
Economic Outlook, Monetary Policy, and Sustained Low Yields

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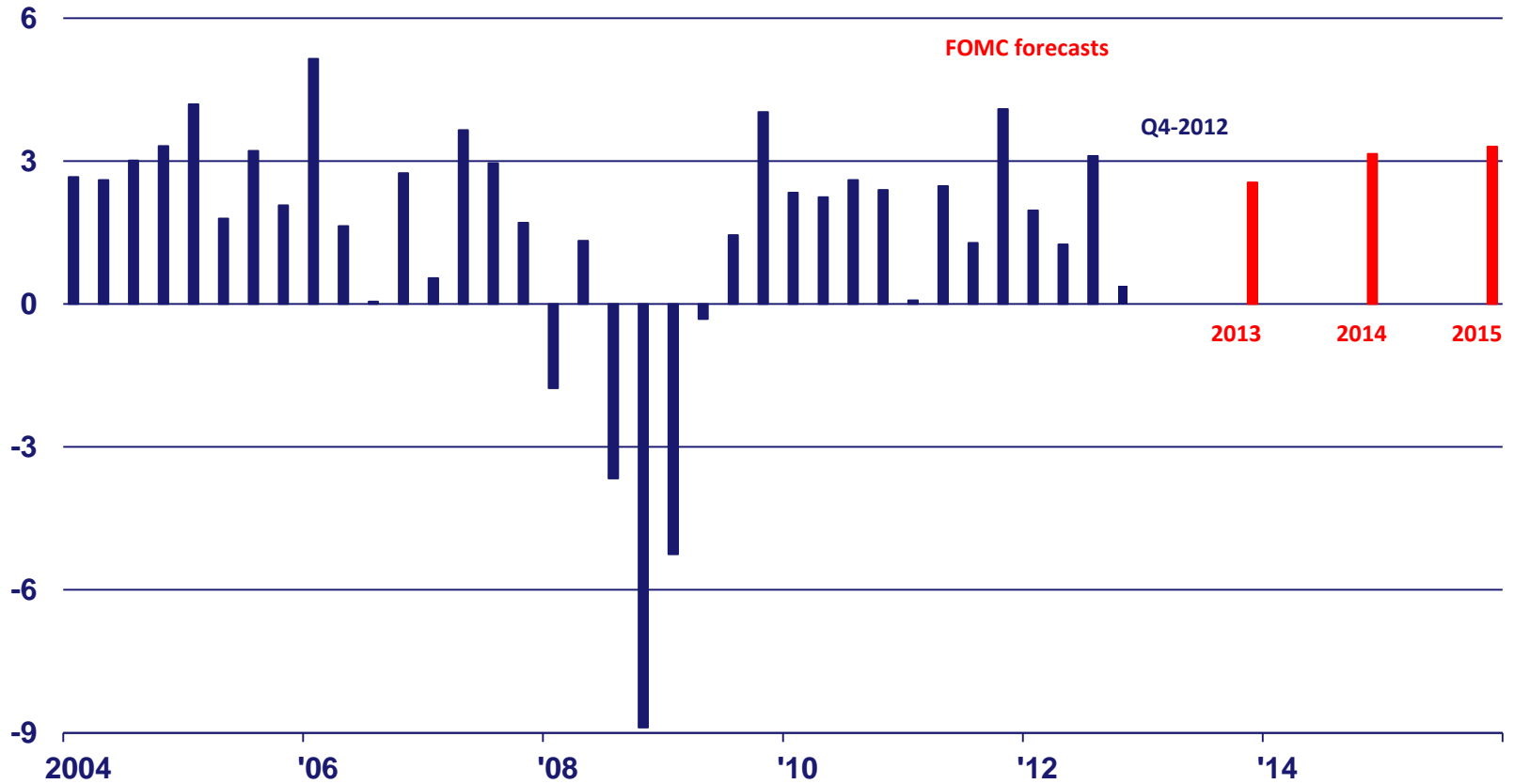
April 9, 2013

* The opinions in this presentation are the presenter's and do not reflect positions of the Federal Reserve Bank of Chicago or the Federal Reserve System.

GDP Growth and Consensus Projections

Real GDP Growth

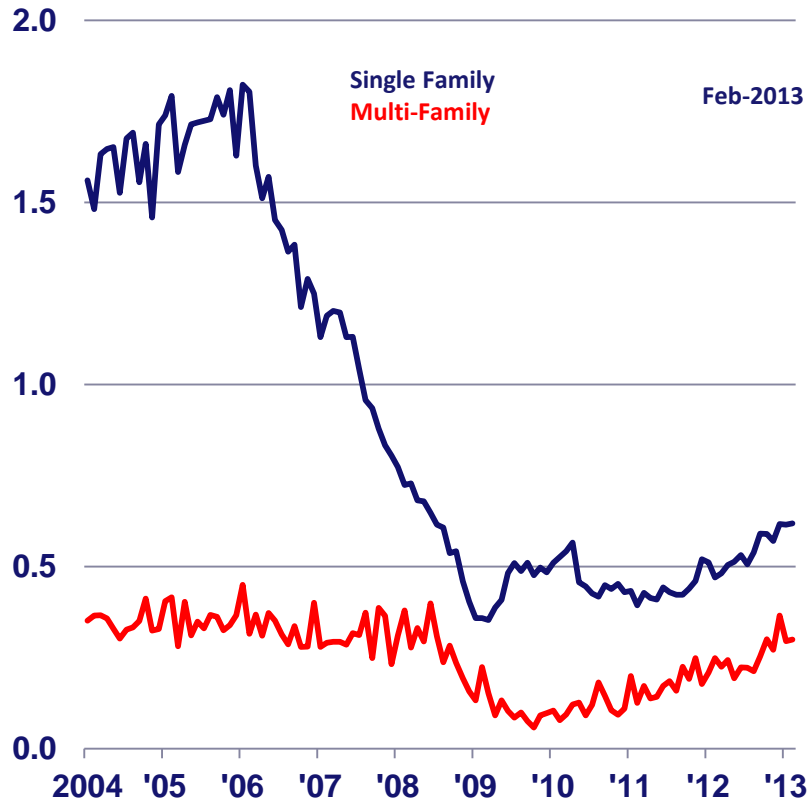
(percent change, annual rate)



*Midpoint of the FOMC participants' forecasts on March 20, 2013.

