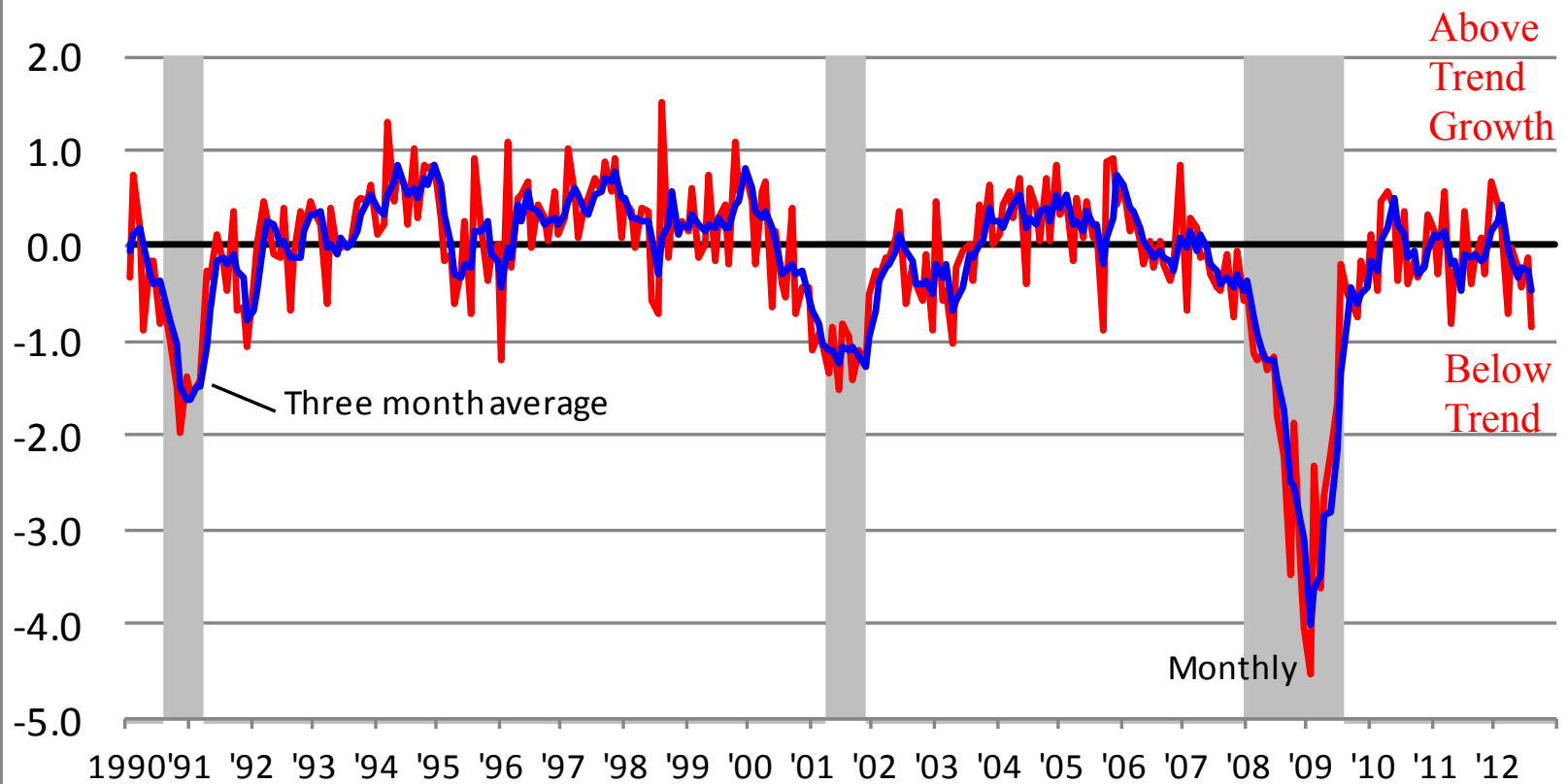

The Global Economy's Impact on U.S. Agriculture

October 18, 2012
Indianapolis, IN

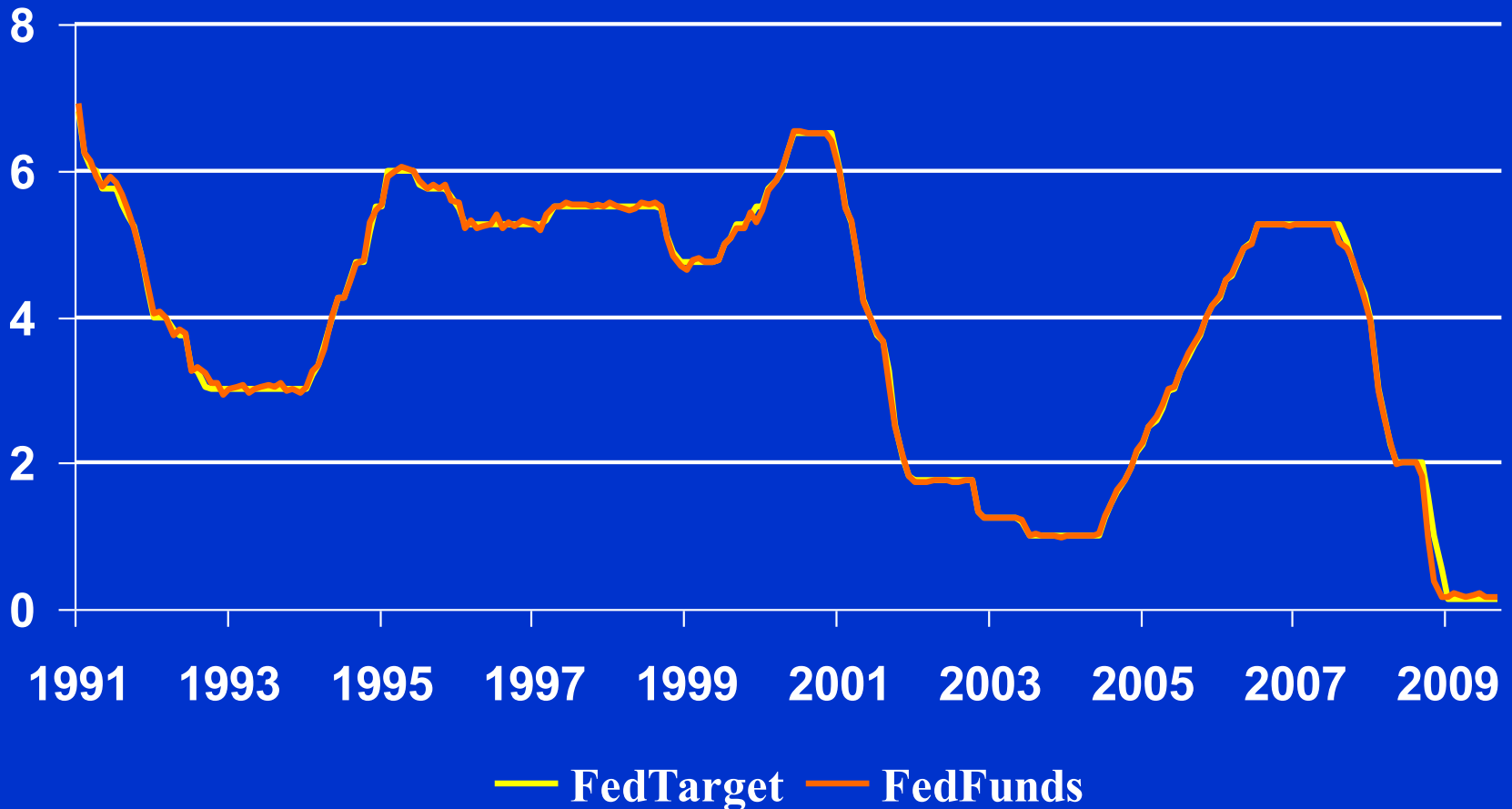
David Oppedahl
Business Economist
312-322-6122
david.oppedahl@chi.frb.org

The economy hit bottom in June 2009, with hesitant growth since then

Chicago Fed National Activity Index



In December 2008, the Federal Open Market Committee lowered its Fed Funds rate target to a range from 0 to 0.25%



Food price increases again rising faster than core inflation (less food and energy)

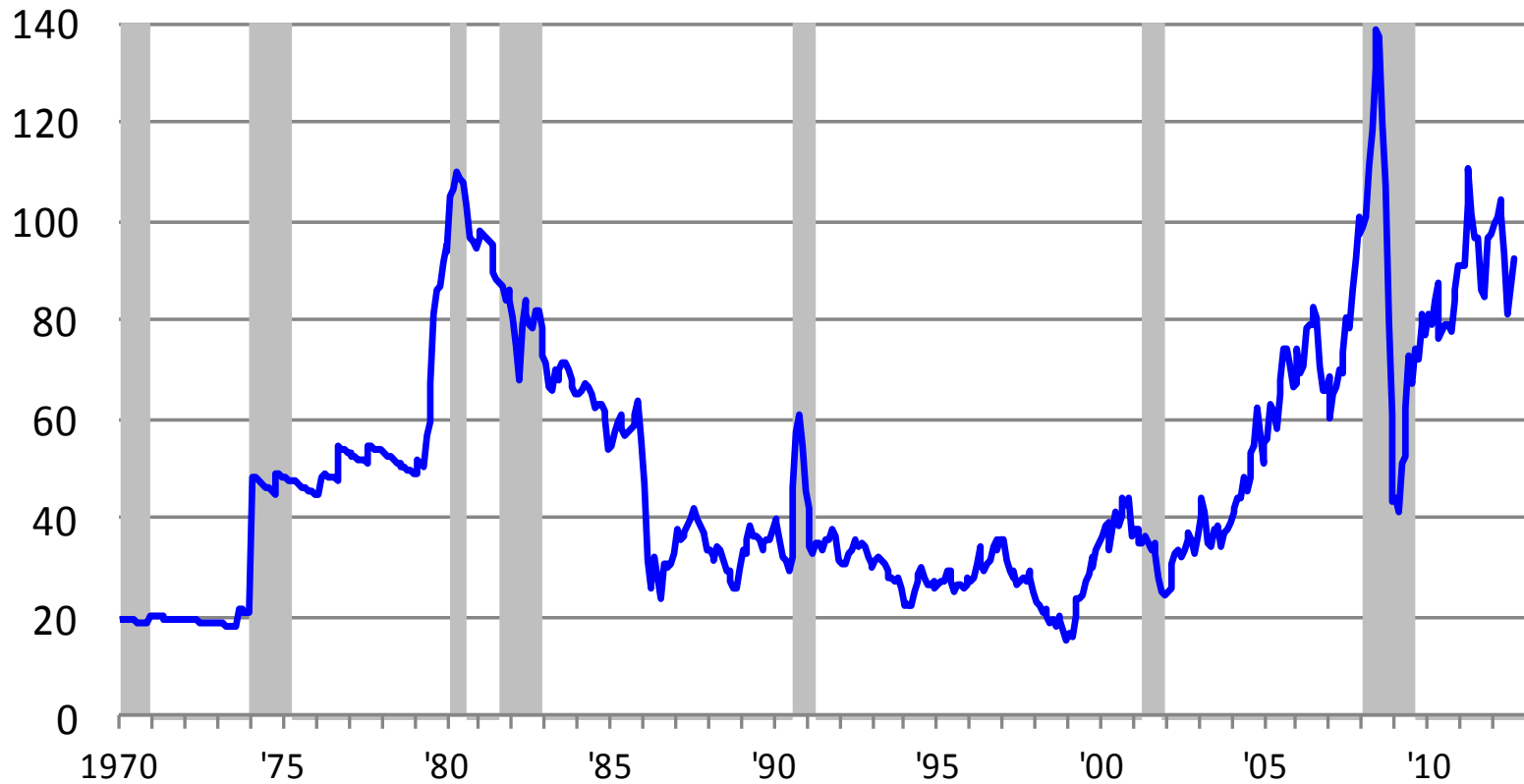
(Consumer price index, percent change from year ago)



Oil prices getting higher again and gas prices hitting consumer spending

Real West Texas Intermediate oil price

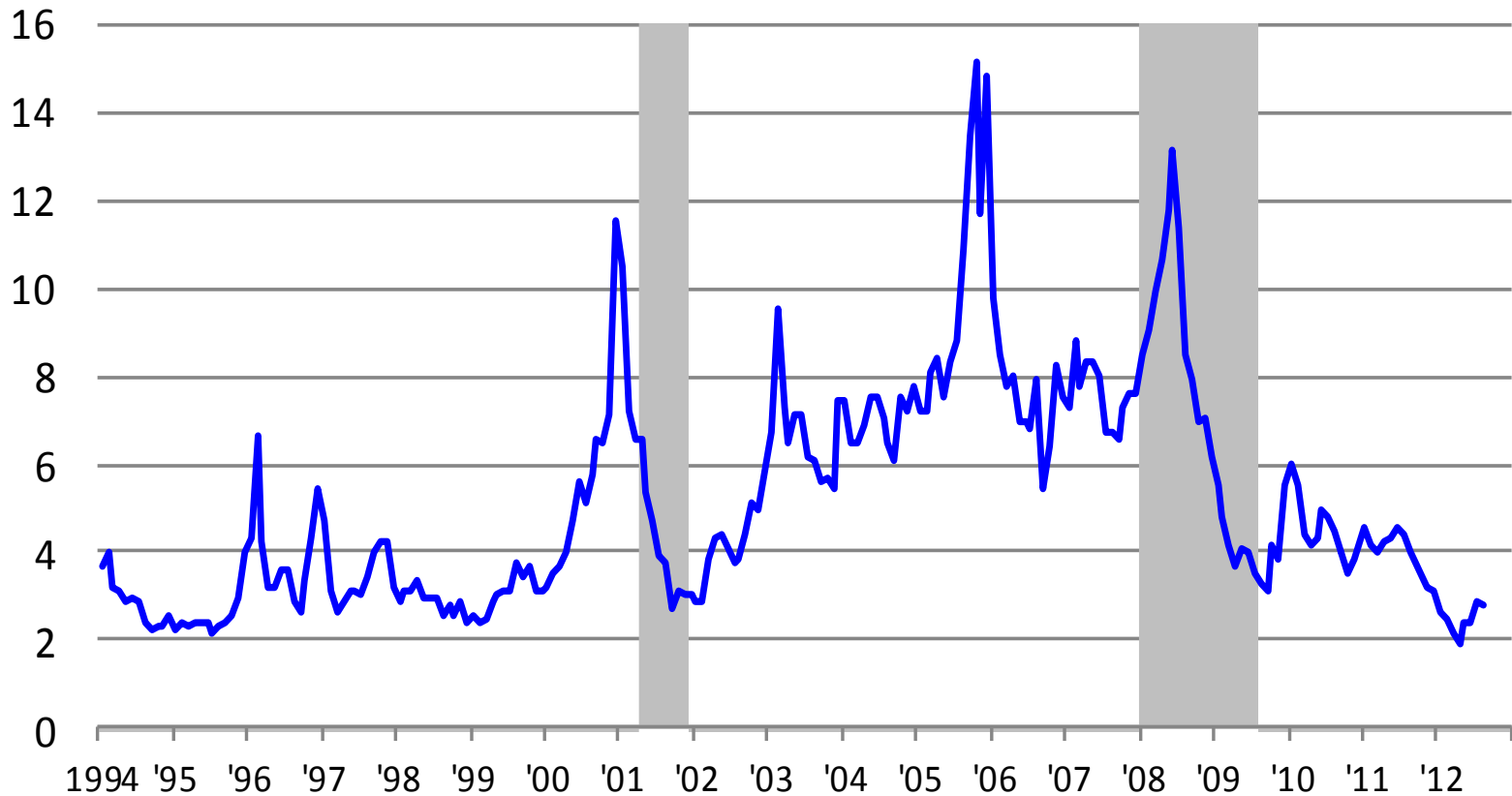
dollars per barrel. 2011 dollars



Real natural gas prices remain very low

Real natural gas price

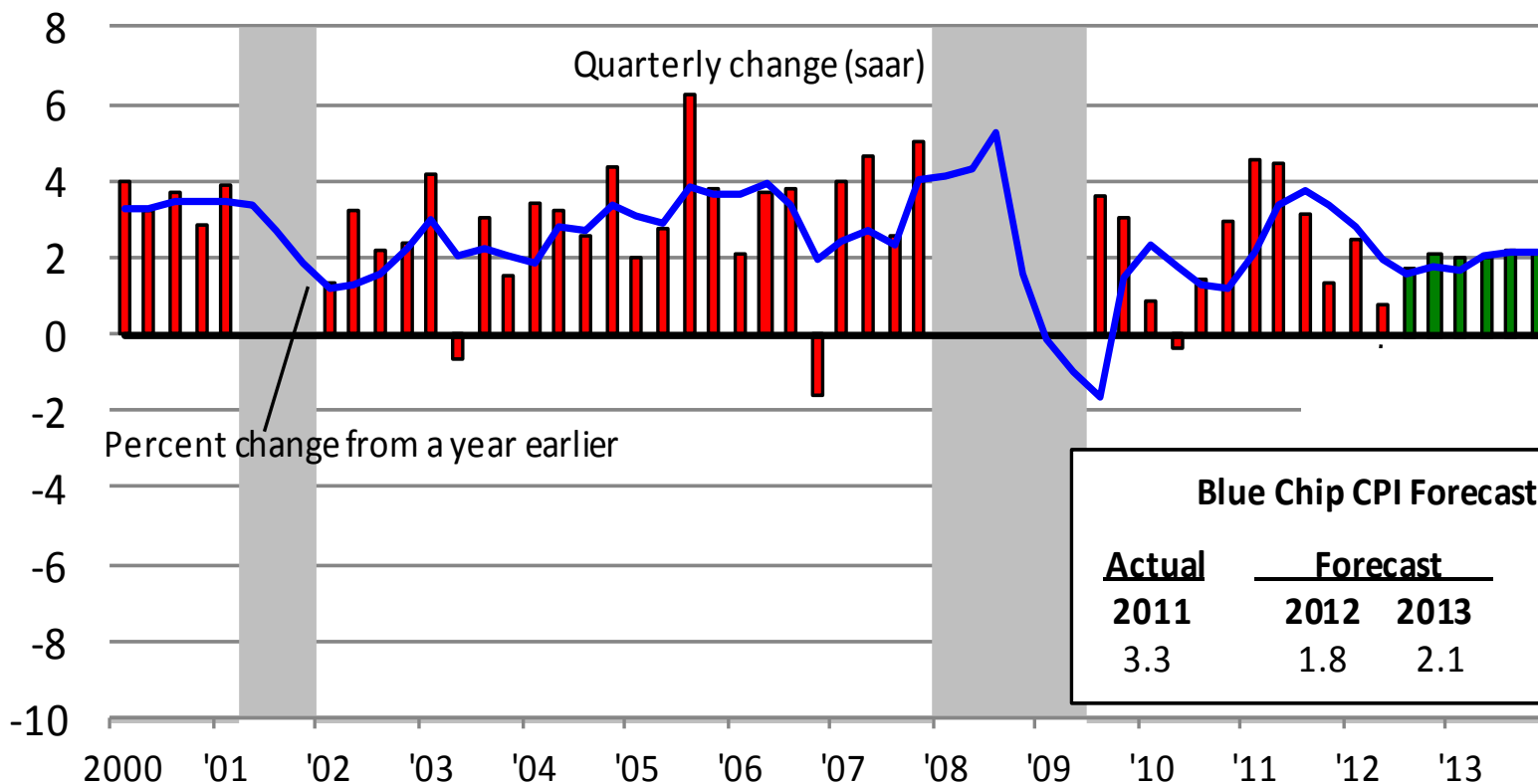
dollars per mmbtu (2011 dollars)



Even including the volatile food and energy components, inflation remains contained

