

US Economy: Improving Outlook, Long-Term Policy Risks

The research views expressed herein are those of the author and do not necessarily represent the views of CME Group or its affiliates.

All examples in this presentation are hypothetical interpretations of situations and are used for explanation purposes only.

This report and the information herein should not be considered investment advice or the results of actual market experience.

**Blu Putnam & Samantha Azzarello
Chief Economist & Economist
CME Group**

April 2013

Risk Disclosures

Futures trading is not suitable for all investors, and involves the risk of loss. Futures are a leveraged investment, and because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money deposited for a futures position. Therefore, traders should only use funds that they can afford to lose without affecting their lifestyles. And only a portion of those funds should be devoted to any one trade because they cannot expect to profit on every trade.

The Globe Logo, CME®, Chicago Mercantile Exchange®, and Globex® are trademarks of Chicago Mercantile Exchange Inc. CBOT® and the Chicago Board of Trade® are trademarks of the Board of Trade of the City of Chicago. NYMEX, New York Mercantile Exchange, and ClearPort are trademarks of New York Mercantile Exchange, Inc. COMEX is a trademark of Commodity Exchange, Inc. CME Group is a trademark of CME Group Inc. All other trademarks are the property of their respective owners.

The information within this presentation has been compiled by CME Group for general purposes only. Although every attempt has been made to ensure the accuracy of the information within this presentation, CME Group assumes no responsibility for any errors or omissions. Additionally, all examples in this presentation are hypothetical situations, used for explanation purposes only and should not be considered investment advice or the results of actual market experience.

All matters pertaining to rules and specifications herein are made subject to and are superseded by official CME, CBOT, NYMEX and CME Group rules. Current rules should be consulted in all cases concerning contract specifications.

US Economy Themes for 2013 and Beyond

- **Housing rebound is for real.**
- **Unemployment rate headed below the 6.5% Fed threshold during 2014.**
- **Energy growth dividend could add 1% to US annual real GDP growth over next ten years.**
- **International headwinds remain, but diminishing in force.**
- **Long-term fiscal policy compromise likely to remain out of reach of a polarized Congress.**
- **Fed to delay, delay, delay exit from zero-rate policies until inflation appears – none in sight.**

US Economic Resilience

Housing

Robust housing starts suggest net new construction jobs in 2013 sector -- good news