Bright Spots: Household Demand Moving Up

Housing starts
(millions, SAAR)



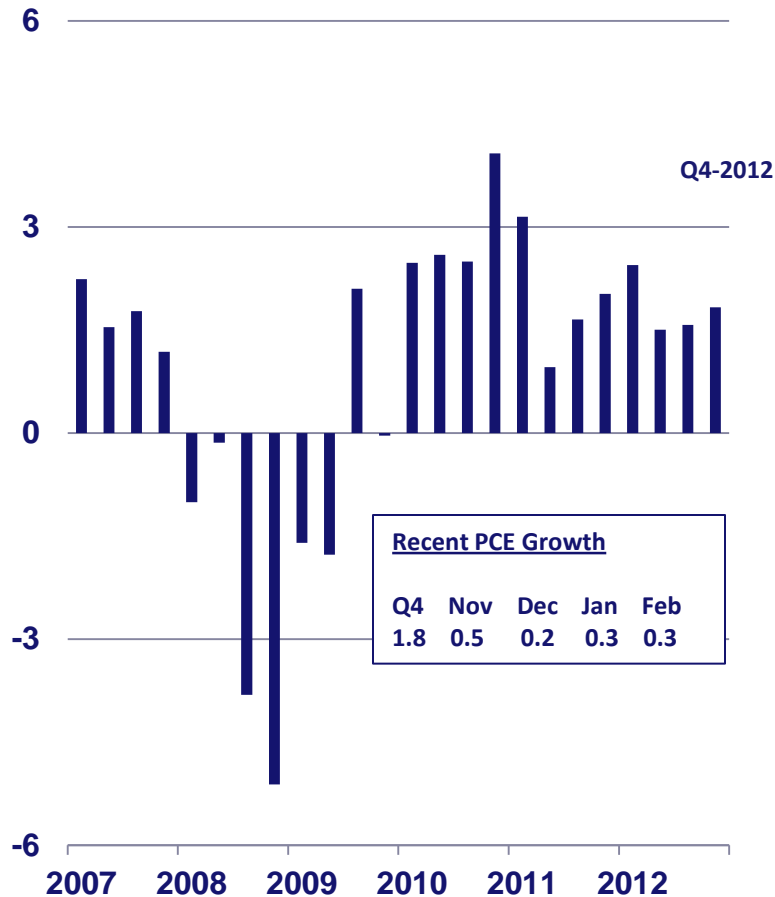
Light Vehicle Sales
(millions of autos and light trucks, SAAR)



Bright Spots: Household Demand Moving Up

Total PCE

(percent change, annual rate)



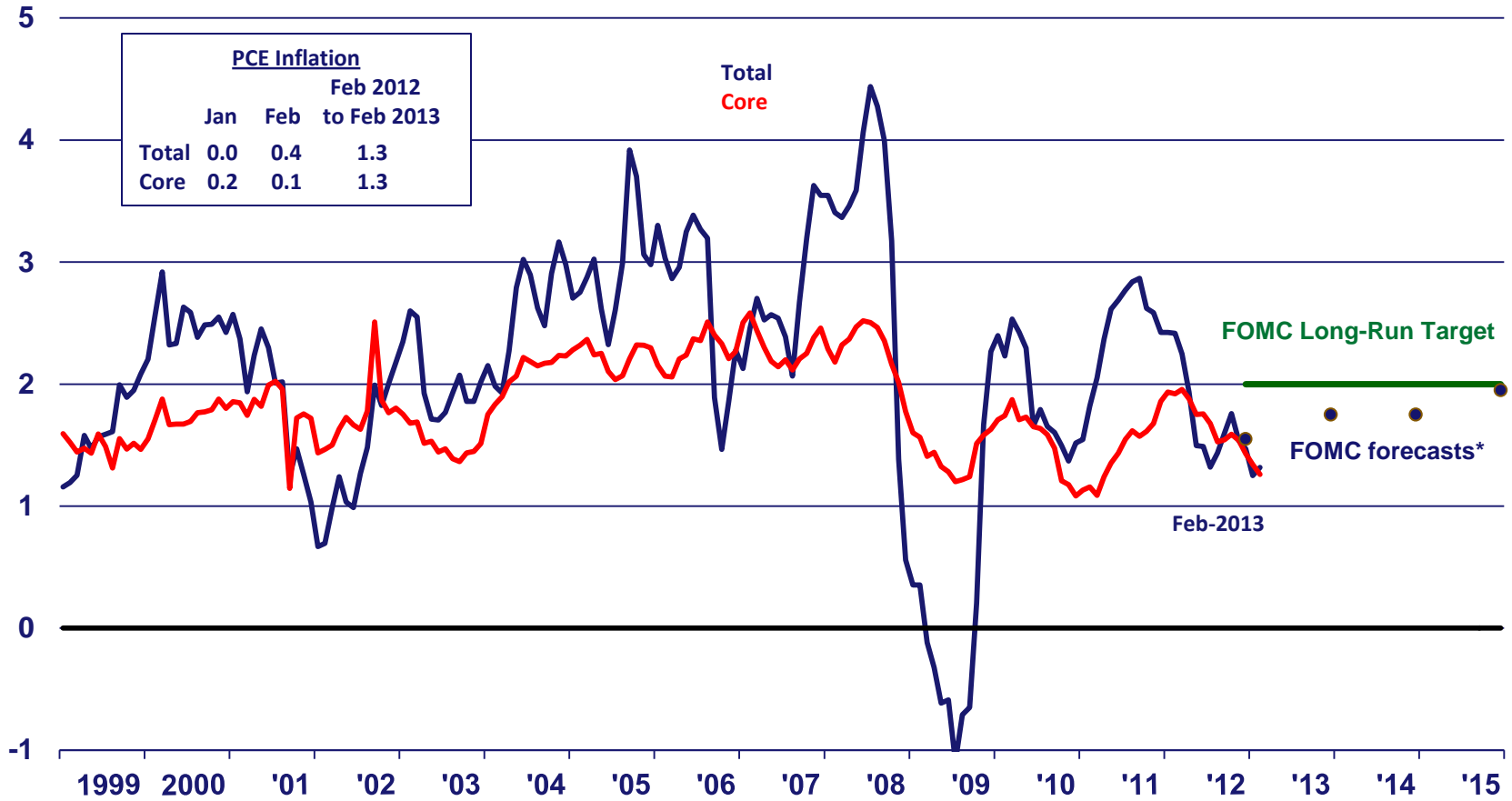
Tax Increases in 2013:Q1

- End Payroll Tax Holiday -- \$130 billion
- Marginal rates, phase outs -- \$38 billion
- Affordable Care Act taxes -- \$24 billion
- Estimated Impact:
 - Roughly $-\frac{1}{2}$ percentage point GDP
 - Mostly in PCE

