

**Landfill Methane
Outreach Program
Baltimore - 2012**



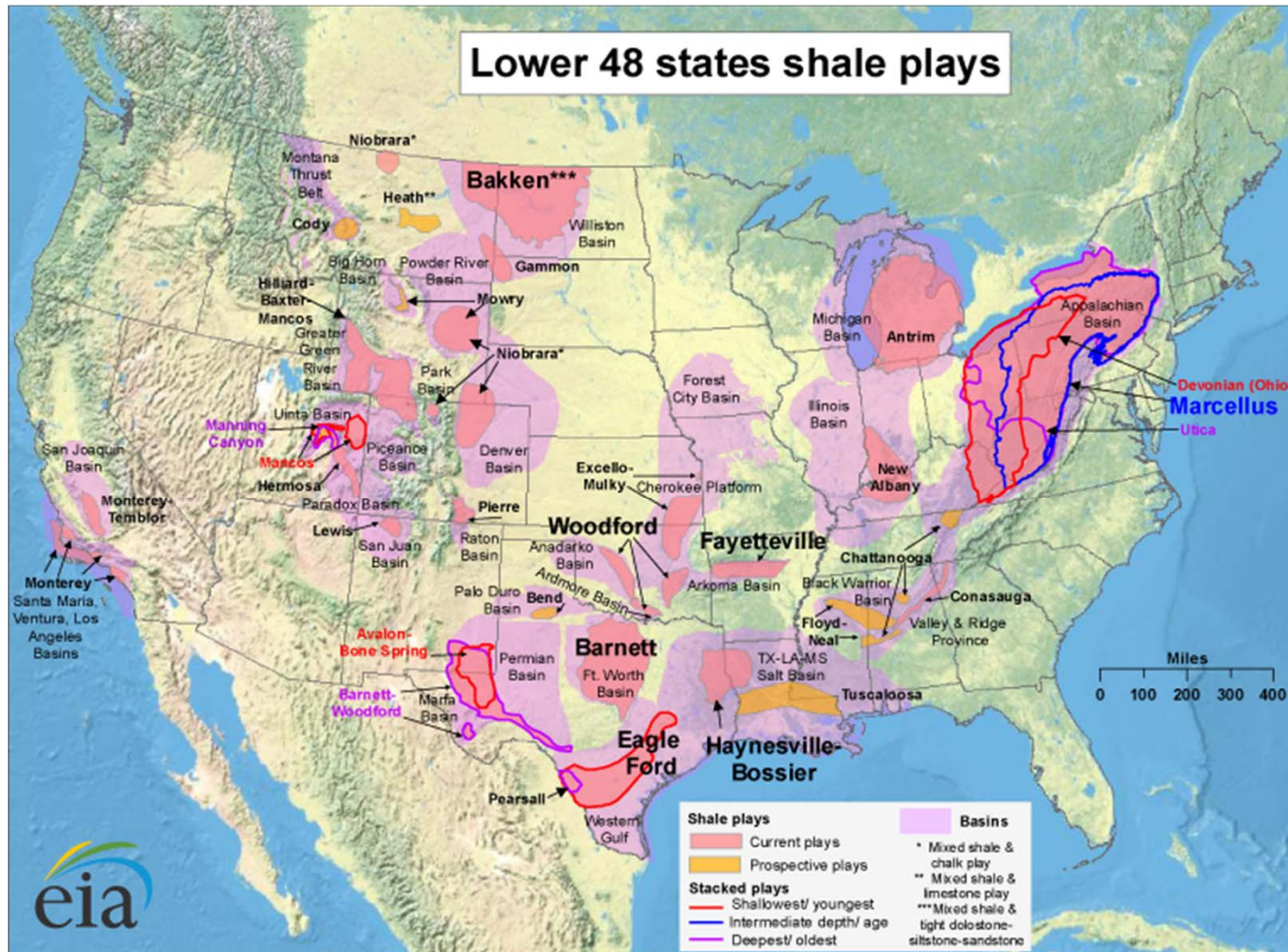
Market Conditions



1. Natural Gas Supply
2. Demand Fundamentals



Emergence of Shale Plays

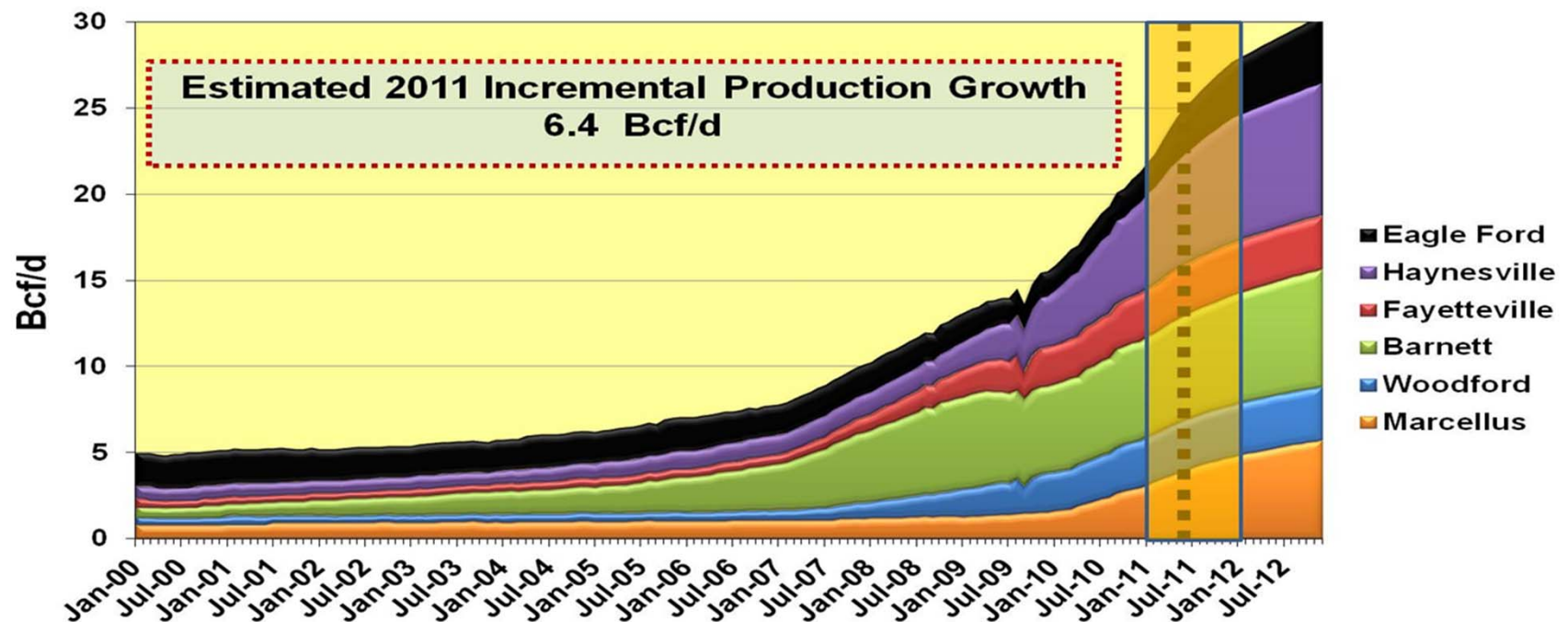


Source: Energy Information Administration based on data from various published studies.
Updated: May 9, 2011

Emergence of Shale Plays



Big "Six" Shale Production Projection

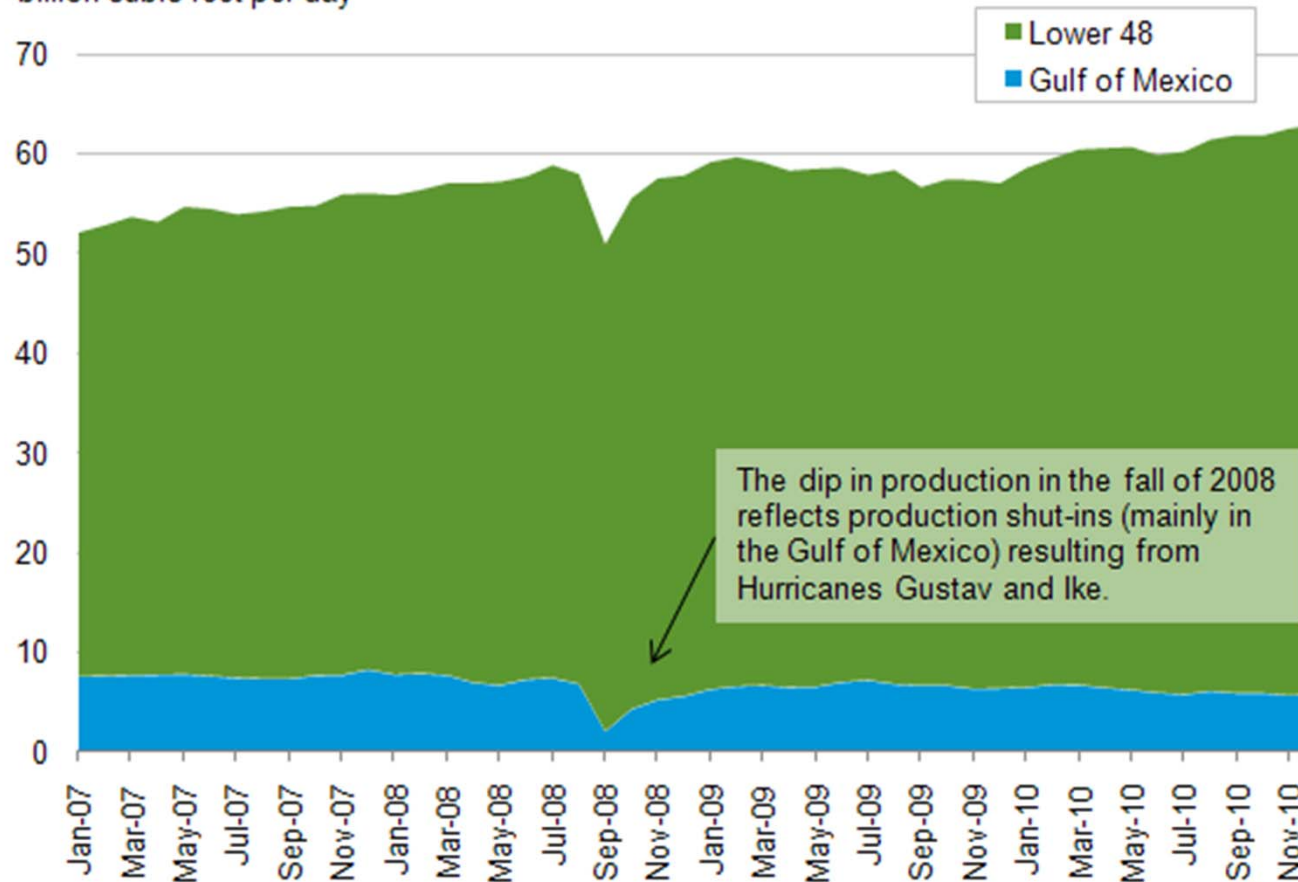


Overall Production



Figure 1. Long-term growth in the lower-48 States and long-term declines offshore continued in 2010