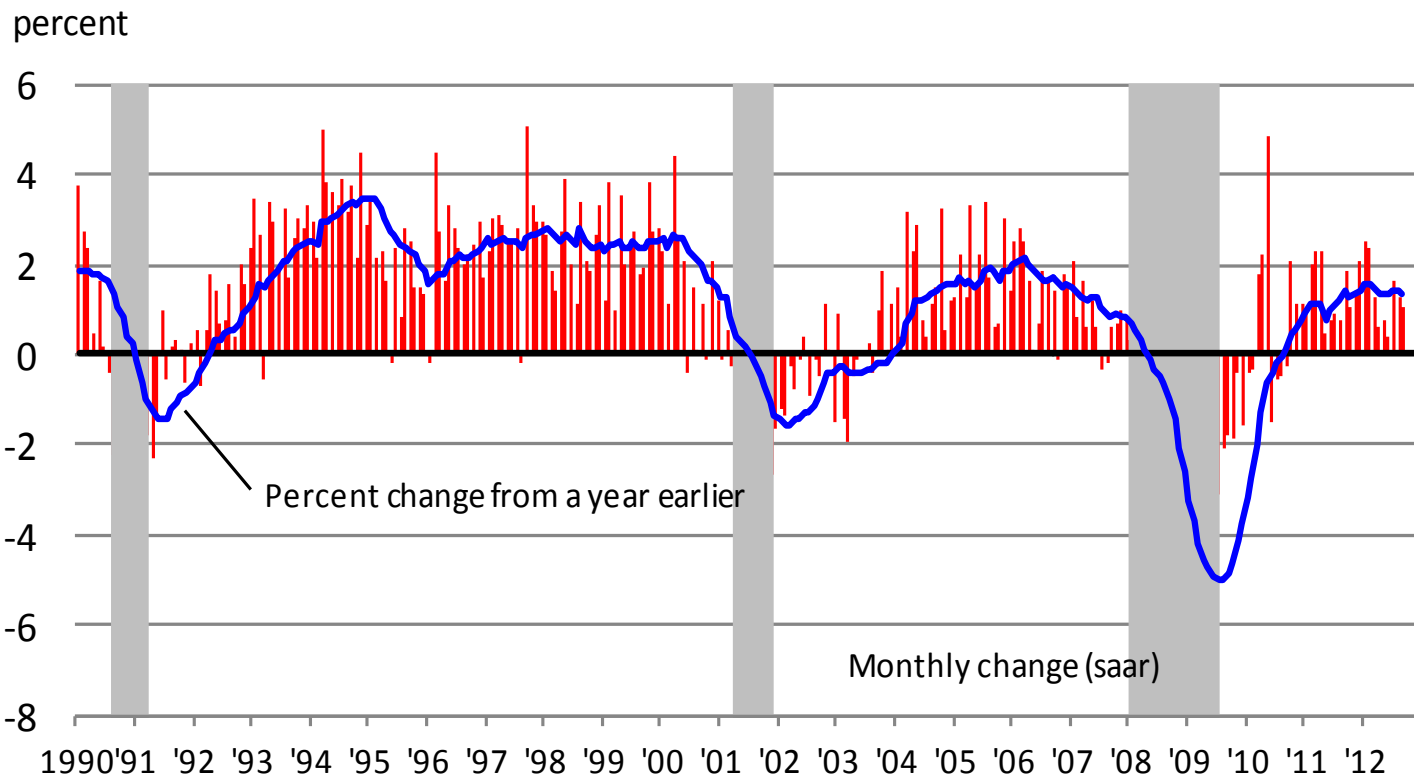
Consumer price index

percent

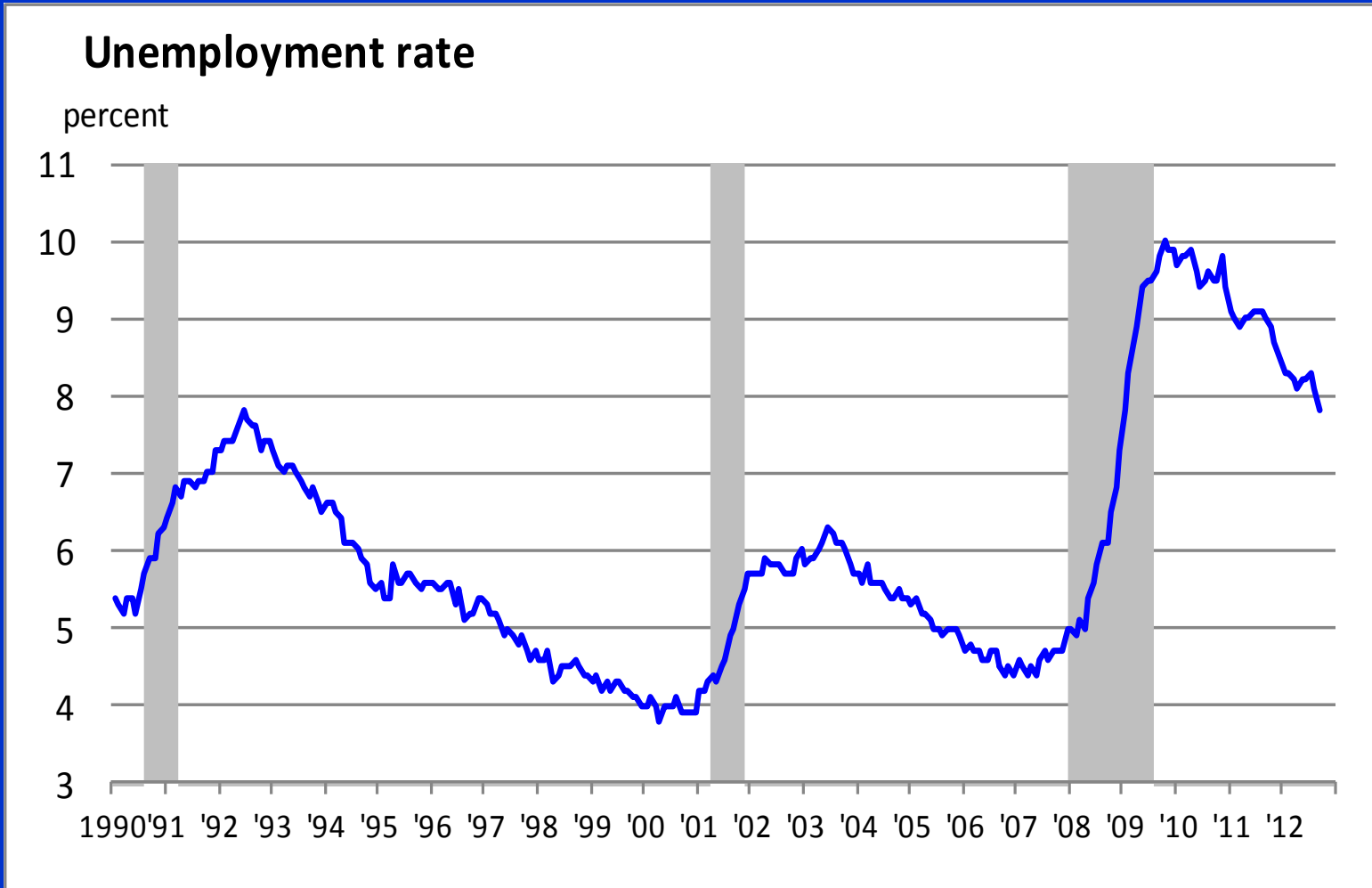


**Employment fell by over 8.7 million jobs
between December 2007 and February 2010,
but began to rise and has added
over 3 million jobs during the past 2 years**

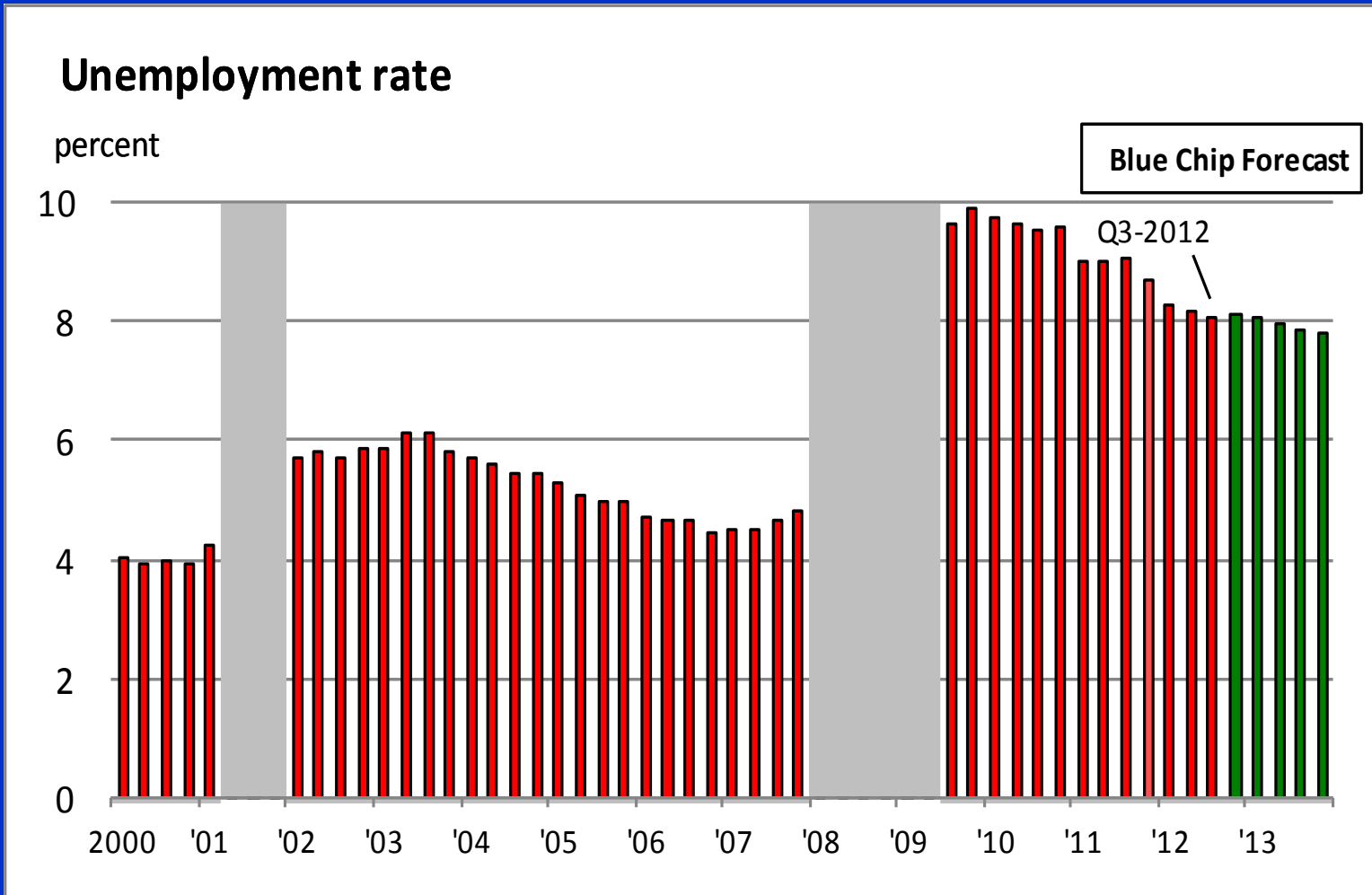
Total employment



The unemployment rate has fallen just over 2% since peaking in October 2009

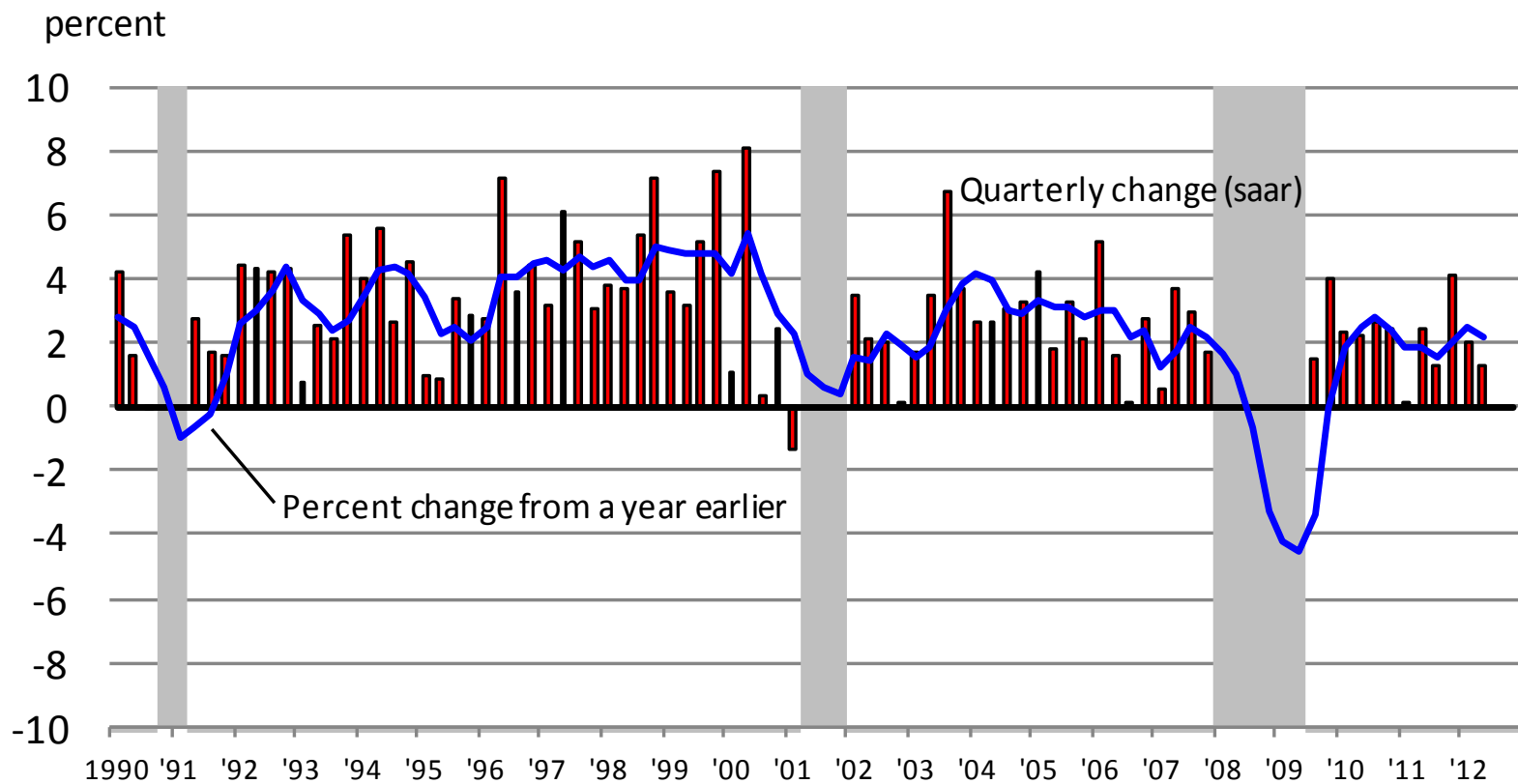


The unemployment rate is forecast to edge lower



The “Great Recession” ended in June 2009, but the economy grew by just 2.3% over the past year

Real gross domestic product

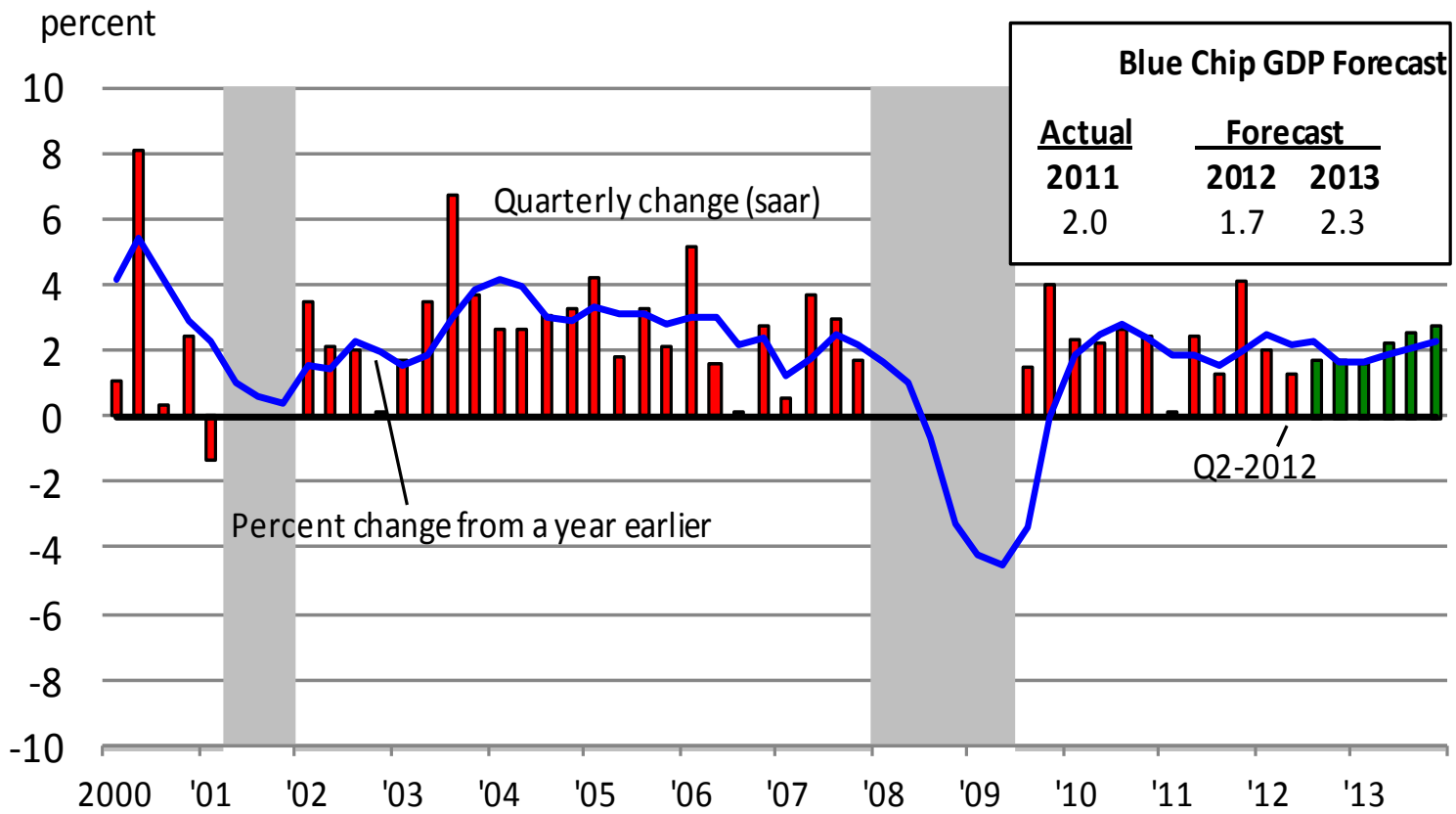


Contributions to real GDP growth of 1.3% in the 2nd quarter of 2012

- Consumption 1.1%
- Residential Investment 0.2%
- Business Investment 0.6%
- Net Exports 0.2%
- Government -0.1%
- Inventories -0.5%

Gross Domestic Product is forecast to grow near trend in 2012 and above trend in 2013

