
The Fed and Monetary Policy 2007-2013

DePaul University
February 14, 2013

Spencer Krane
Senior Vice President, Economic Research

The views expressed are my own and not those of the Federal Reserve
Bank of Chicago or the Federal Reserve System

Structure of the Fed

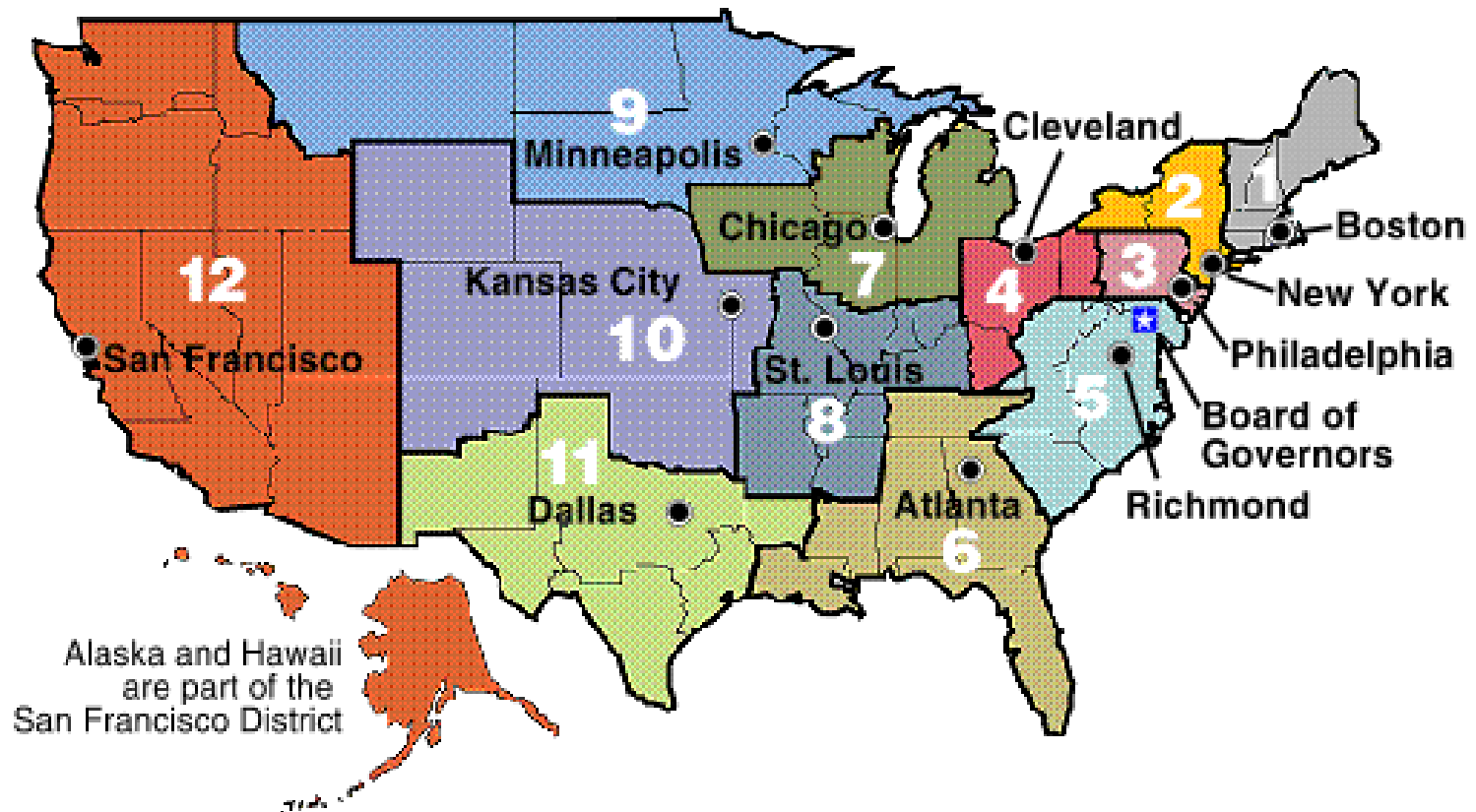
Functions of the Federal Reserve

- **Provide financial services to the public, financial institutions, U.S. government, and foreign official institutions**

- **Supervise and regulate banks and some other financial institutions**
 - Safety and soundness of individual institutions
 - “Macro-prudential” regulation. Puts greater emphasis on the stability of the system as a whole
 - Dodd-Frank bill increased the Fed’s role in financial regulation

- **Conduct monetary policy**
 - Influence the amount and/or cost of credit with aim of macroeconomic stabilization

Federal Reserve Districts



Federal Reserve Structure

■ Board of Governors

- Located in Washington DC
- Seven members appointed by the U.S. president to 14 year terms
- Chairman is Ben Bernanke

■ Federal Reserve Banks

- 12 Banks spread around the country
- Technically owned by member commercial banks
- Reserve Bank presidents appointed by Boards of Directors and approved by the Board of Governors

Regional Banks

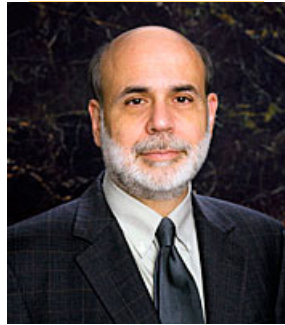
■ **Functional**

- Financial services
- Discount window
- Supervision and Regulation
- FOMC

■ **Information gathering and dissemination**

- Boards of Directors
- Advisory Councils (Bankers, Agriculture, Small Business, Labor, Academics)
- Business contacts
- Community and industry forums
- Research and research sponsorship

The Federal Reserve Board of Governors



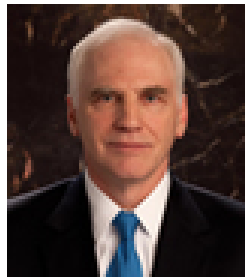
Ben S. Bernanke



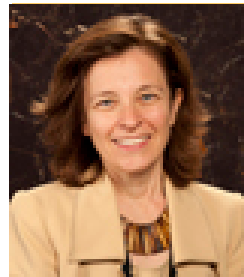
Janet L. Yellen



Elizabeth A. Duke



Daniel K. Tarullo



Sarah Bloom Raskin



Jeremy C. Stein



Jerome H. Powell

Presidents of the District Reserve Banks



Eric S. Rosengren

First District - Boston



William C. Dudley

Second District - New York



Charles I. Plosser

Third District - Philadelphia



Sandra Pianalto

Fourth District - Cleveland



Jeffrey M. Lacker

Fifth District - Richmond



Dennis P. Lockhart

Sixth District - Atlanta



Charles L. Evans

Seventh District - Chicago



James B. Bullard

Eighth District - St. Louis



Naryana Kocherlakota

Ninth District - Minneapolis



Esther L. George

Tenth District - Kansas City



Richard W. Fisher

Eleventh District - Dallas



John C. Williams

Twelfth District - San Francisco

The Federal Open Market Committee (FOMC)

Federal Open Market Committee (FOMC)

- **Makes the monetary policy decisions**
- **7 members of Board of Governors**
- **5 of the Reserve Bank presidents on a rotating basis**
 - New York
 - Chicago or Cleveland
 - Boston, Philadelphia, or Richmond
 - Atlanta, Dallas, or St. Louis
 - Minneapolis, Kansas City, or San Francisco
 - All 12 presidents participate in meetings
- **All 19 participants focus on the appropriate *national* policy**

2012 FOMC Calendar

| | | | | |
|-------------|--------|-----------|--|--|
| January | 24-25* | Statement | Press Conference Projections Materials: PDF Accessible Figures | Minutes: 434 KB PDF HTML (Released February 15, 2012) |
| | | | Longer-Run Goals and Policy Strategy | |
| March | 13 | Statement | | Minutes: 251 KB PDF HTML (Released Apr 3, 2012) |
| April | 24-25* | Statement | Press Conference Projections Materials: PDF Accessible Figures | Minutes: 419 KB PDF HTML (Released May 16, 2012) |
| June | 19-20* | Statement | Press Conference Projections Materials: PDF Accessible Figures | Minutes: 383 KB PDF HTML (Released July 11, 2012) |
| July/August | 31-1 | Statement | | Minutes: 295 KB PDF HTML (Released Aug 22, 2012) |
| September | 12-13* | Statement | Press Conference Projections Materials: PDF Accessible Figures | Minutes: 391 KB PDF HTML (Released October 4, 2012) |
| | | | Related Current FAQs | |
| October | 23-24 | Statement | | Minutes: 262 KB PDF HTML (Released November 14, 2012) |
| December | 11-12* | Statement | Press Conference Projections Materials: PDF Accessible Figures | Minutes: 388 KB PDF HTML (Released Jan 3, 2013) |

FOMC Meetings



What Happens at an FOMC Meeting?

■ Preliminaries

- Administrative matters
- Often presentation on special topic

■ Report from the “Desk”

- NY Fed Markets Group: What’s up in the markets

■ Tealbook Part A presentation: The economic outlook

- FOMC participants ask questions

■ “Go Around I”: Members present views on regional and national outlook

- Supposed to avoid talking about policy; people cheat a little

What Happens at an FOMC Meeting?