billion cubic feet per day



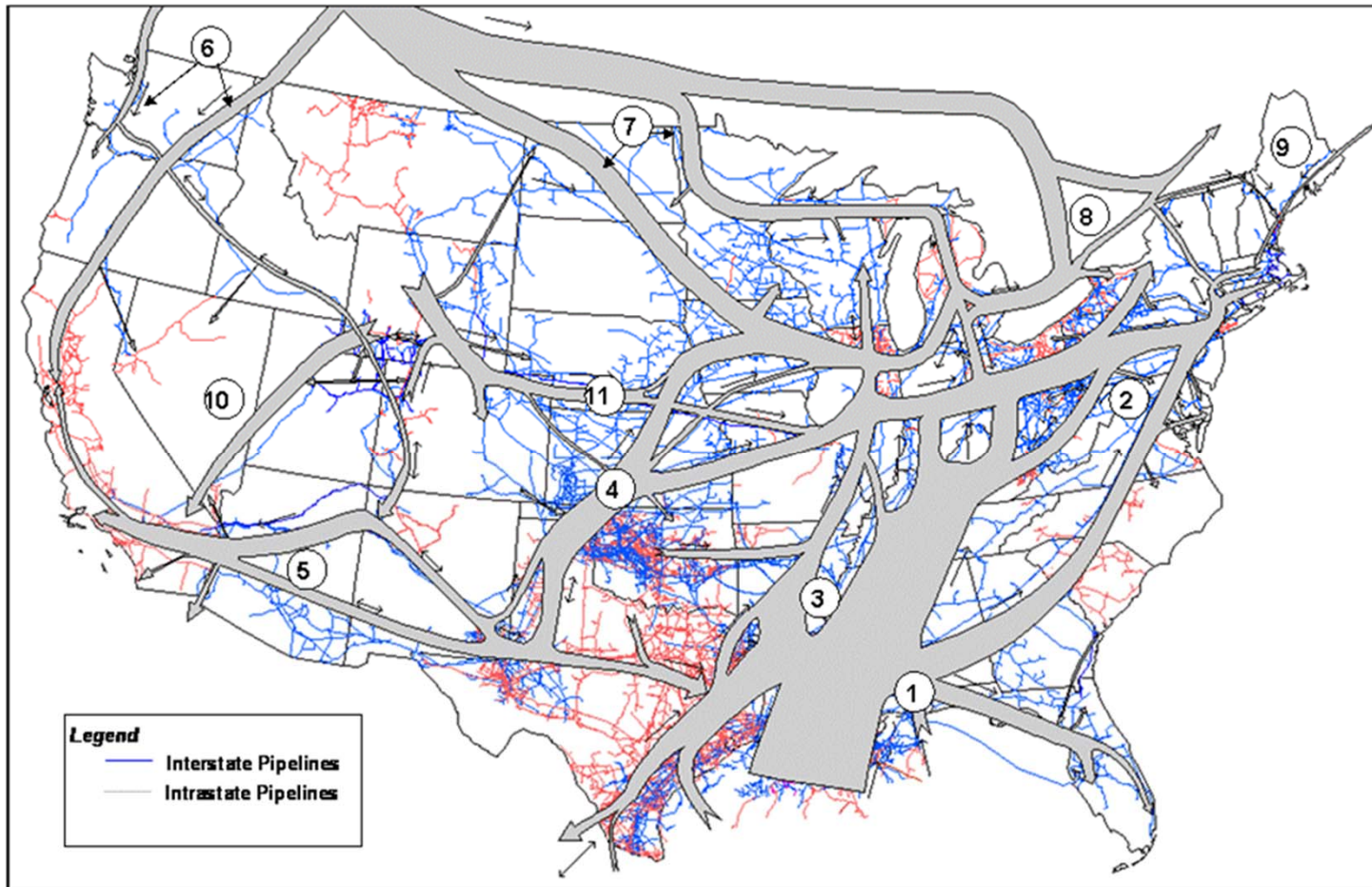
Source: U.S. Energy Information Administration, *Natural Gas Monthly*



Gas Flow Across U.S.

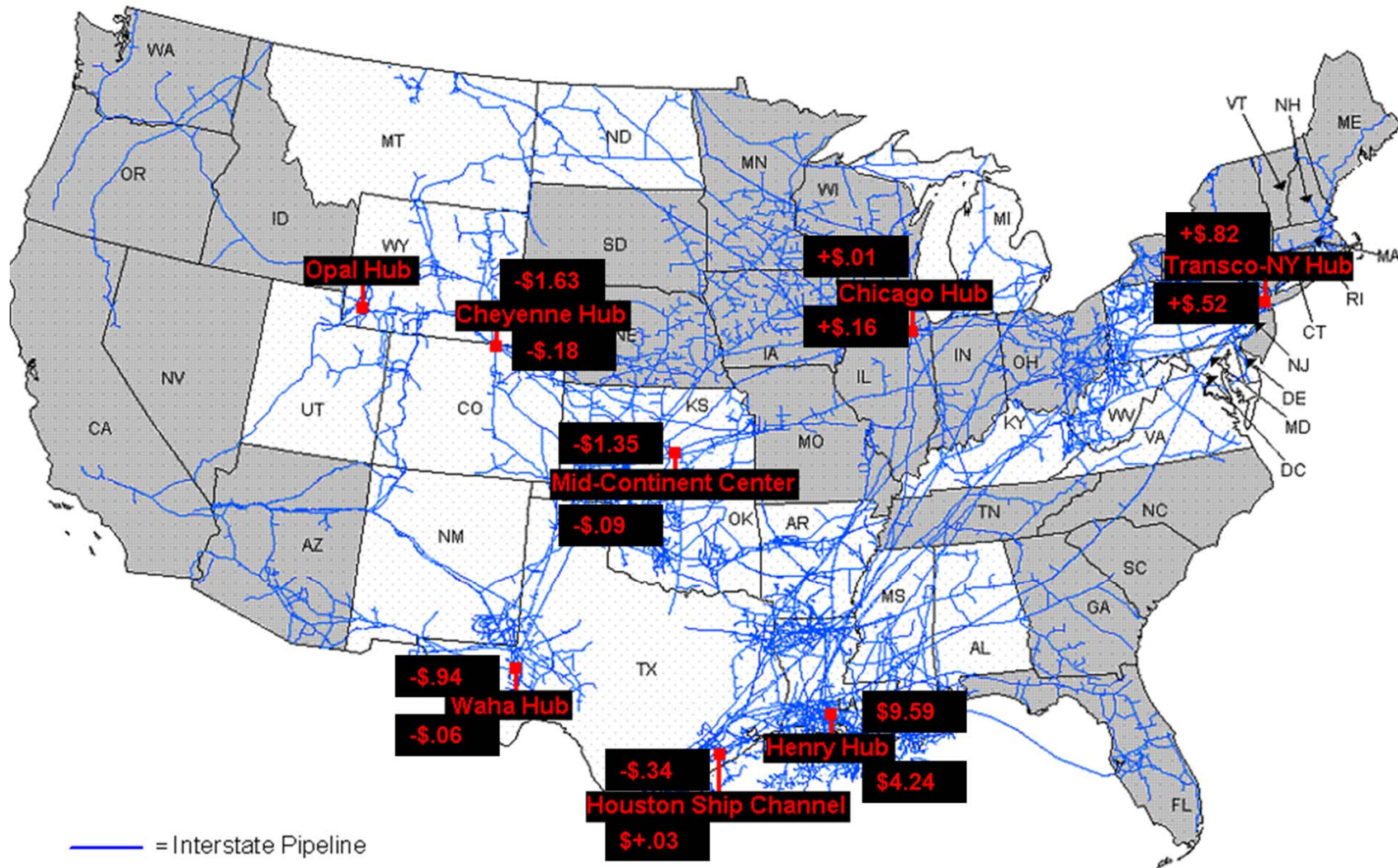


Major U.S. Natural Gas Transportation Corridors, 2008



Source: Energy Information Administration, Office of Oil and Gas, Natural Gas Division, GasTran Gas Transportation Information System.