Recent Inflation Below Target

PCE Price Index

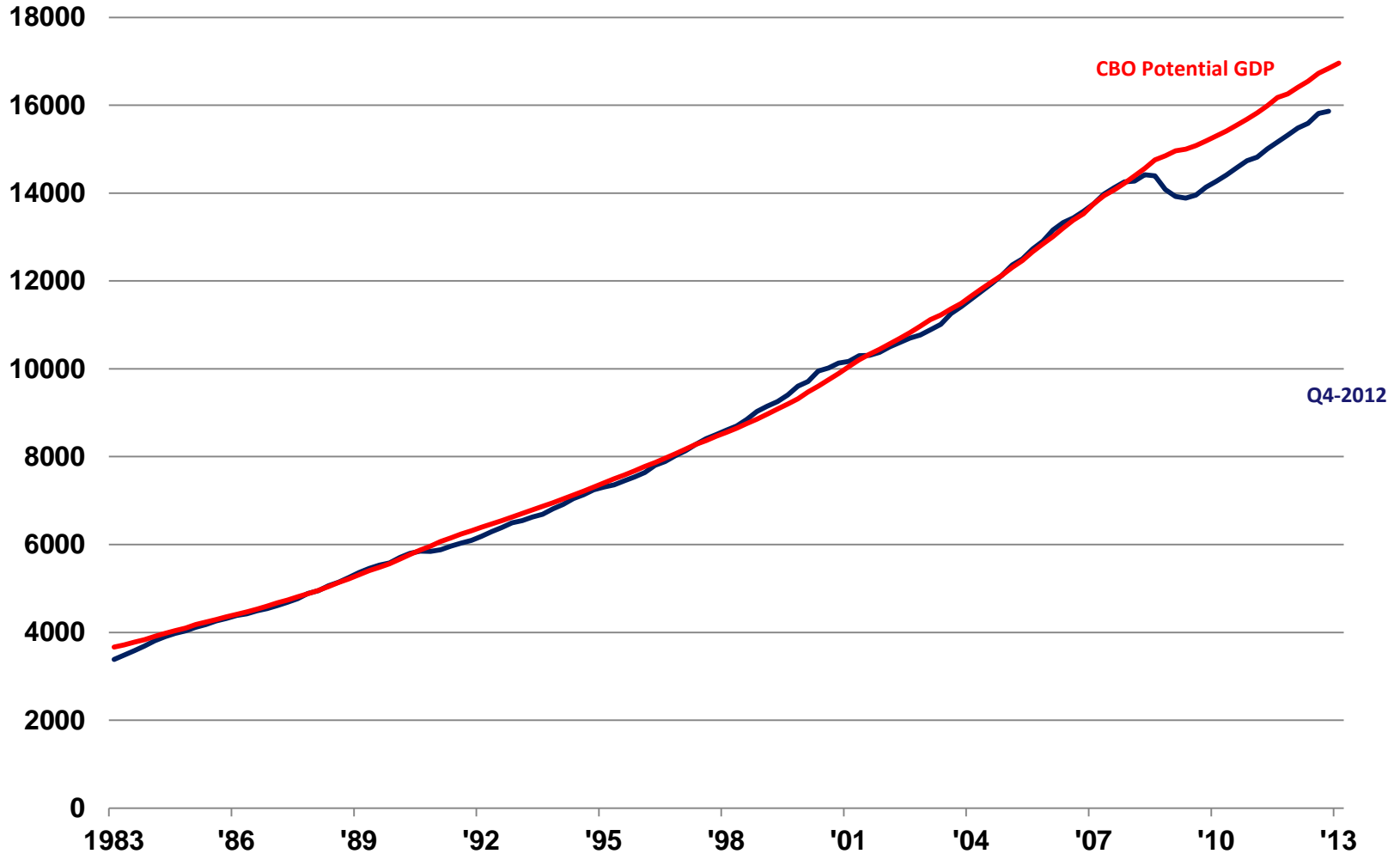
(12-month percent change)



*Median of the forecasts made by the FOMC participants

Nominal GDP

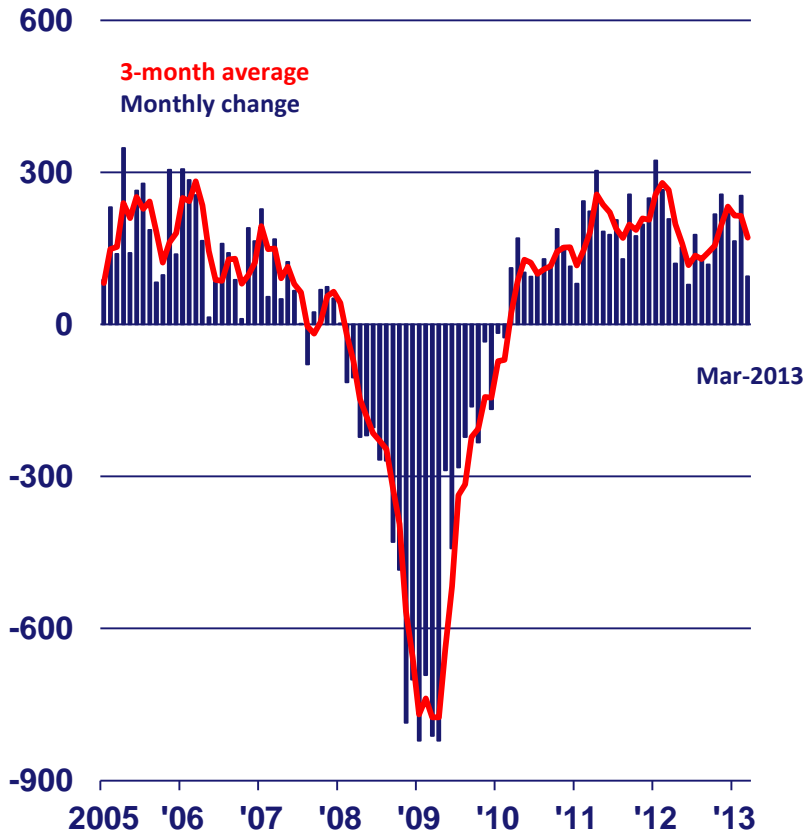
(SAAR, Bil. \$)



Labor Market

Private Nonfarm Payroll Employment

(change, thousands)



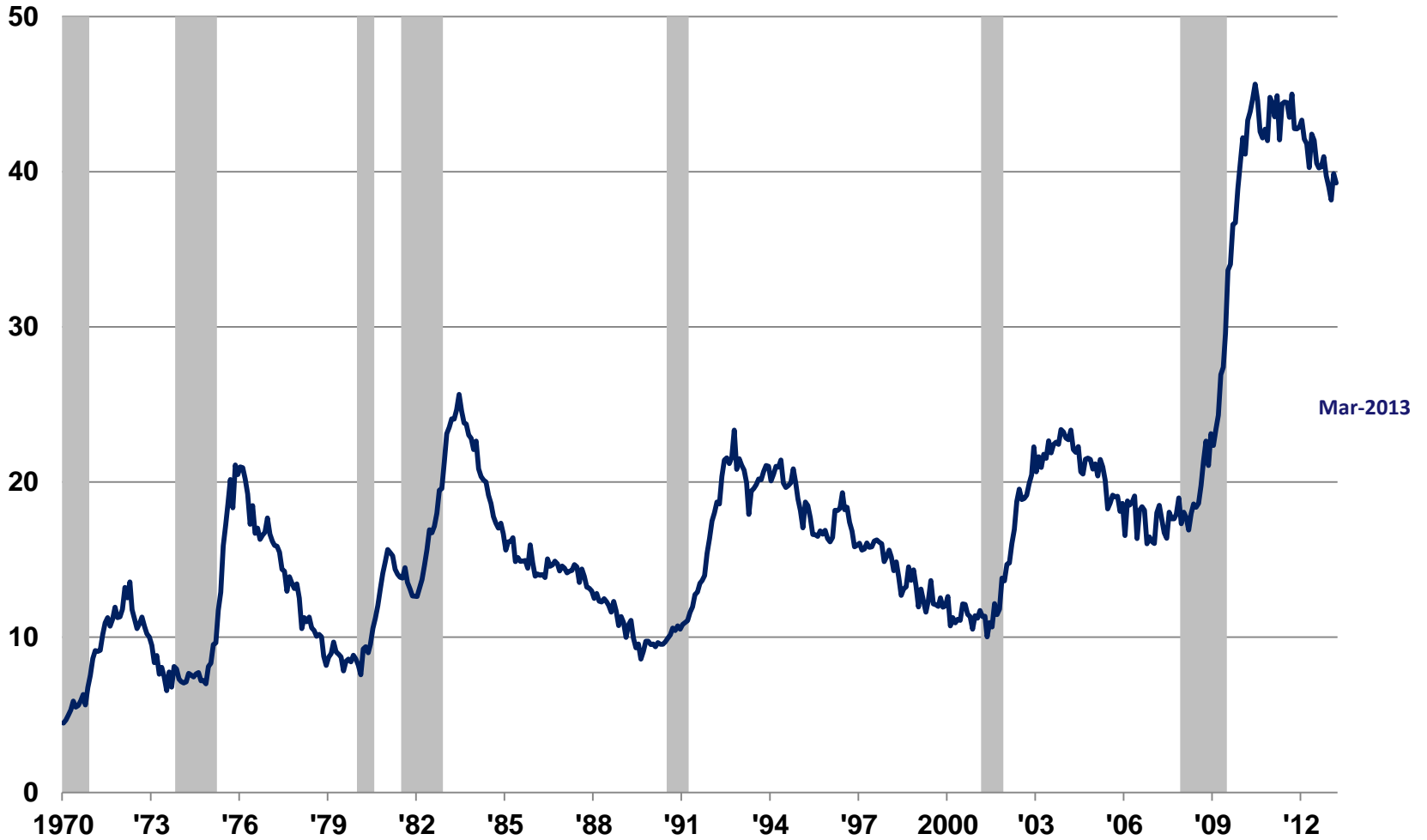
Unemployment Rate

(percent)