Labor Markets

Solid private sector net job creation

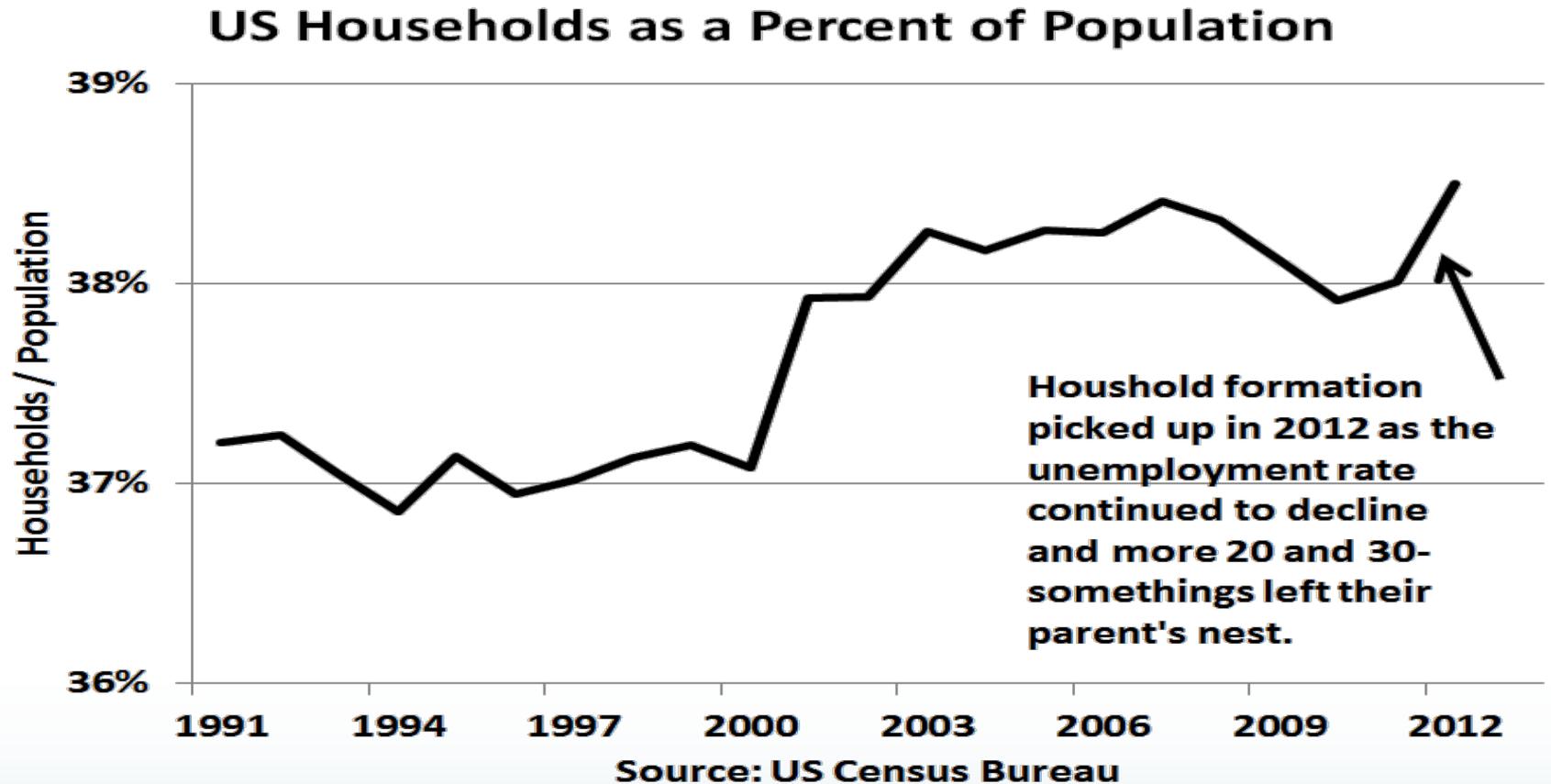
Government jobs contraction diminishing

Overall labor force growth is slowing

Energy

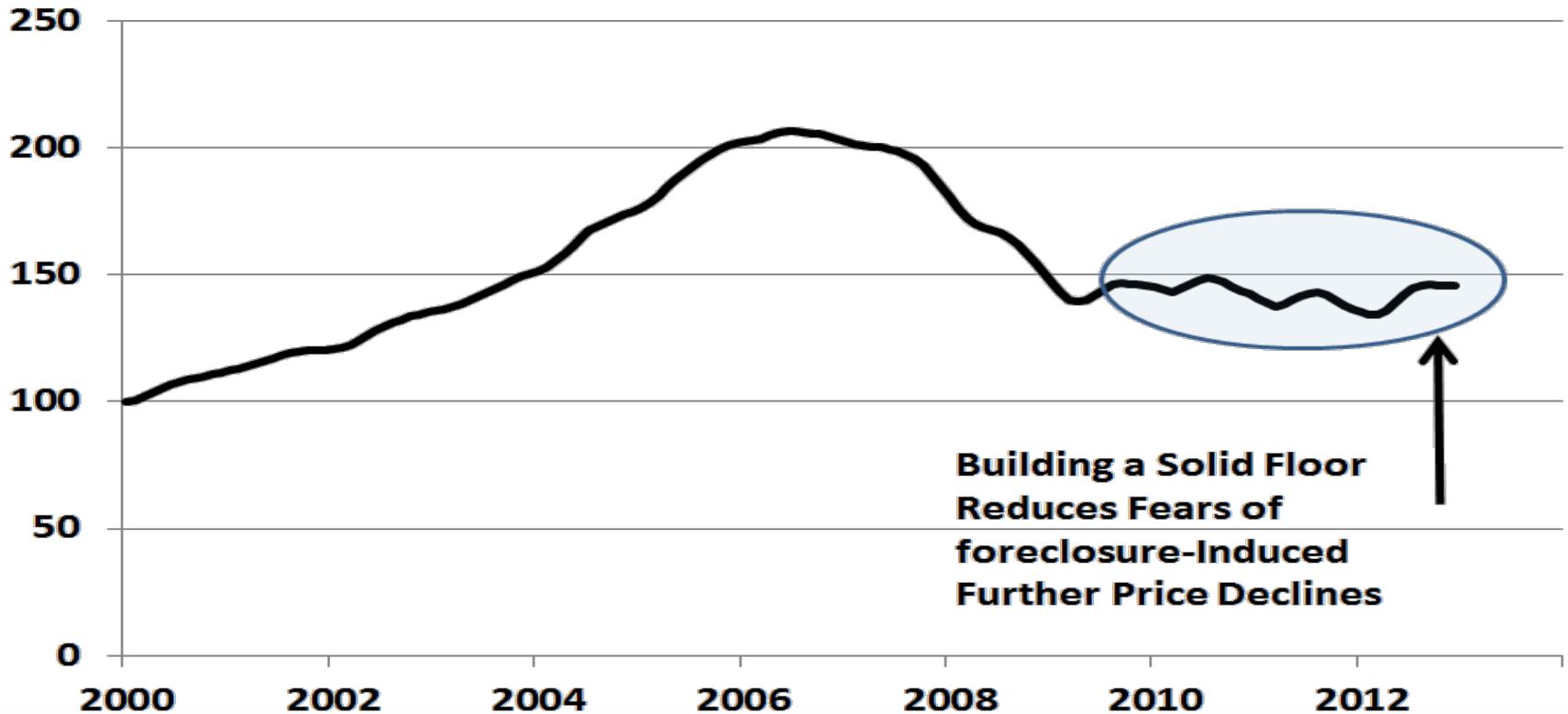
Growth dividend on the way

US Homes are affordable, but Household Formation has been Depressed until 2012



US Home Prices Finally Stabilized

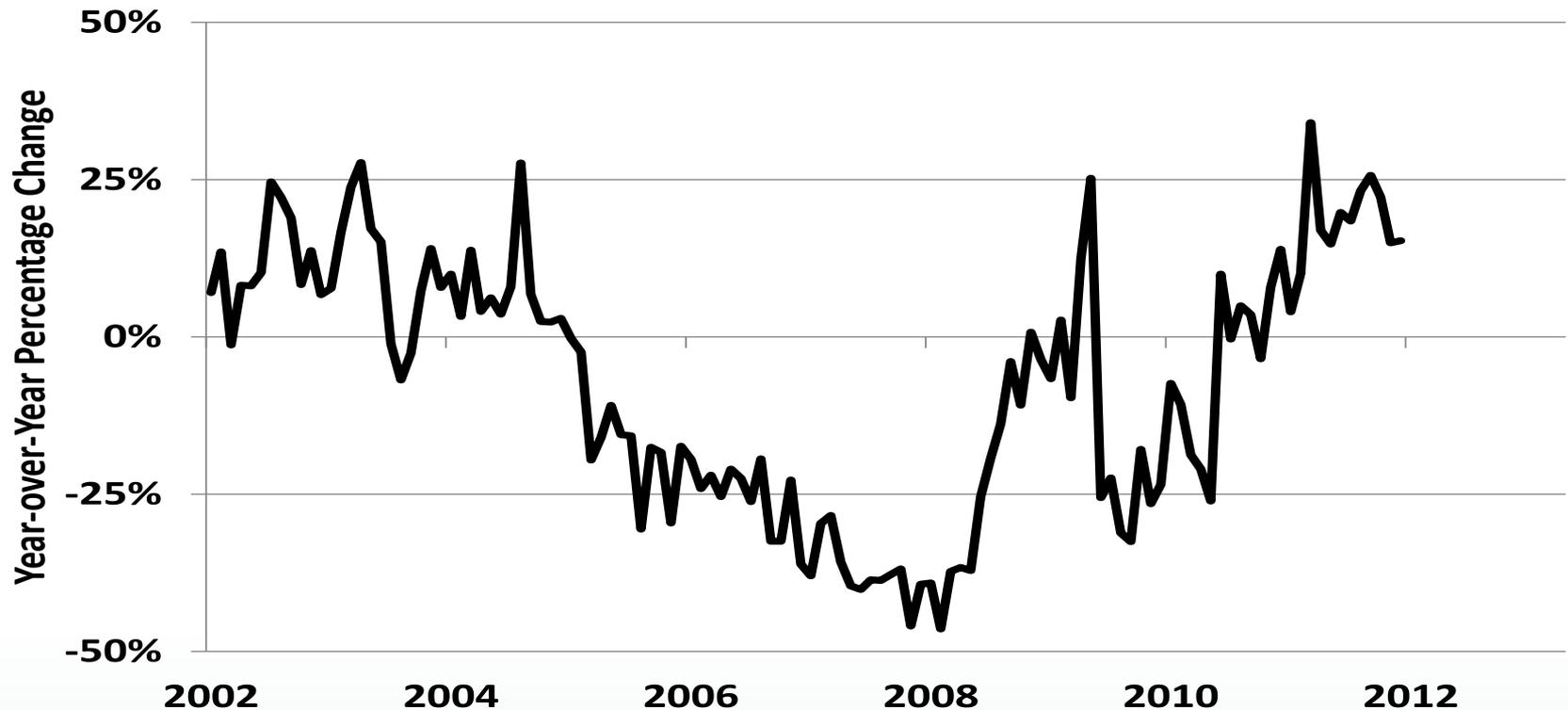
US Case-Shiller Home Price Index



Source: St. Louis Federal Reserve Bank FRED Database (SPCS20RSA)

Leading to a Recovery in Single-Family New Home Sales ...

New Single-Family Home Sales in US

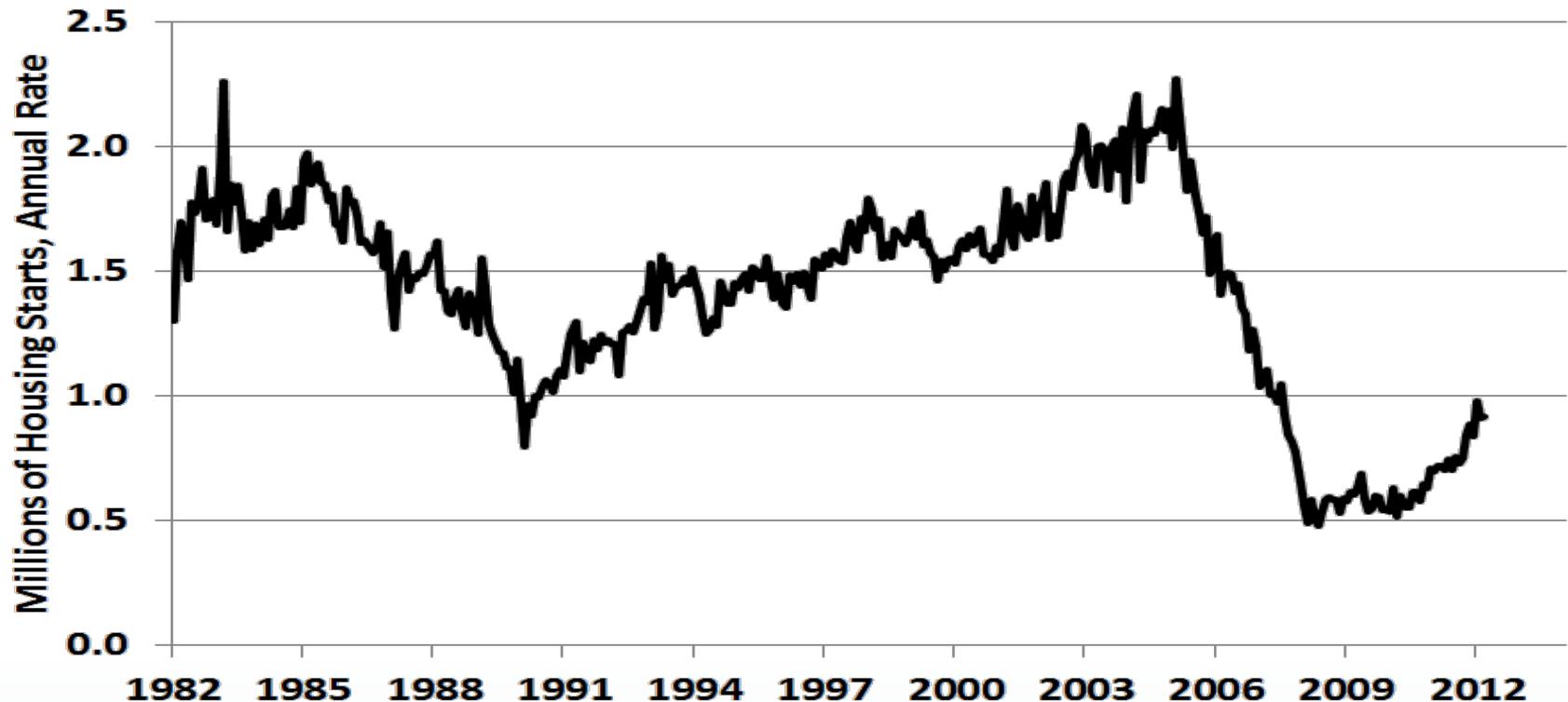


Source: St. Louis Federal Reserve "Fred" Database (HSN1F)