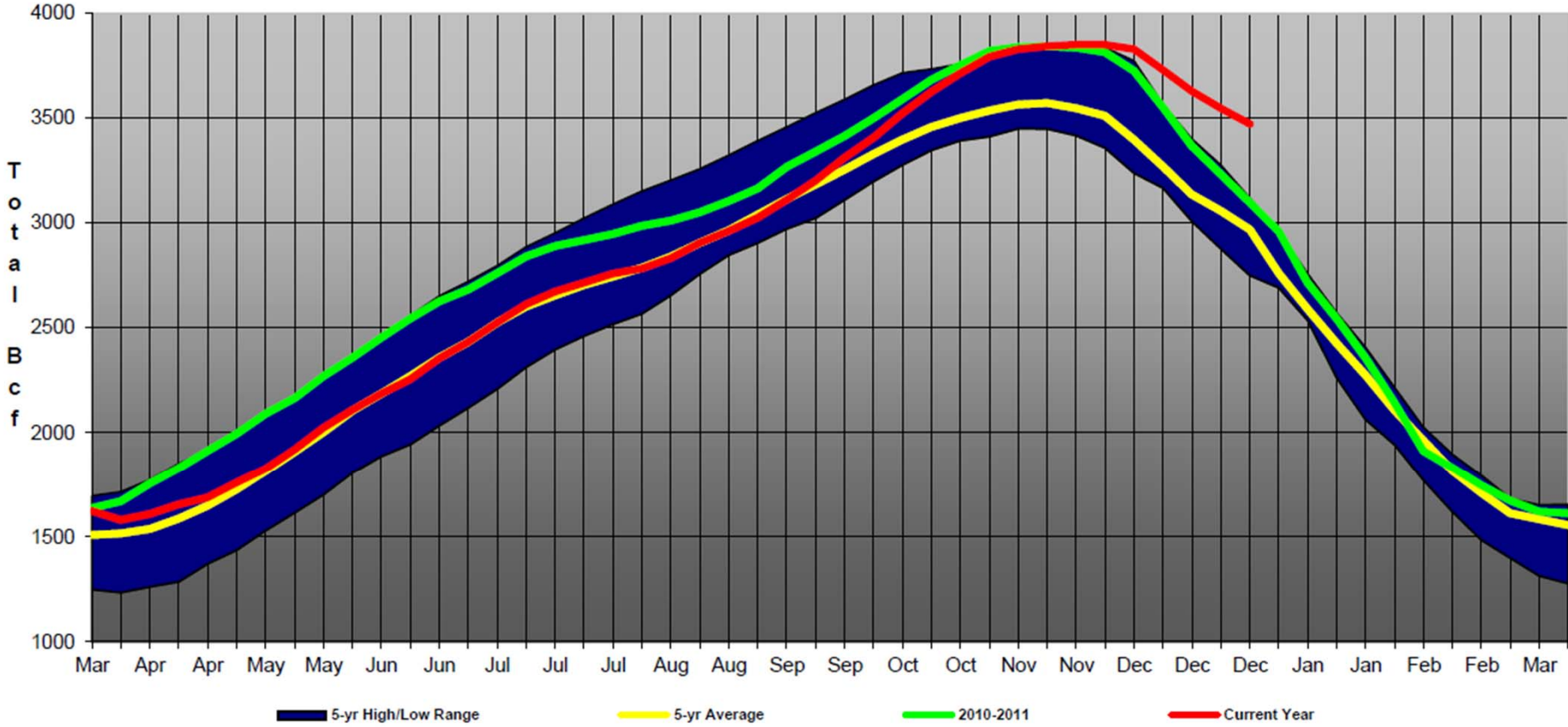
Basis Changes 2008 vs. 2011



Total Working Gas in Storage



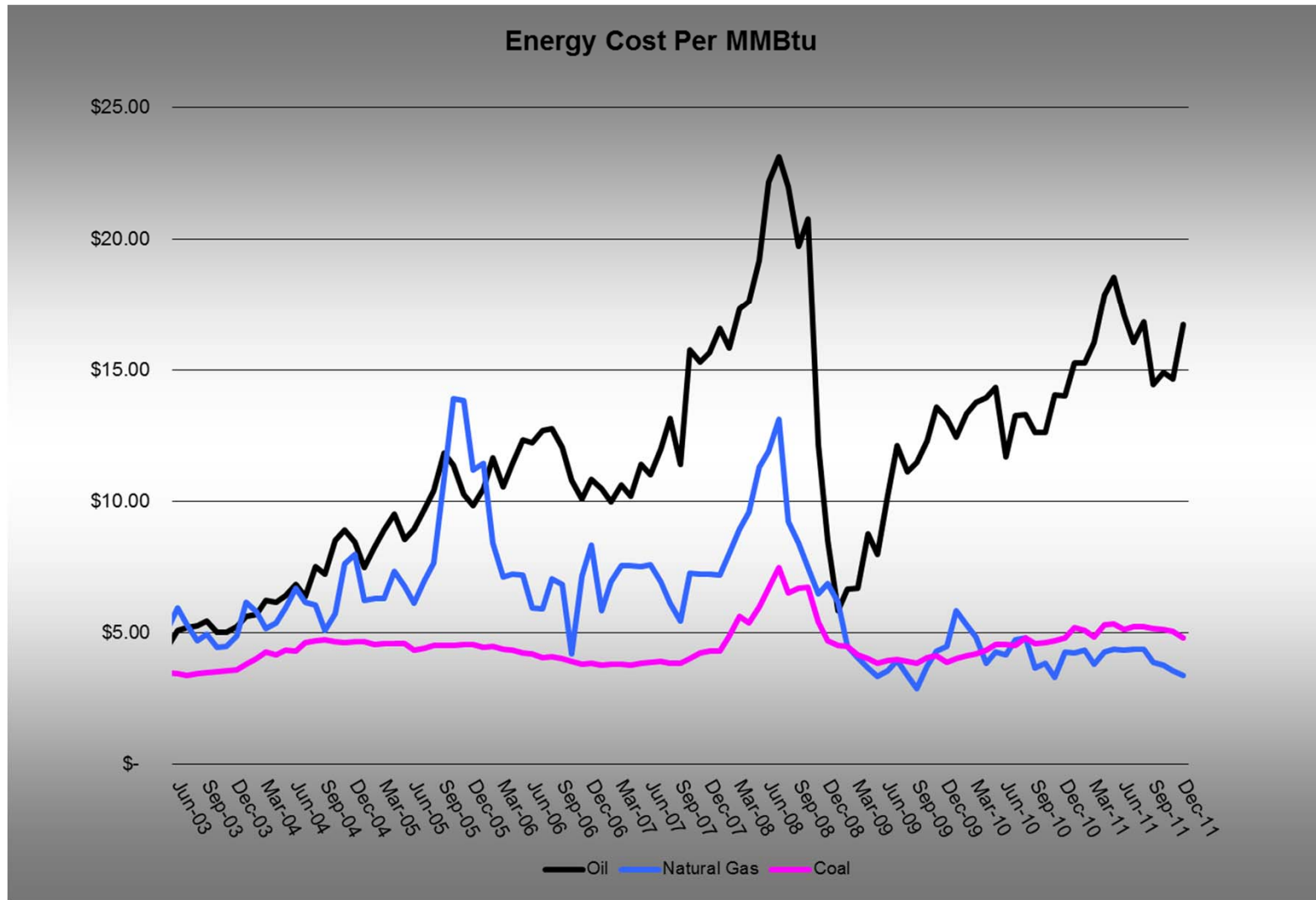
NatGas



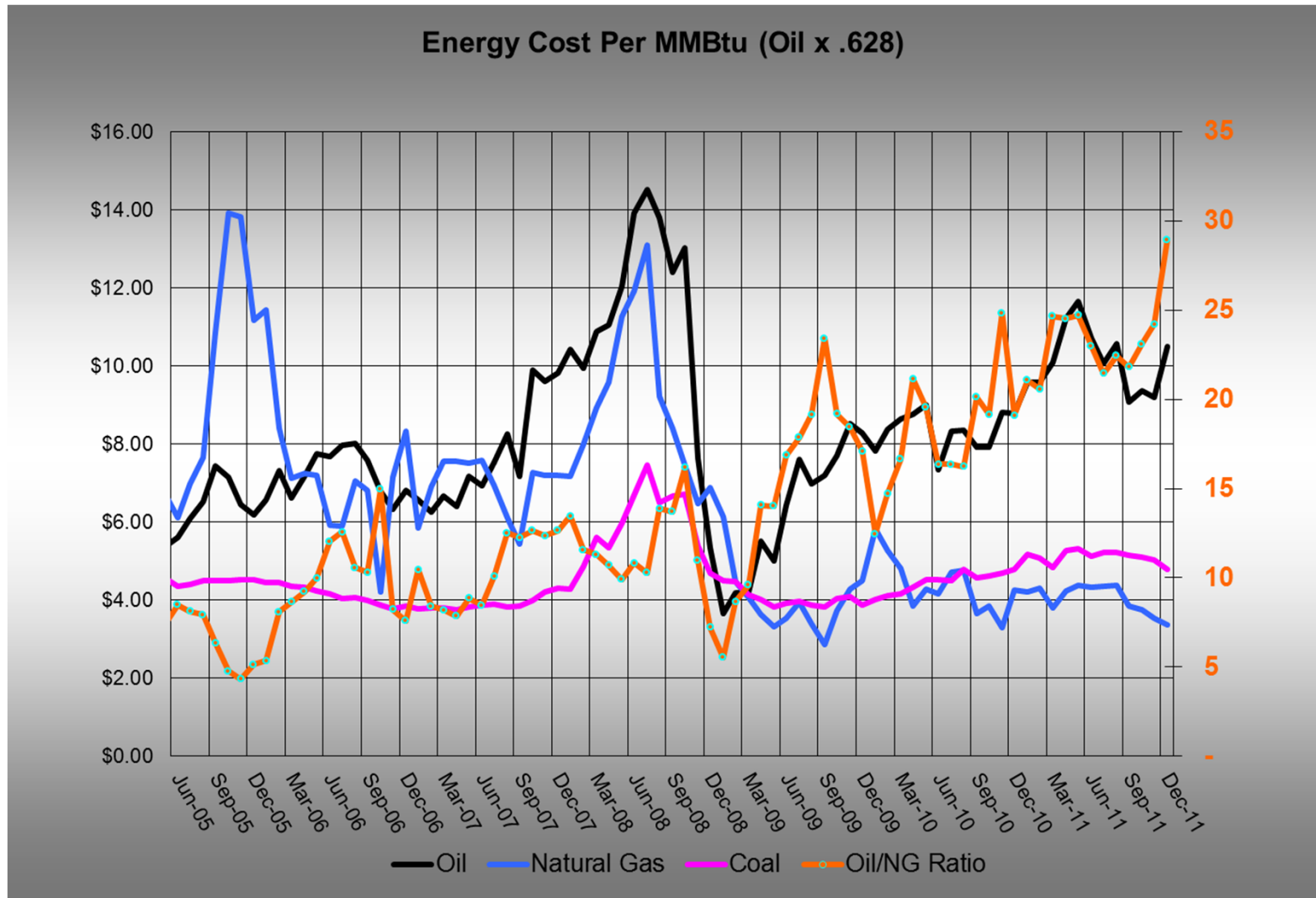
Demand Expectations



Fuel Switching Cost (Generation)