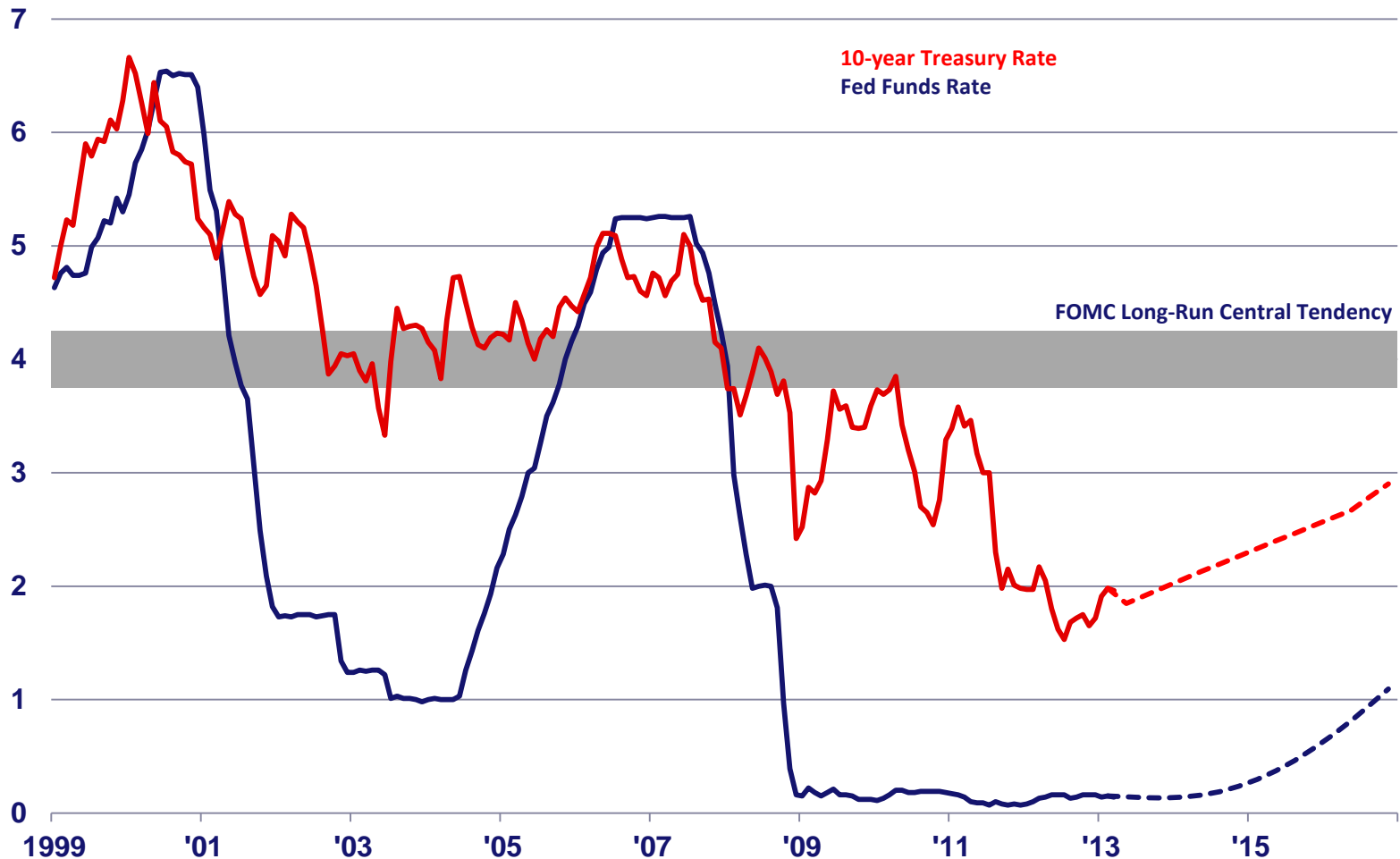
Long-Term Unemployment

(number unemployed for 27 weeks or more as a percent of total unemployed)



Monetary Policy: Interest Rates

Fed Funds Rate and 10-year Treasury Rate (percent)