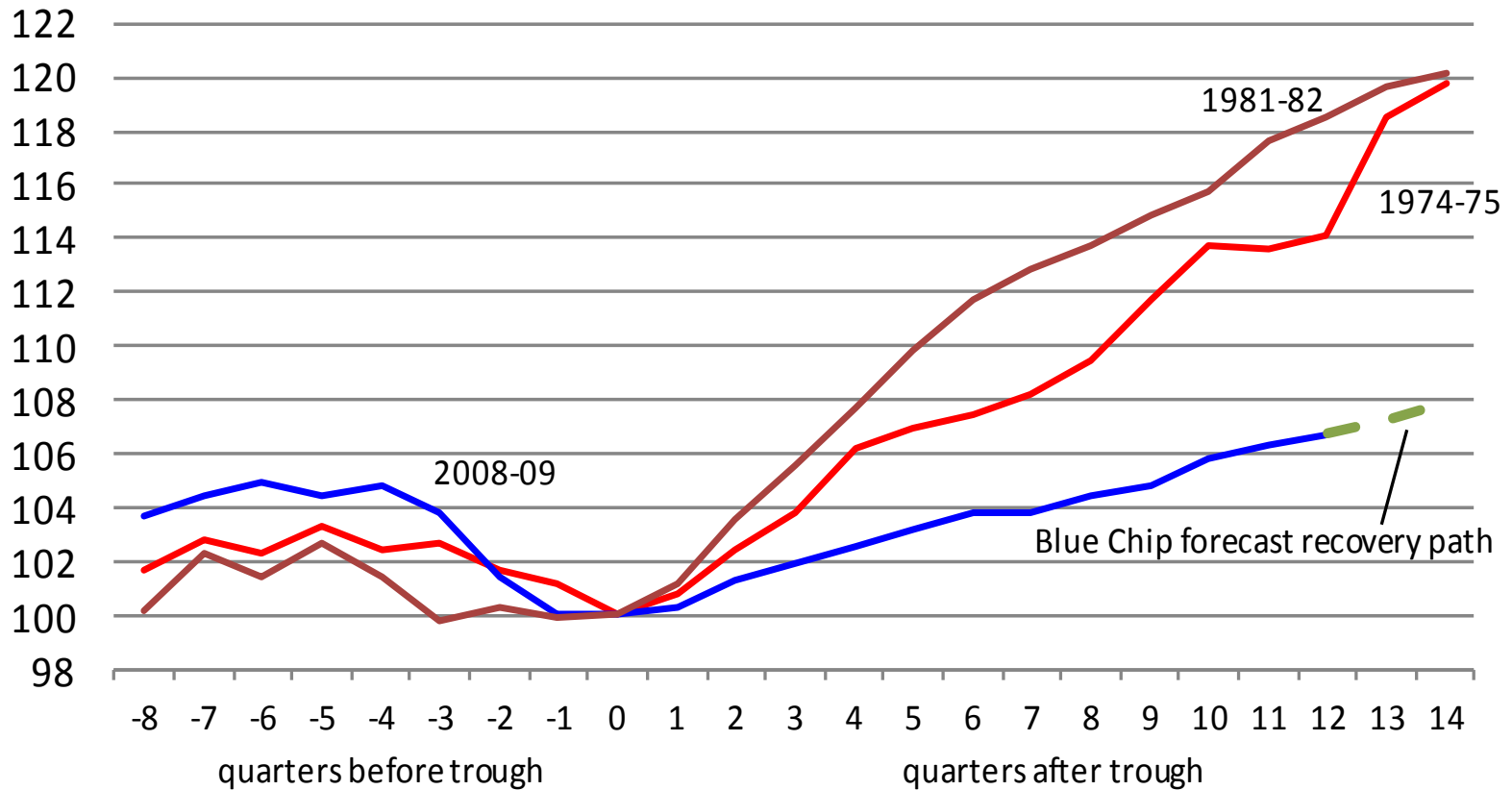
Real gross domestic product



The path of this recovery is forecast below past deep recession recovery cycles

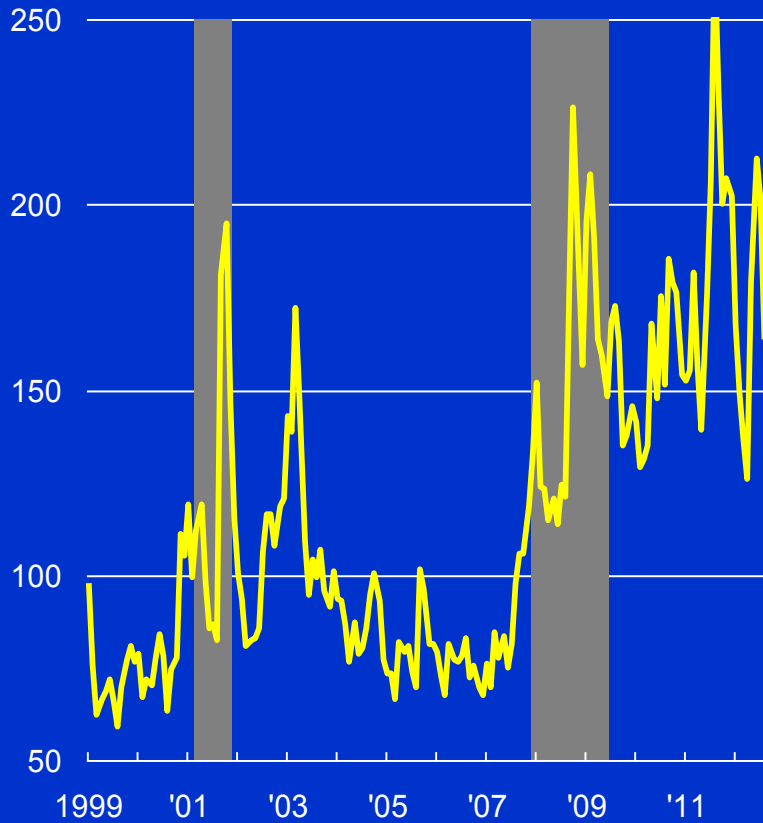
Business cycle recovery path

index - business cycle trough = 100

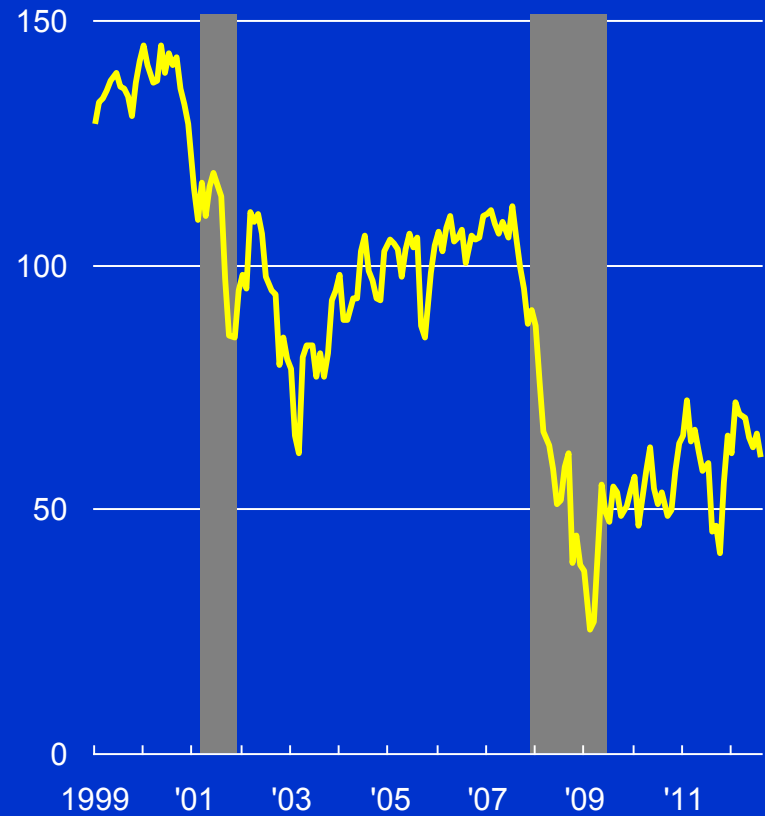


Lots of uncertainty affecting confidence

Economic Policy Uncertainty Index



Consumer Confidence (Conf. Board)



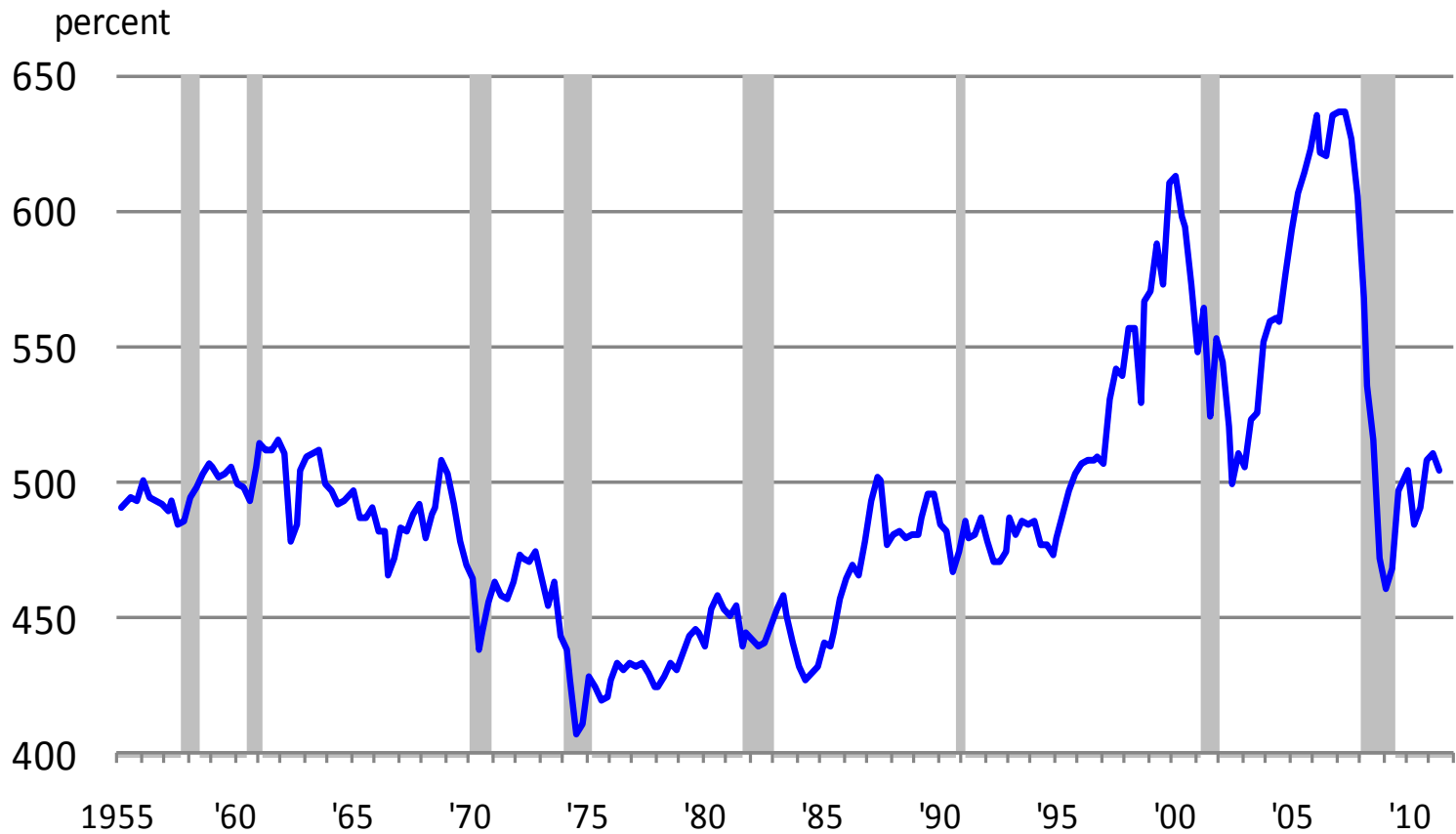
Origins of slow recovery: Wealth Destruction

What is your number?



Household net worth has edged up from low

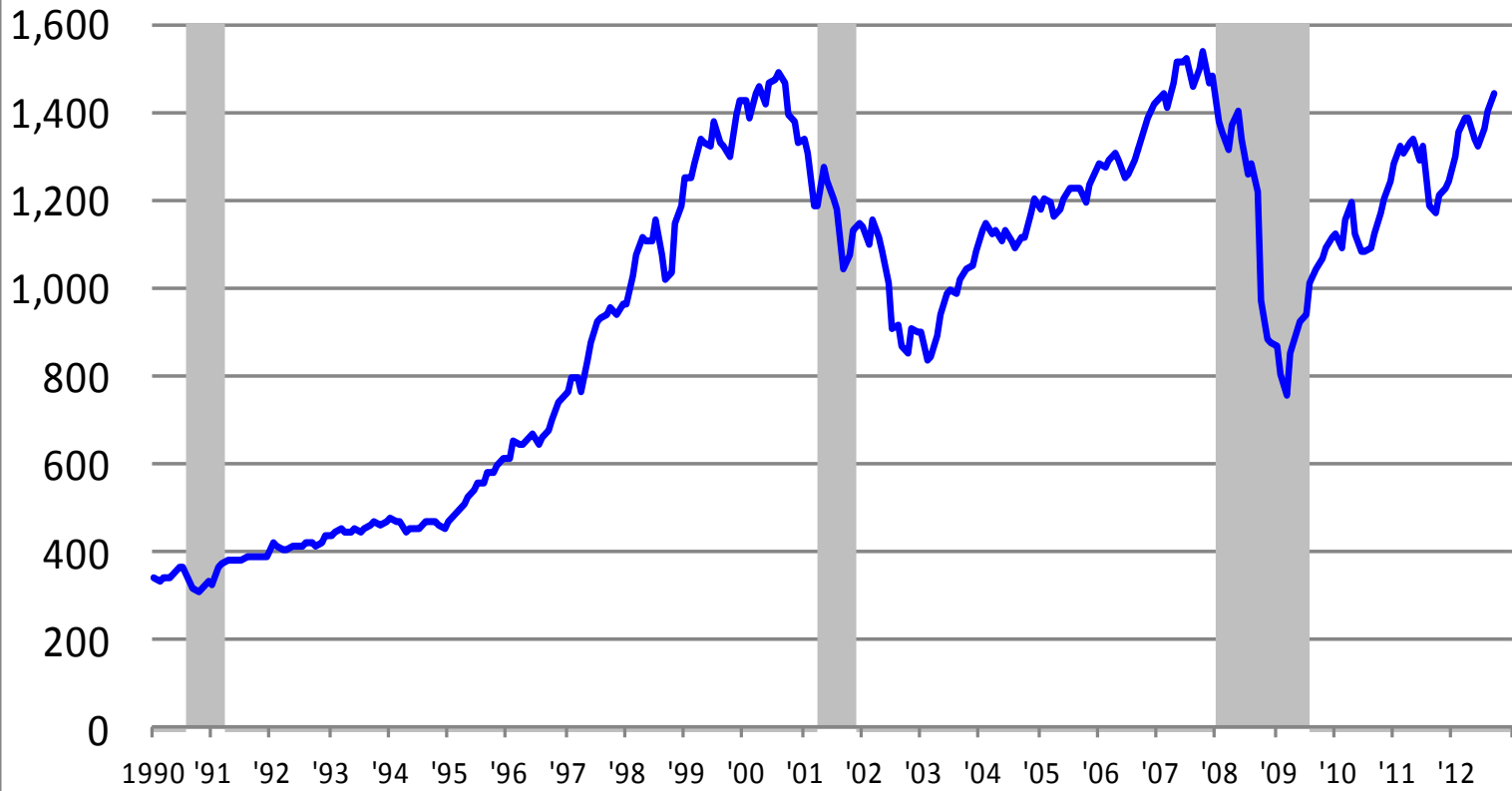
Households net worth divided by disposable income



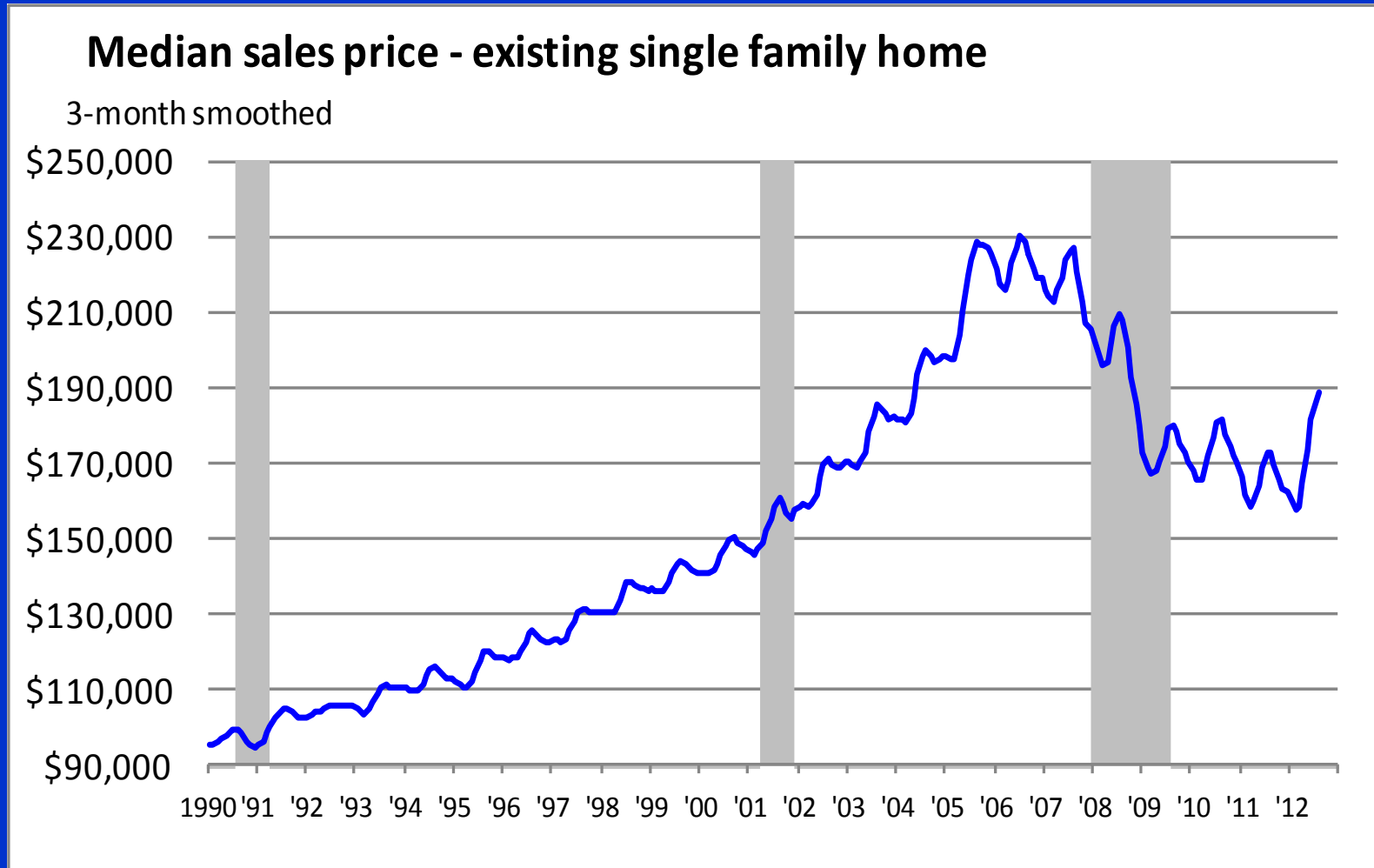
The stock market has improved since March 2009, but remains below previous levels