Fuel Switching Cost (Generation)

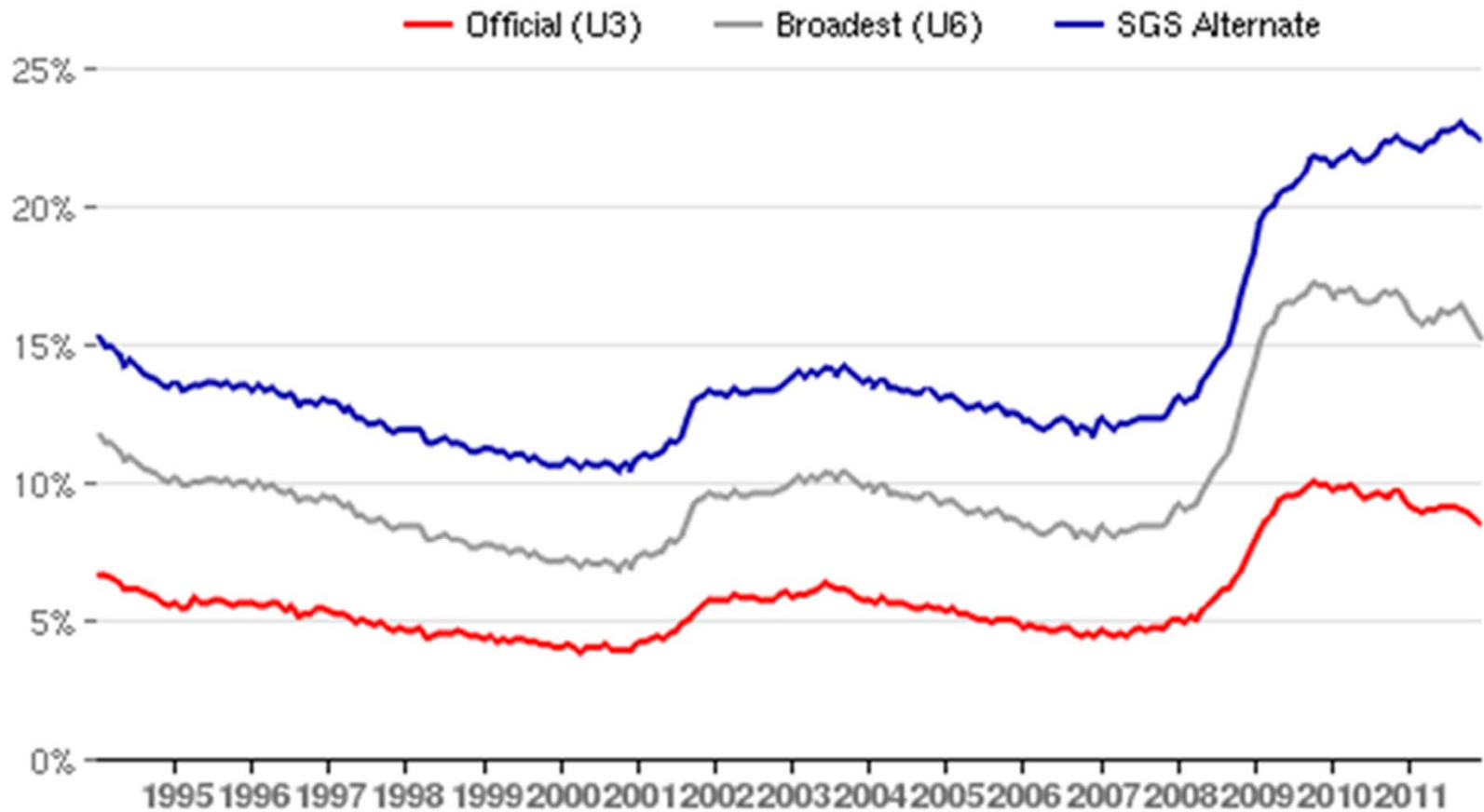


Employment



Unemployment Rate - Official (U-3 & U-6) vs SGS Alternate

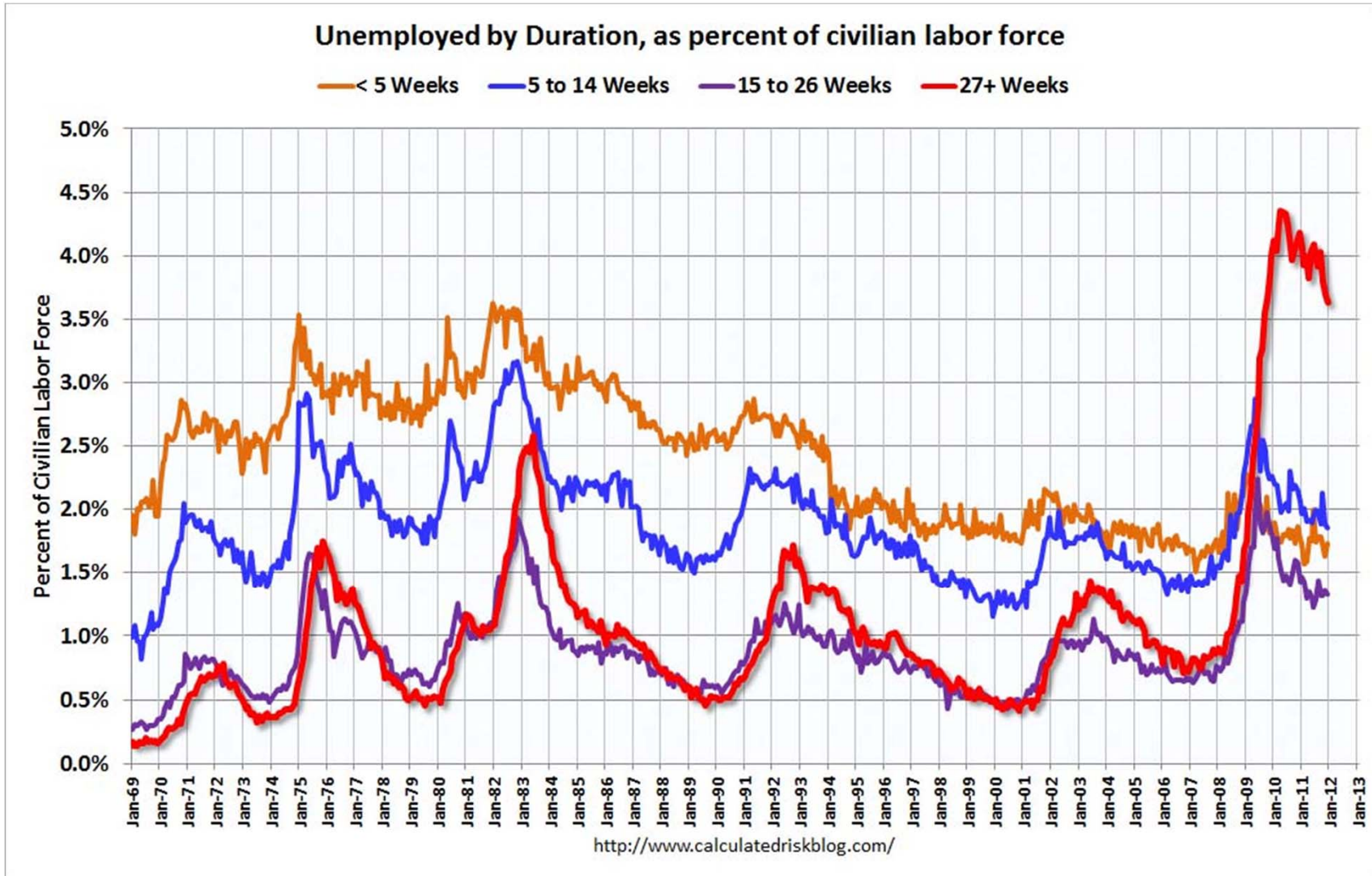
Monthly SA. Through Dec. 2011 (SGS, BLS)