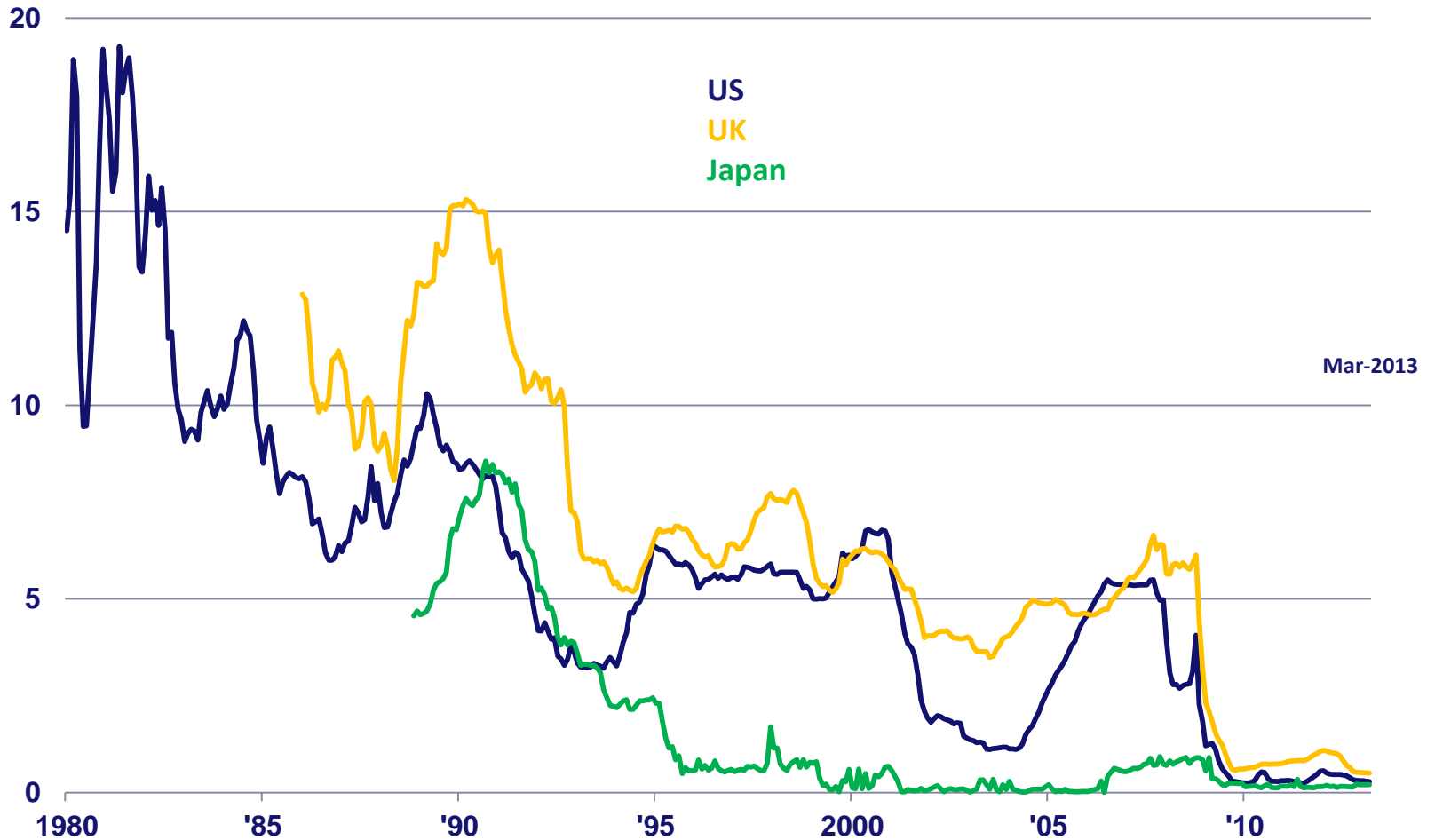


Dashed lines are estimates of market expectations

Short-Term Sovereign Yields

3-Month Yields

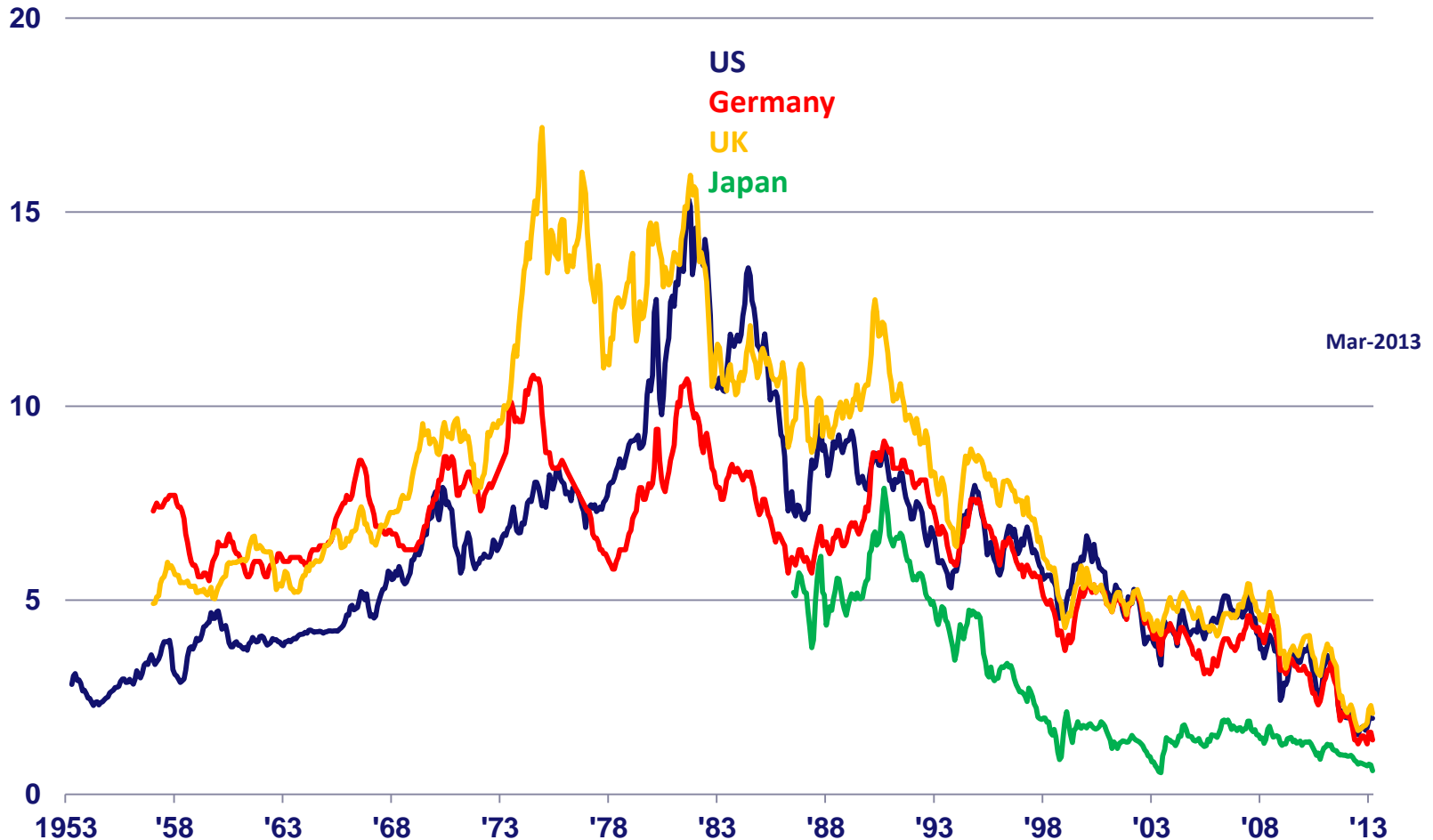
(percent)