S&P 500 stock index

Index: 1941-43 = 10



Existing home prices fell hard and are up from their low



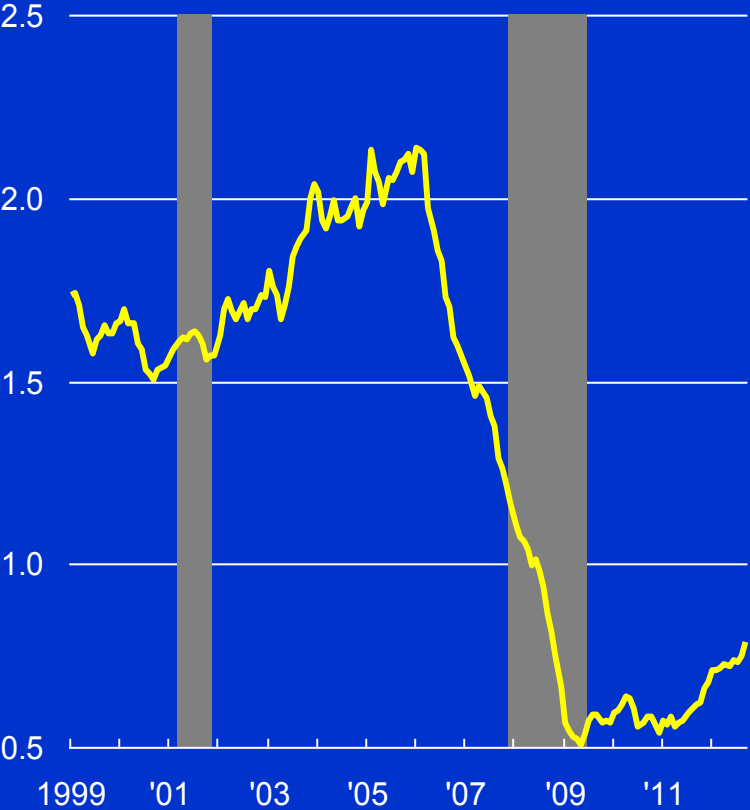
Impact of housing foreclosures varies



Housing market tanked and bounced along bottom

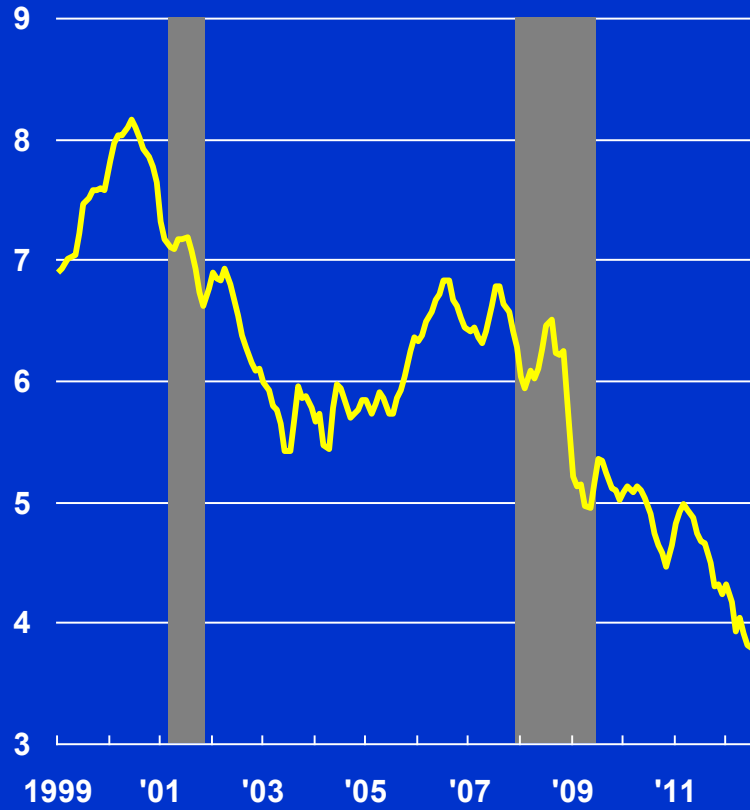
Housing starts

(thousands of units, 3-month moving average, SAAR)



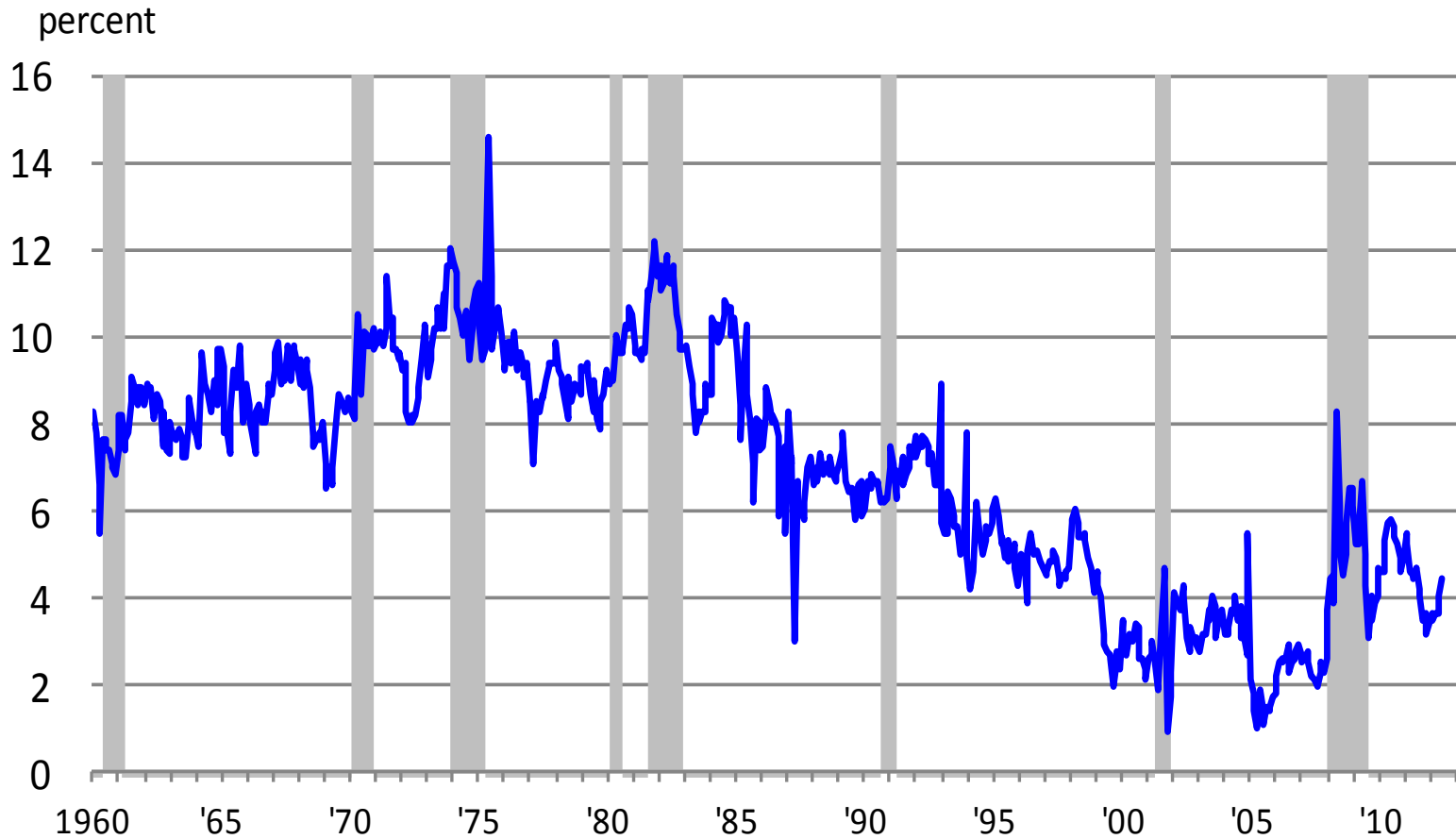
Home mortgage rate

(percent, effective rate for all loans closed)



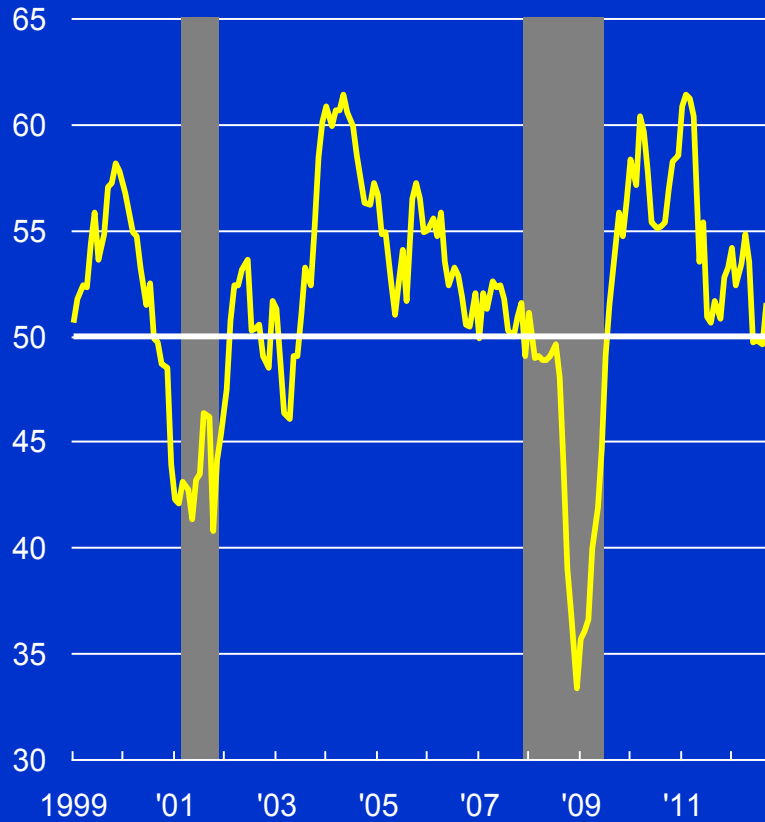
The personal savings rate hasn't moved as low

Personal savings as a percent of disposable personal income

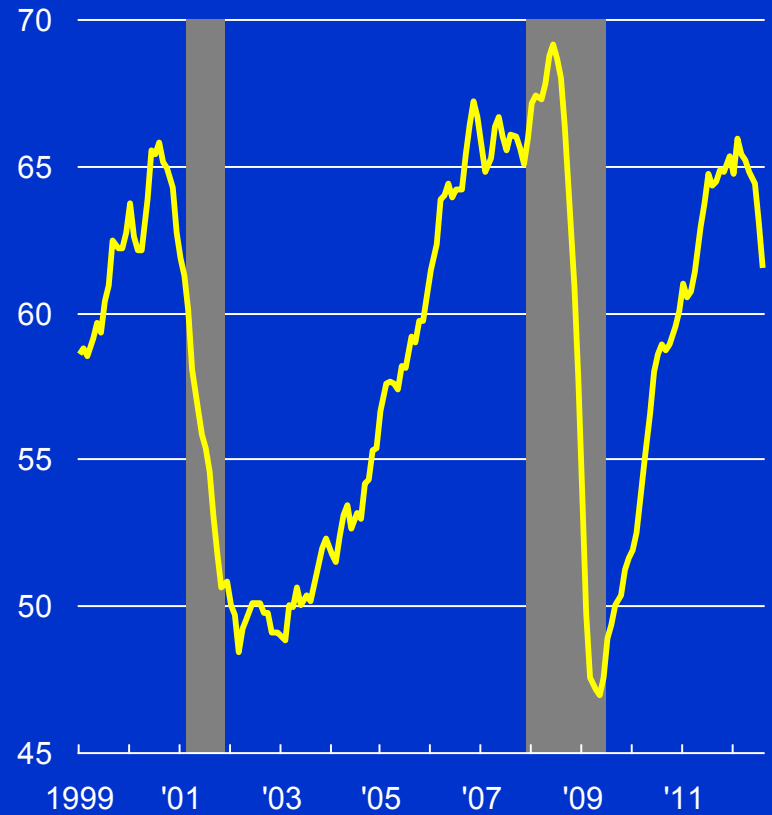


Manufacturing is slowing; orders for capital goods easing

ISM purchasing managers index
(net percent reporting increase)



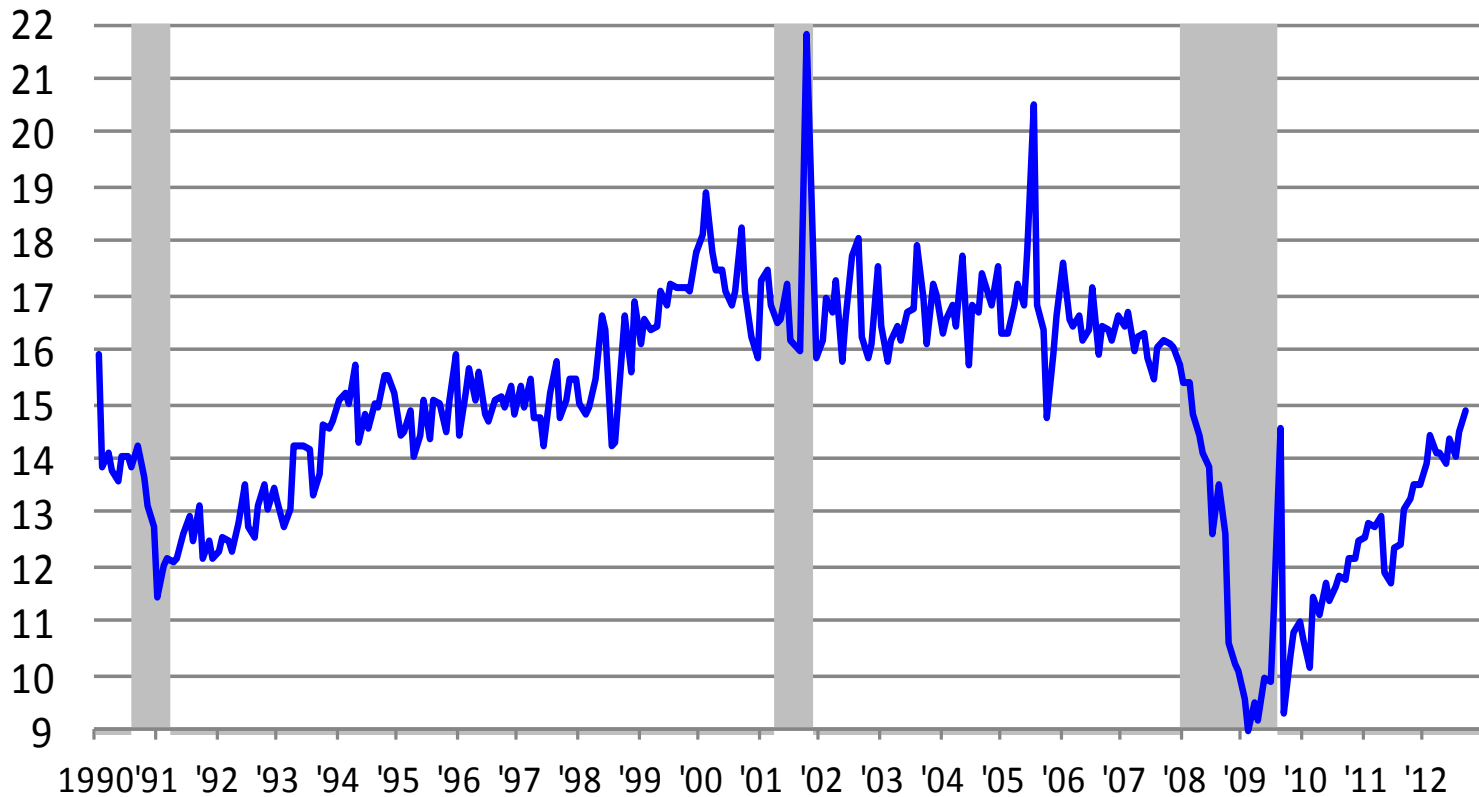
Nondefense capital goods ex. aircraft
(orders in millions of dollars, 3-month moving average)



Vehicle sales are expected to improve at a good pace

Light vehicle sales

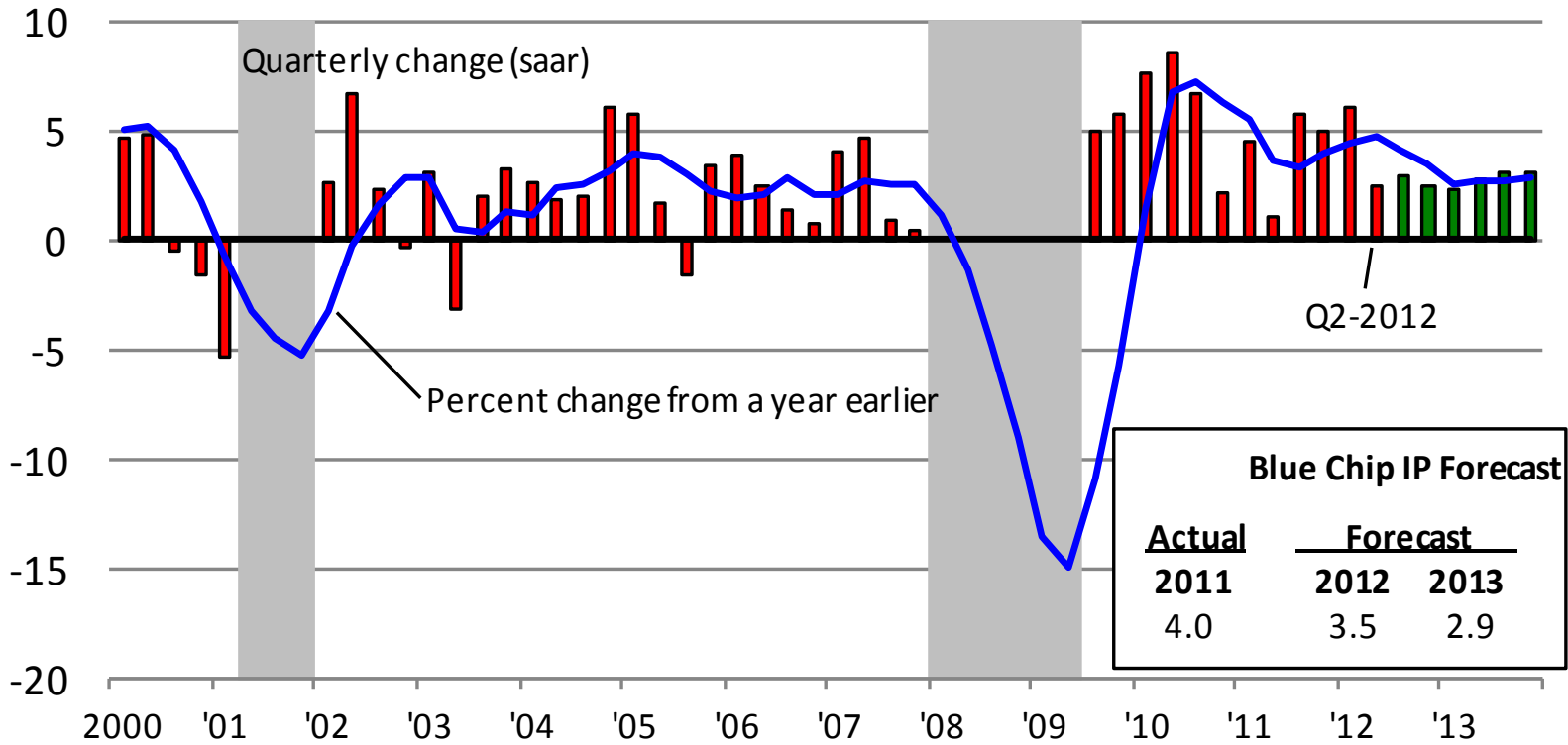
millions of units (saar)