Published: Jan. 6, 2012

shadowstats.com

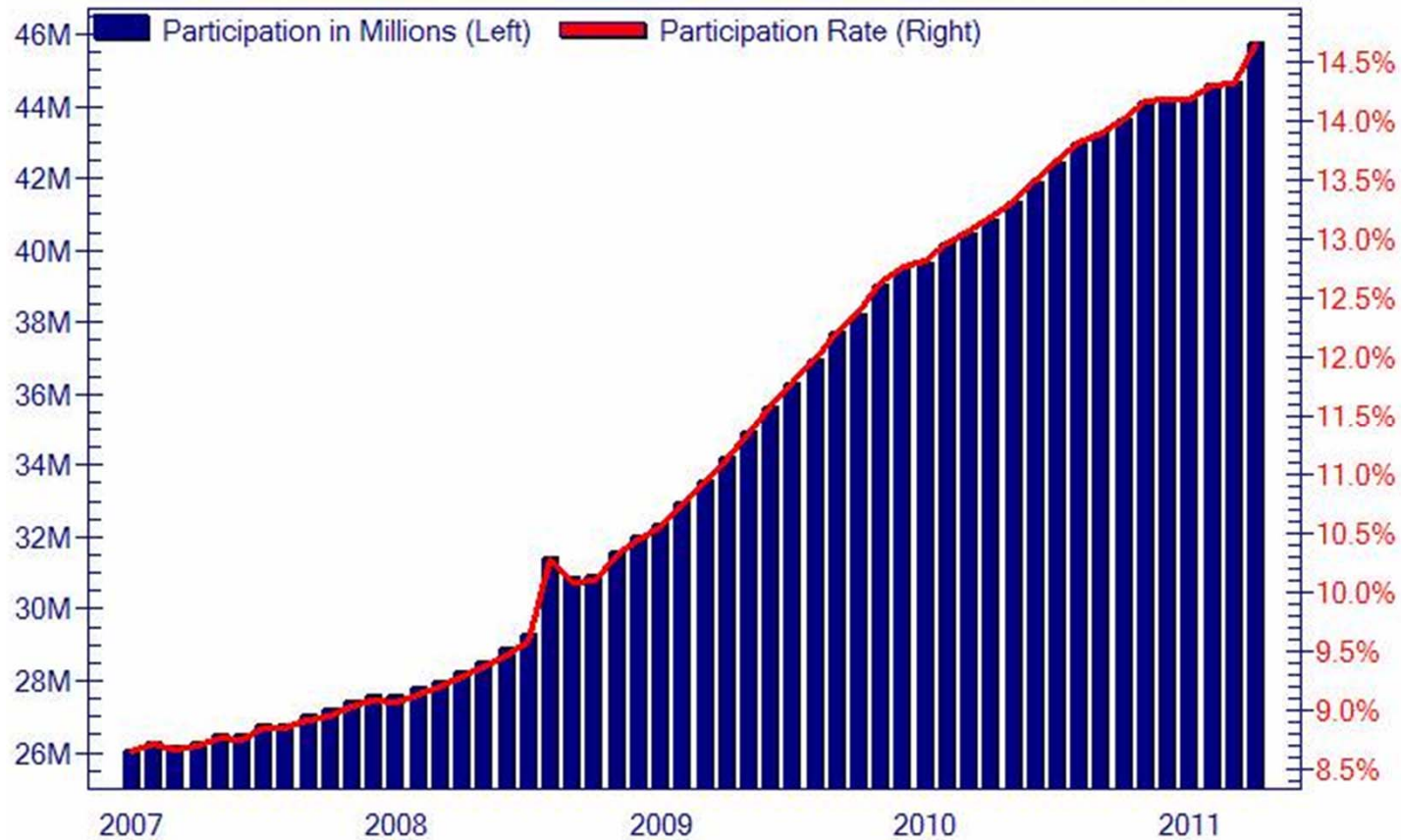
Unemployed Longer



Demand on Public Services



U.S. Food Stamp Participation



Source: SNAP

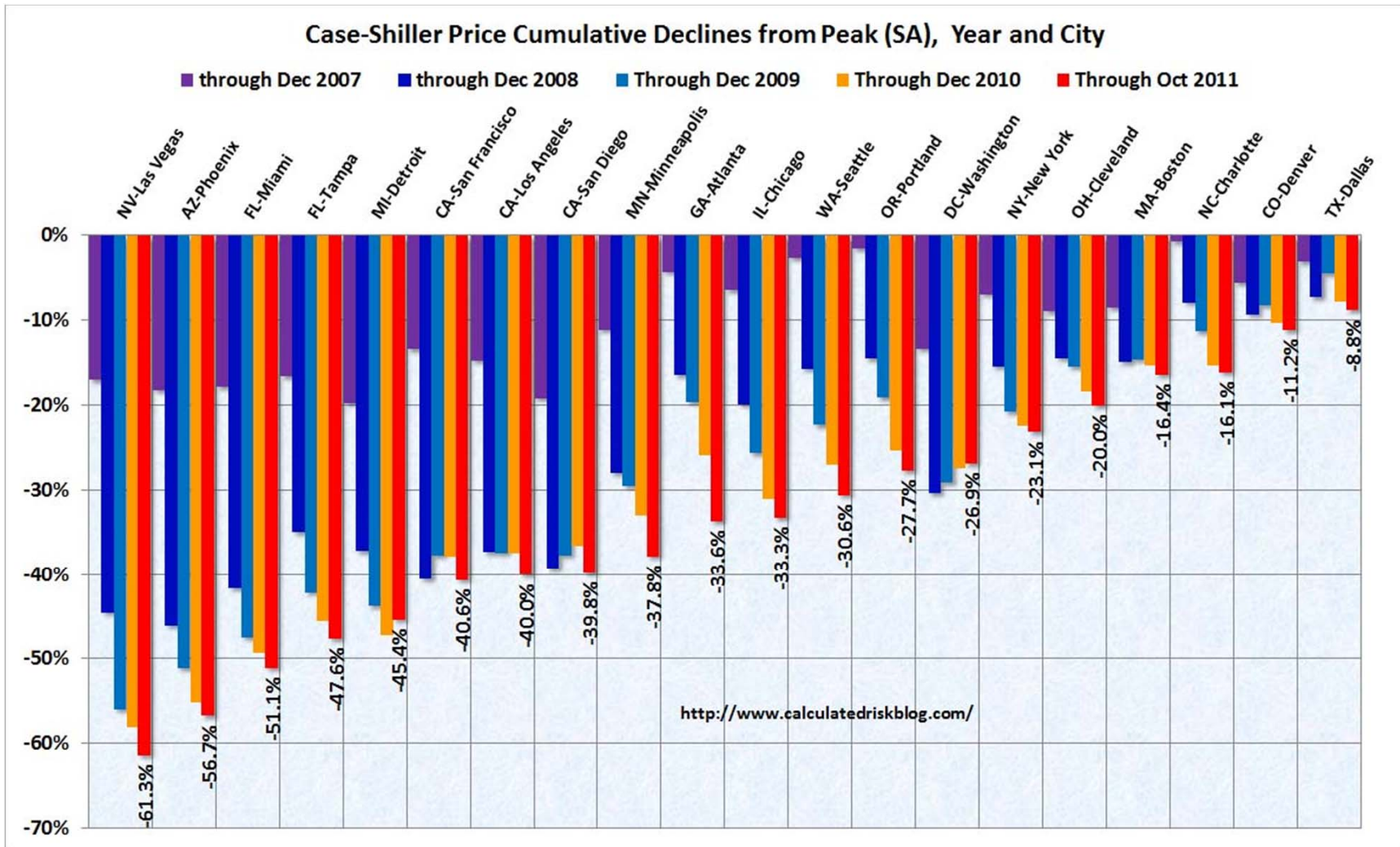
Real Estate Outlook



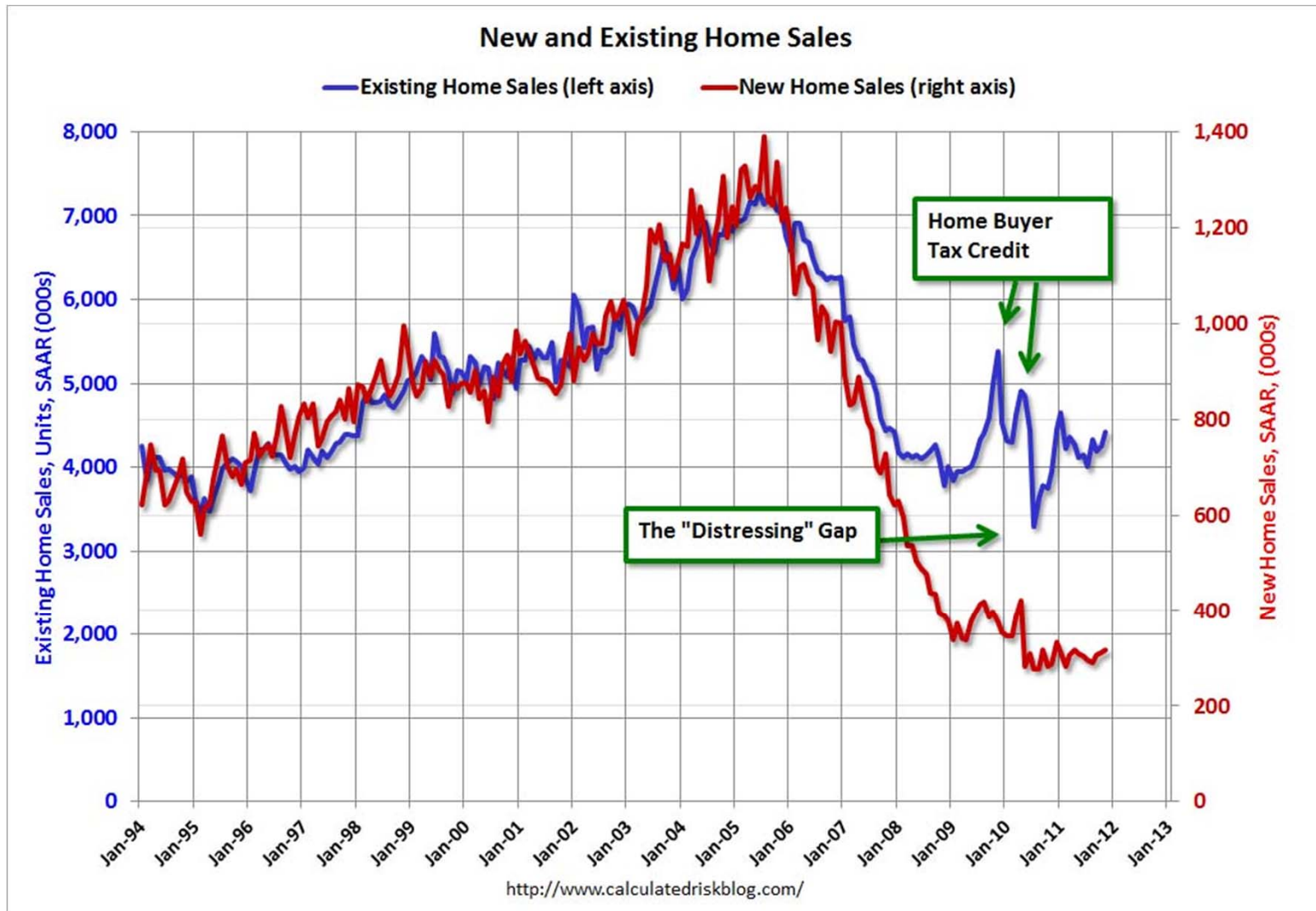
Bernanke expects to see high levels of foreclosure starts in 2011...“this in turn affects household wealth, consumer confidence, consumer liquidity and the rate of new construction.” April 2011