Long-Term Sovereign Yields

10-Year Yields

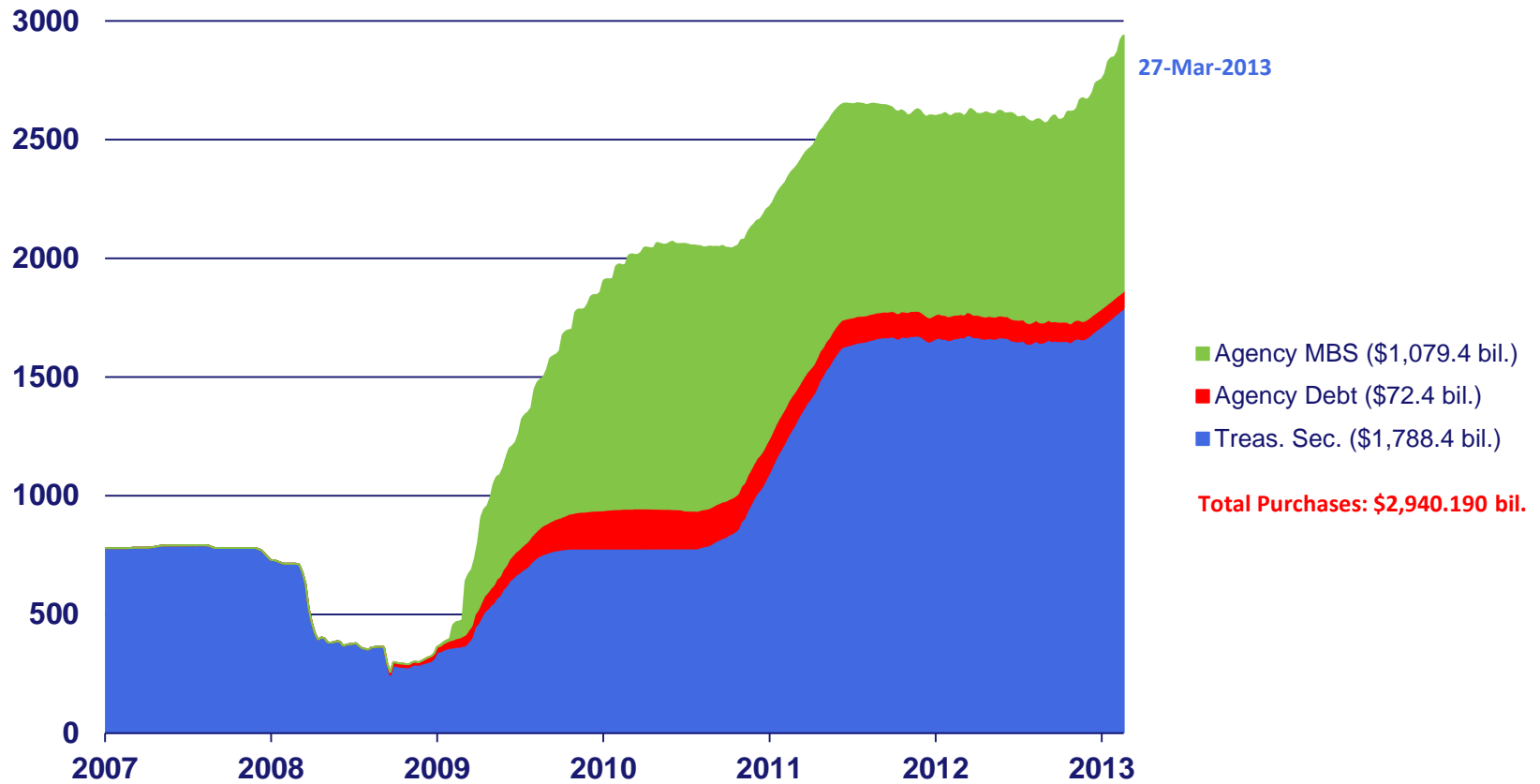
(percent)



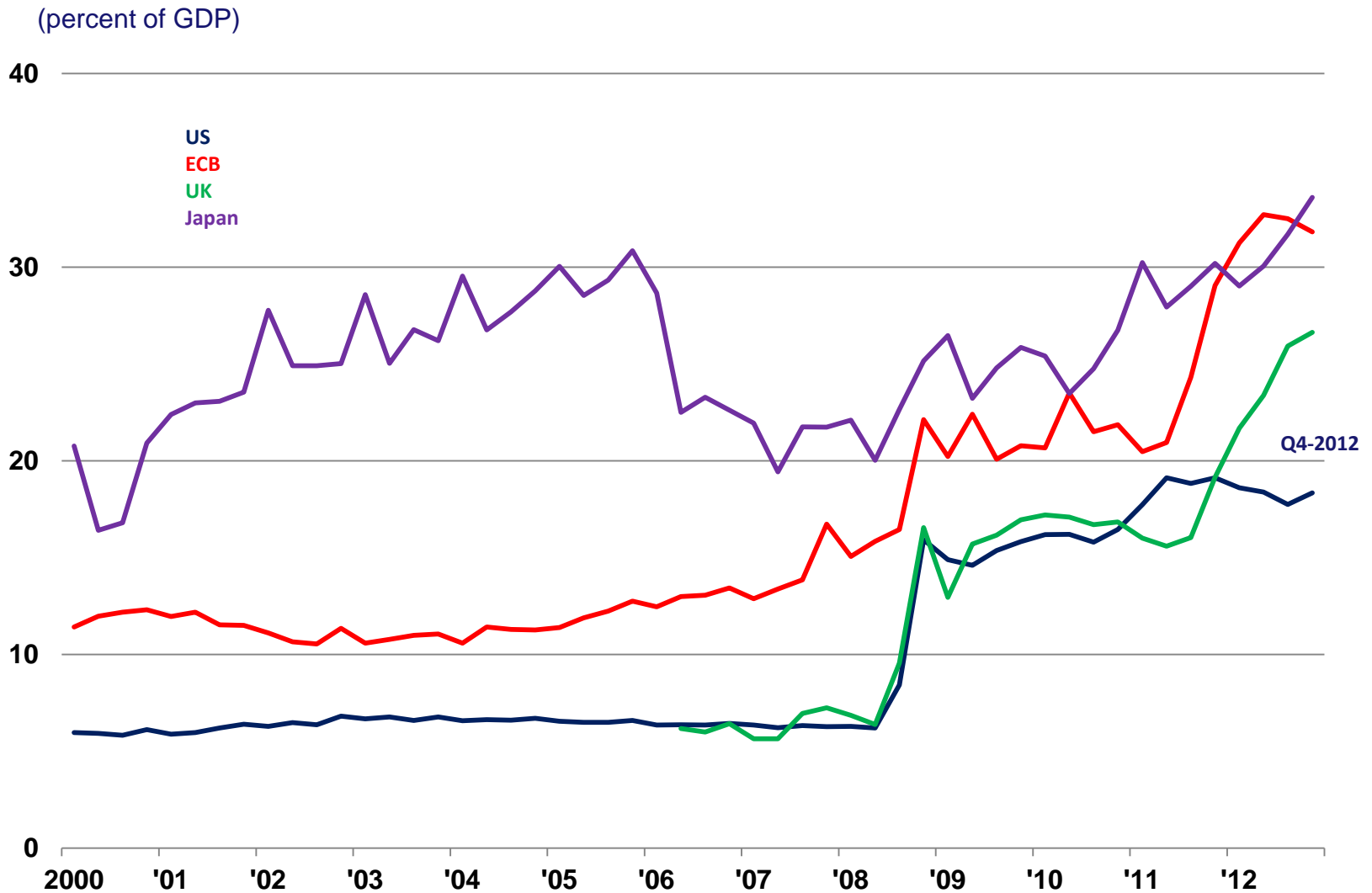
Monetary Policy: Asset Purchases

Federal Reserve Asset Holdings

(Bils. \$)