- **Tealbook Part B presentation: The policy options**
 - The policy prescription
 - The words
- **“Go Around II”: Policy discussion**
 - Participants give views of appropriate policy
- **The Vote: The Chairman gives his sense of the consensus**
 - Only members vote
- **Post-decision activities**
 - Often another presentation of a special topic
 - Lunch

Monetary Policy in the Abstract

The Federal Reserve's Dual Mandate

- **Federal Reserve Act: Section 2a. Monetary Policy Objectives**
- **The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.**

Monetary Policy Goals: Output

- **We would like to see fully utilized productive resources**
- **Monetary policy can help close gaps between actual and “potential” economic output**
- **But if over-stimulate the economy eventually results in increasing inflation**
- **In the long run**
 - **Potential output is the best can do on a sustainable basis**
 - **In the long run, the Fed can’t make the economy grow faster than its potential (classical dichotomy)**

Monetary Policy Goals: Price Stability

- **Price stability provides the environment necessary to meet all the other goals of monetary policy**
- **An environment of price stability makes planning easier**
 - Price stability improves the workings of the price system -- high and variable inflation jams the signals sent by relative prices
 - Price stability may also lower long-term interest rates by reducing uncertainty
- **Usually discussed in terms of cost of inflation being too high or too low**

January 2012 Principles Statement: Long Run Goals and Policy Strategy

■ Price stability

- Sets 2% objective for PCE inflation
- Target is for an average over medium term – it is not a ceiling
- Explicit statement should help anchor expectations

■ Full employment

- Employment goal may change over time for non-monetary reasons
- 5.2-6.0% unemployment currently consistent with mandate
- Seek an economy operating at its level of potential output

■ Balanced approach

- Balanced reaction when shocks move economy from objectives
- Takes account of lags and other limits in effects of monetary policy

Classical Dichotomy Between P and Q

- **Real quantities and relative prices determined by supply and demand in markets for real quantities (labor, goods, services)**
- **Given real quantities, monetary policy determines nominal quantities (prices in terms of dollars) and inflation**

$$M V(p^{\text{rel}}) = P Q(p^{\text{rel}})$$

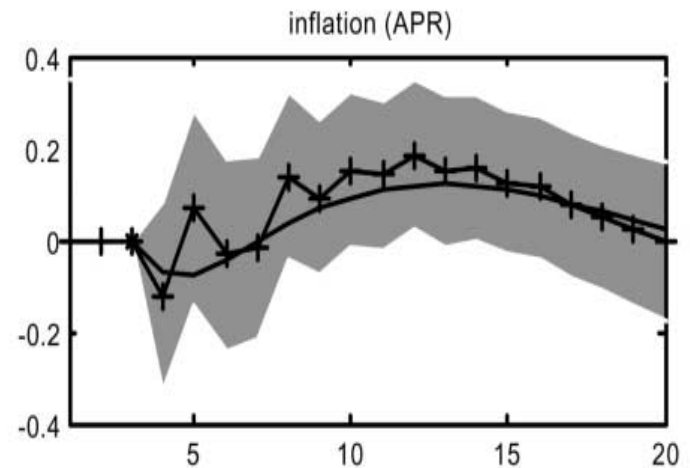
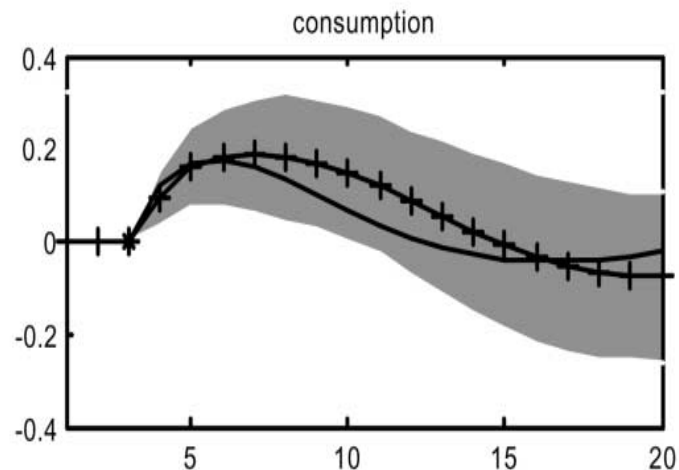
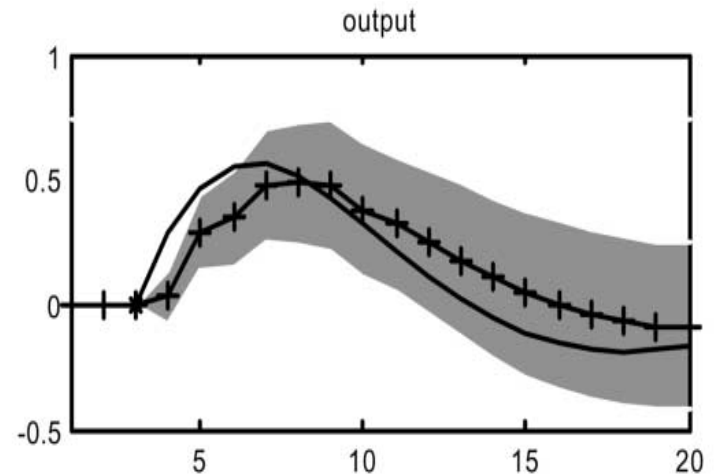
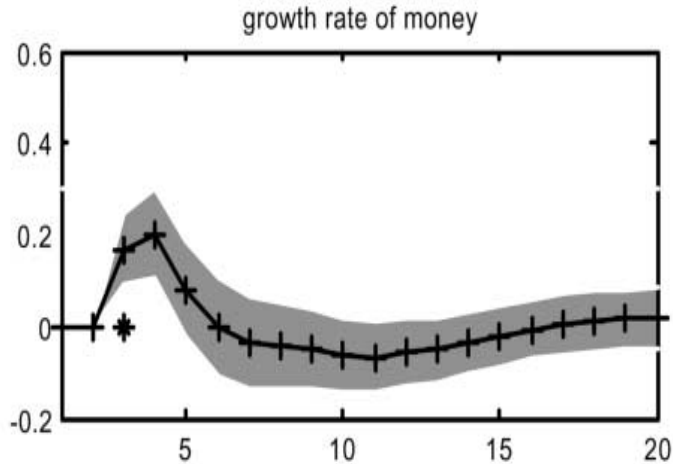
- **Monetary neutrality: idea that variations in the supply of money are irrelevant to the determination of real quantities**
- **A reasonable idea in the long-run**
 - Why should the number of pieces of paper with pictures of dead presidents make a big difference to anything?
 - Capital, labor, and technology determine real output
- **Important violations in short run**

Monetary Policy and the Real Economy

- **Prices and inflation are “sticky” in the short run**
 - More money doesn't immediately raise prices proportionately
- **Monetary policy does affect the real economy**
 - At least in the short and medium run
- **Usually operate by changing the federal funds rate**
- **Changes in short-term interest rates influence**
 - Long-term real interest rates
 - Exchange rates and asset values
- **These then affect saving and investment decisions, which in turn affect employment and output**

Short-Run Monetary Non-Neutrality

■ Evidence from Christiano, Eichenbaum, and Evans (2005)

