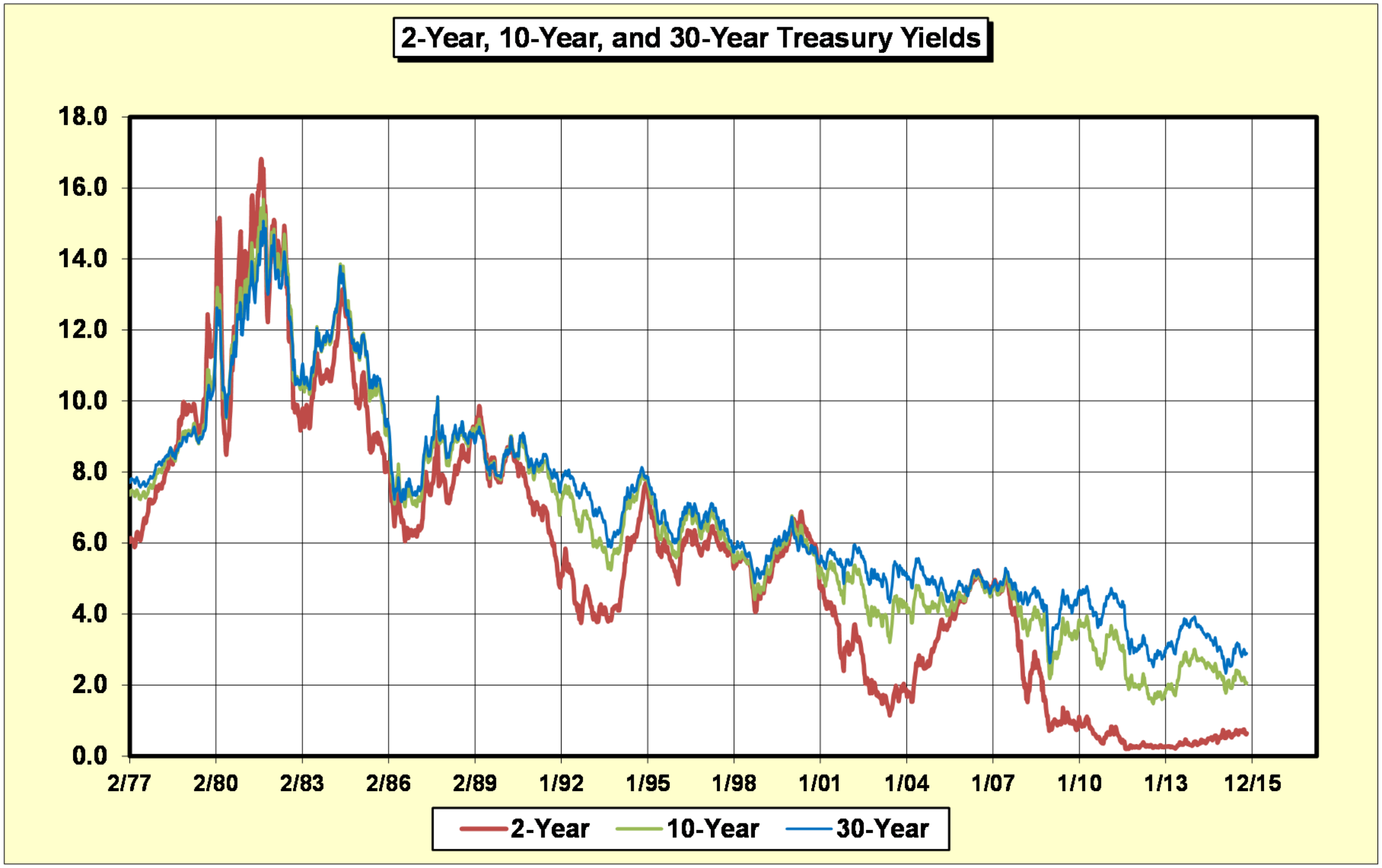
Student Debt: The Next Flashpoint?

This is just government-held portion of student debt – including the private sector brings the estimated total to more than $1.2 trillion.