Rising Housing Starts Mean New Construction Jobs

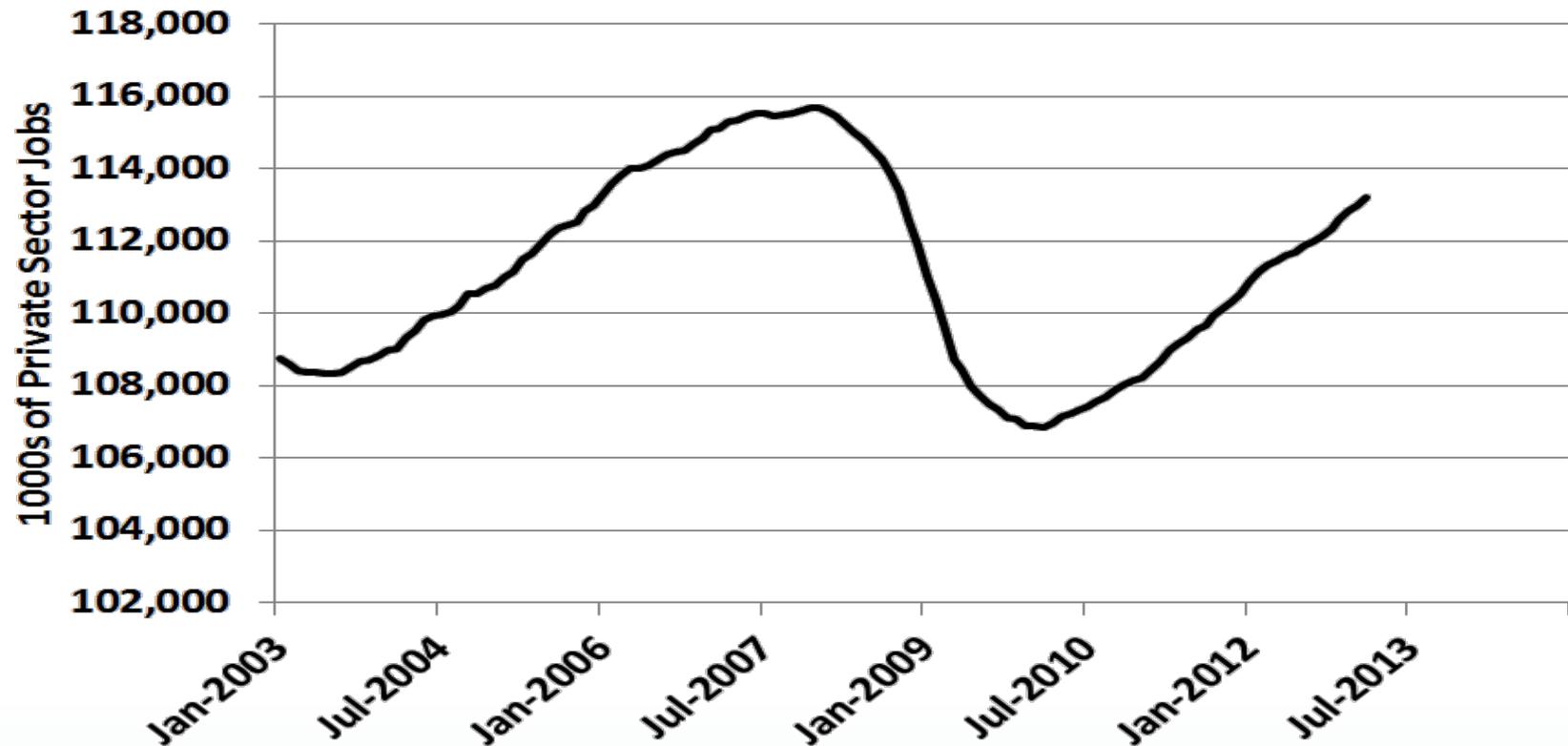
US Housing Starts



Source: Federal Reserve Bank of St. Louis FRED Database (HOUST)

Private sector job creation has been strong

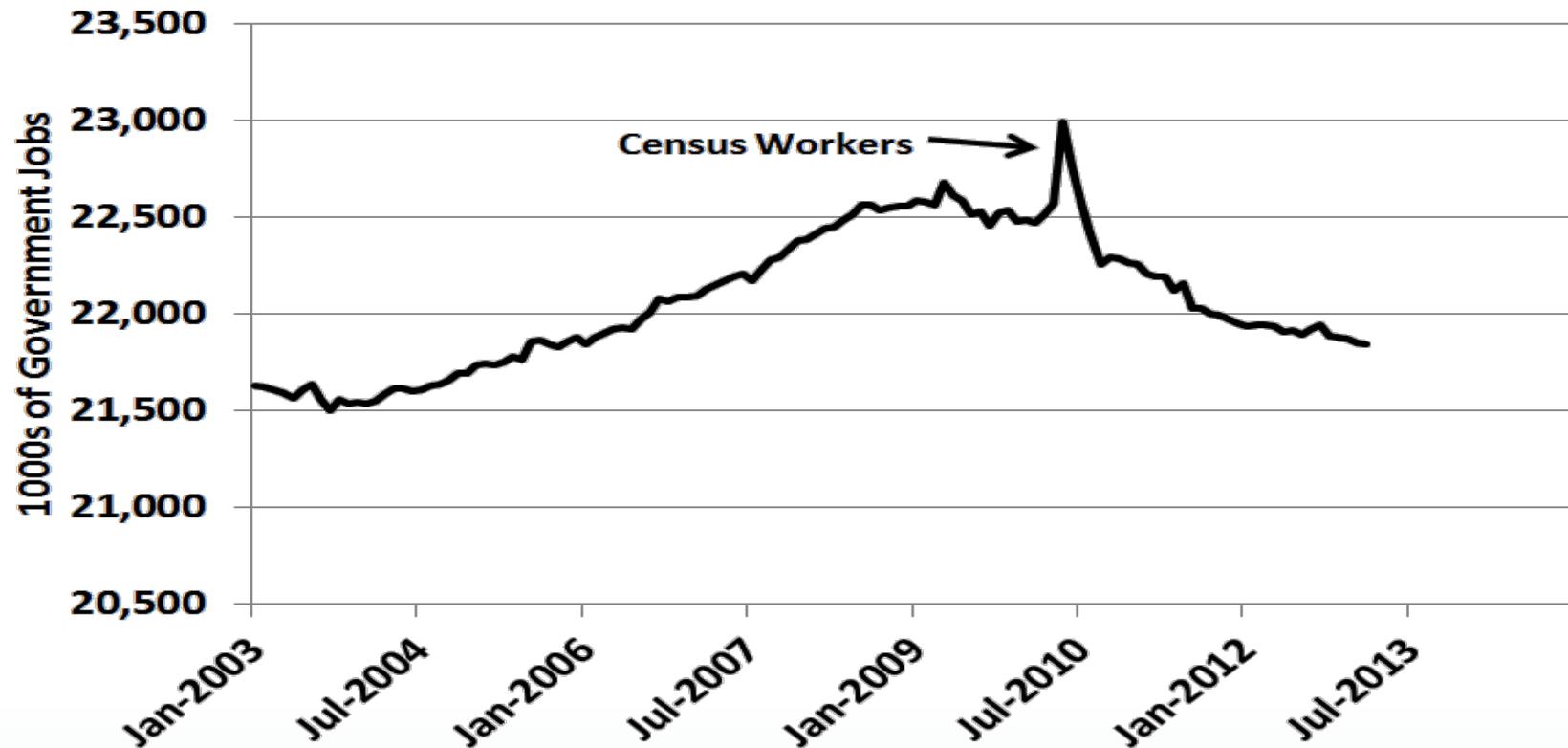
US Private Sector Jobs



Source: Federal Reserve Bank of St. Louis FRED Database (USPRIV)

Government jobs have been contracting

US Federal, State, and Local Government Jobs



Source: Federal Reserve Bank of St. Louis FRED Database (USGOVT)