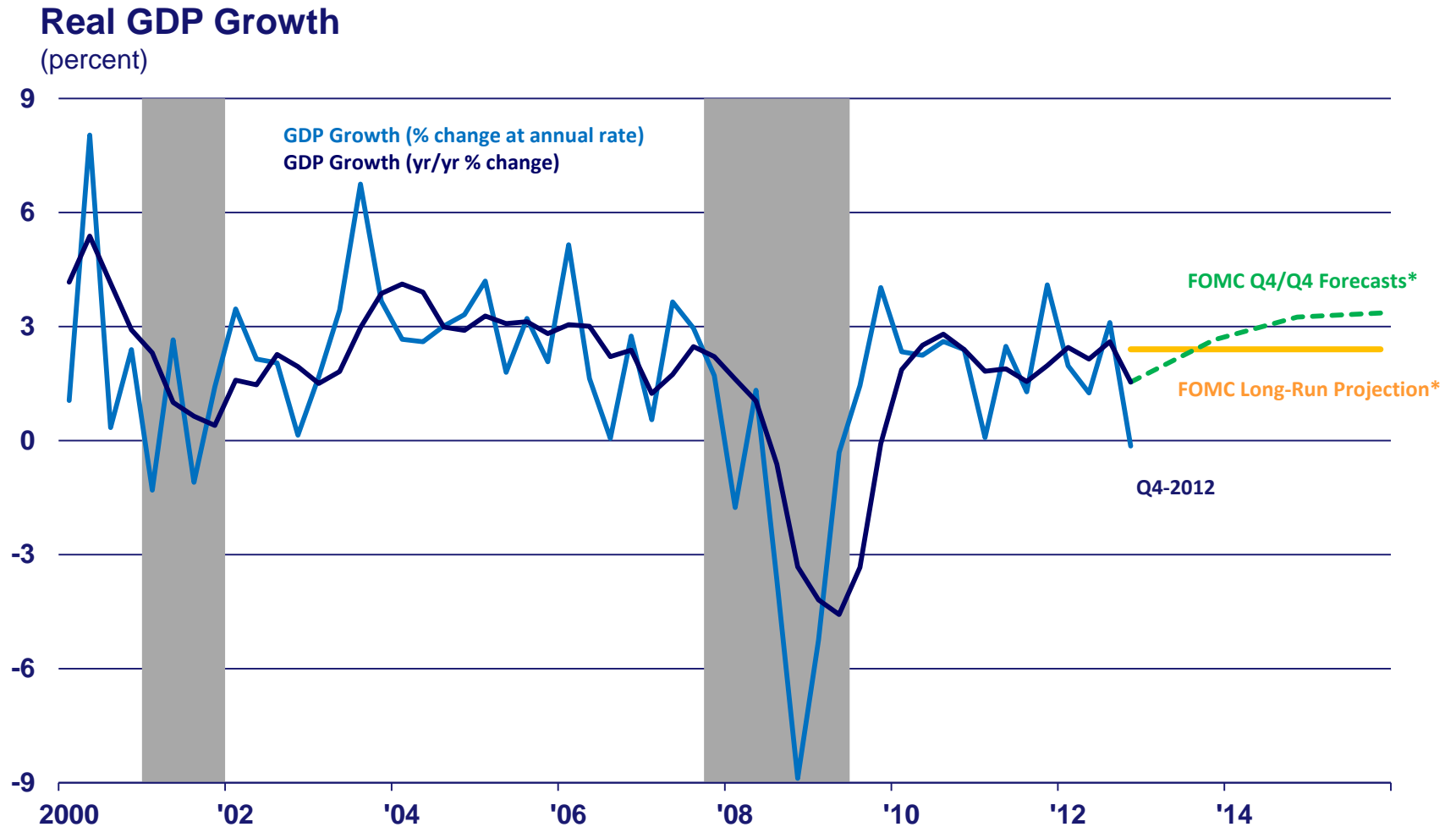


Simple Monetary Policy Rules

- To achieve goals, central banks tend to set policy rates in a way that depends on:
 - Inflation relative to target (π vs. 2 percent)
 - The state of the real economy (y vs. y^*)
- E.g., Taylor's 1999 rule :
 - $i = 2 + \pi + 0.5(\pi - 2) + 1.0(y - y^*)$
- A description about how policy “usually” works
- But various special factors can make it necessary to deviate from simple rules

Economic Conditions and Outlook

GDP Growth Forecast

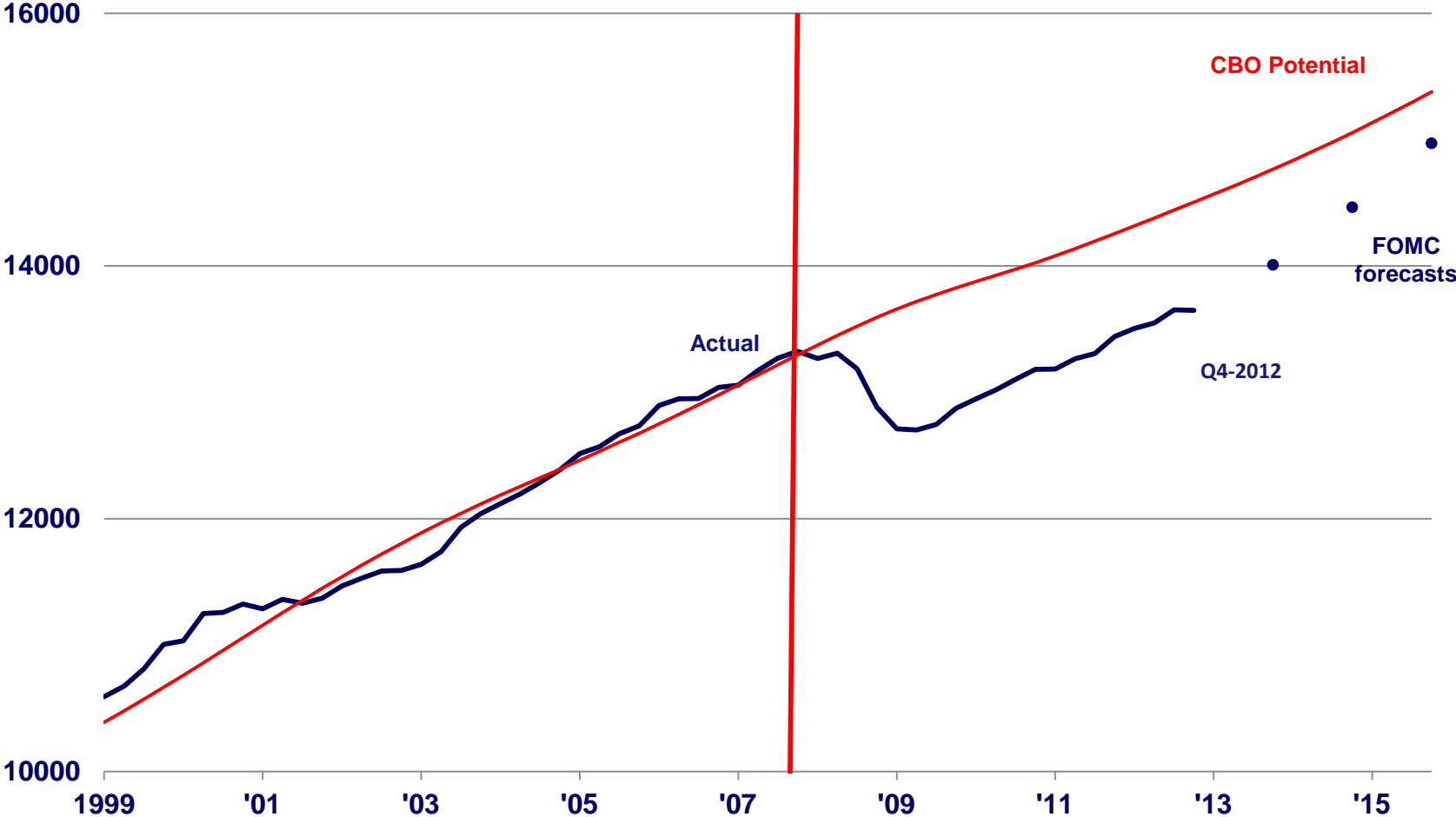


*Midpoint of the forecasts made by the FOMC participants, December 2012

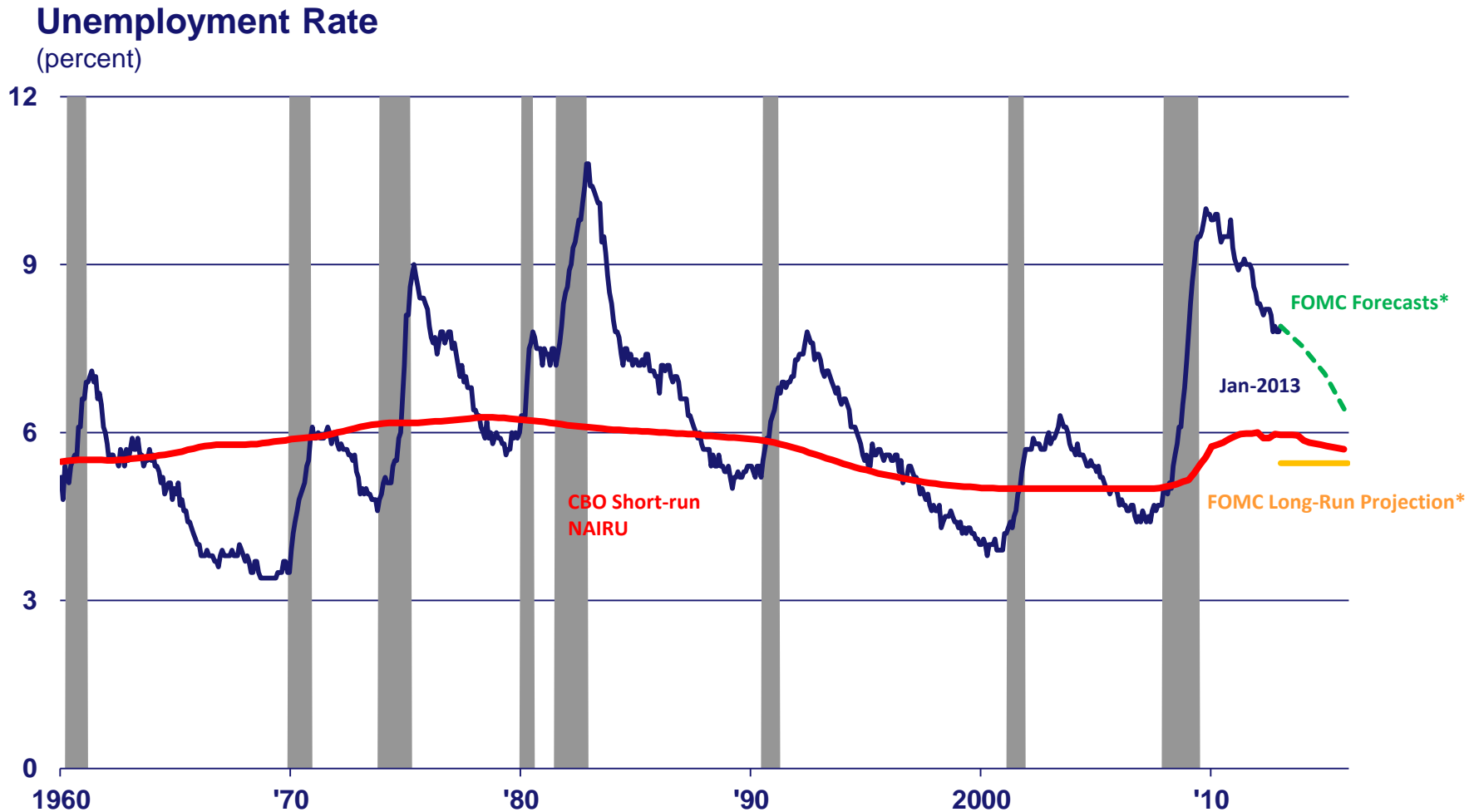
GDP Level Forecast

Actual and Potential GDP

(Bils. 2005\$)