Central Bank Balance Sheets



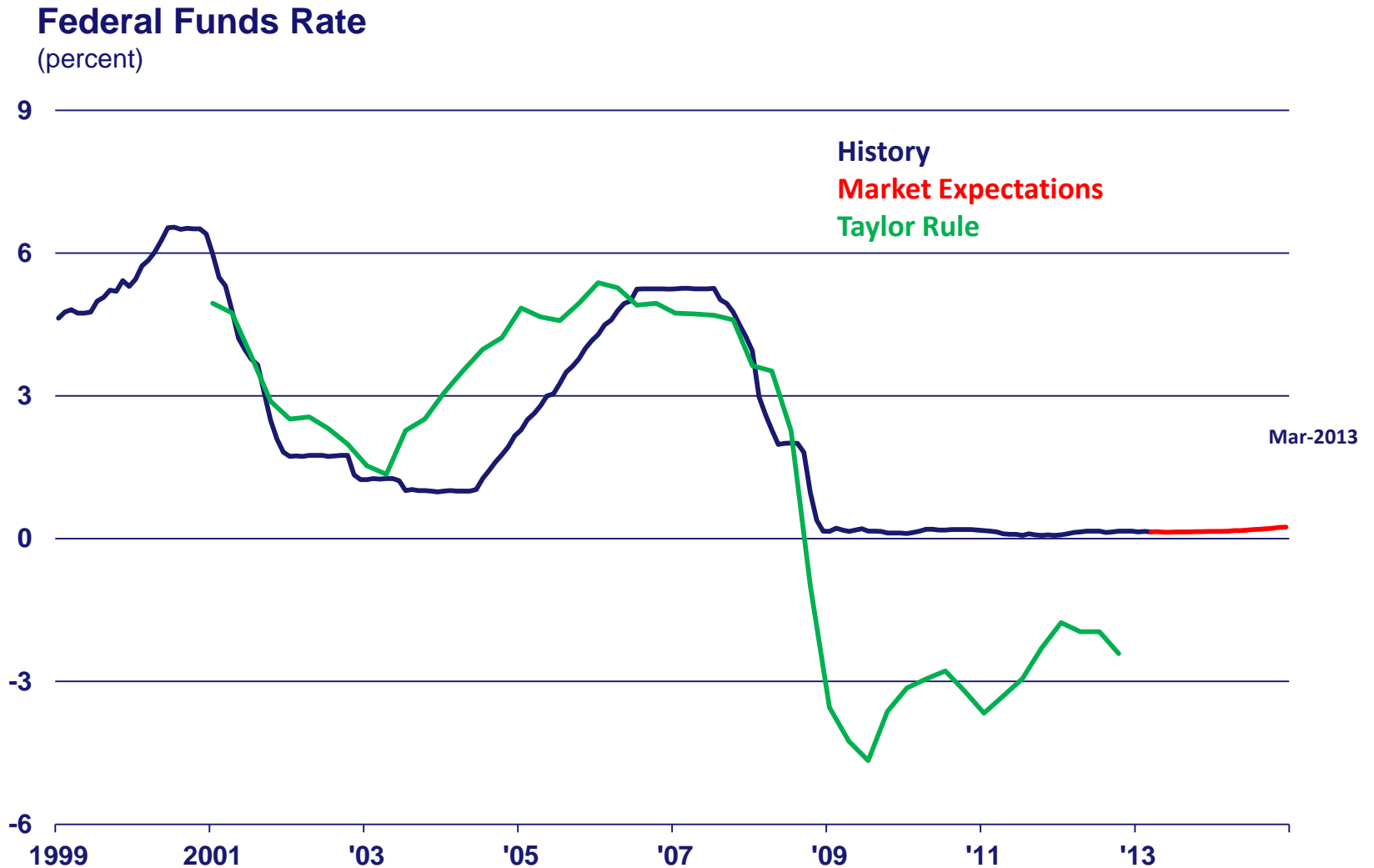
Setting Interest Rates to Clear Markets

- **If rates set too high,**
 - households and firms save too much, relative to the demand for capital investment
 - cash on firms' balance sheets not transformed into the capital spending needed to create jobs
 - Unemployment rate is too high
 - wasted resources

Current Market Clearing Rates Are Negative

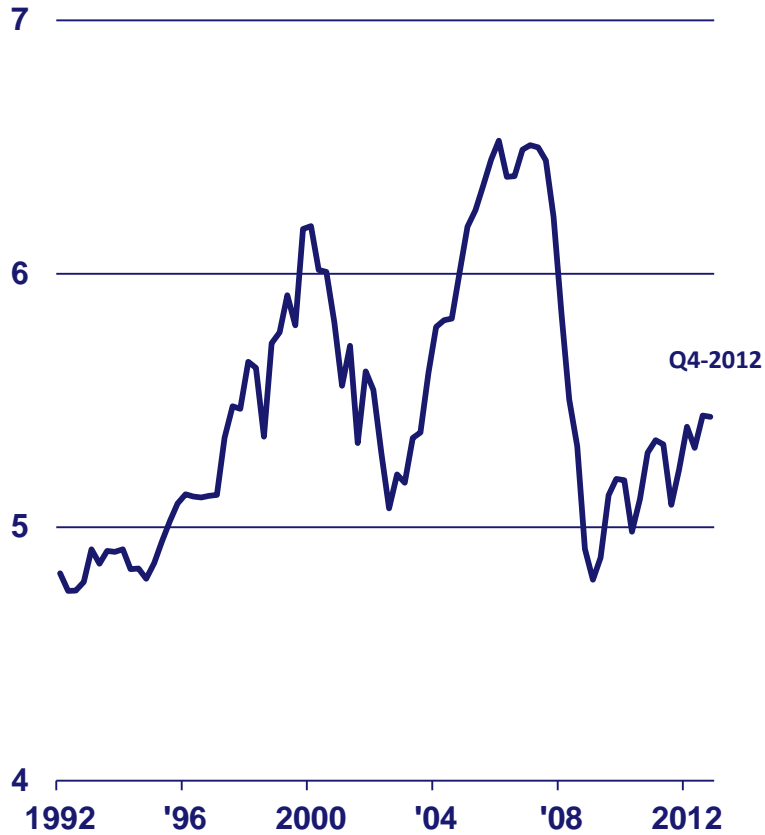
- **“Liquidity Trap”**
- **Households save large amounts even at zero interest**
 - Rebuilding shattered net worth
 - Fear of low incomes in the future
 - Precautionary saving – fear of the next shock
- **Businesses don’t expect increased sales to justify expanded capacity**

Actual Monetary Policy vs. Taylor Rule



Household Wealth and Income

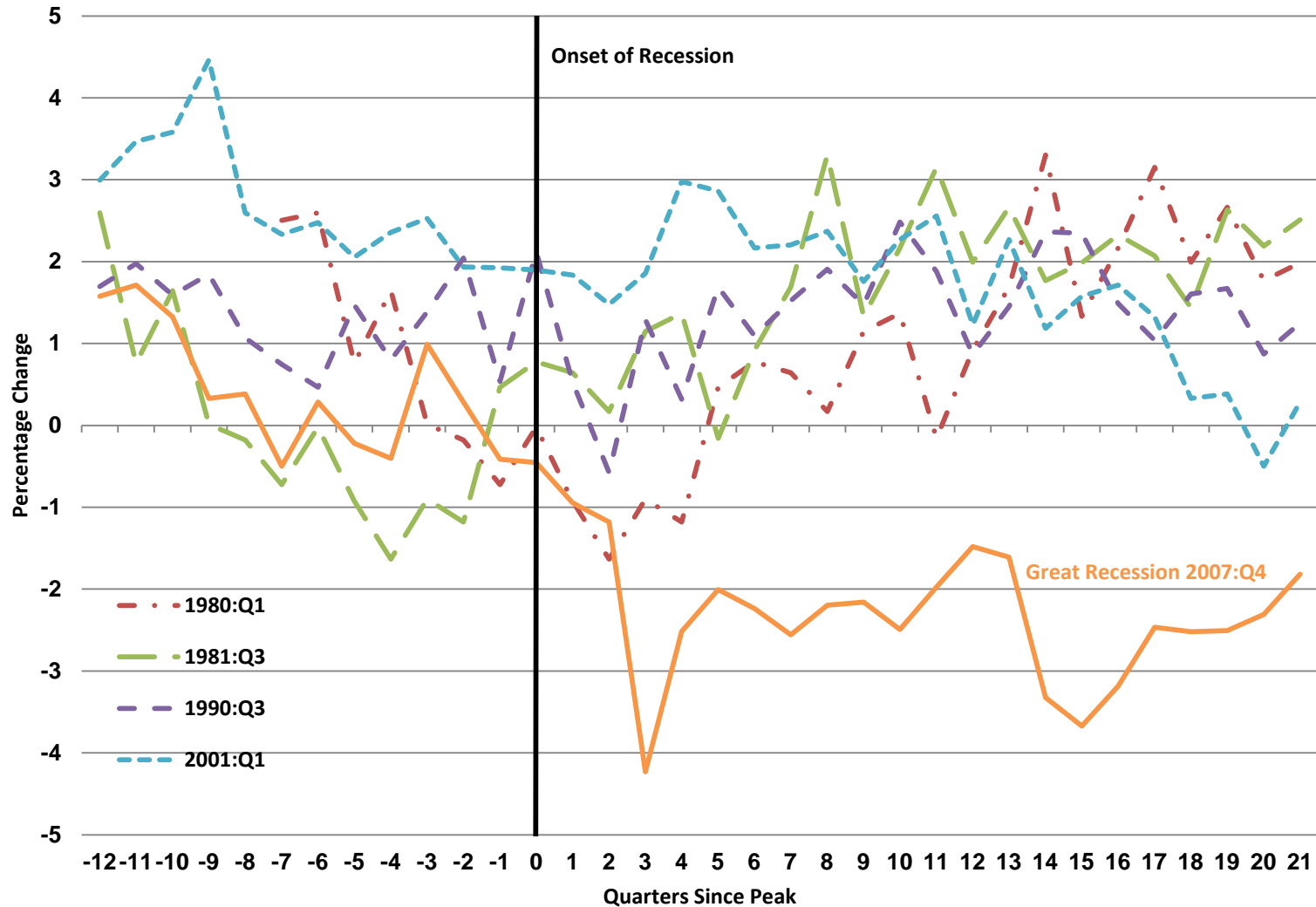
Ratio of Household Net Worth to DPI
(hundreds of percent)