Implications for effectiveness of Federal Reserve quantitative easing

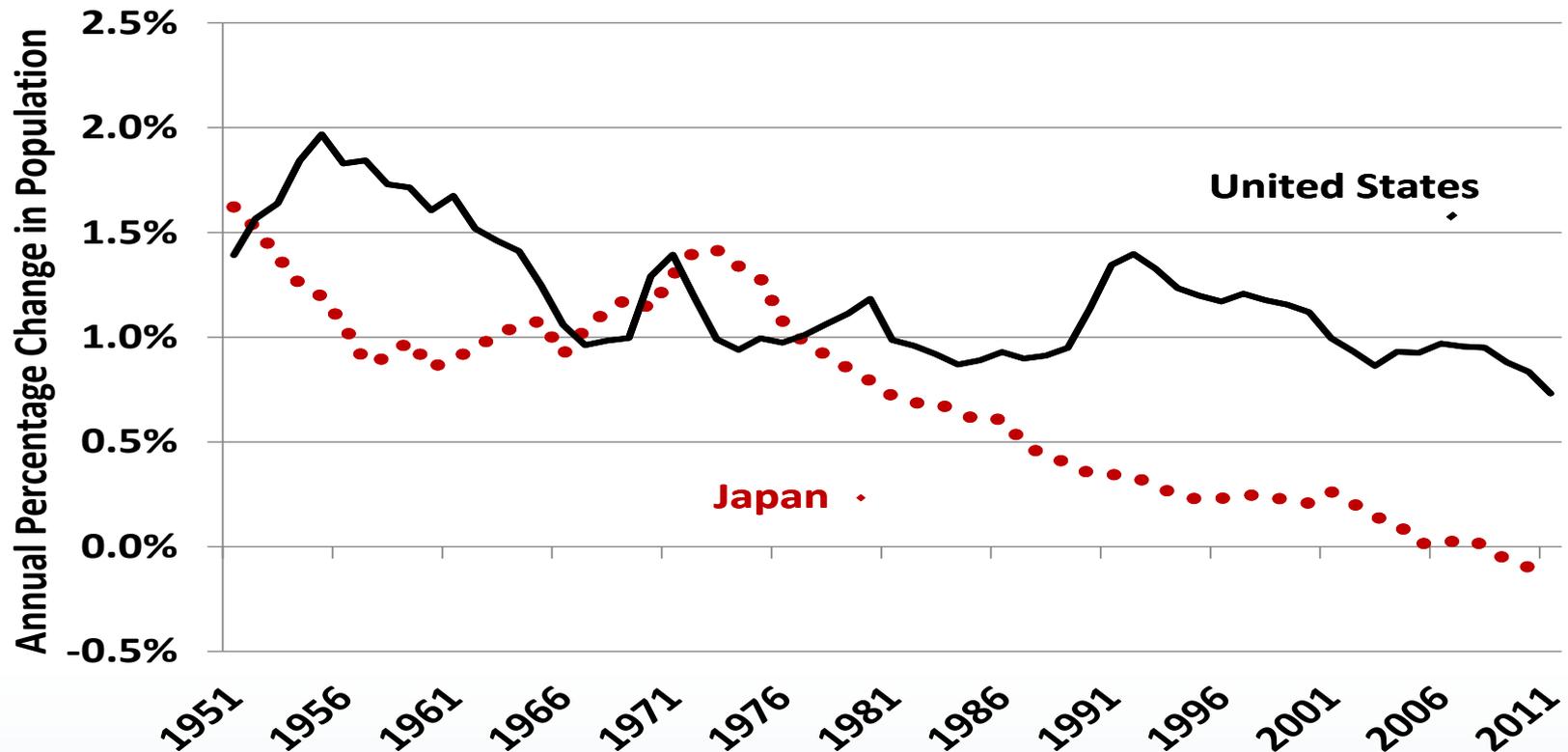
There is little likelihood that any amount of balance sheet expansion by the Federal Reserve has had or is going to have any impact on government job creation.

Federal, state, and local jobs were cut after the financial crisis in 2008, because government revenues were not sufficient to support expenses.

The good news is that state and local governments have reached a point where they now have their finances more or less in balance. Of course, the same thing cannot be said for the Federal government.

US Population Growth is Slowing – US is 20 years ahead of Japan

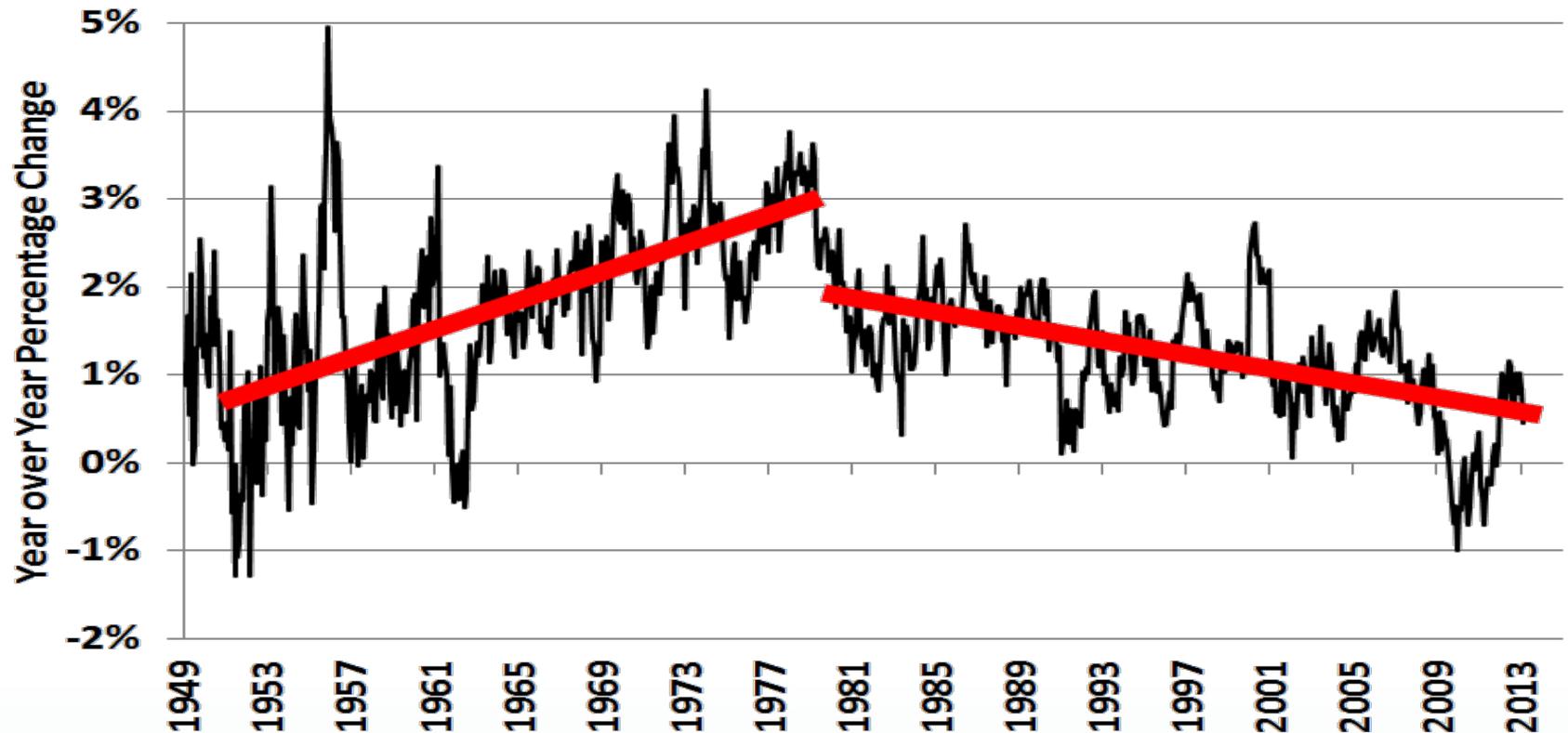
US & Japan Population Growth: 1951-2011



Source: US Census Bureau: International Database

US Labor Force Growth – less than 1%/year

US Civilian Labor Force Growth



Source: Federal Reserve Bank of St. Louis FRED Database (CLF16OV)

Slower Labor Force Growth Implies

For a given amount of real GDP growth and net monthly job creation, the unemployment rate can fall more rapidly than otherwise.

That is, the denominator of the unemployment rate is not growing as fast while the numerator is shrinking.

Slower real GDP growth unless there are special factors (energy growth dividend).