Unemployment Forecast

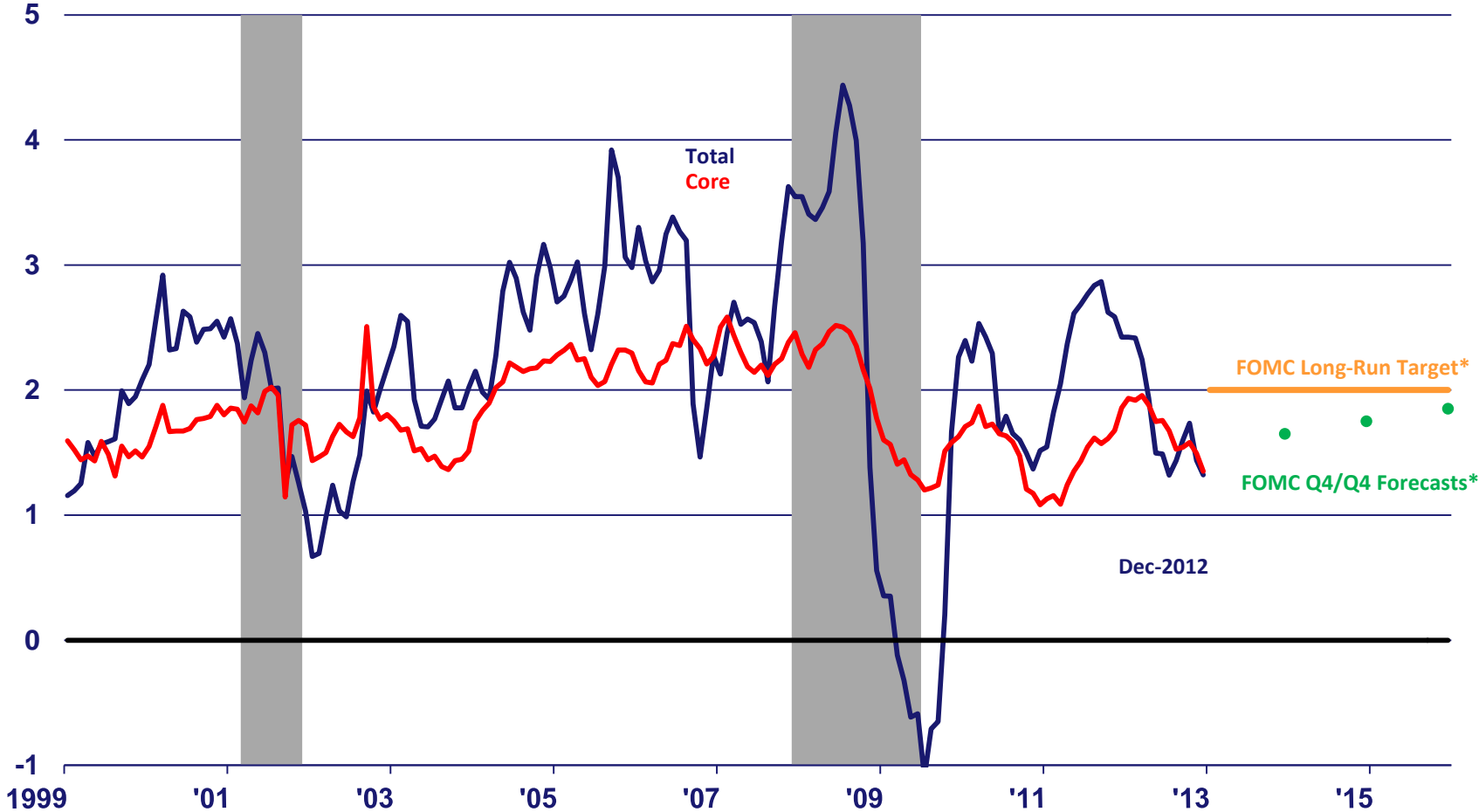


*Midpoint of the forecasts made by the FOMC participants, December 2012

Inflation Forecast

PCE Price Index

(12-month percent change)



*Midpoint of the forecasts made by the FOMC participants, December 2012

How Did We Get In This Situation?

■ **Housing market boom and bust**

- Period of rapidly rising home prices, loose lending, and booming construction
- Unwind was big drag on economy 2006-2009

■ **Financial market disruption**

- Surprising financial market fragility
- Banks and “shadow banks” both highly stressed
- Reduced credit availability slowed economy

■ **Business and consumer pessimism**

- Many disturbing events of late 2008
- Businesses and consumers began to plan for the worst

■ **As a result we got a very bad recession**

Why Has the Recovery Been so Disappointing?

- **Long-lasting damage from the recession**
 - Balance sheet restructuring by households, nonfinancial businesses and financial institutions
 - Loss of worker skills and capital formation
- **Additional shocks**
 - European crisis
 - Fiscal cliff issues in U.S.
- **Business and consumer pessimism and uncertainty**
 - Precautionary behavior
- **Monetary policy runs into the zero lower bound**