Personal Savings Rate
(percent)



Expected Real Income Growth



Cash on Nonfinancial Corp Balance Sheets

Checkable Deposits and Currency

(NSA, Bil. \$)



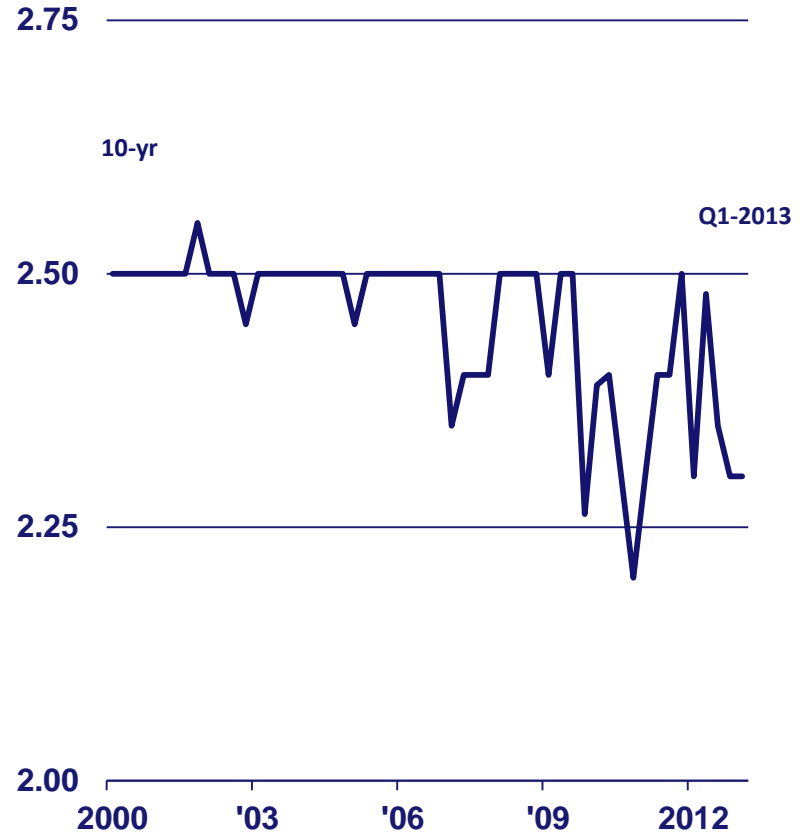
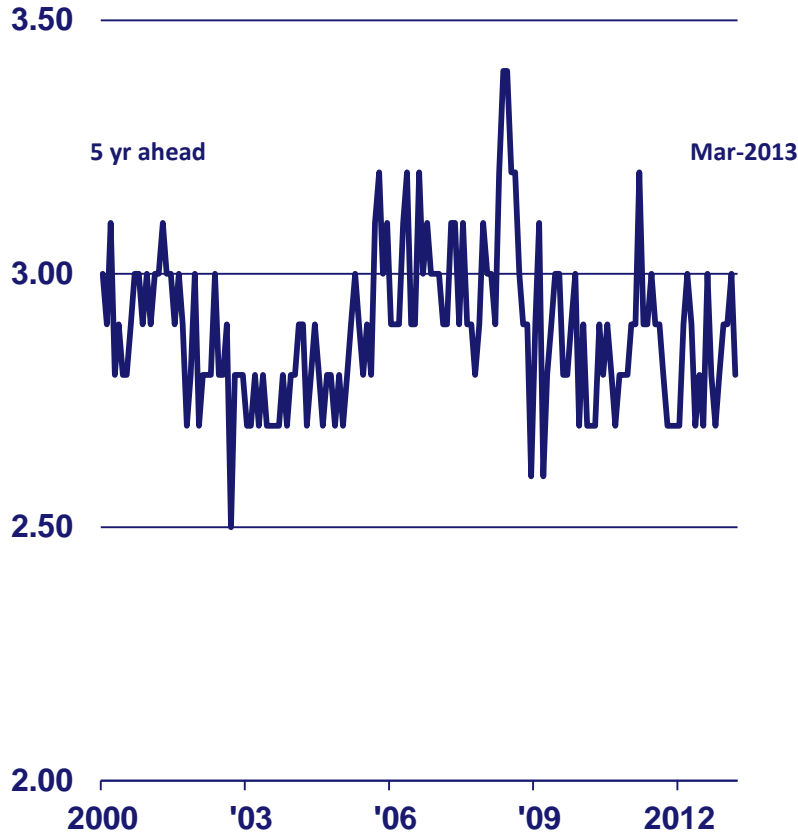
Monetary Policy in a Liquidity Trap

- **Keep short rate ≈ 0**
- **Evans Rule: Federal Funds rate remains at zero at least as long as:**
 - The unemployment rate exceeds $6\frac{1}{2}\%$, and
 - Inflation between one and two years ahead is projected to be no more than $2\frac{1}{2}\%$
- **Long term Treasury purchases reduce term premium**
- **RMBS purchases reduce mortgage premium**

Inflation Expectations

University of Michigan Median Inflation
(percent)

Survey of Professional Forecasters
(percent)



Inflation Expectations

TIPS-based Inflation Compensation (percent)



Reach For Yield

- **When interest rates are very low, some institutions may have an incentive to take on additional risk**
- **Particular concern: institutions with fixed nominal liabilities**
 - Life insurers
 - Pension funds
- **In part, monetary policy works by inducing investors to reach for yield by taking on additional risk**
 - But these additional risks may be opaque to regulators
 - Could generate financial instability

Impact of Low Interest Rate Environment on Life Insurance Companies