Increased Supply of Energy in the US Implies a Growth Dividend

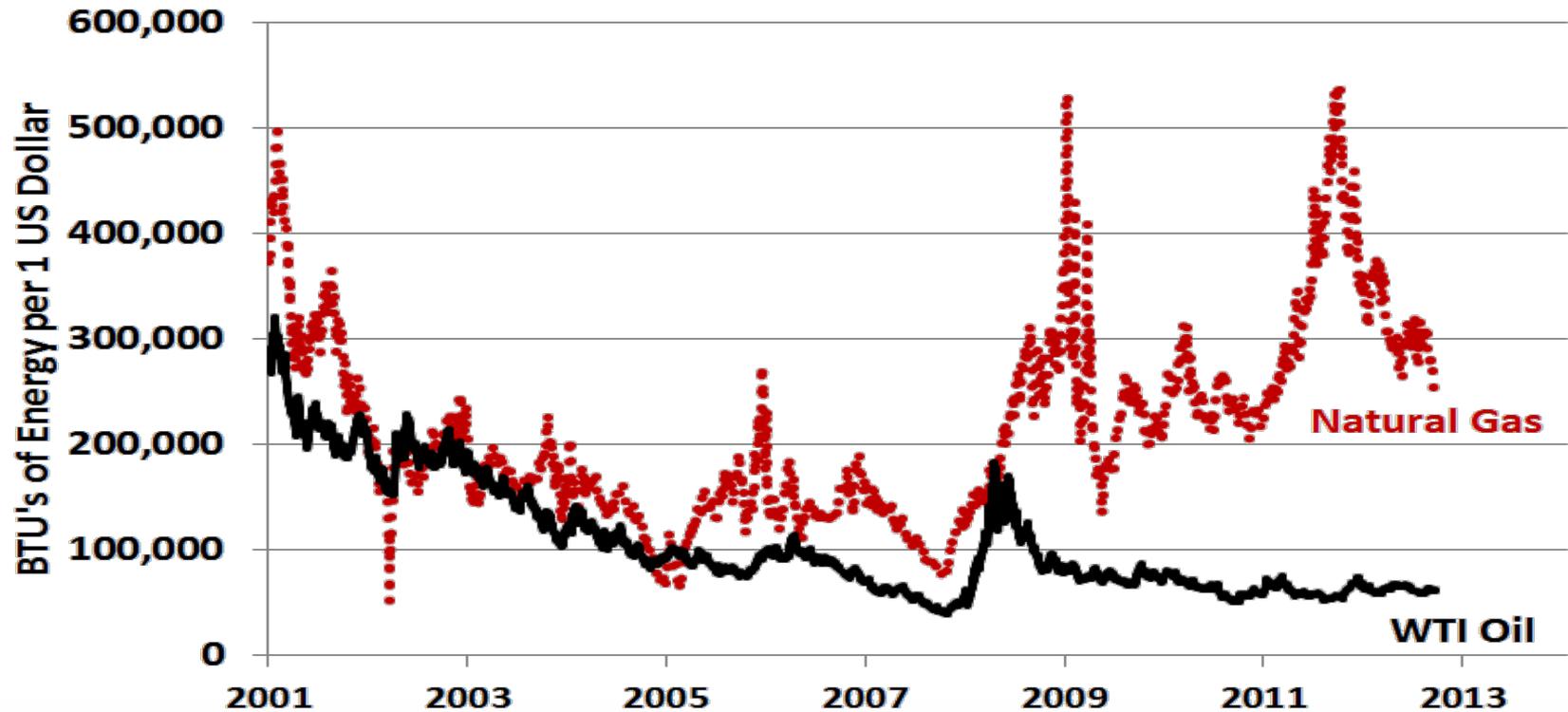
Growth dividend depends on infrastructure development and industry adjustments to the new supply.

The pace of infrastructure develop is uncertain, but it is clearly underway.

The energy growth might reach 1% or more per year over the next ten years.

Energy Transformation is Underway in the US

BTU's per US\$1 by US Energy Source



Source: Bloomberg Professional for prices (USCRWTIC, NGUSHHUB), CME Economics Research for BTU conversion.

Infrastructure Development is Happening

New pipelines are in the planning phase and some old pipelines have been reversed to move crude oil to refineries more efficiently.

More transit systems are using buses powered by natural gas.

Where feasible, electrical power generation has been switched to natural gas.

Fertilizer plants have been built near sources of natural gas.

The US steel industry is rebounding on the back of less expensive energy.

The list goes on.

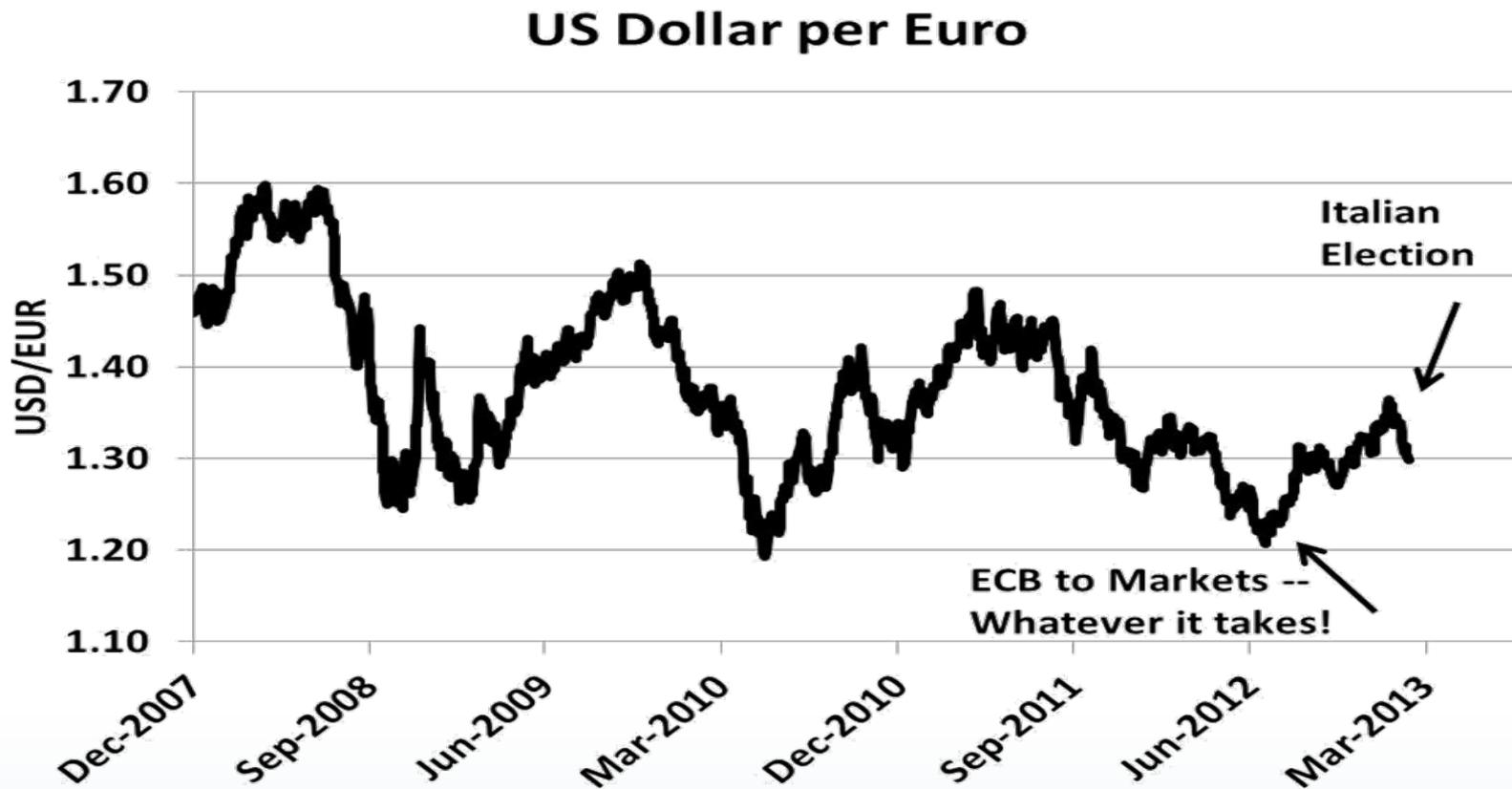
International Headwinds

Europe – Political uncertainties may destabilize Euro

China – No hard-landing from growth deceleration, but China is on a glide path to industrial maturity

Japan – Monetary policy expansion to achieve 2% inflation target is likely to promote further yen weakening