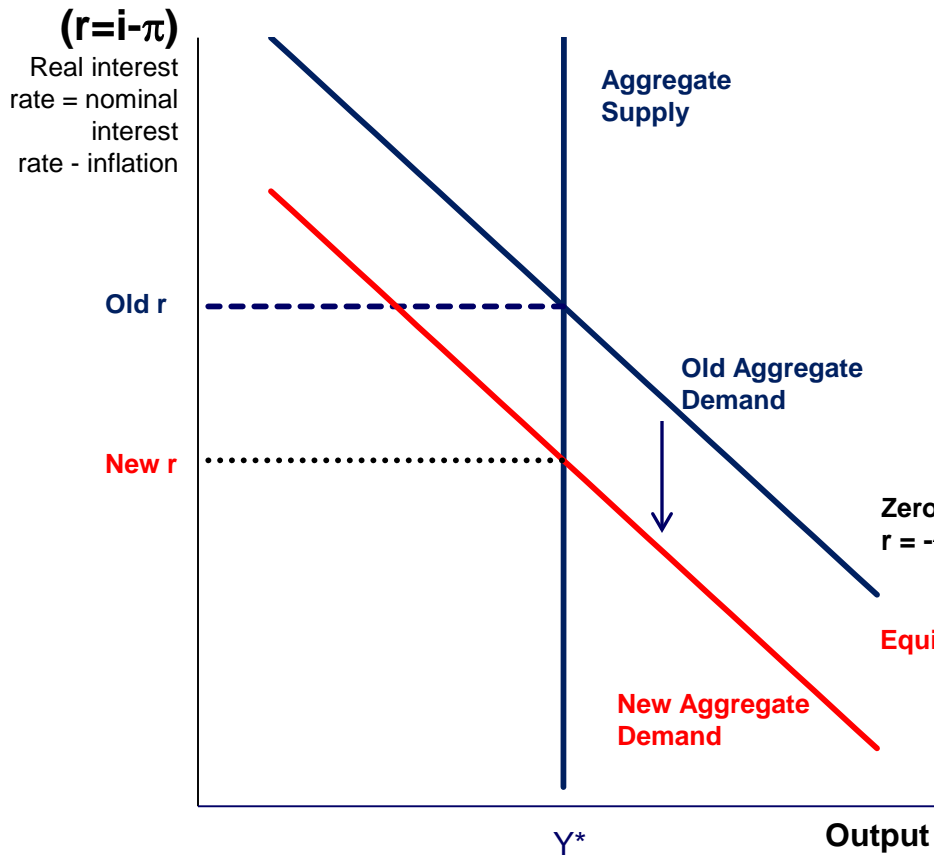
Monetary Policy 2008- 2013

Key Elements of Fed Response

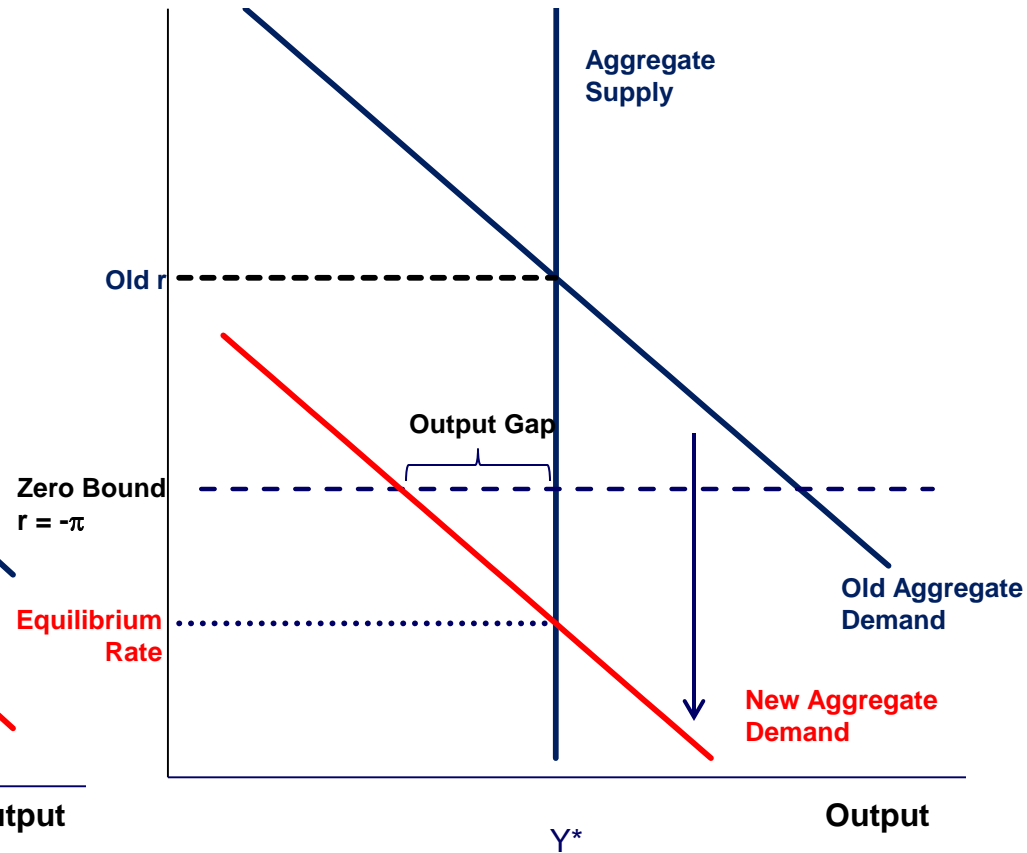
- **Credit easing/liquidity provision**
 - Target specific stress points in financial markets through various liquidity facilities
- **Exceptional support**
 - Manage distress at systemically important institutions
- **Highly accommodative monetary policy**

Impact Of Aggregate Demand Decline

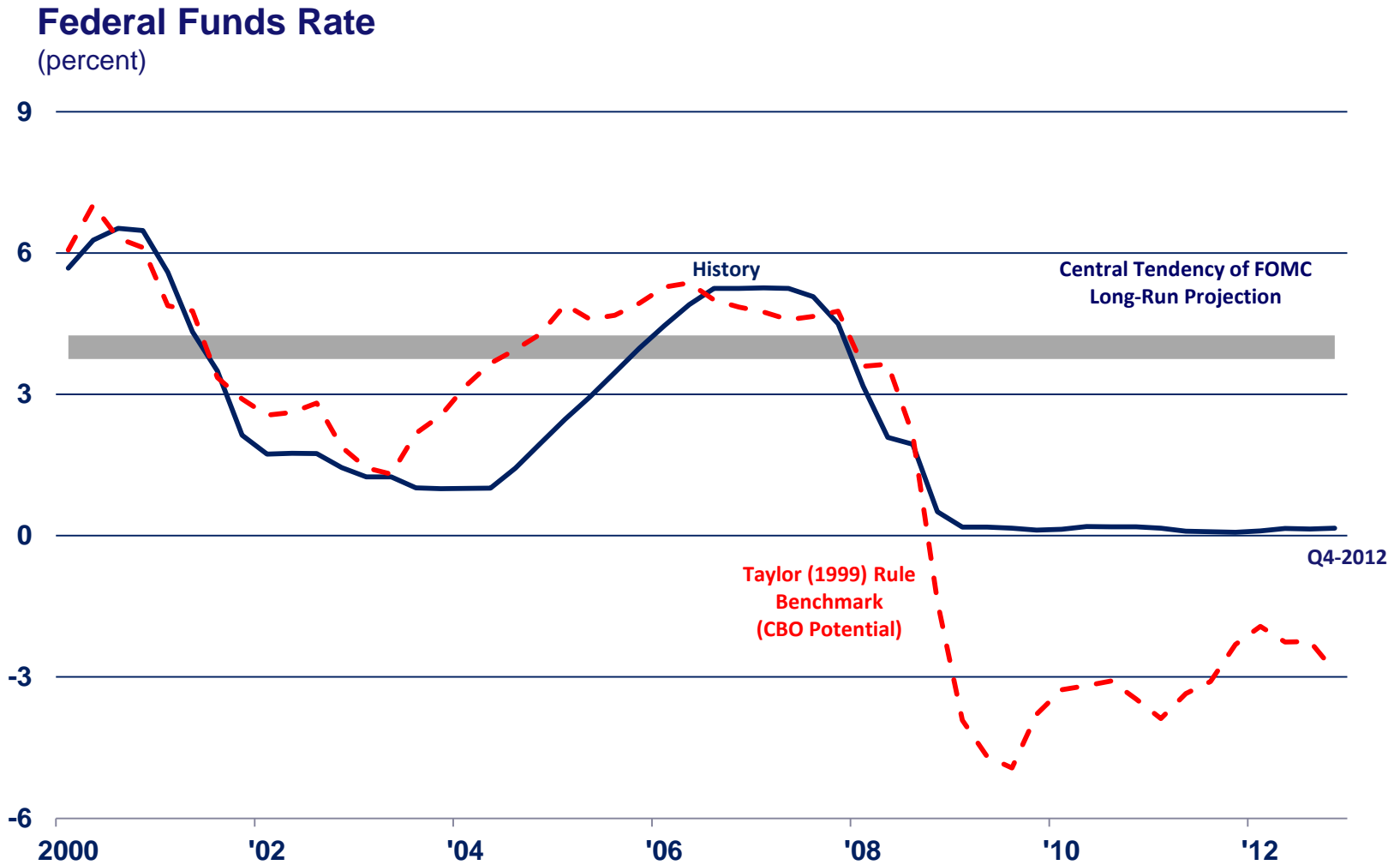
Normal Adjustment



Liquidity Trap



Funds Rate: Low, but Constrained at Zero Bound



Monetary Policy At The Zero Lower Bound

- **What to do when can't cut current short-term rate any further?**
- **Lower longer-term interest rate**
 - **Option 1: Cut expectations of future short-term rates**
 - ◆ **Current long-term rates depend on average of expected future short-term rates**
 - ◆ **Forward guidance on future policy rates**
 - **Option 2: Buy long-term bonds to reduce term premium**
 - ◆ **Term premia = difference between average expected short-term rates and the long-term rate**
 - ◆ **Duration, credit, and inflation uncertainty**

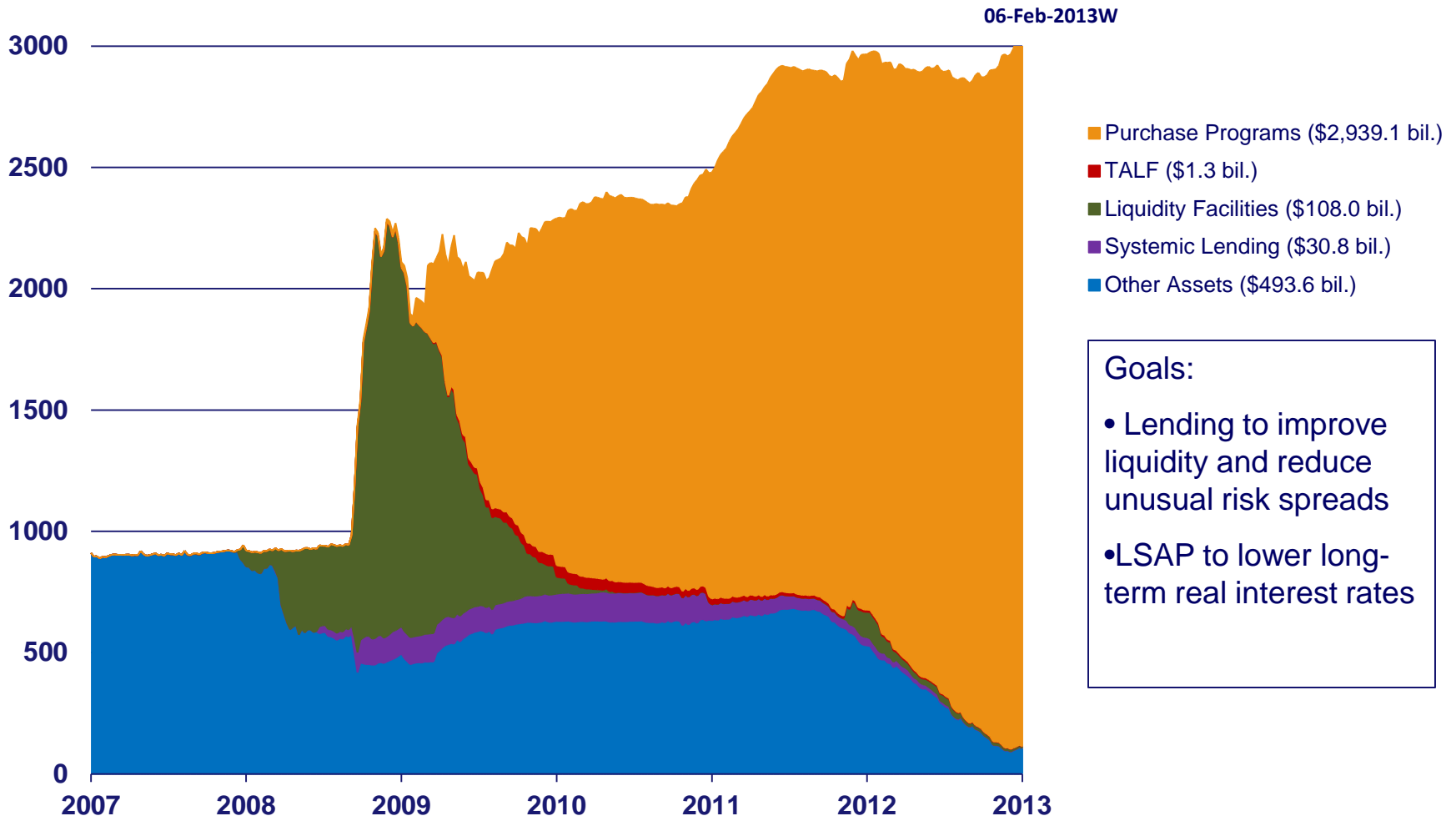
Opion 2: Large Scale Asset Purchases (LSAP)