Interest Rates Have Yet to Break Out of Long-Term Downtrend



The “Dots” Point to Very Gradual Tightening

FOMC PARTICIPANT ASSESSMENTS OF APPROPRIATE TIMING OF MONETARY POLICY FIRMING

	2015	2016	2017		
Timing of Policy Firming					
Prior timing expectation	13	3	1		
Pace of Policy Firming	**2015**	**2016**	**2017**	**2018**	**Long Run**
Median	0.375%	1.375%	2.625%	3.375%	3.500%
Prior median expectation	0.625%	1.625%	2.875%	n/a	3.750%
Average	0.40%	1.48%	2.64%	3.34%	3.46%
High	0.88%	2.88%	3.88%	3.88%	4.00%
Low	-0.13%	-0.13%	1.00%	2.88%	3.00%
Mode (most frequent)	0.38%	1.13%	2.63%	2.88%	3.25%
Range (basis points)	100	300	288	100	100
Target fed funds at year-end	**2015**	**2016**	**2017**	**2018**	**Long Run**
Participant	-0.125%	-0.125%	1.000%	2.875%	3.000%
Participant	0.125%	0.875%	1.875%	2.875%	3.250%
Participant	0.125%	0.875%	1.875%	2.875%	3.250%
Participant	0.125%	1.125%	2.125%	3.000%	3.250%
Participant	0.375%	1.125%	2.125%	3.125%	3.250%
Participant	0.375%	1.125%	2.375%	3.125%	3.250%
Participant	0.375%	1.125%	2.375%	3.250%	3.250%
Participant	0.375%	1.375%	2.625%	3.250%	3.500%
Participant	0.375%	1.375%	2.625%	3.375%	3.500%
Participant	0.375%	1.625%	2.625%	3.500%	3.500%
Participant	0.375%	1.625%	3.000%	3.500%	3.500%
Participant	0.625%	1.625%	3.000%	3.500%	3.500%
Participant	0.625%	1.875%	3.125%	3.625%	3.625%
Participant	0.625%	2.125%	3.375%	3.625%	3.750%
Participant	0.625%	2.125%	3.375%	3.625%	3.750%
Participant	0.625%	2.375%	3.500%	3.750%	3.750%
Participant	0.875%	2.875%	3.875%	3.875%	4.000%

NOTE: "Timing of policy firming" denotes the number of FOMC participants who judge that, under appropriate monetary policy, the first increase in the target federal funds rate from its current range of 0 to 1/4 percent will occur in the specified calendar year. "Pace of policy firming" shows the distribution of individual participants' judgments of the appropriate level of the target federal funds rate at the end of the specified calendar year or over the long run. SOURCE: Federal Reserve Board

MFR Forecast of Fed Funds Target,

2-Year, 10-Year & 30-Year Treasuries

(End-of-Quarter, FF Rate is Midpoint of 25bp Target Range)

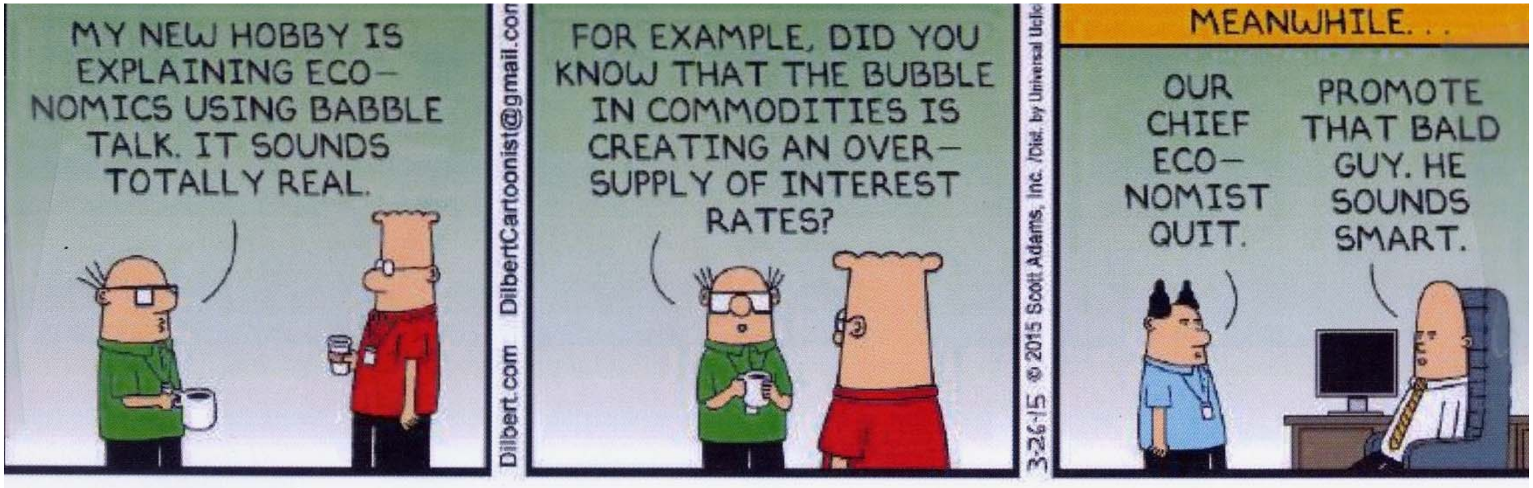
	Actual	----------------------Forecast----------------------						
	3Q'15	*4Q'15*	*1Q'16*	*2Q'16*	*3Q'16*	*4Q'16*	*1Q'17*	*2Q'17*
FF	0.13	***0.38***	***0.38***	***0.63***	***0.88***	***0.88***	***1.13***	***1.38***
2s	0.63	***1.00***	***1.10***	***1.25***	***1.50***	***1.60***	***1.75***	***2.00***
10s	2.04	***2.50***	***2.60***	***2.75***	***3.00***	***3.10***	***3.25***	***3.40***
30s	2.85	***3.25***	***3.35***	***3.40***	***3.65***	***3.70***	***3.85***	***4.00***
2s-FF	50	***63***	***73***	***63***	***63***	***73***	***63***	***63***
10s-FF	191	***213***	***223***	***213***	***213***	***223***	***213***	***203***
10s-2s	141	***150***	***150***	***150***	***150***	***150***	***150***	***140***
30s-10s	81	***75***	***75***	***65***	***65***	***60***	***60***	***60***