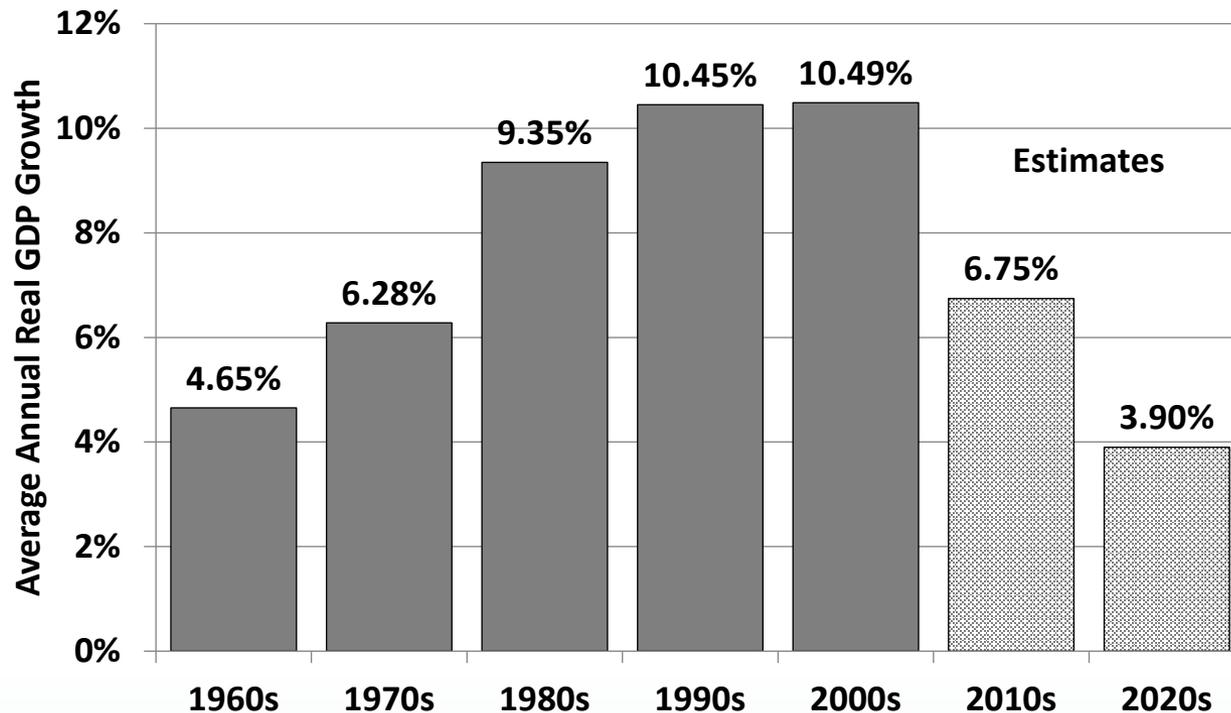
Euro Has Recovered from Worst of Break-up Fears, but Politics Matter Now



Source: Bloomberg Professional (EUR)

China stabilizing in the 7% real GDP range for 2013, then slowing into the 2020s

China Real GDP by Decade



Source: World Bank Data through the Bloomberg Professional, CME Economics Estimates for 2012-2030.

Japan Embarks on Currency Depreciation Policy and Expanded Quantitative Easing

**If the Bank of Japan Successfully Weakens the Yen,
Will the Japanese Government Bond Market be Destabilized?**



Source: JPY Data from Bloomberg Professional

Long-Term Policy Risks

Fiscal Policy

Congress is polarized.

No grand fiscal compromise likely.

Monetary Policy

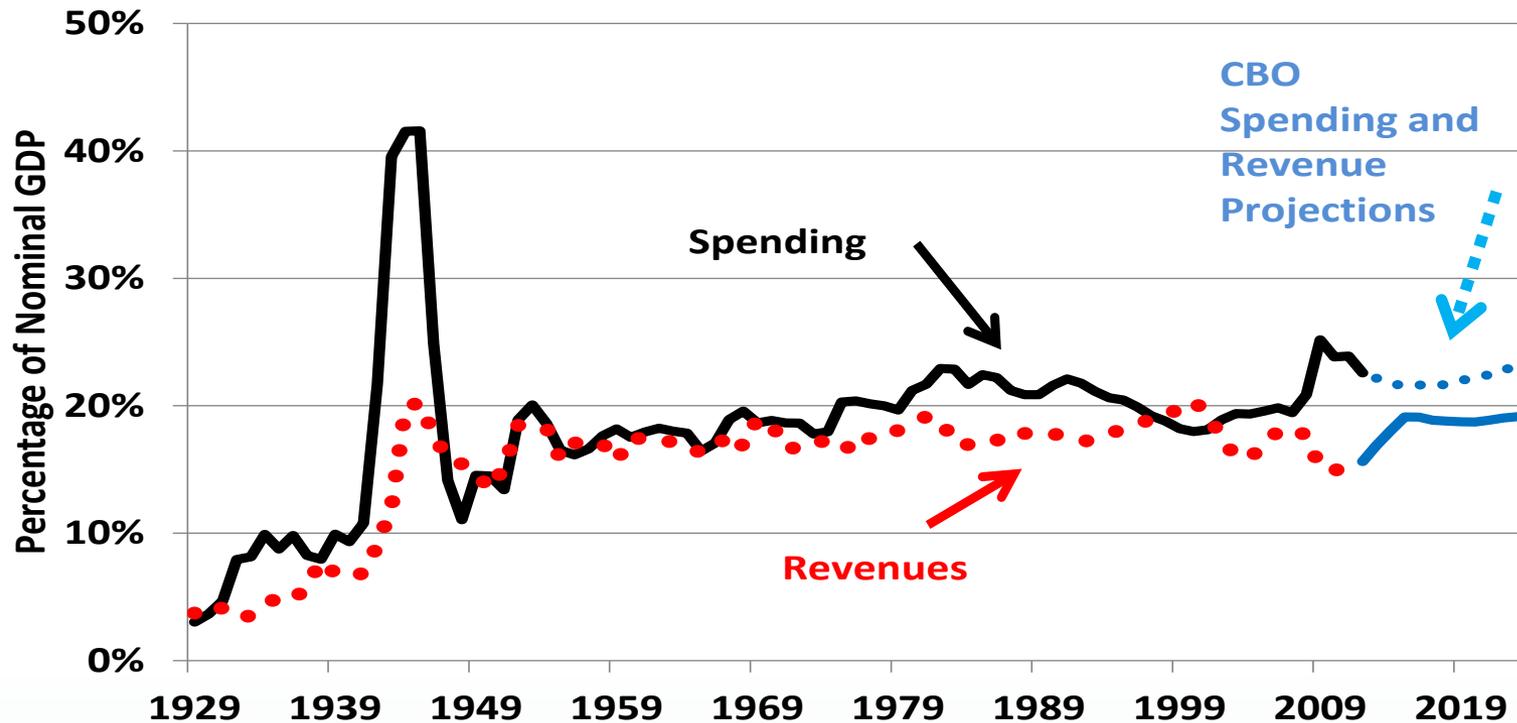
Fed may cease asset purchases by the end of 2013, assuming economic growth continues apace.

Fed may delay commencing the process of raising the federal funds rate target until inflation pressures emerge, which could be one or two years after the unemployment rate declines below the Fed's 6.5% threshold.

The Fed may never sell assets, holding them until maturity to avoid causing a severe steepening of the yield curve.

The Spending Debate in the US Congress

US Government Spending and Revenues



Source: Historical Data from the St. Louis Federal Reserve FRED Database (FYONET, FYFR), and Projections from the Congressional Budget Office