Industrial production is forecast to rise at a solid pace

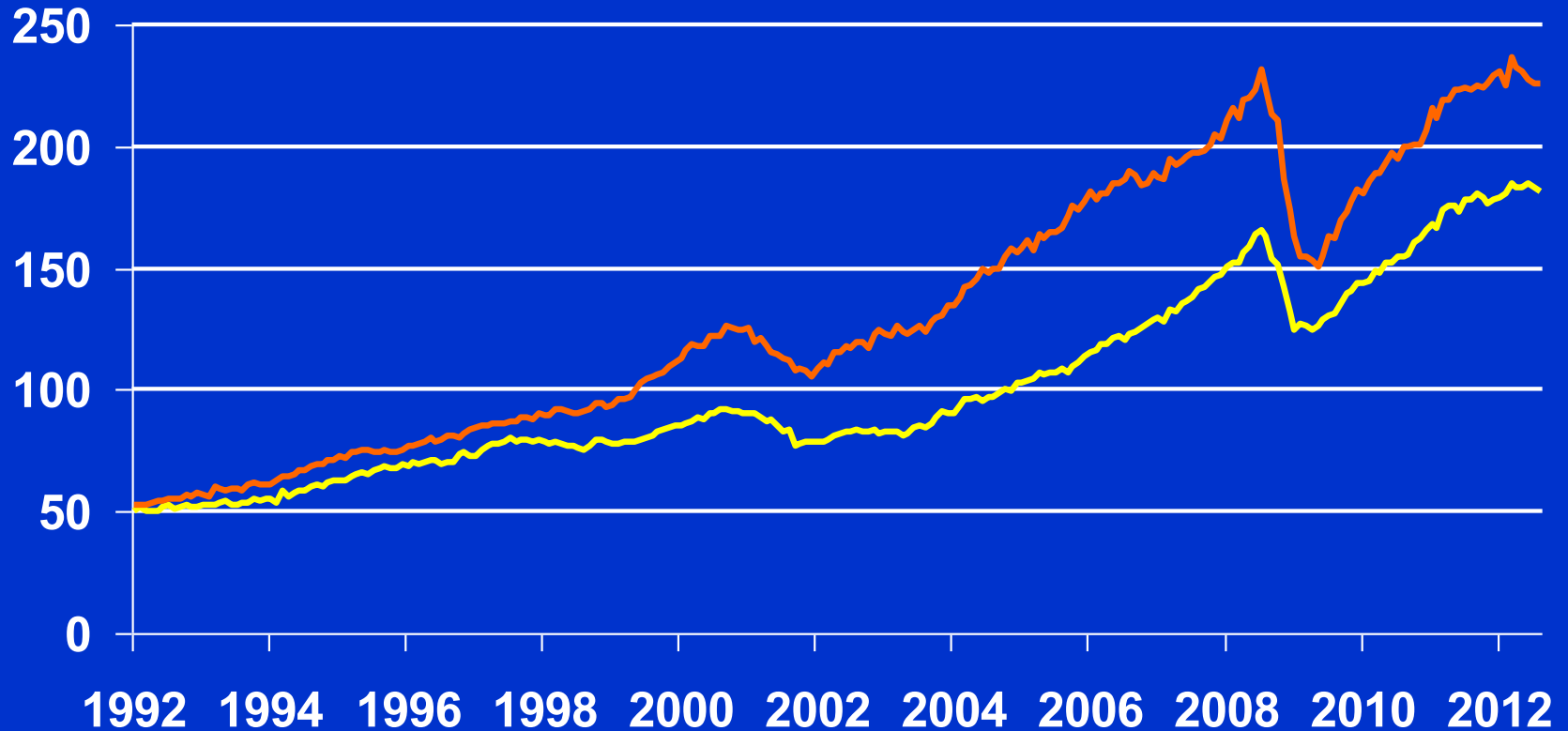
Total industrial production

percent



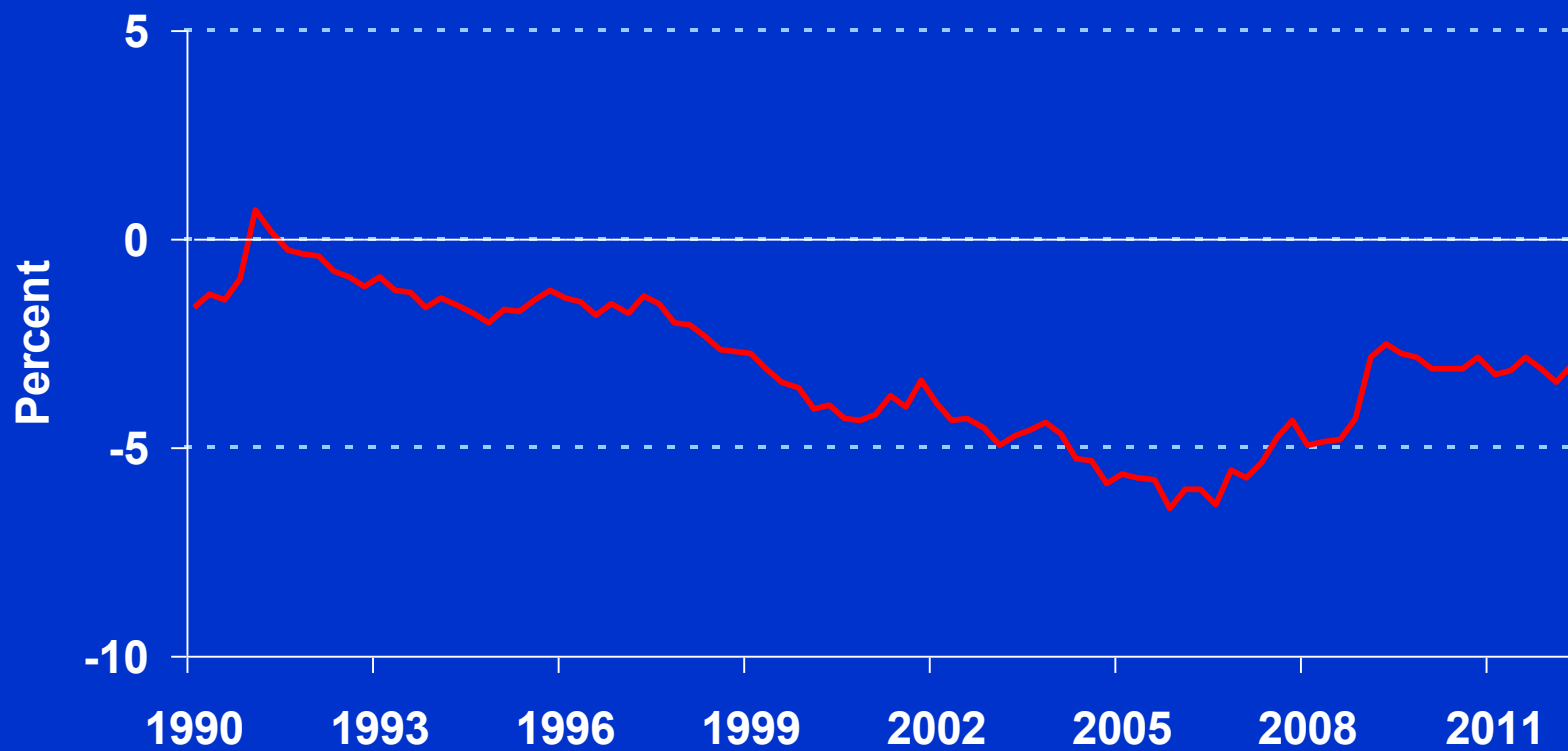
Exports have not dipped as much as imports this year

(billions of dollars, SA)



— Exports — Imports

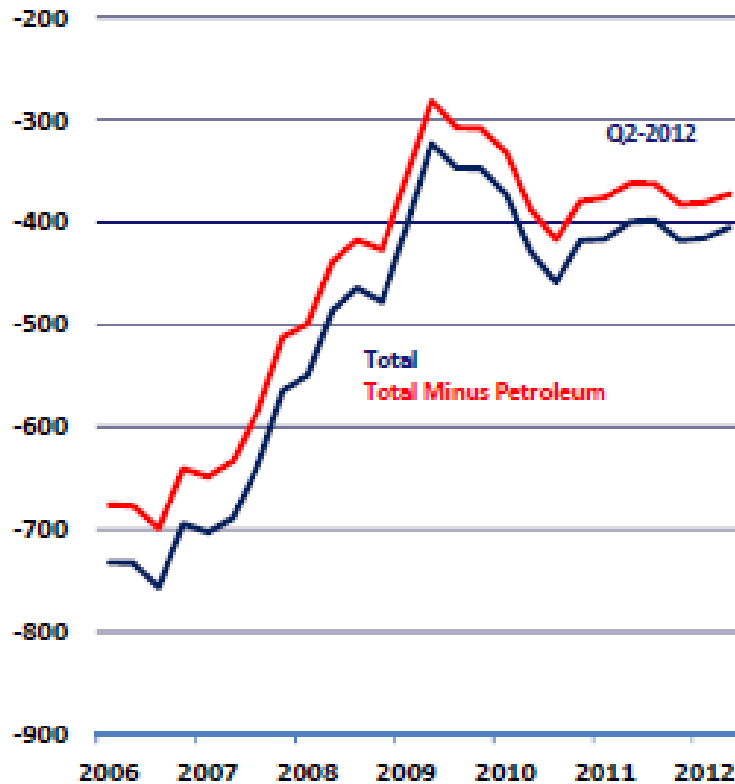
Balance on Current Account as a % of GDP



International trade faces global headwinds

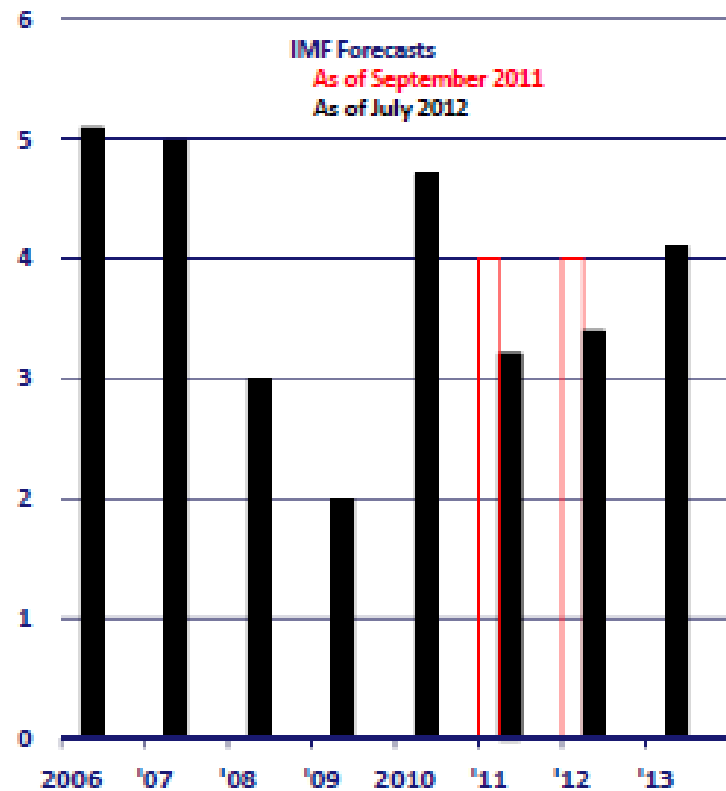
Real Net Exports

(SA, Bils. 2005\$)



Real World GDP Growth (4-

quarter percent change)



The dollar's exchange value peaked in 2002, before falling below earlier range

(Real Broad Trade-Weighted Exchange Value of the US\$)
{March 1973=100}



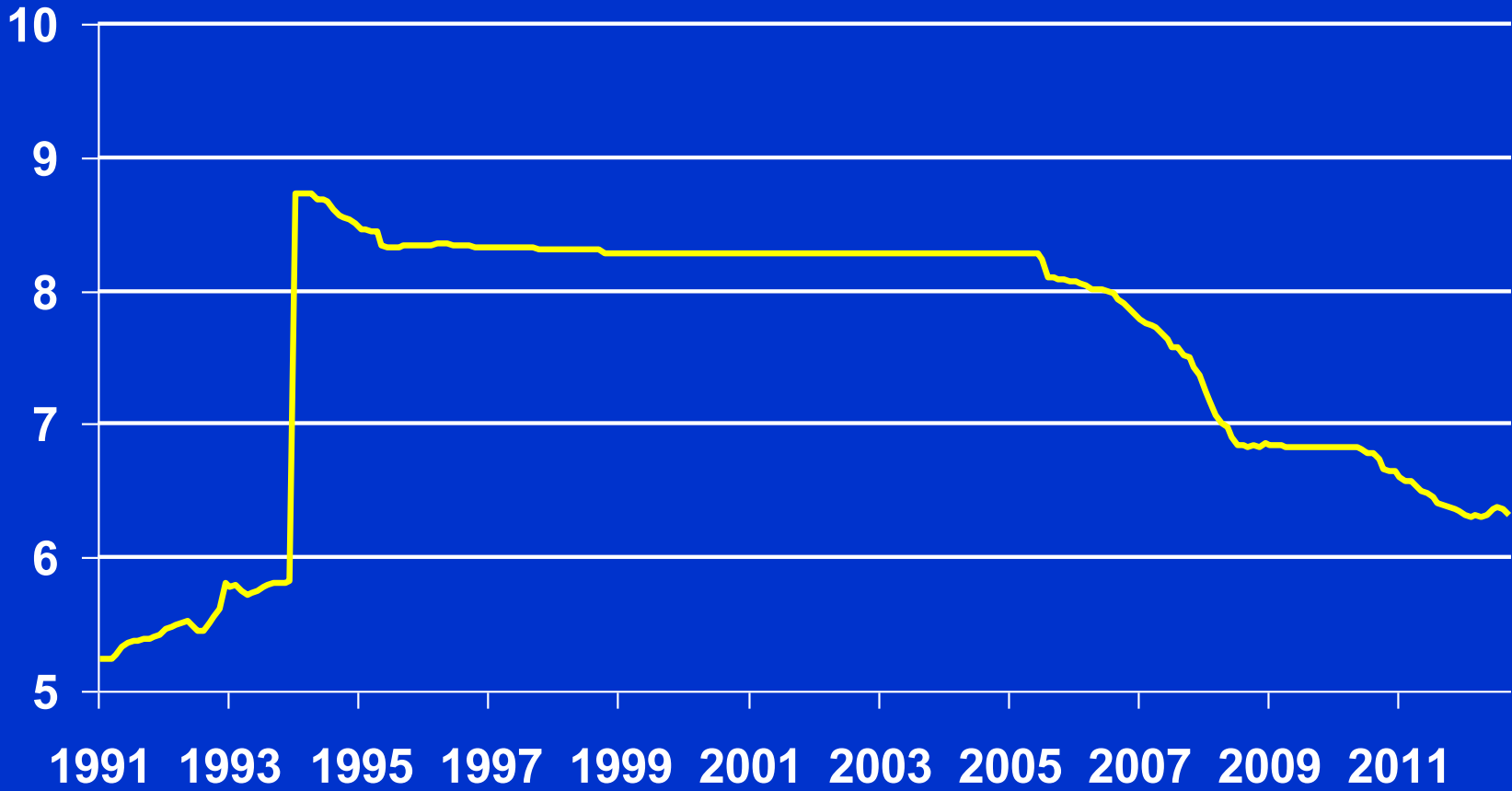
Euro vs. U.S. Dollar

(Euro/\$)



Yuan vs. U.S. Dollar

(yuan/\$)

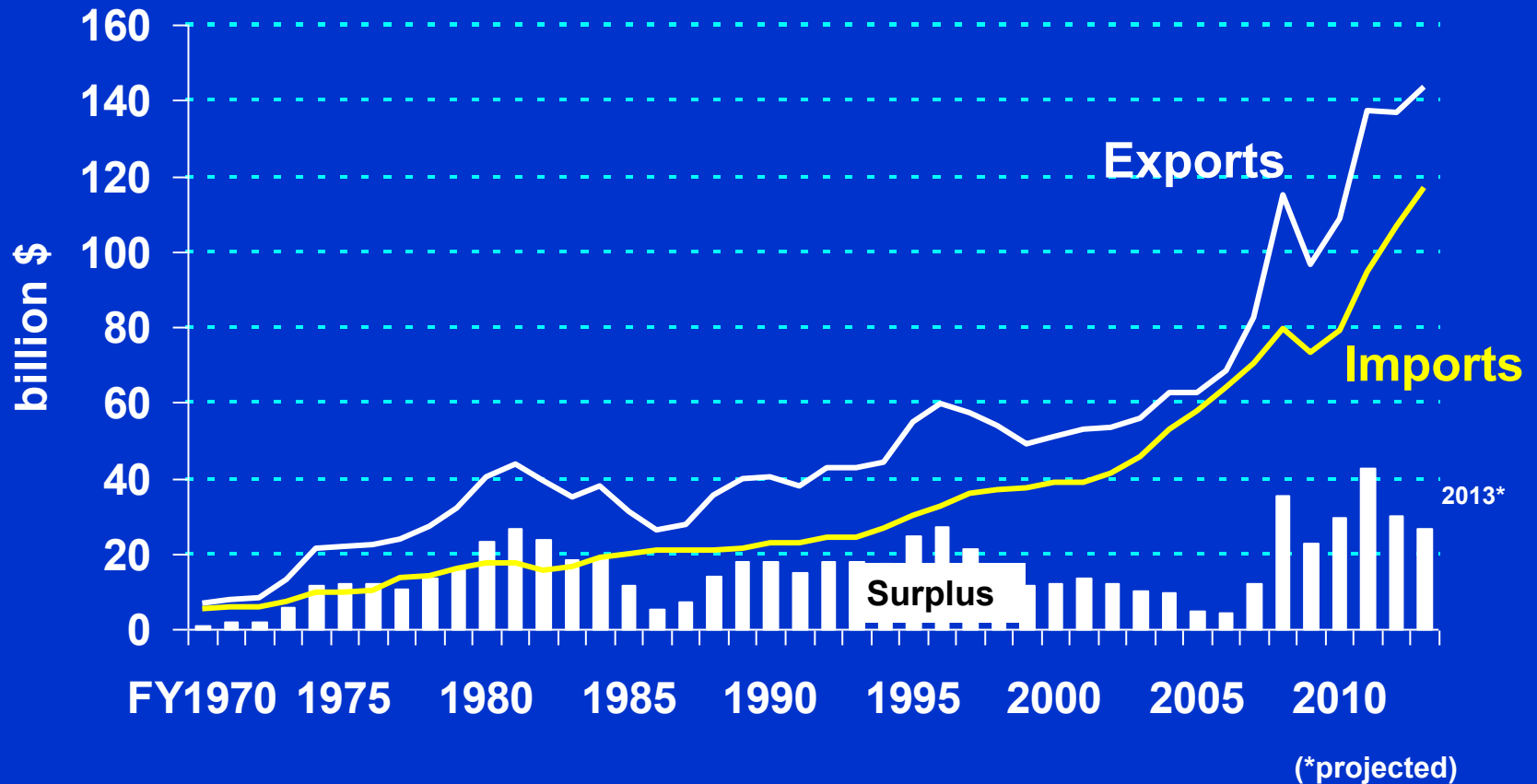


Global Trade in Action

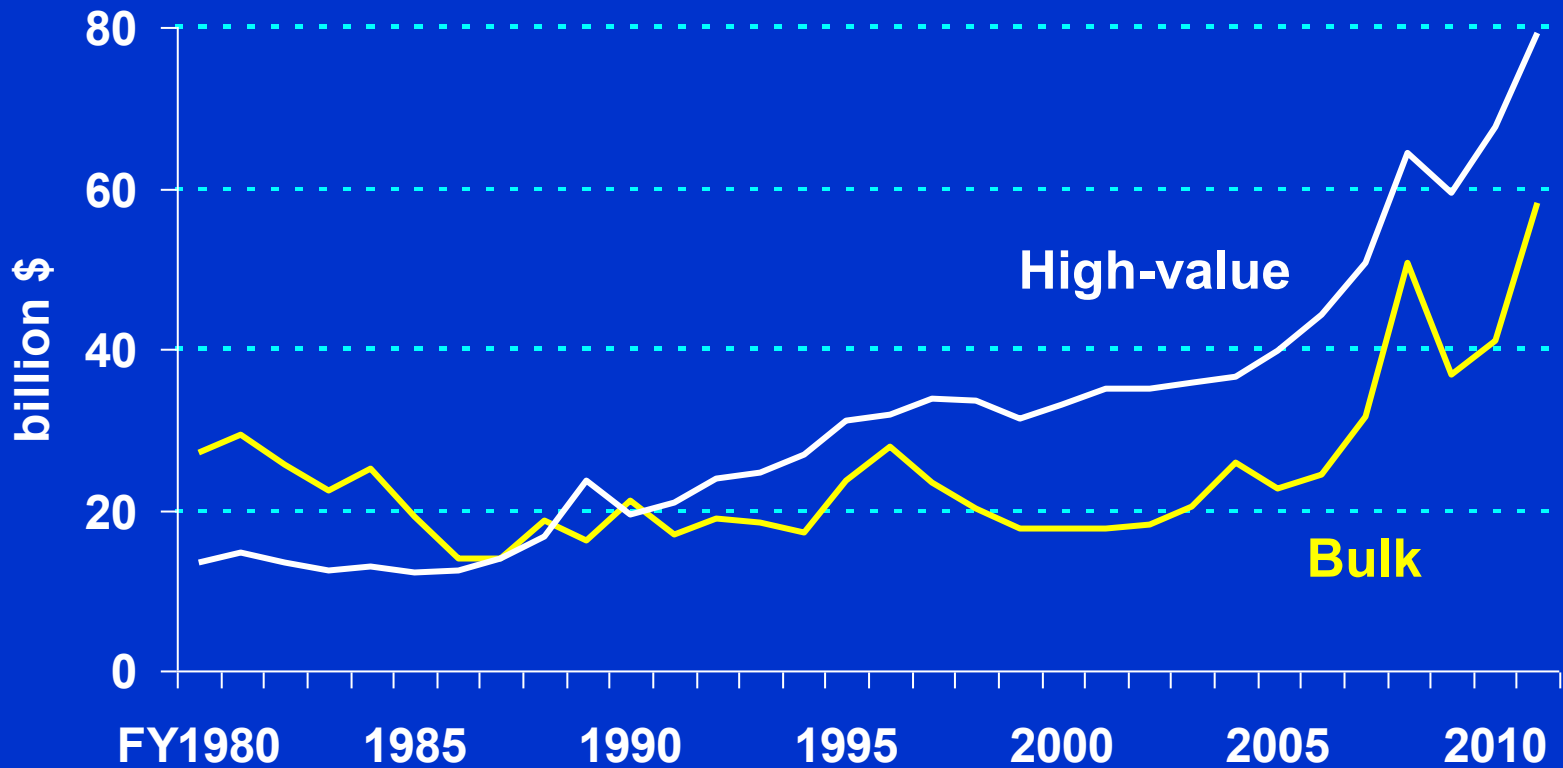
9.1% of U.S.
Exports in
2009 were
Food and
Agricultural
Products