- **LSAP I (11/08): \$600 bill agency debt/MBS**
- **LSAP Ia (3/09): \$850 bill agency debt/MBS; \$300 bill Treas.**
- **LSAP II (11/10): \$600 bill Treas.**
- **MEP (9/11): Exchange \$400 bill short-term for \$400 bill long-term Treas.**
- **MEP extension (6/12): Extend MEP through end of 2012**
- **LSAP III (9/12): \$40 bill per month MBS, no fixed end date -- “until labor market outlook improved substantially”**
- **LSAP IIIa (12/12): \$40 bill per month MBS and \$45 bill per month long-term Treas; no fixed end date**

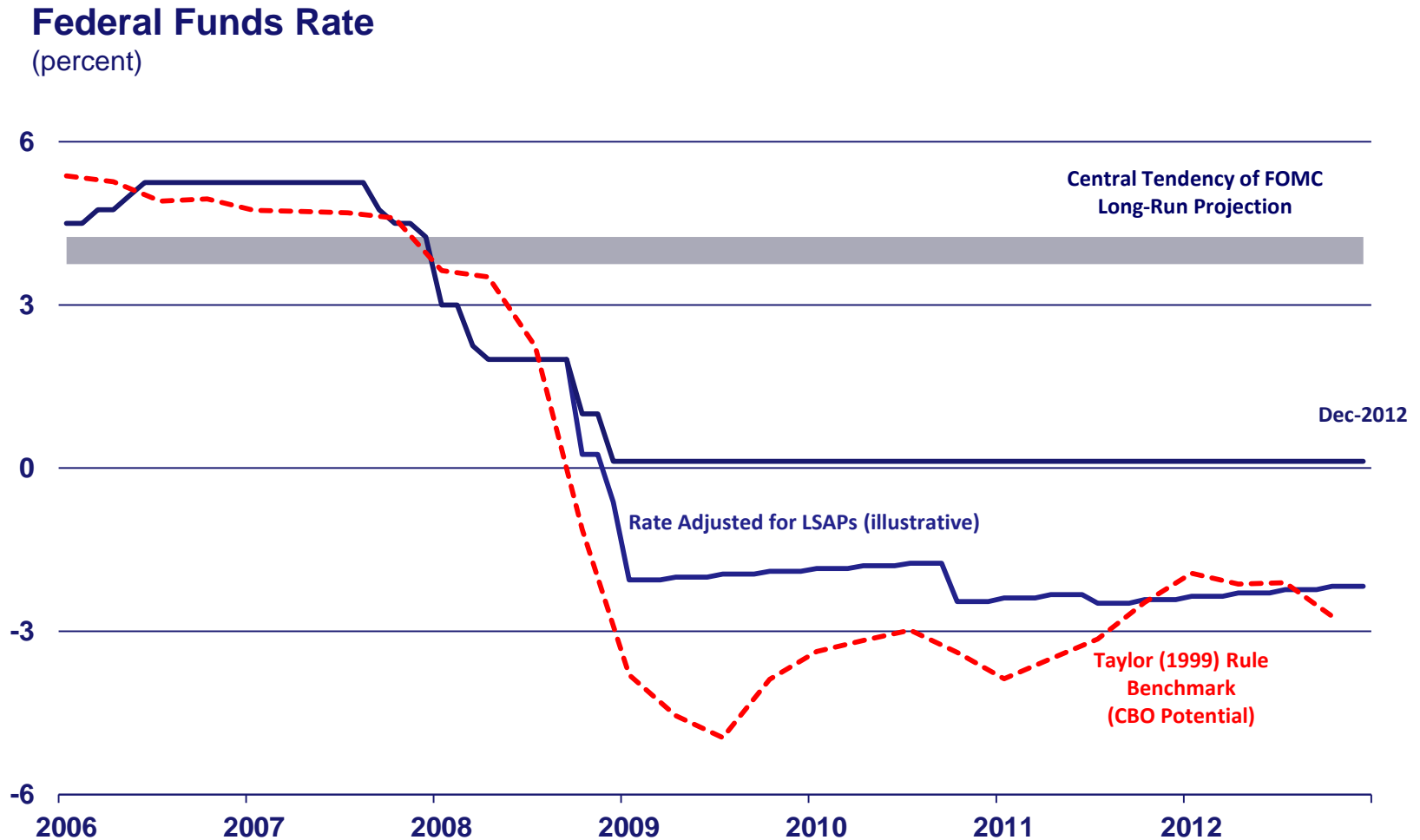
Non-Standard Policies Adding More Stimulus

Federal Reserve Assets

(Bils. \$)



Monetary Policy and LSAPs

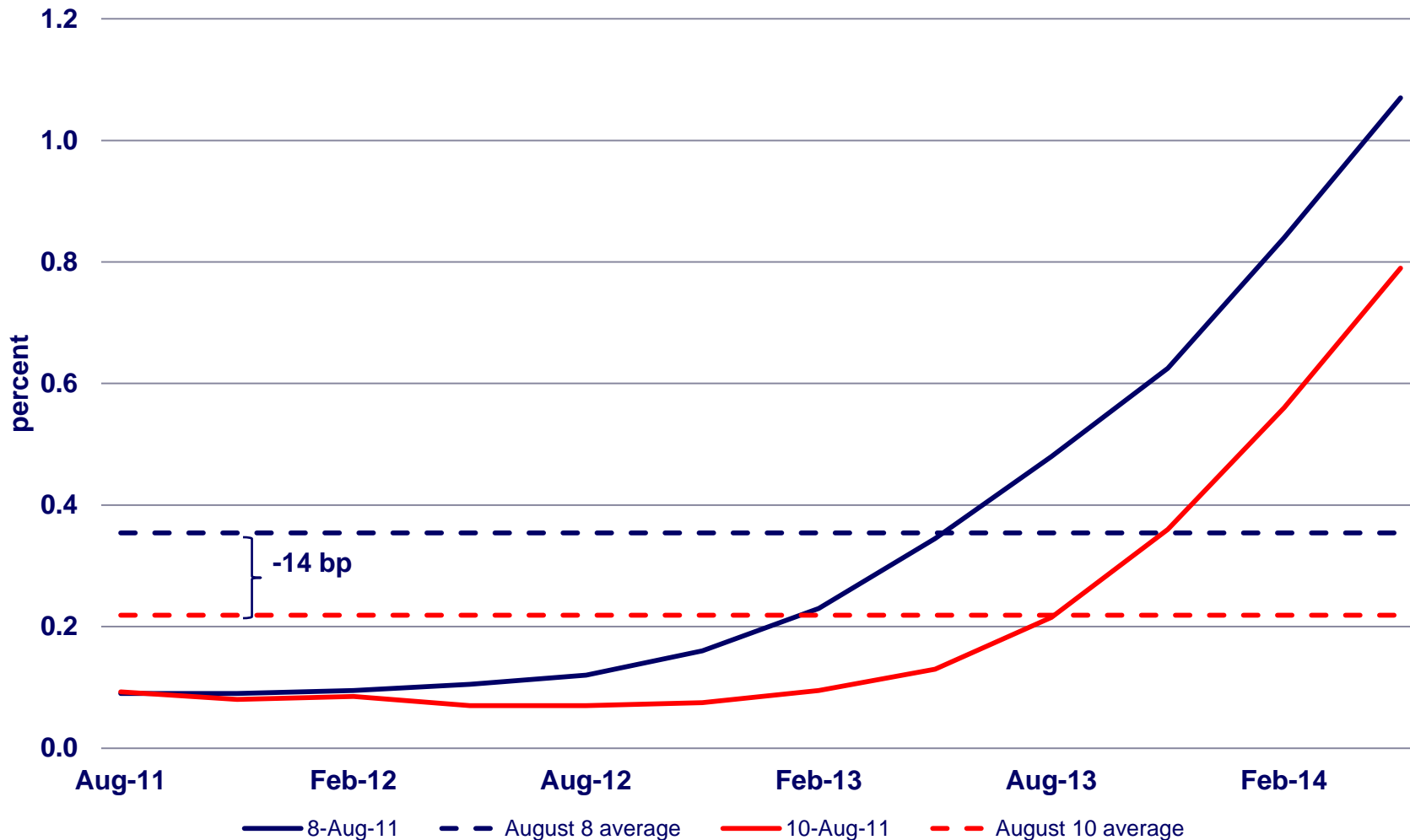


Option 1: Forward Guidance on Funds Rate

- **Economic conditions likely to warrant exceptionally low level of the funds rate:**
 - **12/08: “for some time”**
 - **3/09: “for an extended period”**
 - **8/11: “at least through mid 2013”**
 - **1/12: “at least through late 2014”**
 - **9/12: “at least through mid 2015”**