2013 -- Back to the Quantitative Easing Debate

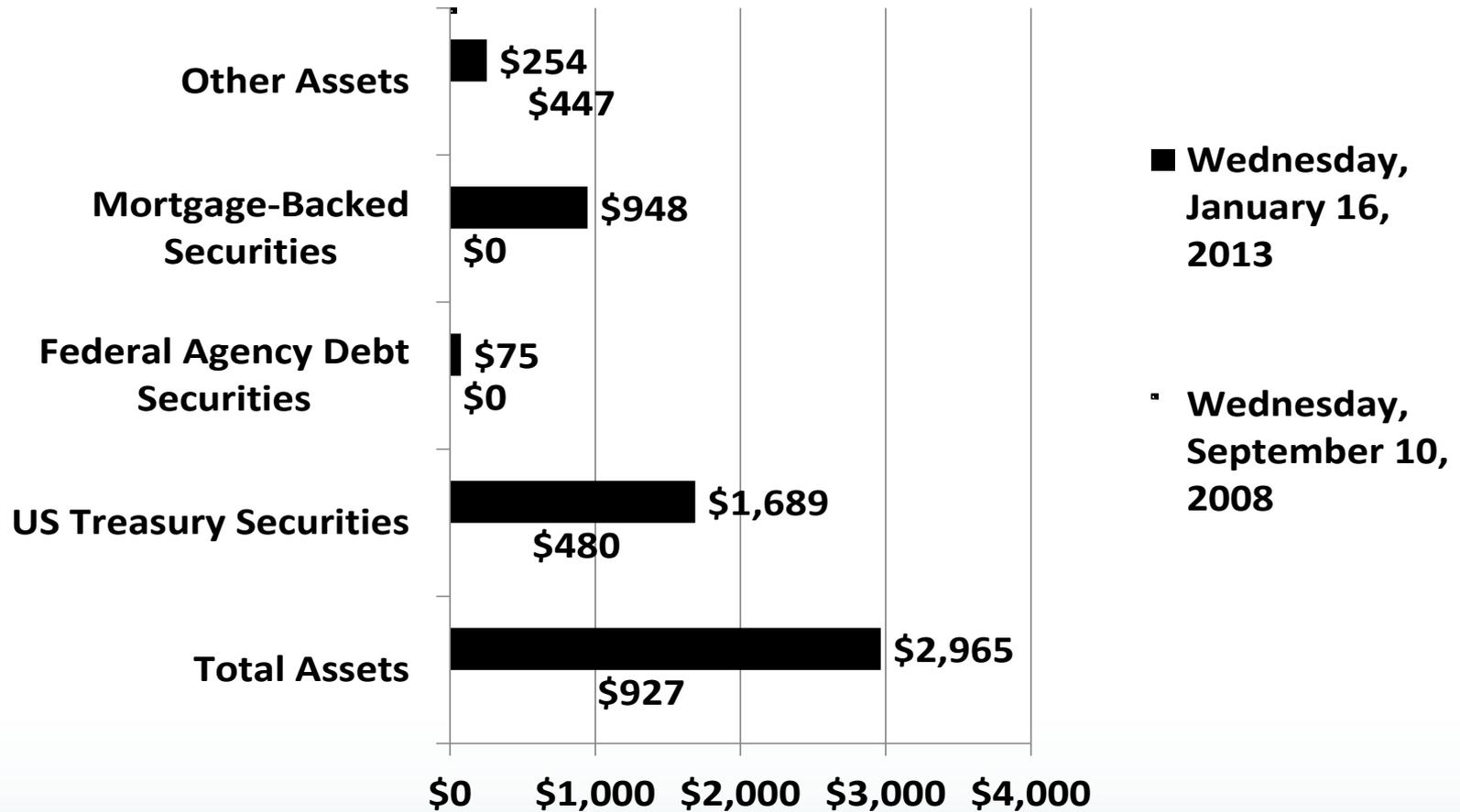
Evaluating Why QE Did Not Help Create Jobs:

“Essential concepts necessary to consider when evaluating the efficacy of quantitative easing,”
Review of Financial Economics, 2013, (Bluford H. Putnam)

Unintended Consequences of QE: “Ultra easy monetary policy and the law of unintended consequences,” Federal Reserve Bank of Dallas Globalization and Monetary Policy Institute, 2012, Working Paper no. 126 (William R. White).

US Federal Balance Sheet Expansion

Assets of the US Federal Reserve (\$Billions)

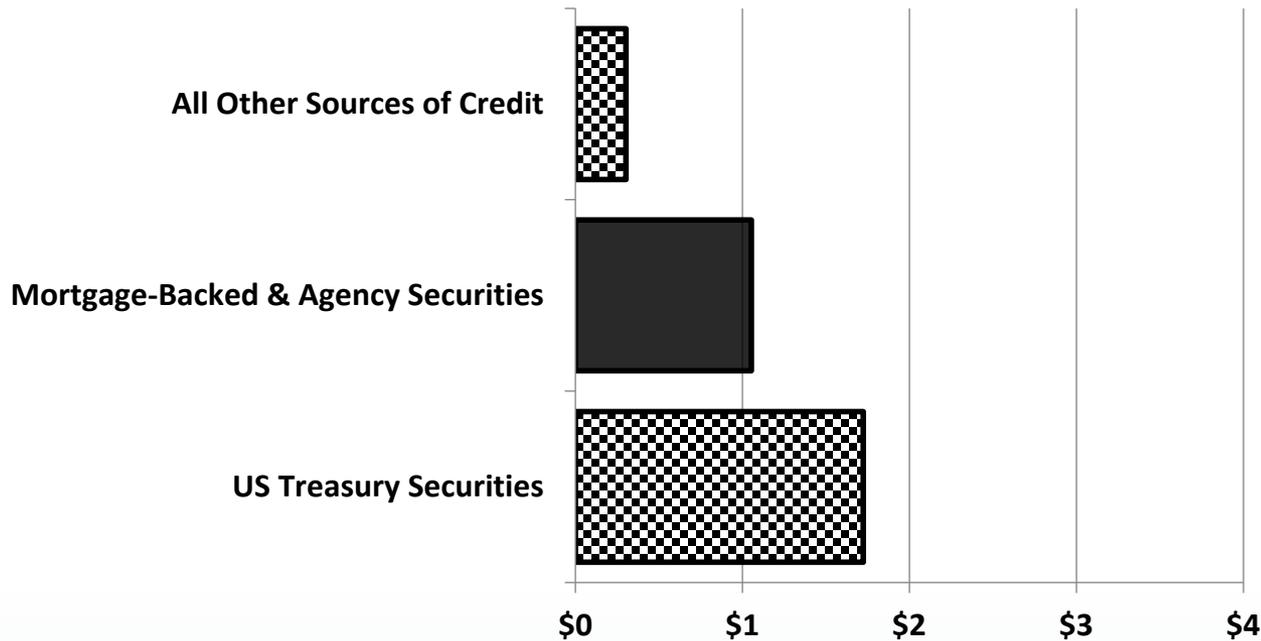


Source: Federal Reserve Release H.4.1, Table 8.



What the Fed Owns

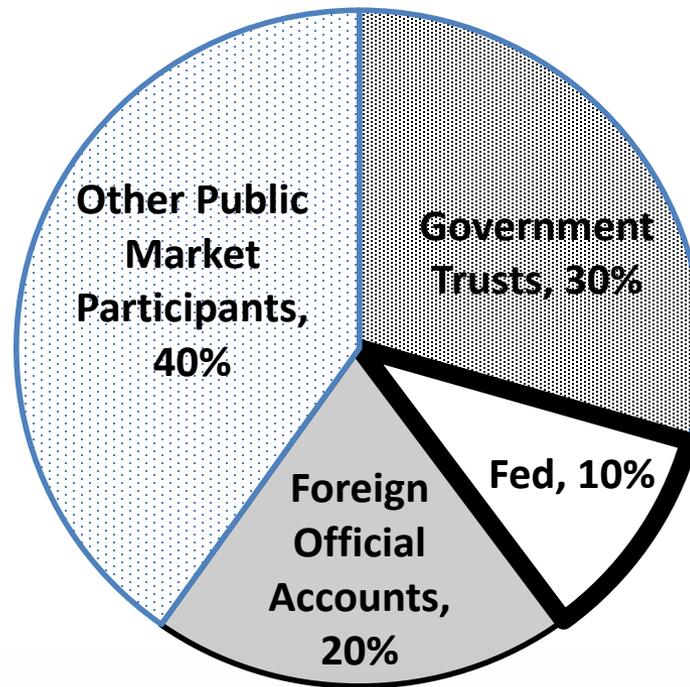
Federal Reserve Asset Holdings: 14 February 2013, US\$ Trillions



Source: Federal Reserve H.4.1 Statistical Release, Table 1.

Ownership of US Treasury Debt

Percent of US Government Debt Held by Various Types of Entities



Source: US Treasury for Gross Government Debt and Intergovernmental Trust Holdings, Federal Reserve H.4.1 release for Federal Reserve Treasury Security Holdings and Foreign Official Account Holdings.

Too Many Assets to Sell

The Federal Reserve may choose to hold its assets until maturity.