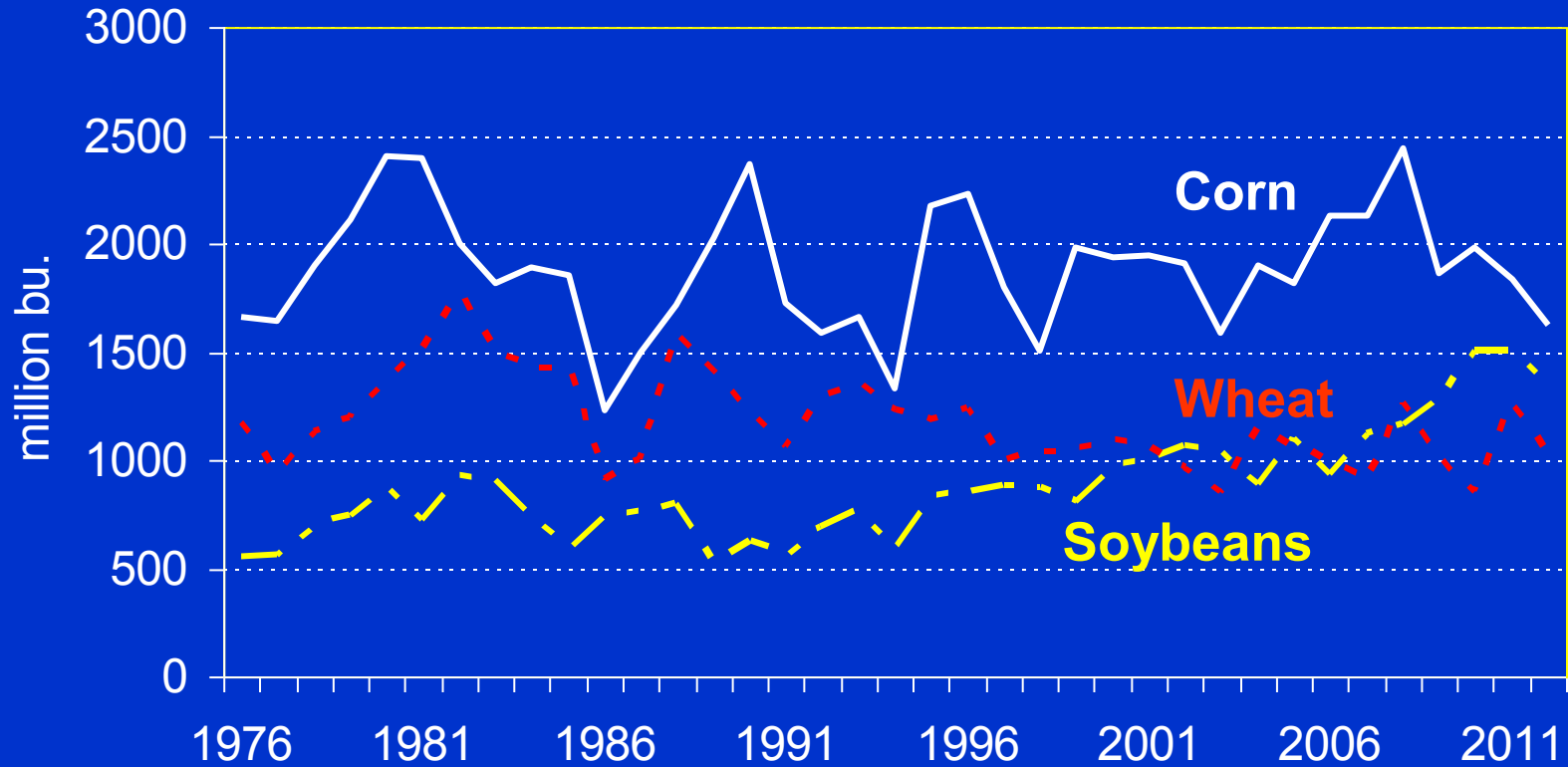
Value of agricultural exports expected to rise in 2013



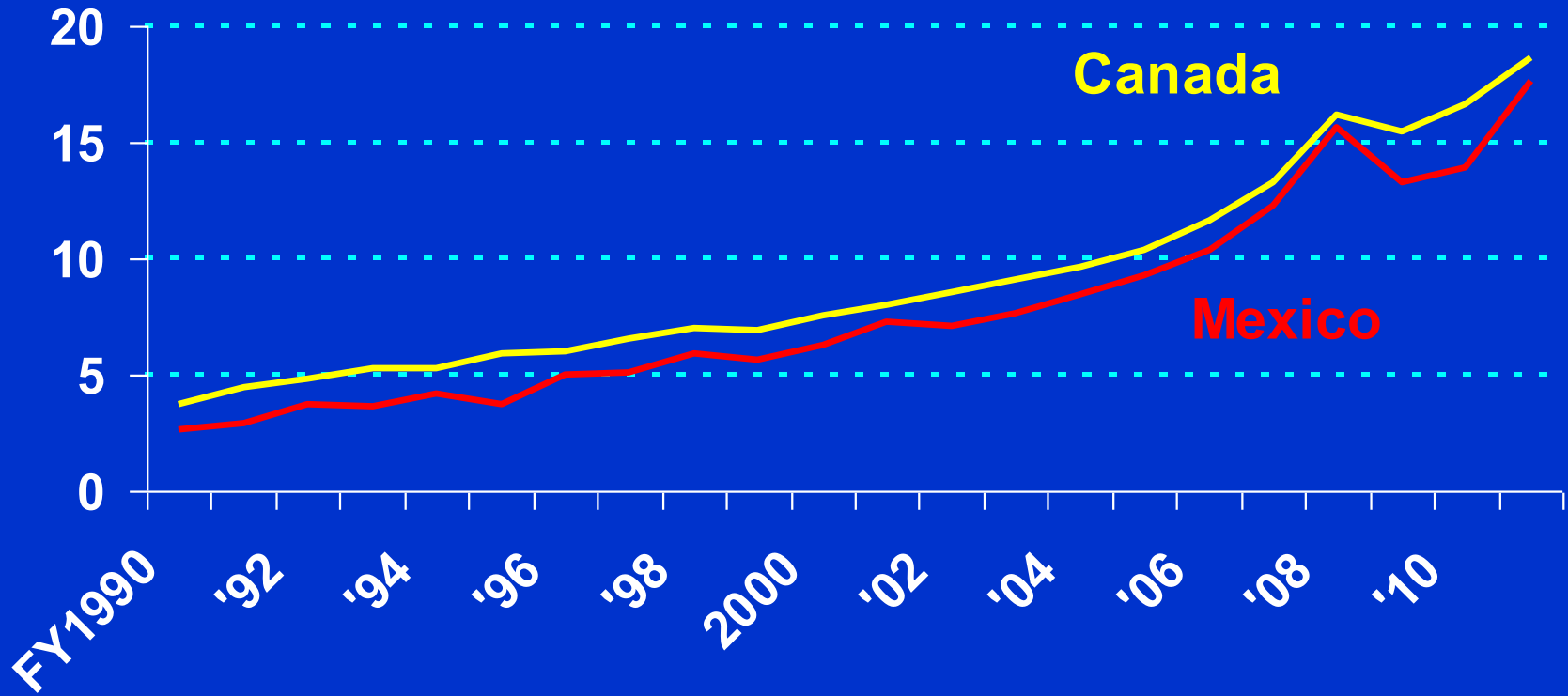
*High-value exports are the star performers,
with bulk exports more variable*



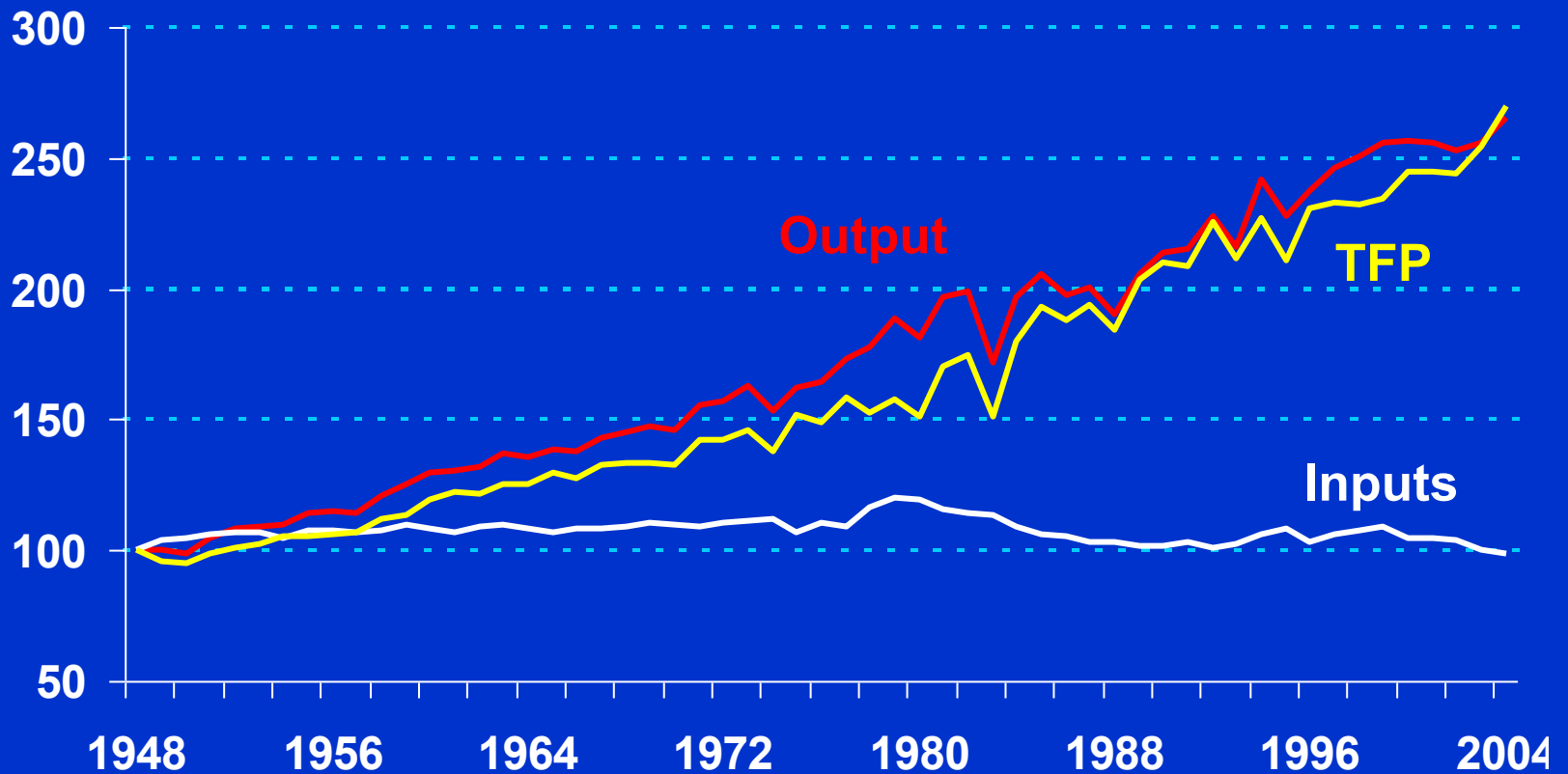
Trade agreements won't repeal the variability of bulk exports



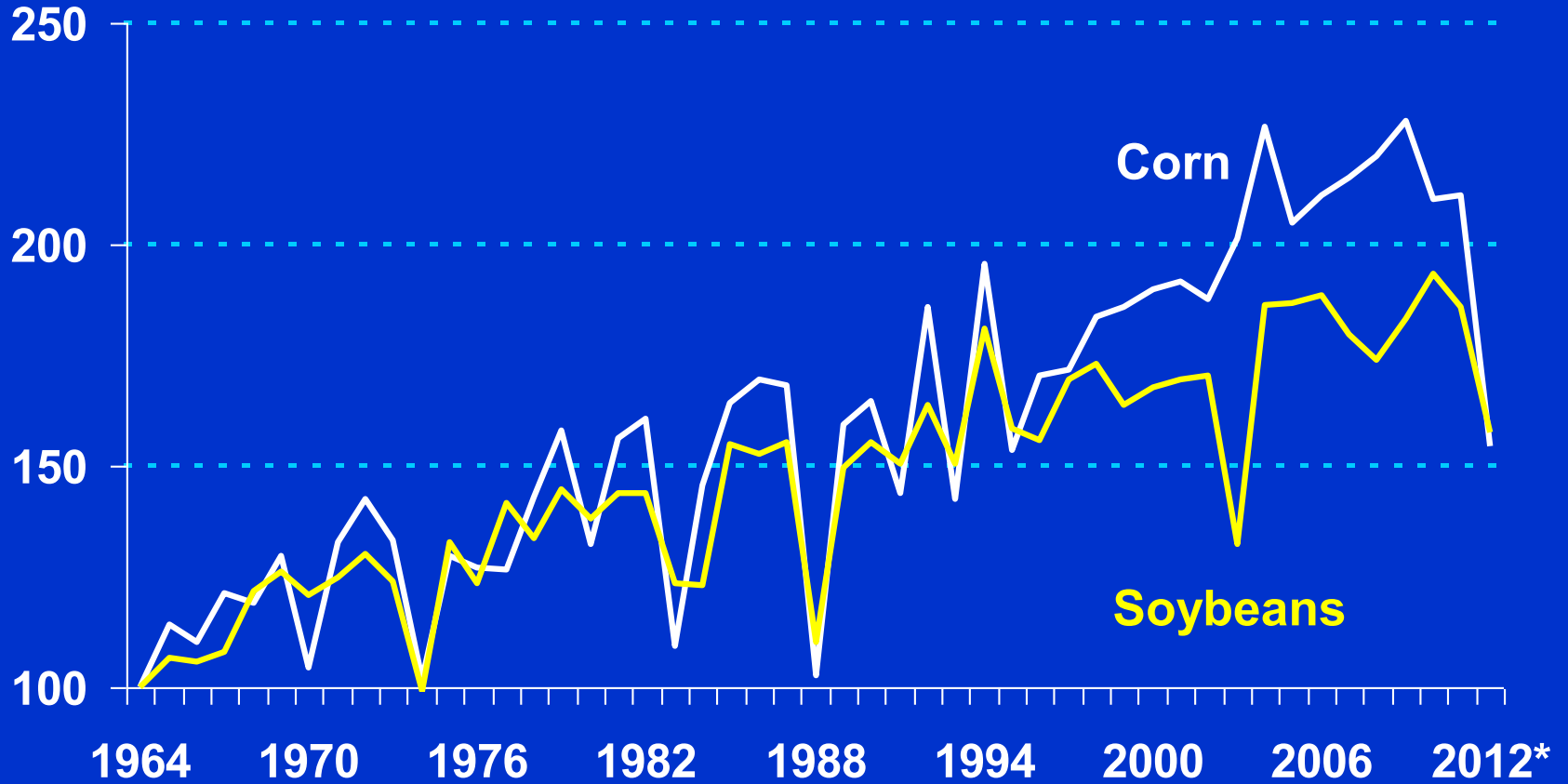
Growth in agricultural exports to NAFTA partners (billion \$)



U.S. agricultural output, inputs, and total factor productivity (TFP) (1948=100)

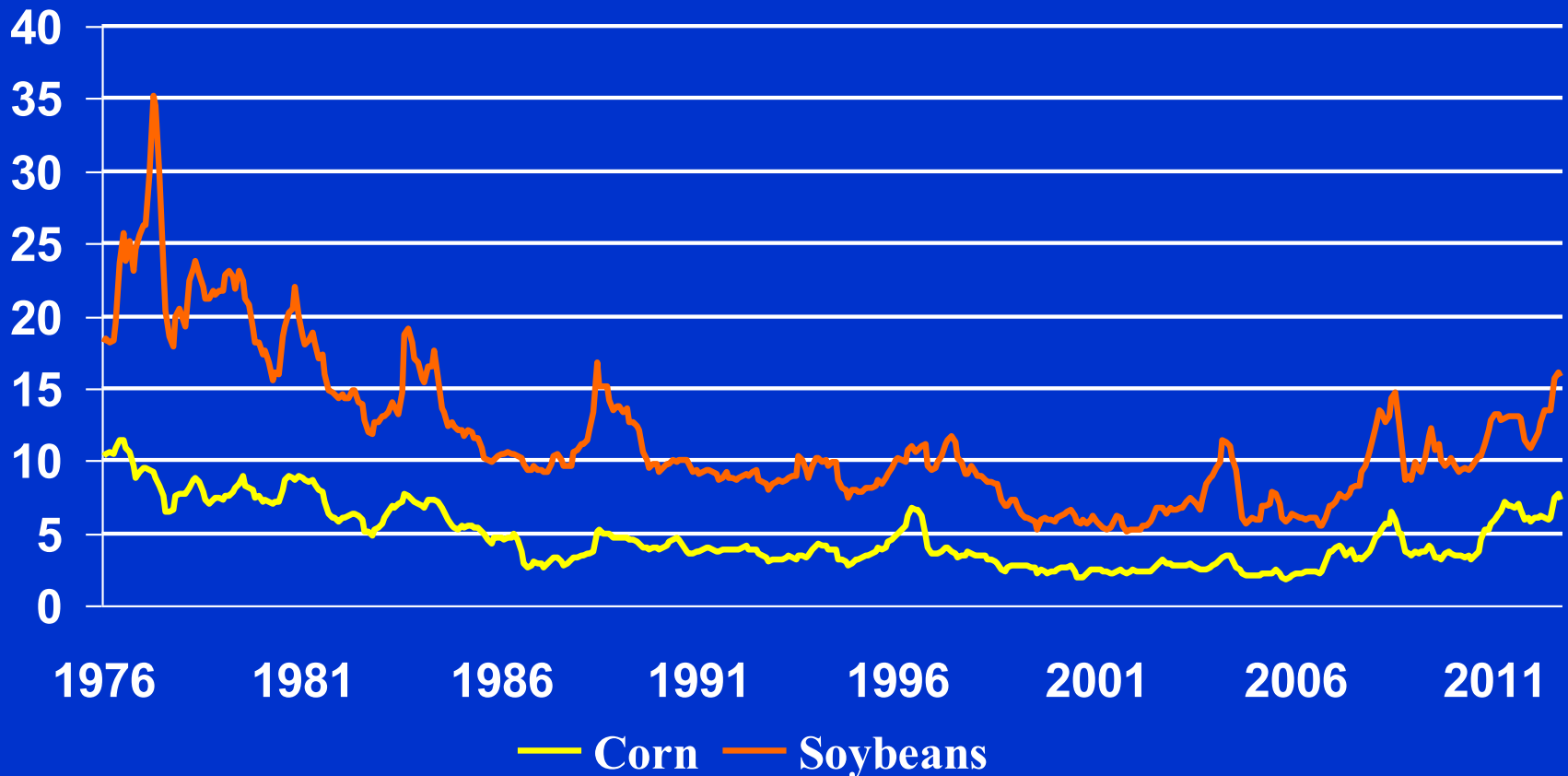


7th District Crop Yield Indexes (1964=100)