Monetary Policy At The Zero Lower Bound

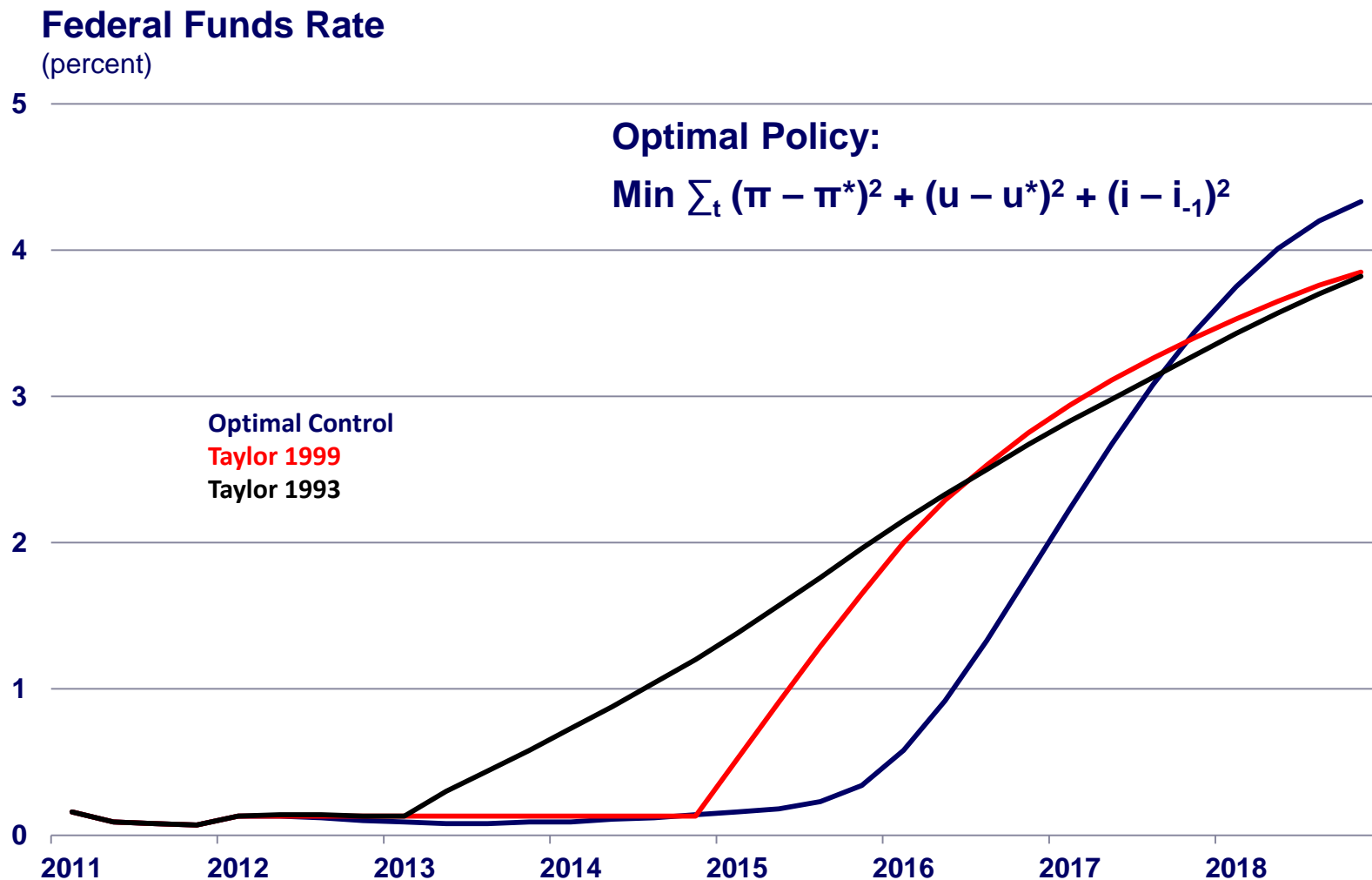
Response to August 9, 2011 FOMC Statement
Change from "extended period" to "at least mid-2013"



Forward Guidance on Funds Rate, cont.

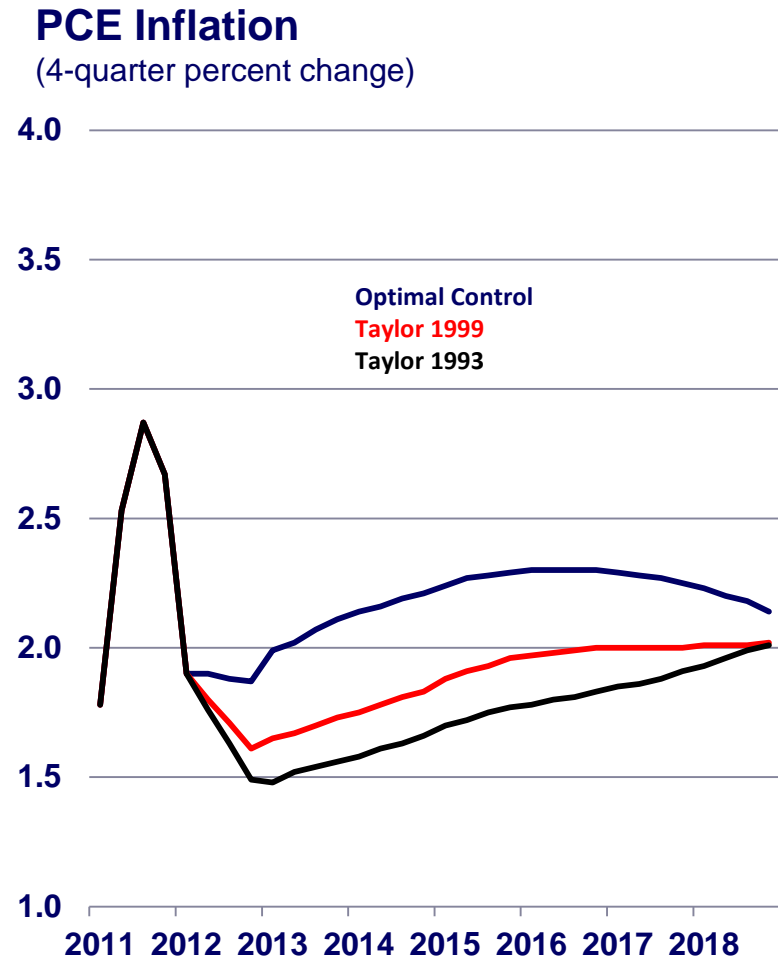
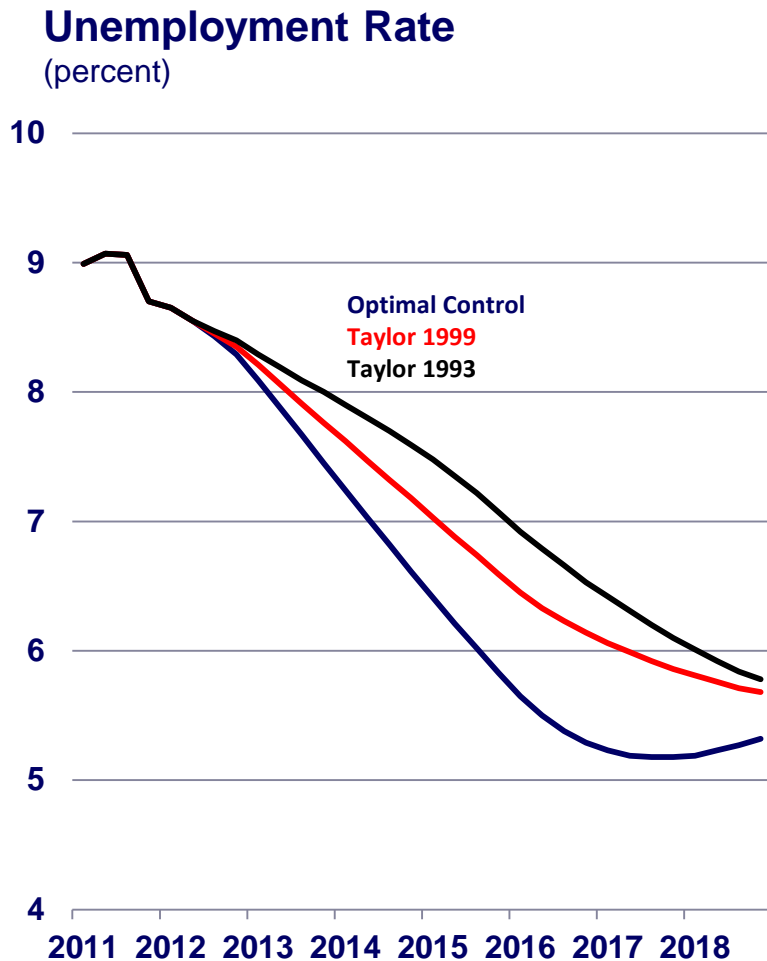
- **9/12 cont. “...the Committee expects that a highly accommodative stance of monetary policy will remain appropriate for a considerable time after the economic recovery strengthens....at least through mid-2015.”**
- **12/12: “...at least as long as the unemployment rate remains above 6-1/2 percent, inflation between one and two years ahead is projected to be no more than a half of a percentage point above the Committee’s 2 percent long-run goal, and longer-term inflation expectations continue to be well-anchored.**