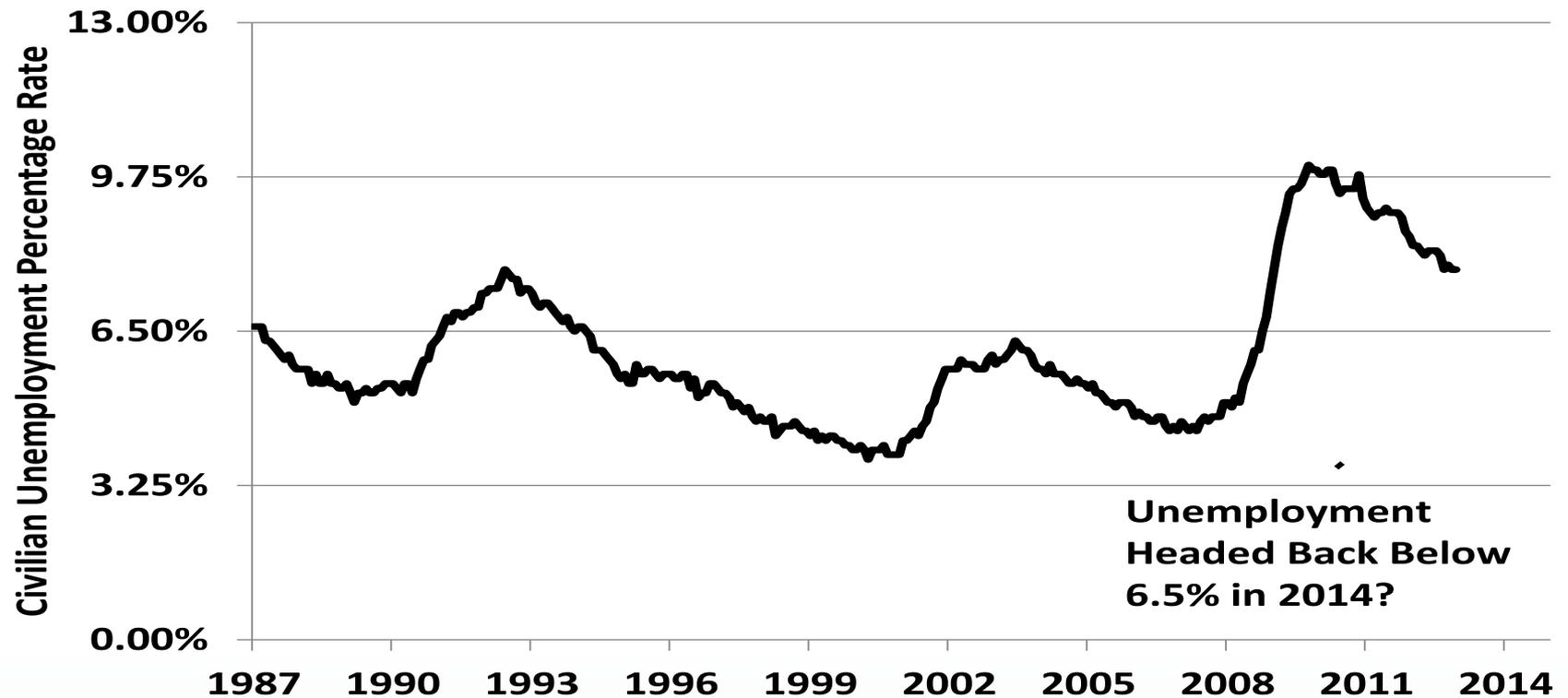
The Fed will not want to destabilize a perceived fragile housing recovery by selling mortgages.

The Fed will not want to push bond yields higher and raise US Treasury interest expense by selling US Treasuries.

The Fed just may decide to never sell.

The Fed has 6.5% Unemployment as a “Threshold” for reconsidering its rate policy

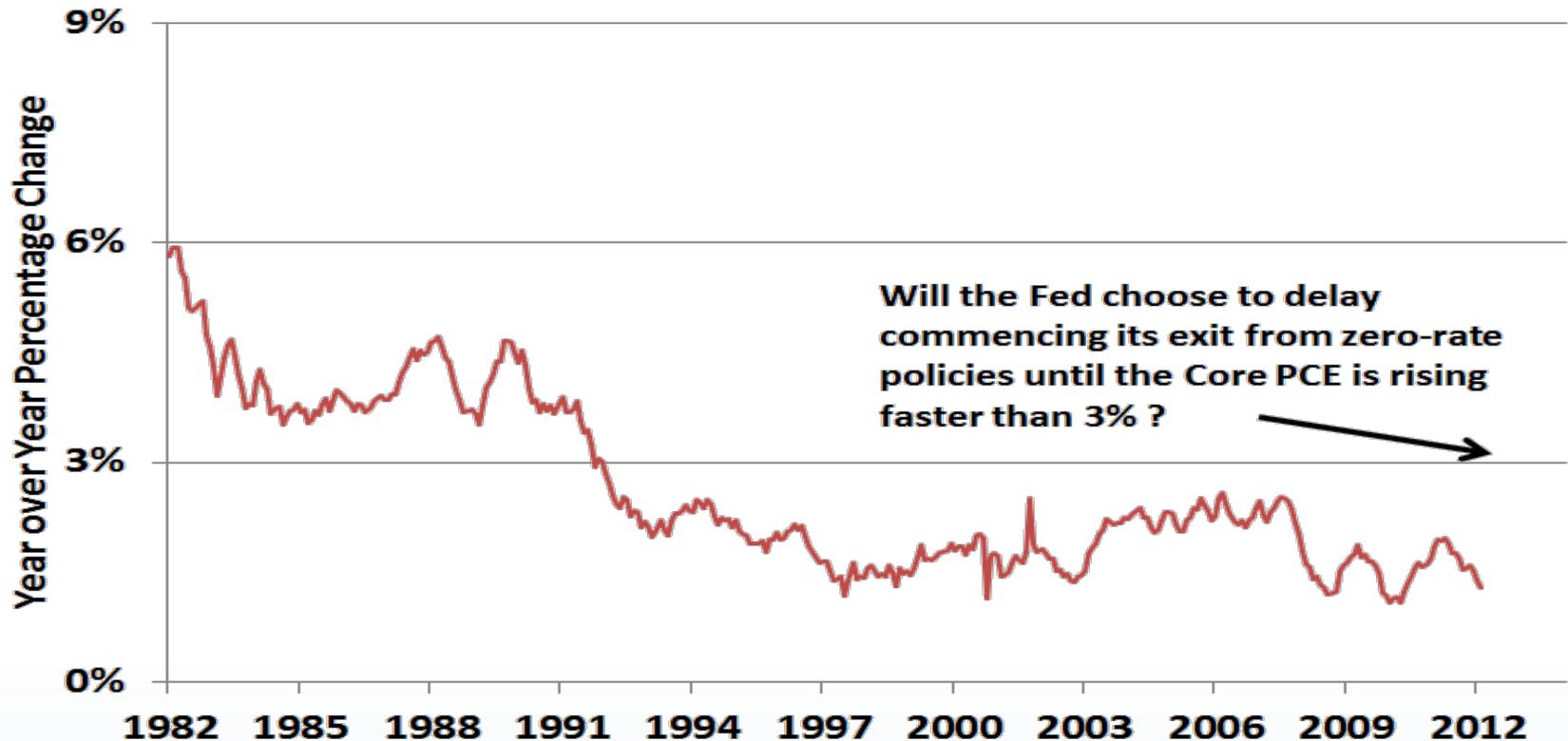
US Unemployment Rate



Source: St. Louis Federal Reserve Bank FRED Database (UNRATE)

But, the Fed may delay zero-rate exit until inflation pressure emerges, regardless ...

US PCE Core Inflation



Source: Federal Reserve Bank of St. Louis FRED Database (PCEPILFE)

Summary of Key Points: US Economy

US Housing is on the rebound, and rising housing starts will lead to net new construction jobs in 2013.

The US labor force is on a secular trend toward much slower growth, which implies that the unemployment rate can fall faster for a given number of net new jobs each month than typical historical rules of thumbs might suggest.

Expanded energy supply in the US is likely to lead to an energy growth dividend, which could be 1% or higher in added annual real GDP growth over the coming decade.

International headwinds from a stagnating Europe and slowing China represent modest drags on the US economy, but their influence is diminishing from previous years.

Summary of Key Points: Long-Term Policy

Congressional political incentives for compromise are not sufficient to suggest the likelihood of any long-term budget compromise, now or after the 2014 elections.

The Federal Reserve is likely to focus as much or more on its inflation mandate as its unemployment concerns, which means that the trigger for exiting its zero-rate policies may be the inflation rate, not the unemployment rate.

Since there are no signs whatsoever of inflation pressures, this means the Federal Reserve may delay commencing to raise the federal funds rate target to long after the unemployment rate has declined below the threshold level of 6.5%.

Questions?

www.cmegroup.com/marketinsights - Actionable ideas for customers and economic insights from top industry analysts

www.cmegroup.com/subscribe - Subscribe to automatically receive the latest key reports from our market insight contributors