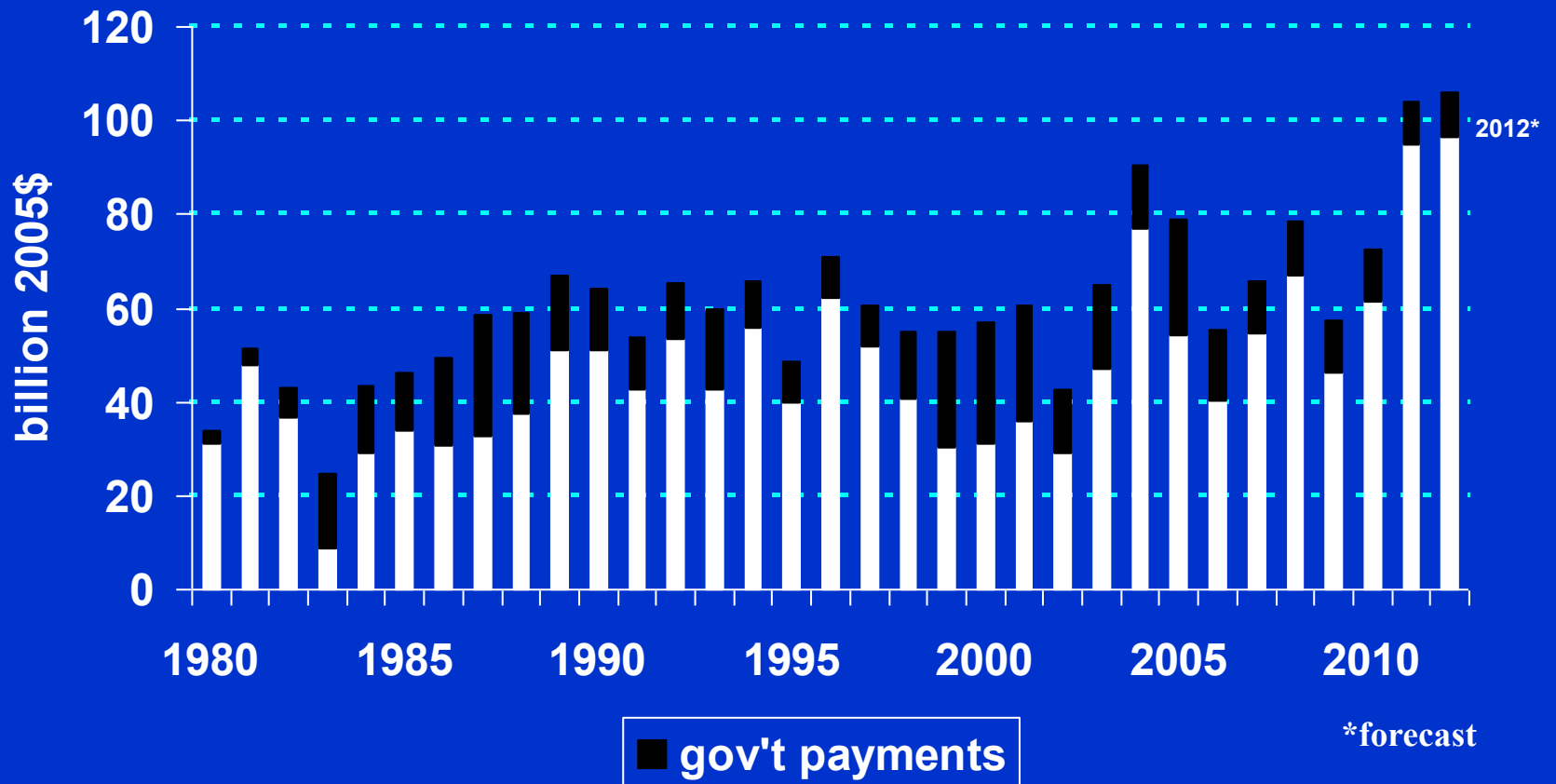


Real Crop Prices

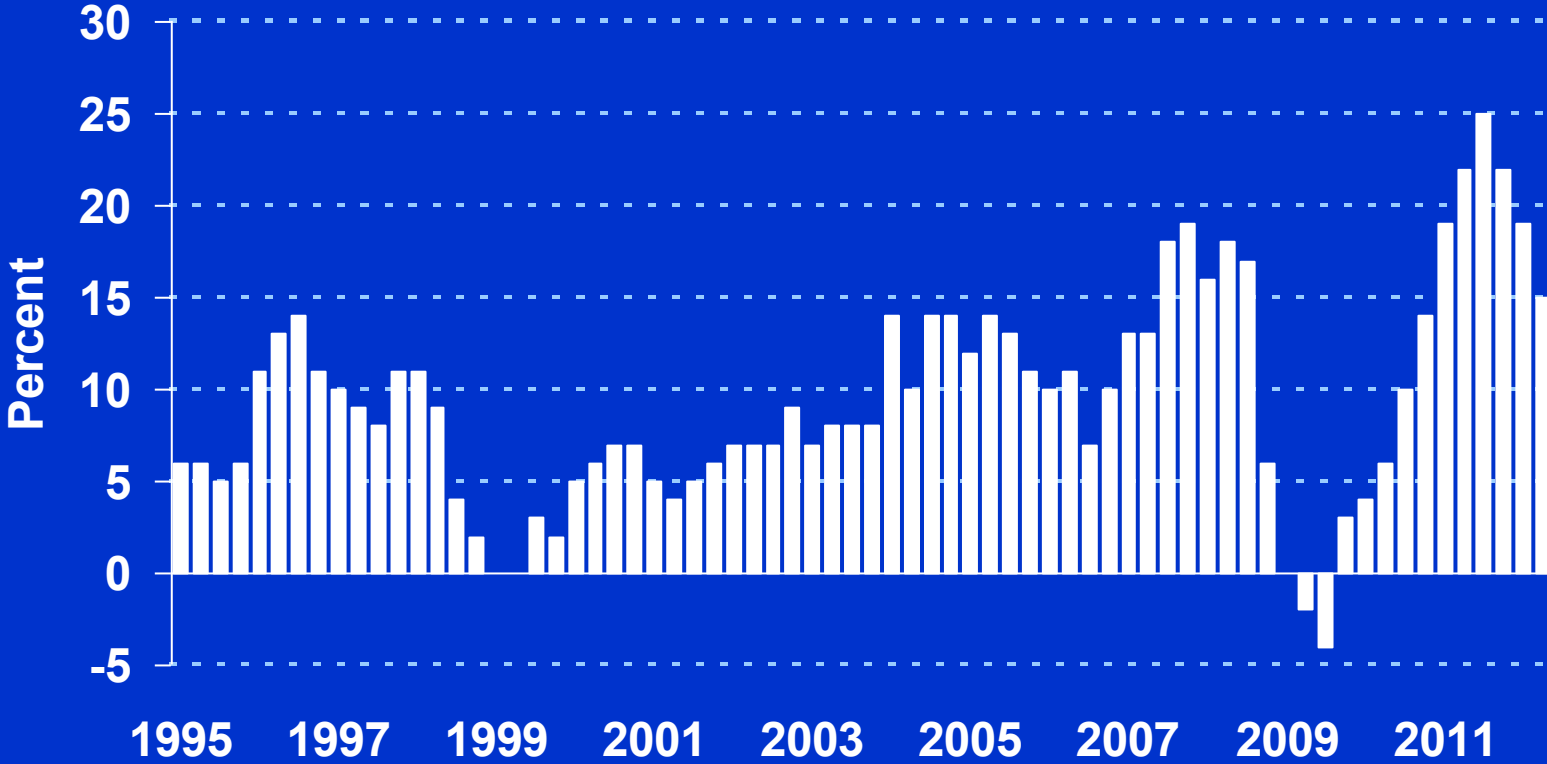
(\$/bushel, adjusted by CPI-U for January 2010)



Real net farm income boosted by direct government payments to farmers, but the regional impact varies



Year over year changes by quarter in farmland values in the Seventh Federal Reserve District



Growth Potential for Ag Exports

- **Exports are key to profitability of Midwest ag**
- **In 2008 exported 1/3 of corn value and 2/3 of soybean value**
- **Only large potential growth markets are in low income countries**
- **Midwestern comparative advantage in producing products desired by people as they move up the income ladder (animal products and feed, edible oils)**

Growth in Food Demand

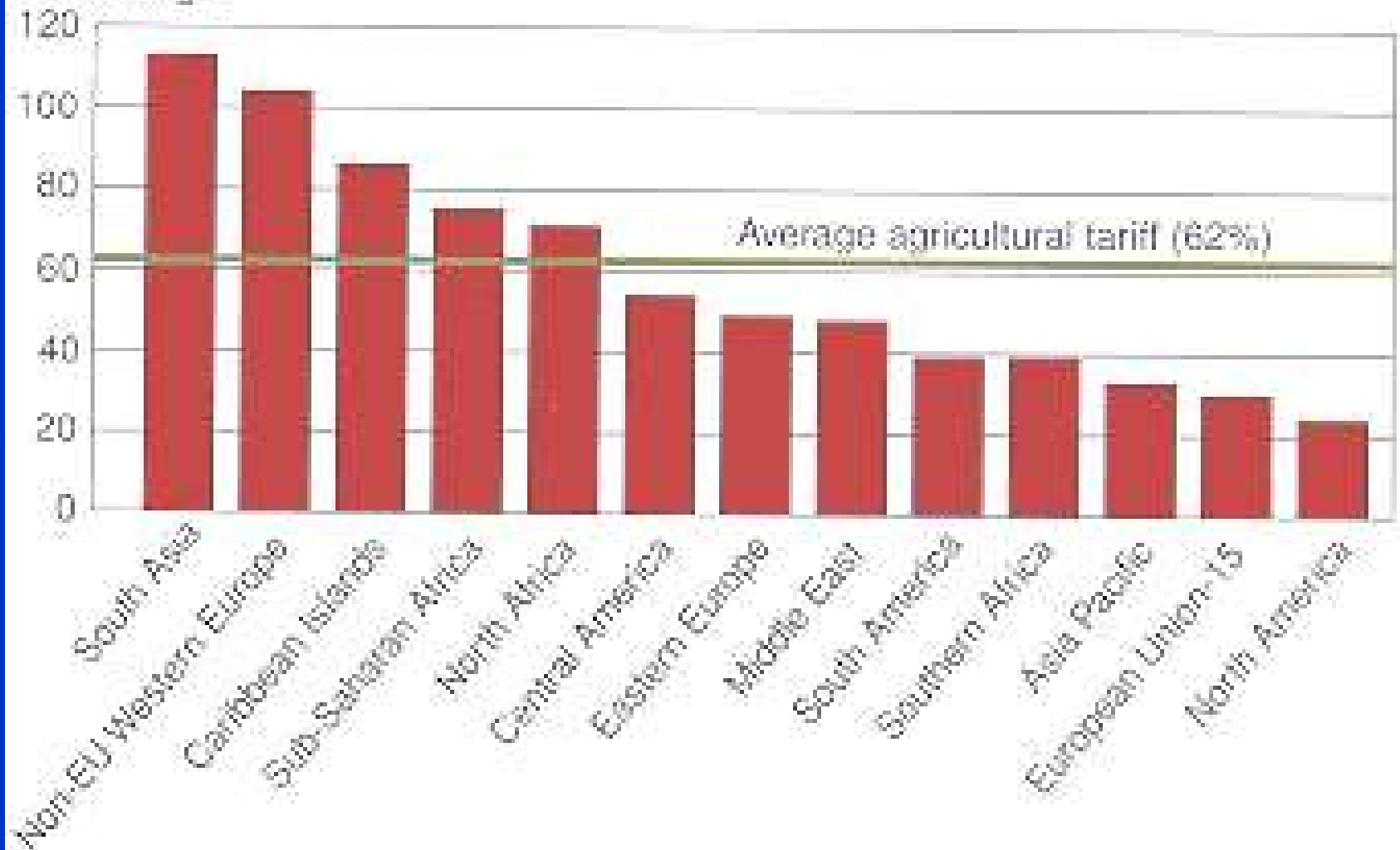
- **Projected population growth: 45% increase in low income countries, 7% in high income countries**
- **1.4 billion live on less than \$1.25/day (most hungry or under-nourished)**
- **3.1 billion live on less than \$2.50/day (calorie problems solved for most)**
- **As income increases from \$2 to \$10 per day, demand rises for meat, dairy, oils, and fruits**
- **After \$10 per day, demand for processed food greater than demand for raw commodities**
- **World food demand may double by 2050 as people escape from poverty**

Resource Constraints Drive Trade

- **At most 12% more arable land available worldwide for agriculture (without destruction)**
- **Inferior quality or degraded land in many areas**
- **Agriculture uses 70% of world's fresh water**
- **Water is a scarce resource in much of the world, but it's not priced that way**
- **To meet world food demand sustainably there will need to be huge increases in food system productivity around the world**
- **Larger fraction of food to move via trade due to distribution of arable land**

World Agricultural Tariff Averages, by Region¹

Percentage



¹Tariffs are bound MFN rates based on final URAA implementation.

Current issues in food and agriculture

- **Trade negotiations—WTO and bilateral / regional negotiations and agreements**
 - *Foreign competition*
 - *Farm subsidy reductions*
 - *Genetically modified crops*
 - *U.S. as a residual supplier in the export market*
- **Farm safety net / government farm policy**
 - **Expired farm bill started new programs**
 - **WTO violations**
 - **Future changes?**

Global Marketplace



- U.S. trade surplus for agriculture varies
- How can the Midwest fill empty containers?
 - Consumer-driven agriculture
 - Innovations in technology and marketing

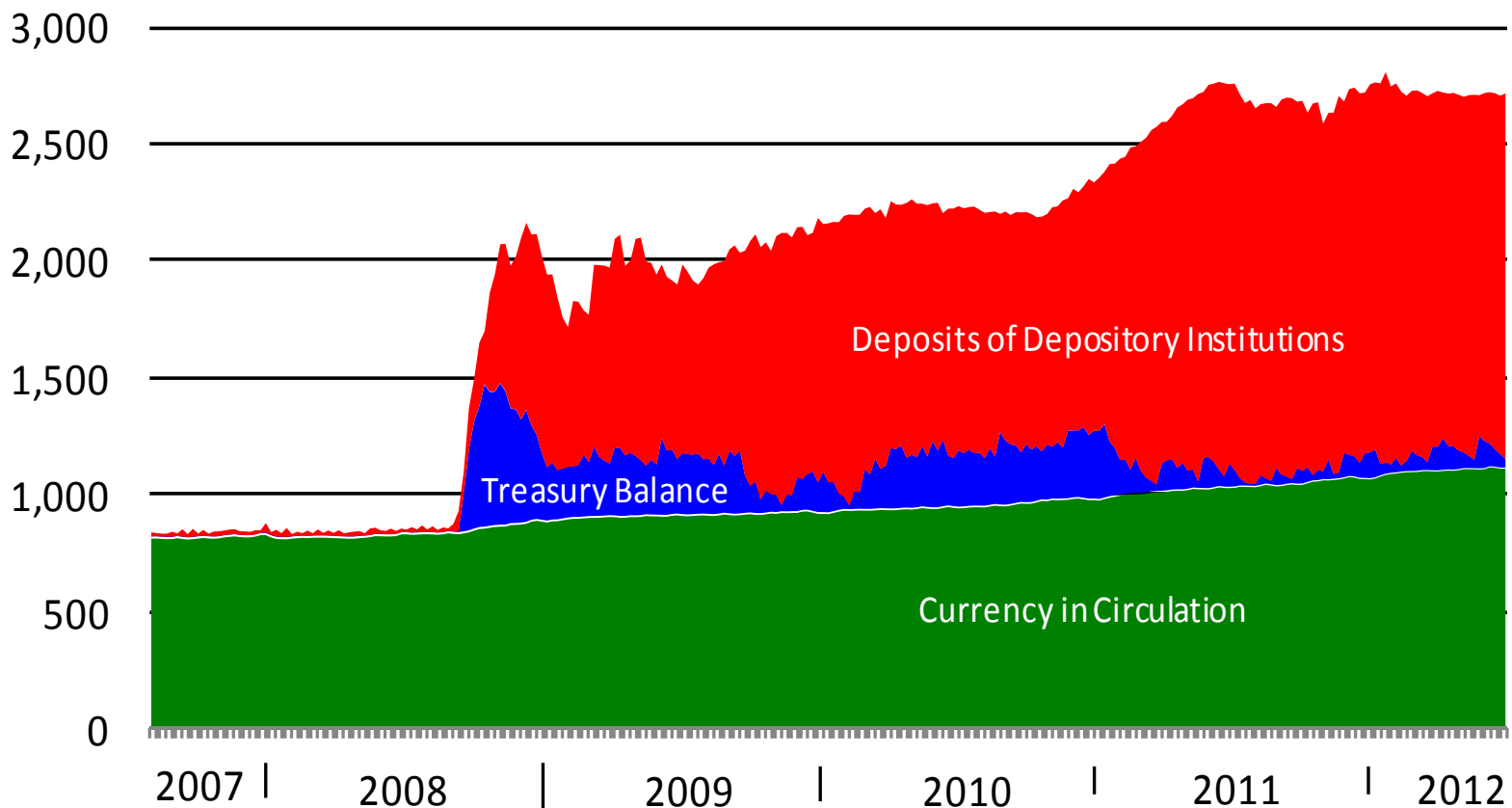
Fiscal Cliff

- According to current law, significant changes to taxes and spending are scheduled for January 1, 2013
- Substantial uncertainty about what will happen and the impact on the economy
- Many analysts expect cuts that imply reduction in 2013 growth from 0.5 to 1.0 percentage points of GDP
- If all possible tax and spending changes occurred CBO's midpoint estimates show an additional 2.0 percentage points of reduction in GDP growth for 2013

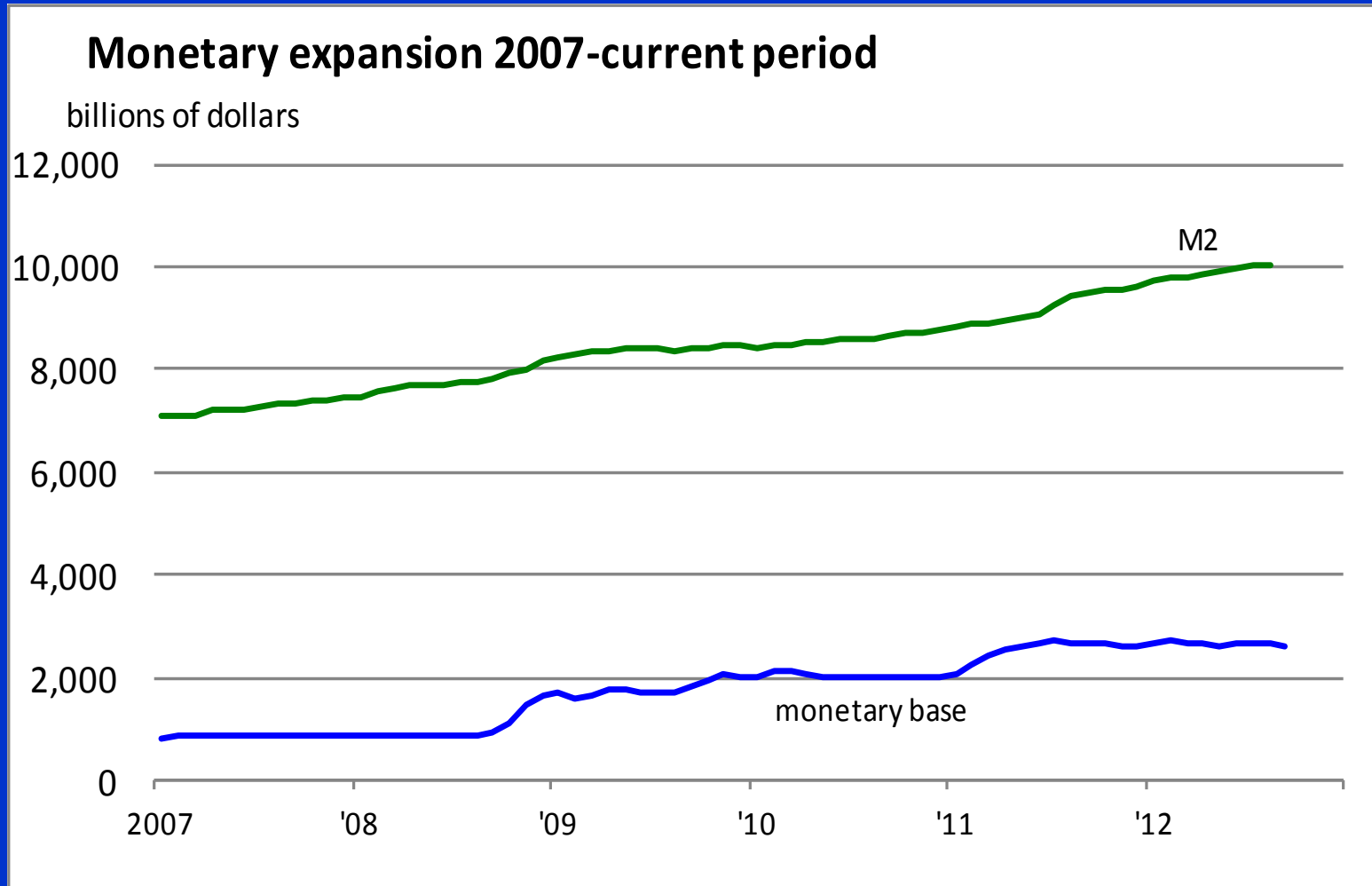
The liabilities side of the Fed's balance sheet shows a large amount of excess reserves