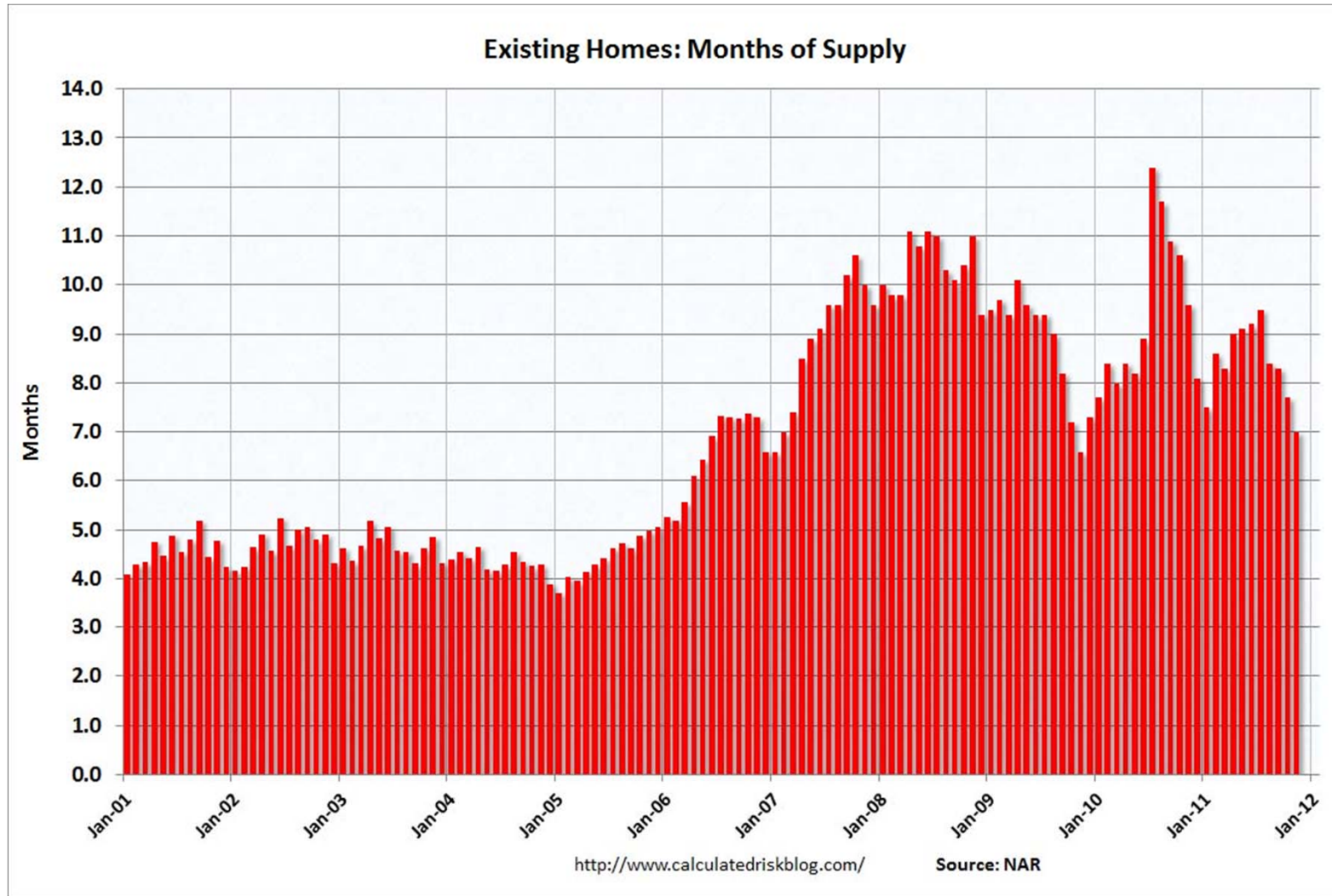
Household Wealth



New Home Sales



Existing Home Inventory



State Budgets - Deficits



44 States have deficits. (FY11 \$130B - FY12 \$112B)

WI \$1.8B

TX \$13B

NY \$10B

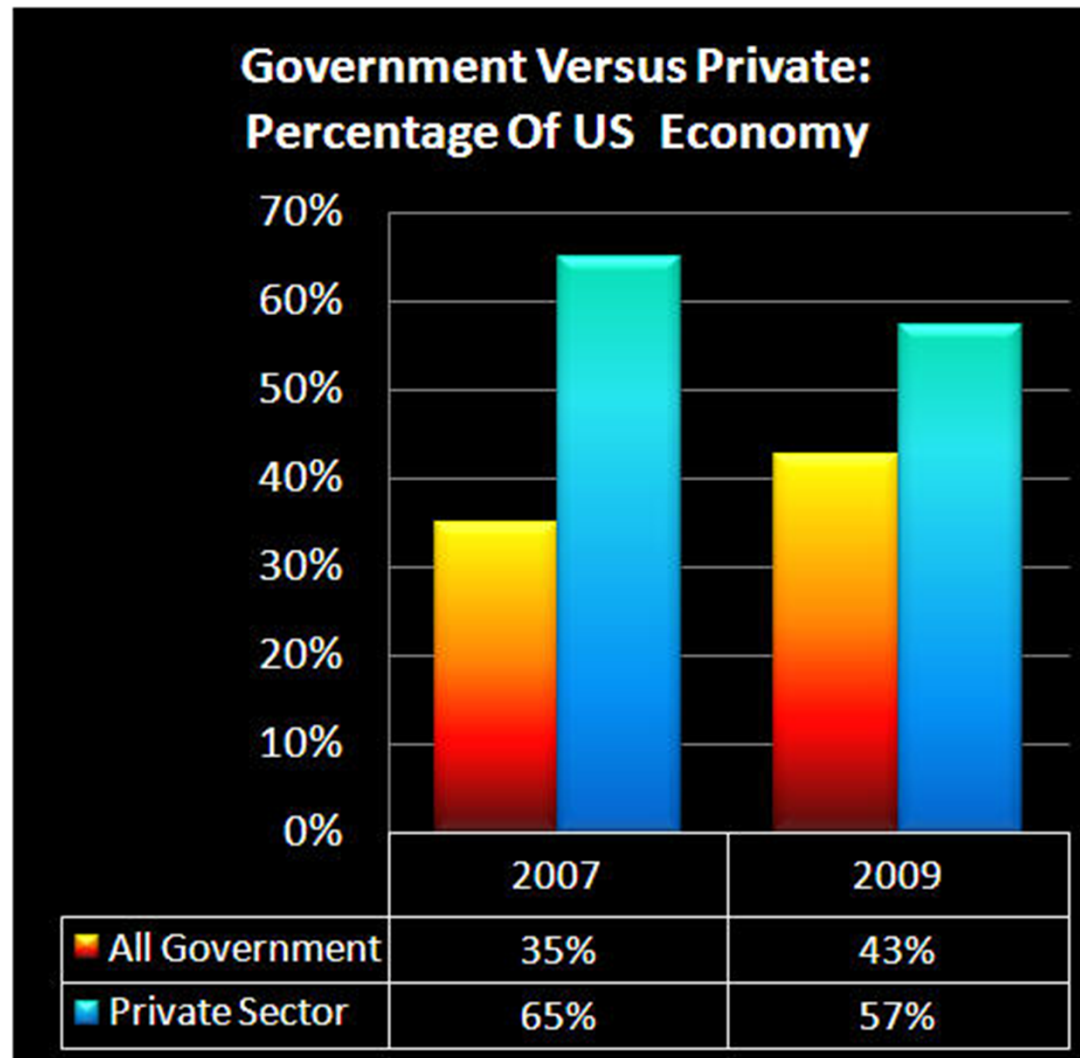
NJ \$10B

CA \$25B



Moody's warns that this year would be "the toughest year for local governments since the economic downturn." (March 23, 2011)

Public & Private % of Economy



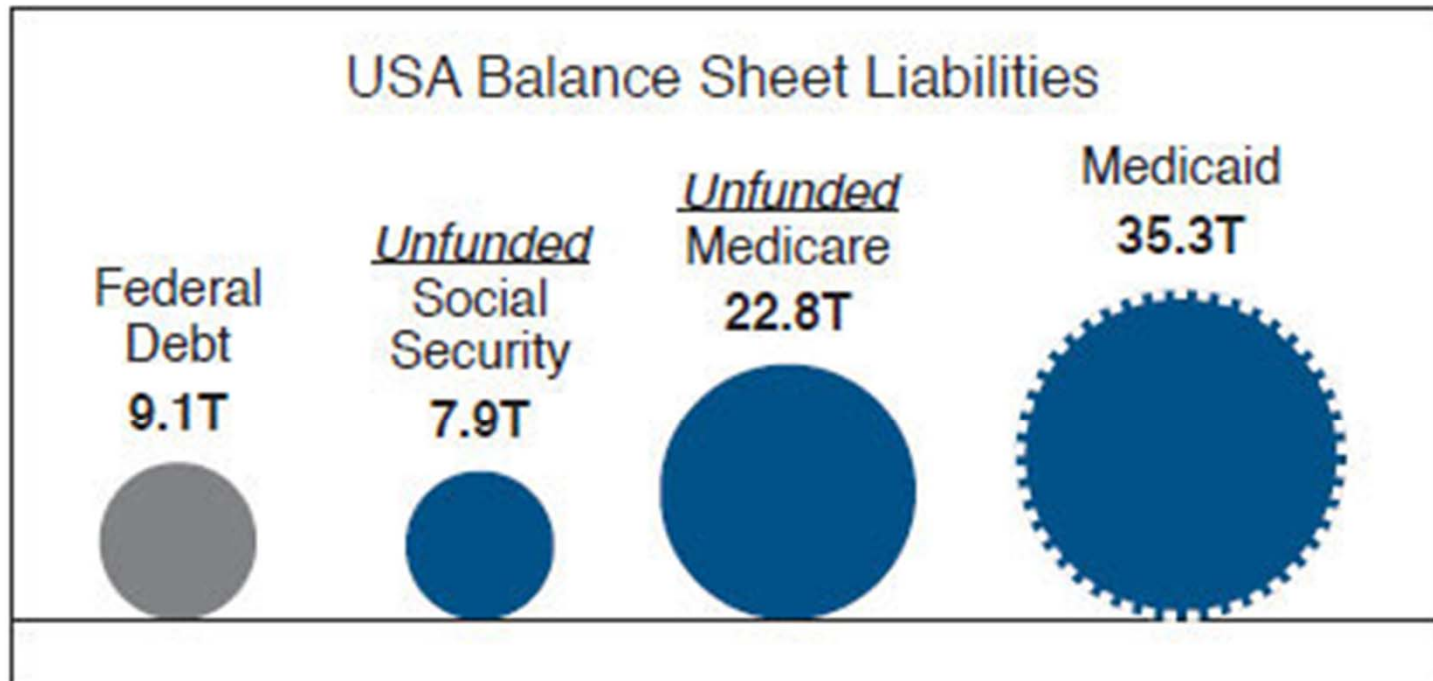
Debt



April 2011 – Bill Gross, founder/CEO of PIMCO (world’s largest bond fund \$1.2T), reduced its US Bonds holding from 45%-50% to less than 5% Jan11.