Funds Rate Under Alternative Policy Rules



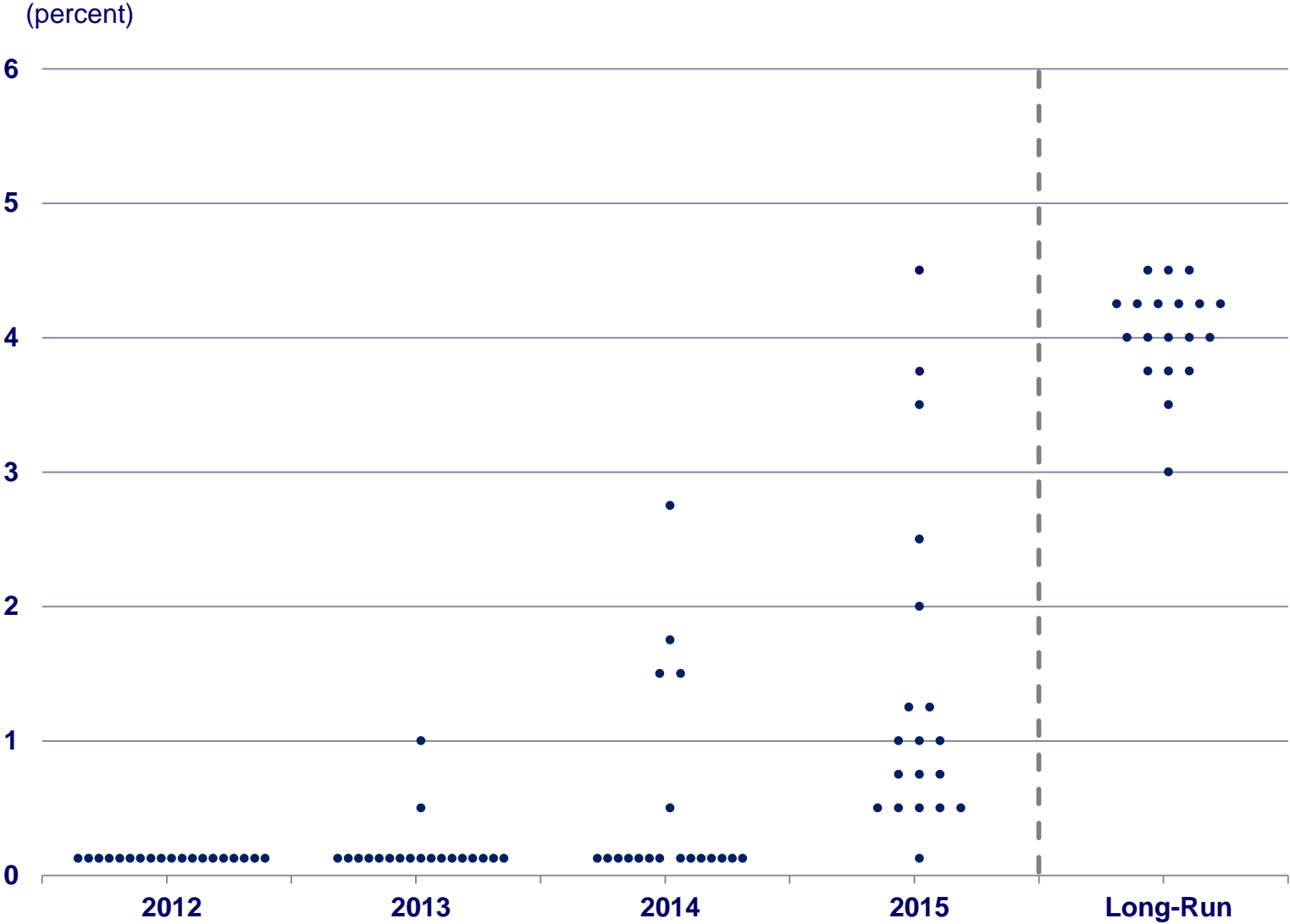
Source: Janet L. Yellen, "The Economic Outlook and Monetary Policy," New York, 11 April 2012

Forecasts Under Alternative Policy Rules



Source: Janet L. Yellen, "The Economic Outlook and Monetary Policy," New York, 11 April 2012

Target Federal Funds Rate at Year End



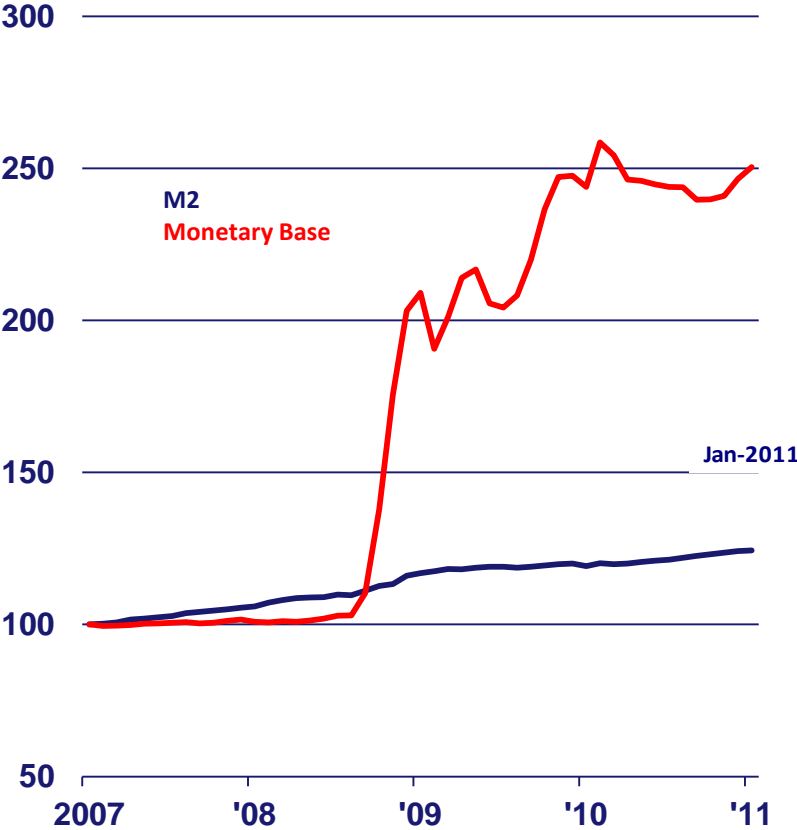
Source: Projections made at the December 11-12, 2012 FOMC meeting, available at www.federalreserve.gov

Appendix

Monetary Expansion

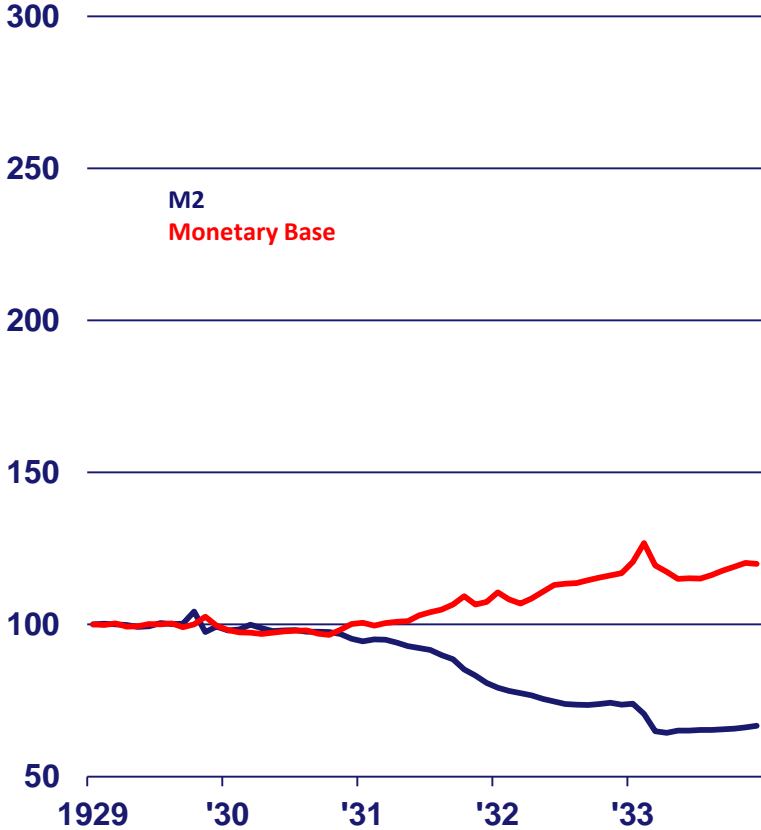
Current Period

(Index, Jan-07=100)



1929-1933

(Index, Jan-1929=100)



Expanded Federal Reserve Liquidity Facilities

| Liquidity Facilities with Financial Institutions | | | Liquidity/Credit Facilities with Other Investors and Borrowers | | Portfolio Purchases | Other |
|--|---------------------|-----------------|--|------------------------------------|--------------------------------|---------------------------|
| Depository Institutions | Other Central Banks | Primary Dealers | Money Market Mutual Funds and Commercial Paper Markets | Consumer and Small Business Credit | GSEs and Residential Mortgages | Specific Institutions |
| Discount window | Swap Lines | PDCF* | AMLF* | TALF* | GSE debt and MBS purchases | Bear Stearns* |
| TAF | | TSLF* | CPFF* | | | AIG* |
| Interest on reserves | | TOP* | MMIFF* | | | Citigroup/Bank of America |

* Authorized under Section 13(3) of the Federal Reserve Act – “unusual and exigent circumstances”