Liabilities of the Federal Reserve

Billions of dollars



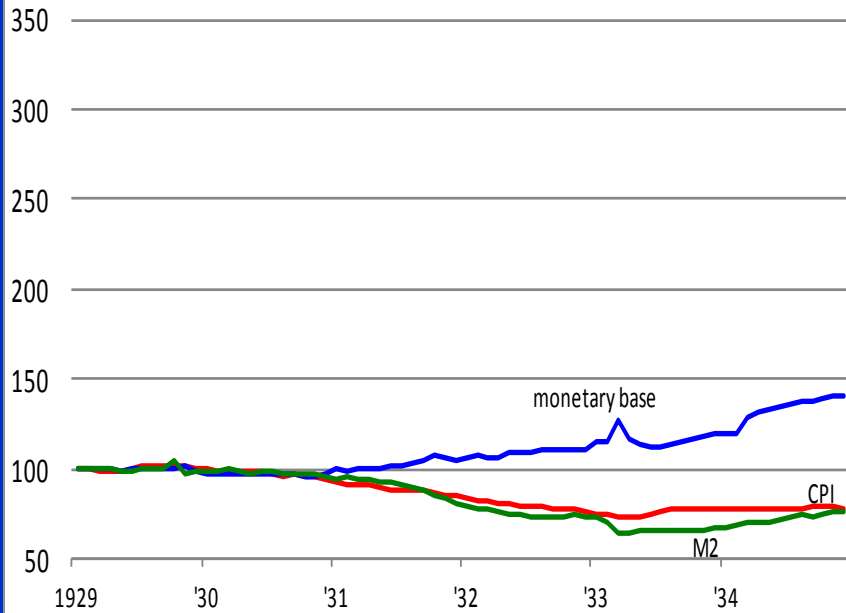
The money supply (M2) is nearly four times bigger than the monetary base



The Fed's expansion of the monetary base has allowed the money supply to continue rising, compared to a contraction in the 1930s

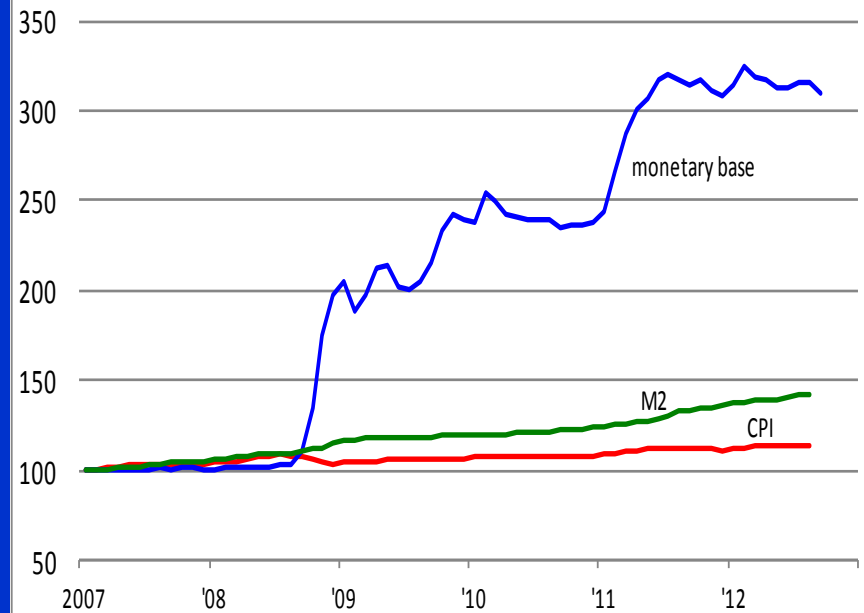
Monetary expansion 1929-1933

index: Jan 1929 = 100



Monetary expansion 2007-current period

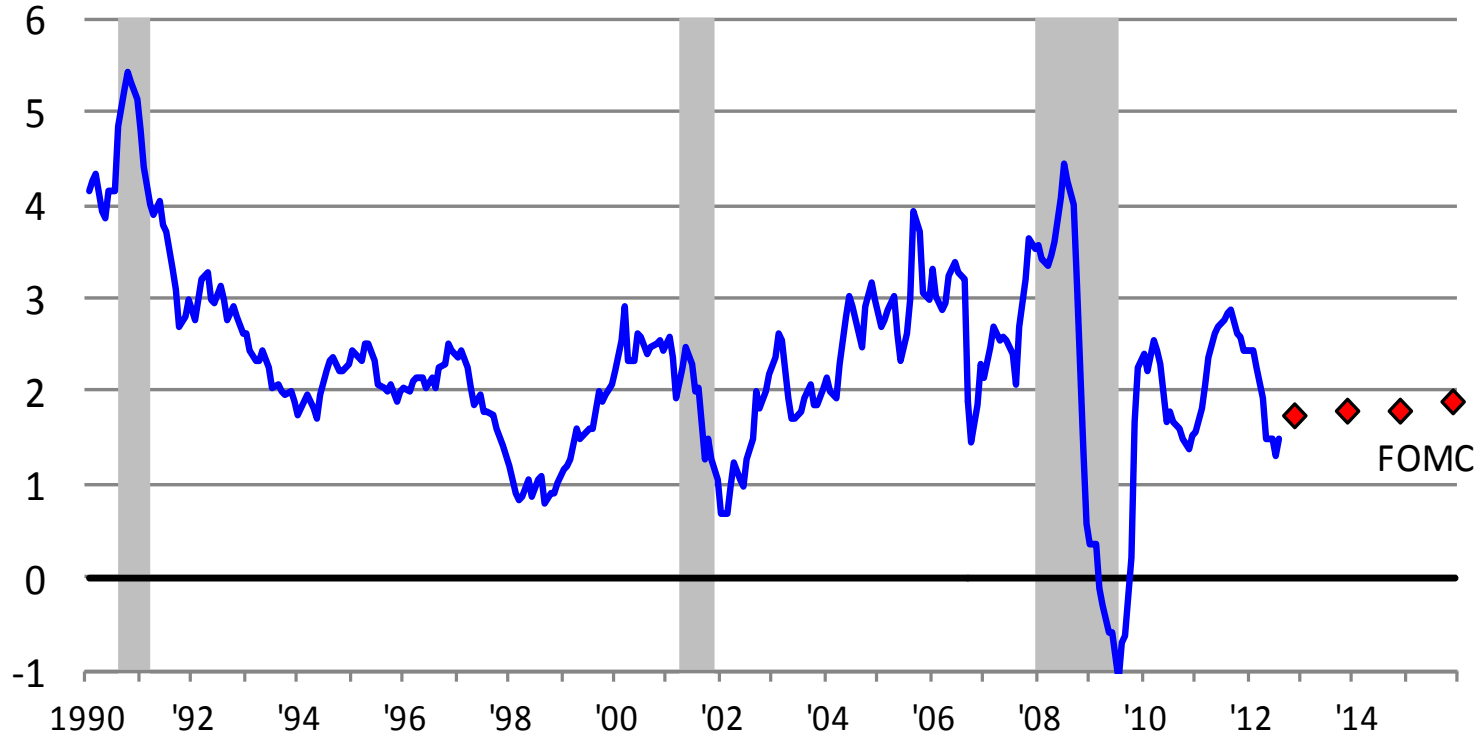
index: Jan 2007 = 100



The FOMC anticipates that PCE inflation will remain below 2% through 2015

Personal consumption expenditure - chain price index

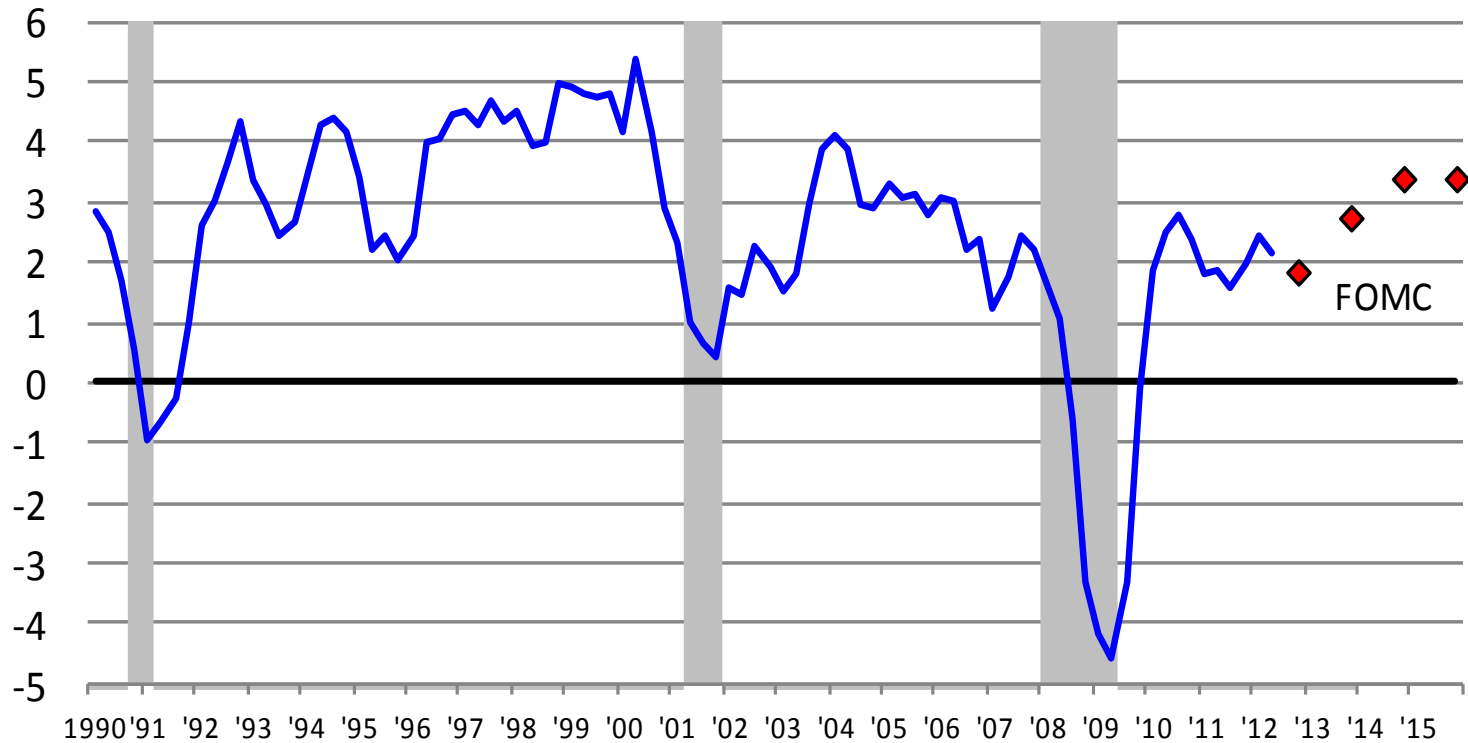
percent change from a year earlier



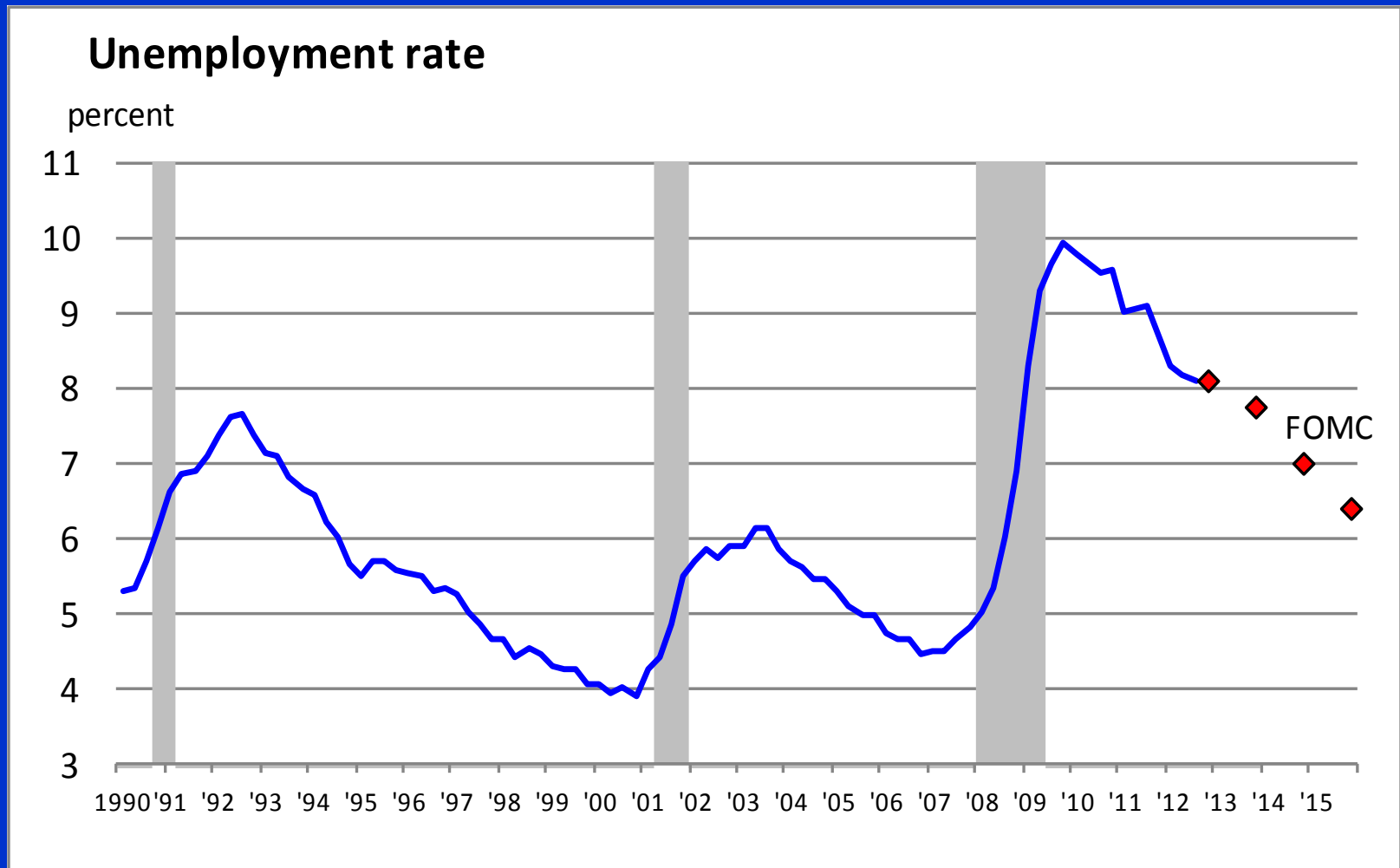
The FOMC expects GDP to grow somewhat above trend over the next three years

Real gross domestic product

percent change from a year earlier



The FOMC forecasts unemployment rates remaining above the natural rate through the end of 2015

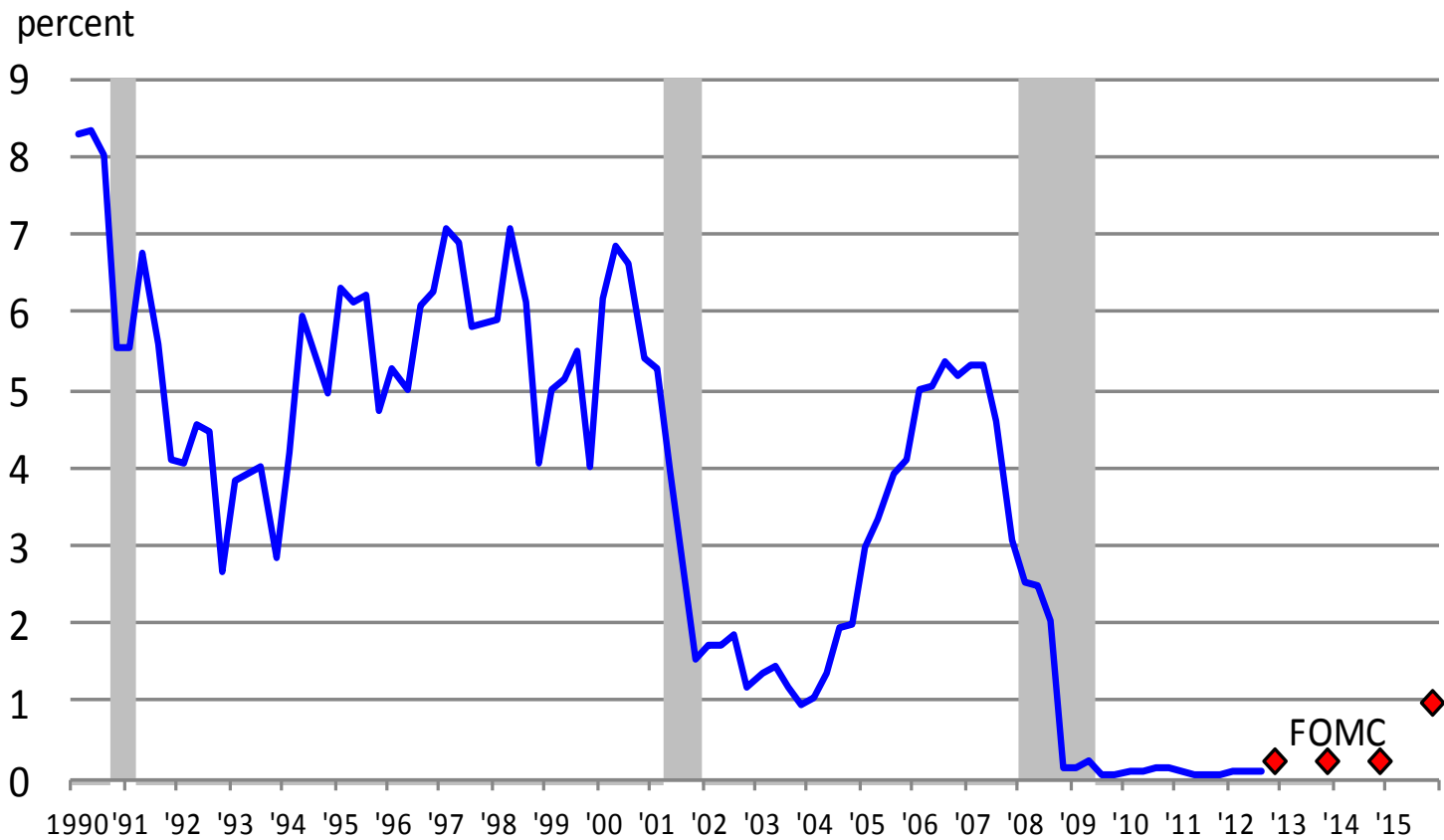


September FOMC Actions

- Begin open-ended purchases of Agency MBS at a pace of \$40 billion per month
- Continue Maturity Extension Program through the end of the year and reinvest principal payments into Agency MBS
- Pledge Resolve: If labor market outlook does not improve substantially, continue accommodation until outlook is better
- Expect highly accommodative policy to be appropriate for a considerable period *after* economic recovery strengthens

The Federal Funds Rate is anticipated to remain very low over the forecast horizon

Target Federal Funds Rate



Summary

- The outlook is for the U.S. economy to expand at a pace below trend this year and slightly above trend in 2013
- Employment is expected to rise moderately with the unemployment rate edging lower
- Slackness in the economy will lead to a relatively contained inflation rate
- Growth in manufacturing output may slow but continue
- Agriculture has been healthy, but drought hits livestock most
- Housing has turned the corner in some areas, but not all

<http://www.chicagofed.org>