- We’ve been selling treasuries “because they have little value within the context of a \$75 trillion total debt burden. Unless entitlements (Social Security, Medicare, Medicaid) are substantially reformed, I am confident that this country will default on its debt; not in conventional ways, but by picking the pockets of savers via a combination of less observable, yet historically verifiable policies – inflation, currency devaluation, and low to negative real interest rates.”

Un-Funded Liabilities



Source: A Basic Summary of America's Financial Statements, USA Inc., Mary Meeker

Who is invested in US...



Country	Amount	% Share
China	\$891.6 billion	20.4%
Japan	\$883.6 billion	20.2%
United Kingdom	\$541.3 billion	12.4%
Oil Exporters	\$218 billion	5%
Brazil	\$180.8 billion	4.1%

China doesn't buy our treasury bonds because they like us... they buy them to prop up the value of the dollar, keeping the US dollar artificially high, so their goods stay artificially cheap.



Does Bill Gross know what he is talking about?



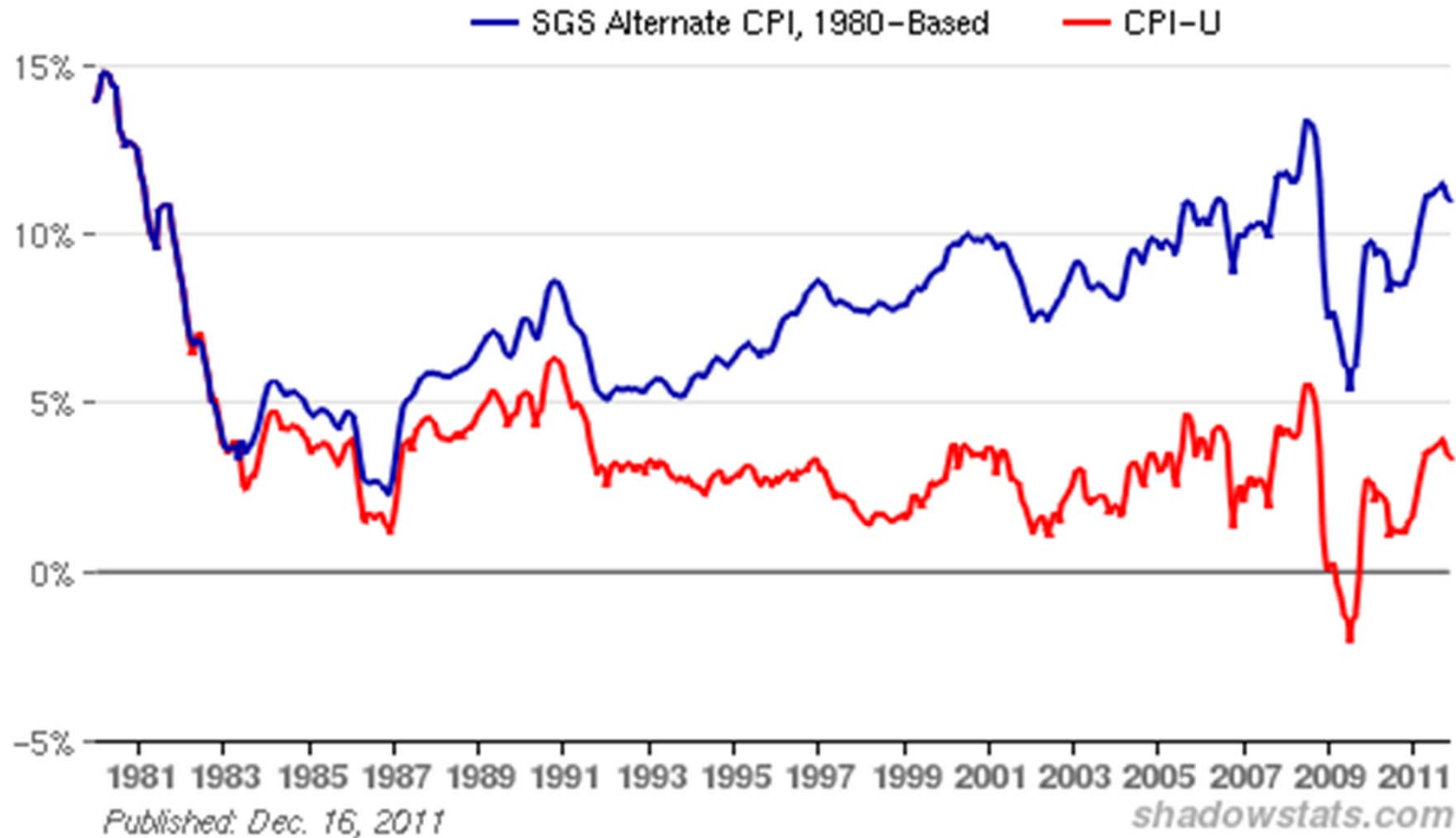
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- **inflation,**
- **currency devaluation,**
- **and low to negative real interest rates."**

CPI Rate



Annual Consumer Inflation - Official vs SGS (1980-Based) Alternate
Year to Year Change. Through Nov. 2011. (BLS, SGS)



“Hot Money” Fiscal Policy

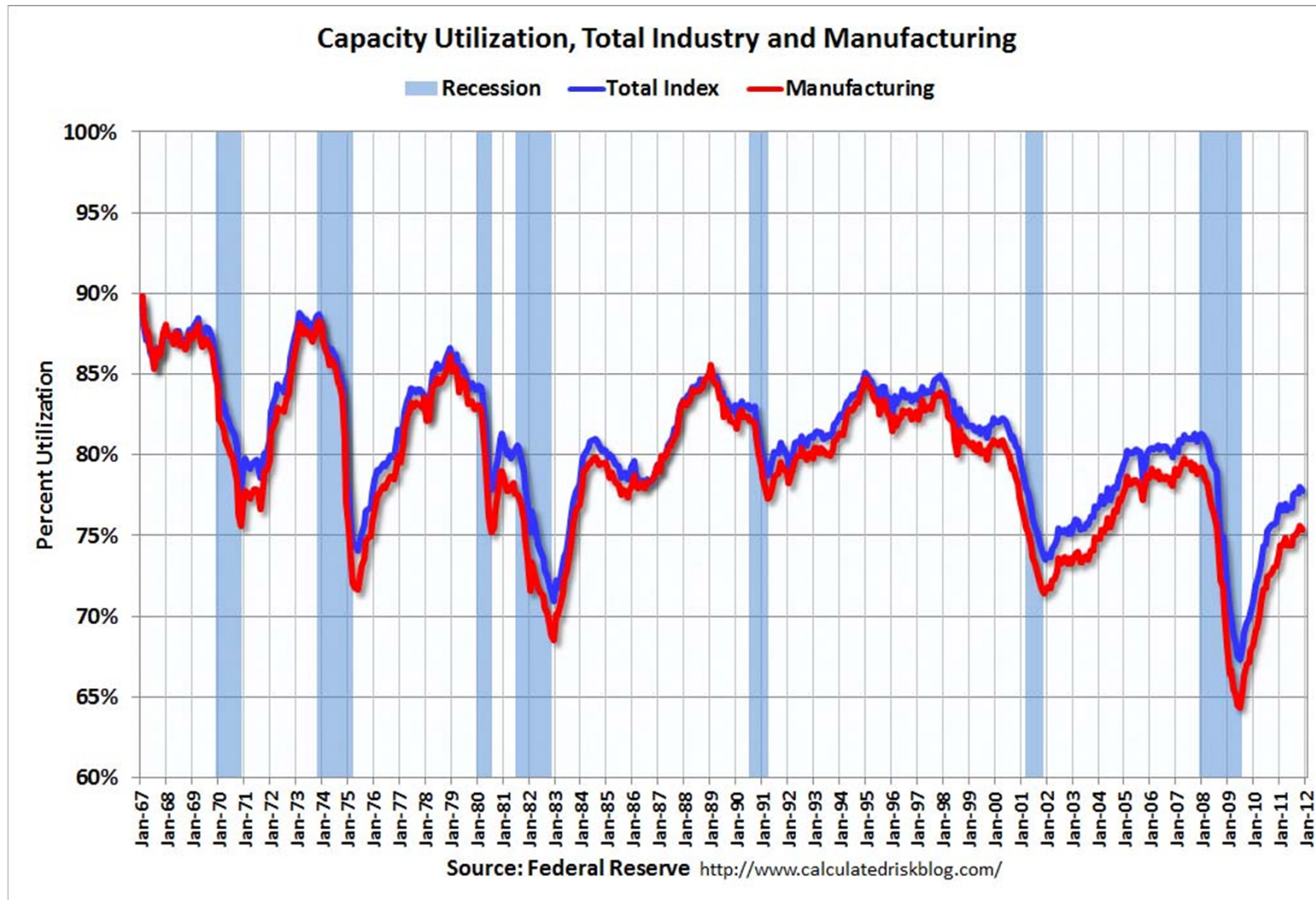


Concerning for holders of US Treasuries...WHO?