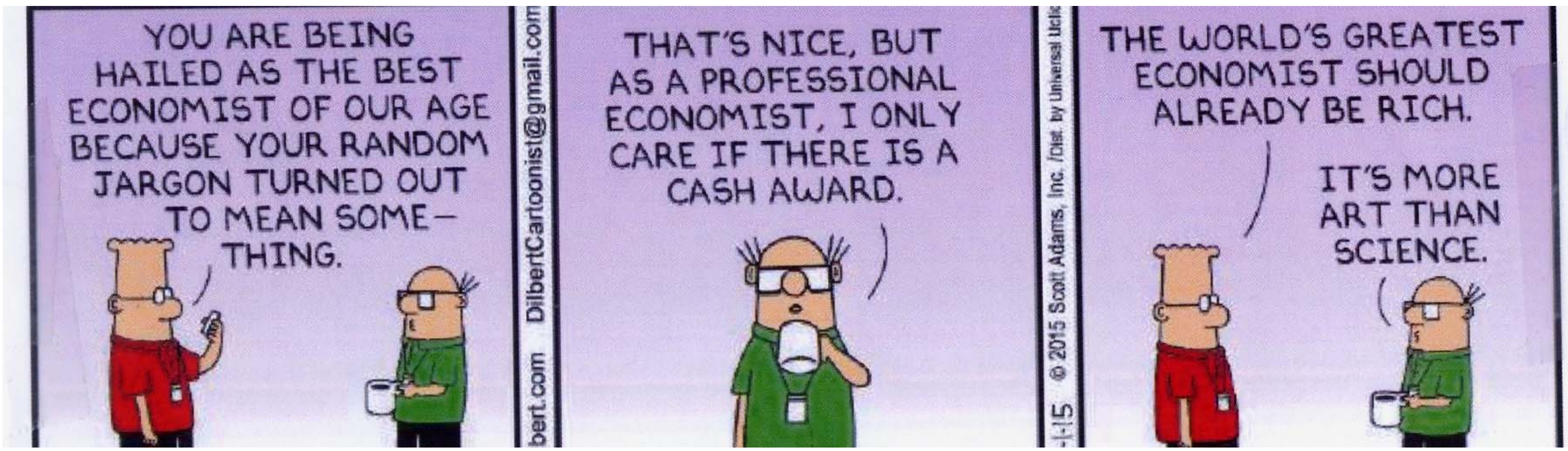
October 30, 2015

Forecast Summary

	2015:Q3 (actual)	2015:Q4	2016:Q1	2016:Q2	2016:Q3	2016:Q4	2014 q4/q4 (actual)	2015 q4/q4	2016 q4/q4
Real GDP q/q annualized	+1.5%	+2.7%	+2.7%	+2.9%	+2.7%	+2.8%	+2.5%	+2.2%	+2.8%
Final Demand q/q annualized	+3.0%	+2.9%	+2.6%	+2.9%	+2.7%	+2.8%	+2.5%	+2.4%	+2.8%
Consumer Sp. q/q annualized	+3.2%	+2.9%	+2.7%	+2.7%	+2.8%	+2.6%	+3.2%	+2.9%	+2.7%
Capital Spending q/q annualized	+2.1%	+5.1%	+5.3%	+5.0%	+4.9%	+5.1%	+5.5%	+3.2%	+5.1%
CPI y/y	+0.1%	+0.9%	+2.2%	+2.0%	+2.1%	+2.2%	+1.2%	+0.9%	+2.2%
Core CPI y/y	+1.8%	+2.0%	+2.1%	+2.0%	+2.2%	+2.3%	+1.7%	+2.0%	+2.3%
Housing Starts (000's, saar)	1163	1175	1190	1205	1220	1235	1001	1119	1213
Light Vehicle Sales (mlns, saar)	17.8	17.8	17.7	17.6	17.6	17.5	16.4	17.3	17.6
Unemployment Rate (period avg)	5.1%	5.0%	5.0%	4.9%	4.9%	4.9%	6.2%	5.3%	4.9%

Economist Humor





MFR – Who We Are

GLOBAL ECONOMIC CONSULTING

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BROKER/DEALER

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