QE I and QE II (and now Operation Twist) - keeping interest rates low

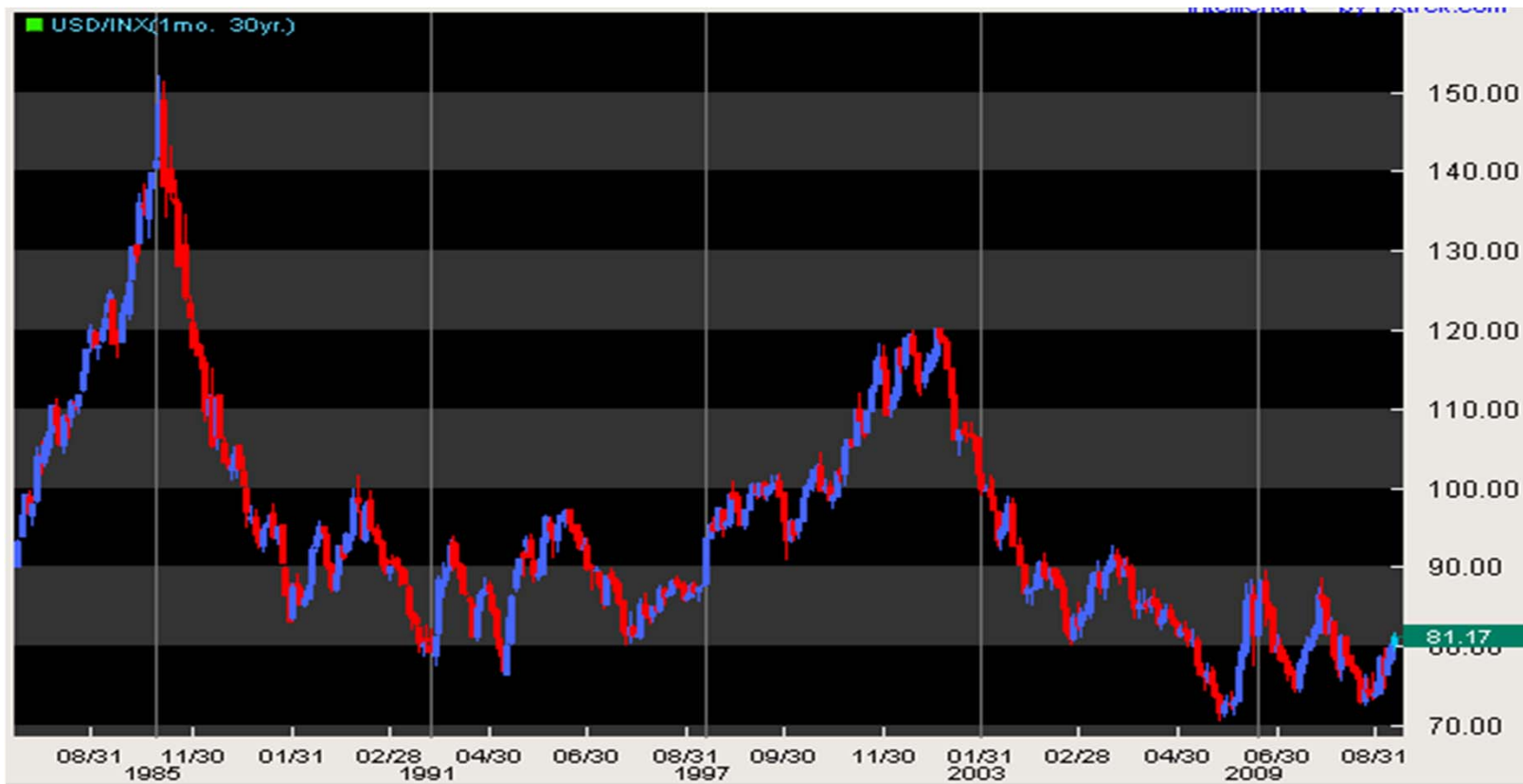


Manufacturing

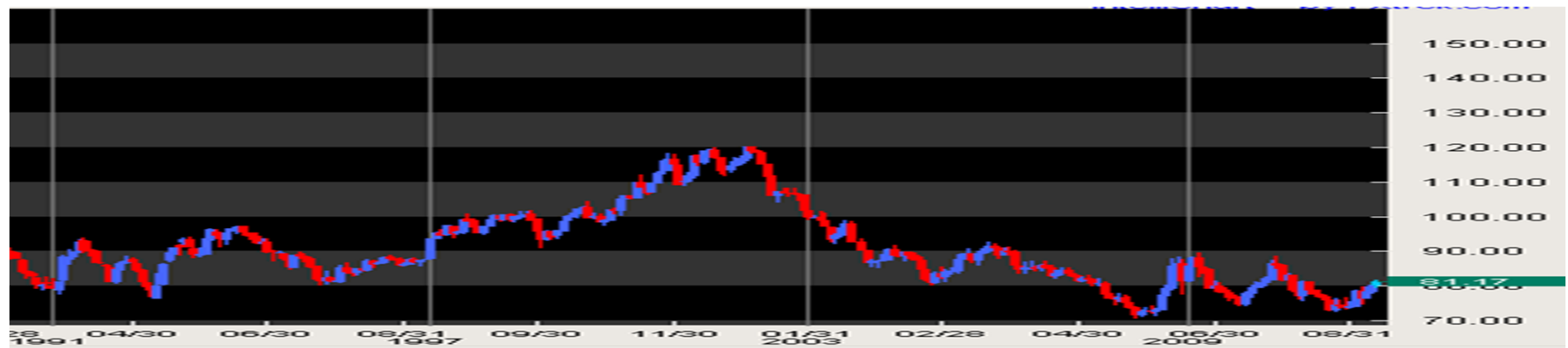
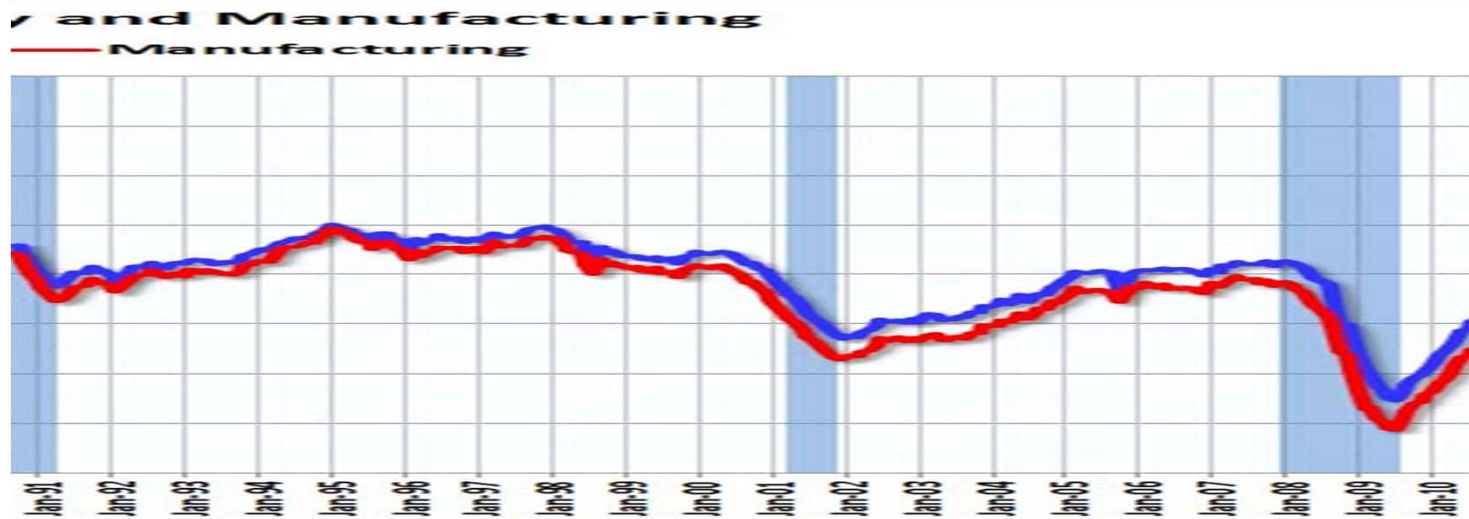


US Dollar

“I would recommend against buying long-term fixed dollar investments...If you ask me if the US Dollar is going to hold its purchasing power fully at the level of 2011 in 5, 10 years from now,I would tell you it will not.” Buffet (Mar 25)



Manufacturing and Dollar?



Benefits of a Softer US Dollar



Slight improvement in real estate values...

Consumer Spending begins to improve...

Manufacturing begins to return to US...

Unemployment begins to improve...

**Budgetary Constraints on State and Local Gov't
ease...**

Everyone starts to 'feel' a little better.



Recap - Supply Impacts



General collapse of price spreads - Basis has flattened

New rate structures foreshadow shifts in basis differentials resulting from changes to pipeline tariff rate structures and cost allocations.

- **Rate hikes of 30-60% and tariff restructuring proposed by traditional long-haul pipelines.**
- **New competition. Reduced long-haul supply.**

What's the Outlook?



Mid-Term (12-18 Months):

Ample Supply

Lackluster Industrial Demand

Lethargic Economy

- **Budgetary constraints on State and Local Gov'ts...**
- **Higher Unemployment Rates...**
- **QE III (Operation Twist), QE IV, Etc...???**

Uncertainty in EU, MENA continues...

Stable/Stronger US Dollar...

Stable Energy NG (\$3.50-\$5.50) on average



What's the Outlook?



Long-Term (24 to 48 Months):

Continued Supply Growth...assuming no Regulatory intervention...no deterioration in Liquids Play

Demand Growth

- **Power Generation 7 Bcf Day possible Due to EPA Coal Regs**
- **BACT and MACT...etc.**
- **Industrial Demand Growth due to Weaker Dollar**

QE XXI? - Ratings Agencies consider placing another downgrade on US Debt...

Loss of confidence in US Dollar by foreign creditors...

Inflation Realization...Commodities (Energy/Ags/Metals) Rise...

Interest Rates Increase...somewhat offsetting benefits of lower US Dollar...

Historical NYMEX Natural Gas Charts—January 2000 to January 2012

- The current prompt month NG contract has plummeted to a 10 year low and is currently at \$2.65.
- Current 12, 24 and 36 mo prices of \$3.05, \$3.40 and \$3.70 are also at lowest the levels since 2002.
- The lack of cold weather has compounded the effects of an already over-supplied market. With production levels remaining healthy, in part due to strength in the liquids markets, \$2.50 seems like a near term certainty.
- I remain a proponent maintaining the long range vision provided by a disciplined risk management strategy. Profound statement of 2012...10 yr low prices only come around every 10 years, so take advantage of this opportunity and layer in purchases for the next 12, 24 or 36 mos.



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