



EMBARGOED UNTIL MONDAY, NOVEMBER 10, 2014 AT 5:10 P.M. EASTERN TIME OR UPON DELIVERY

# Implications of Low Inflation Rates for Monetary Policy

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November 10, 2014

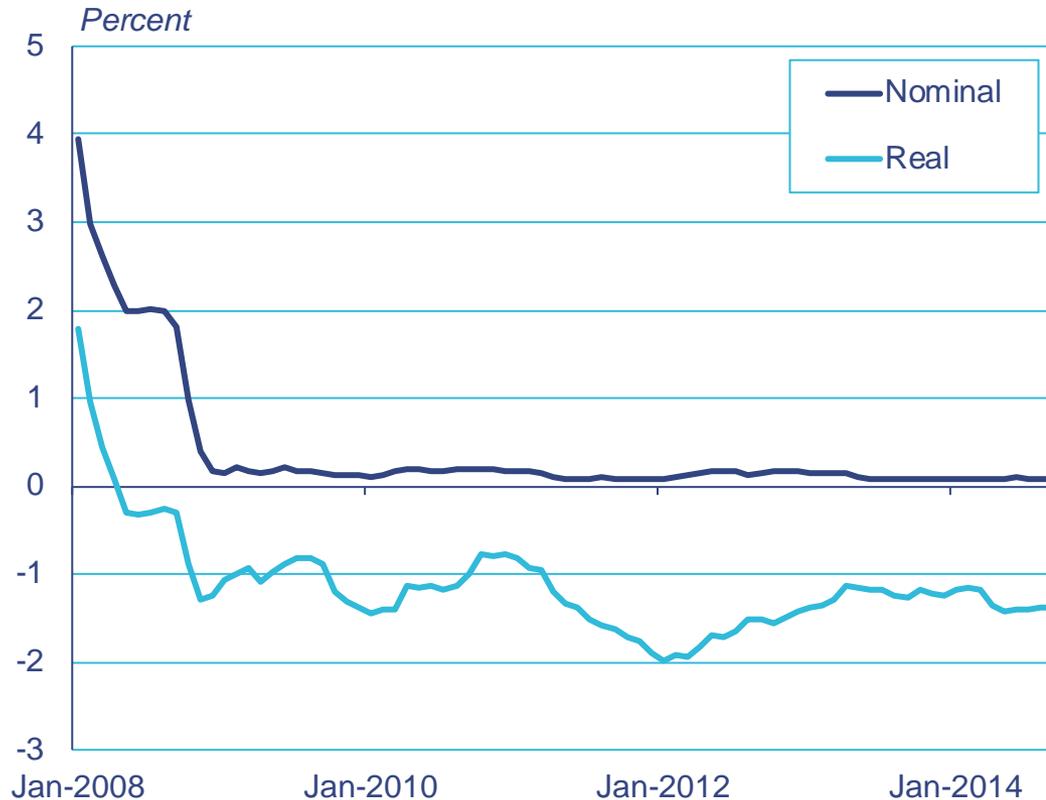
The H. Parker Willis Lecture in Political Economy  
Washington and Lee University  
Lexington, Virginia

[bostonfed.org](http://bostonfed.org)



# Figure 1: Nominal and Real Federal Funds Effective Rate

January 2008 - September 2014

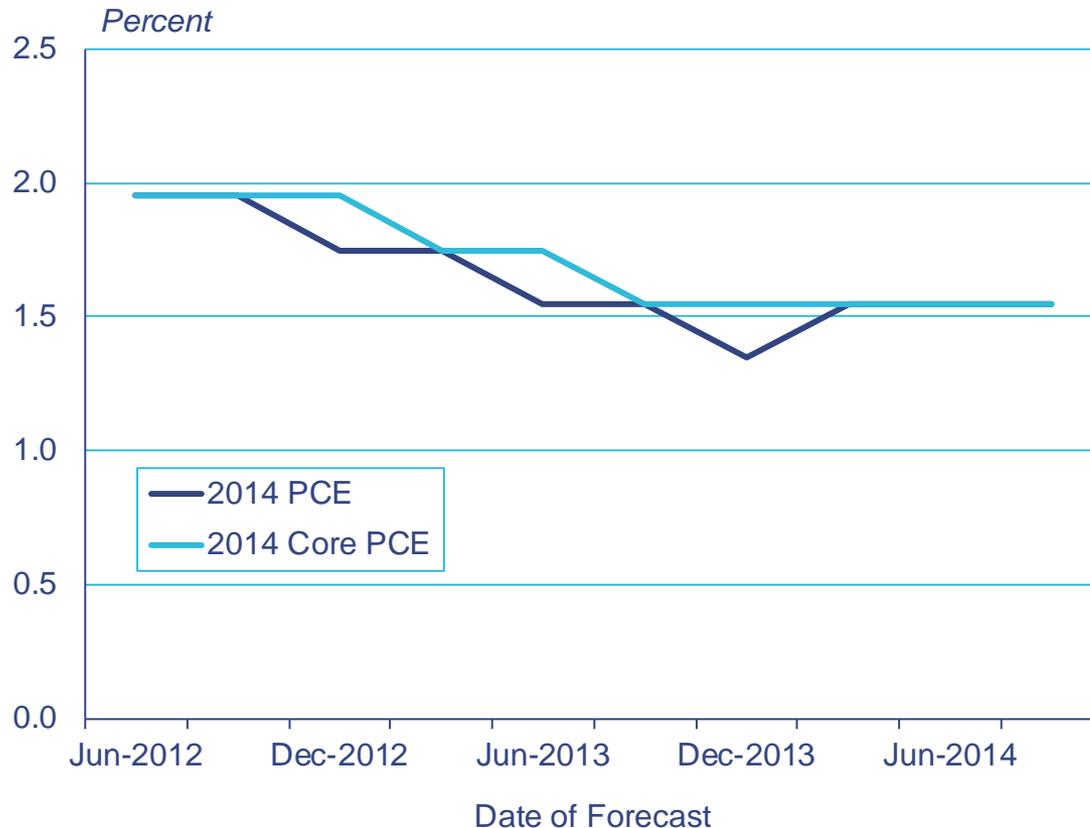


Note: The real federal funds effective rate is calculated by subtracting the core PCE inflation rate from the nominal federal funds effective rate.

Source: BEA, Federal Reserve Board, Haver Analytics

## Figure 2: Median Inflation Forecasts for 2014 of Federal Reserve Board Members and Federal Reserve Bank Presidents

June 2012 - September 2014

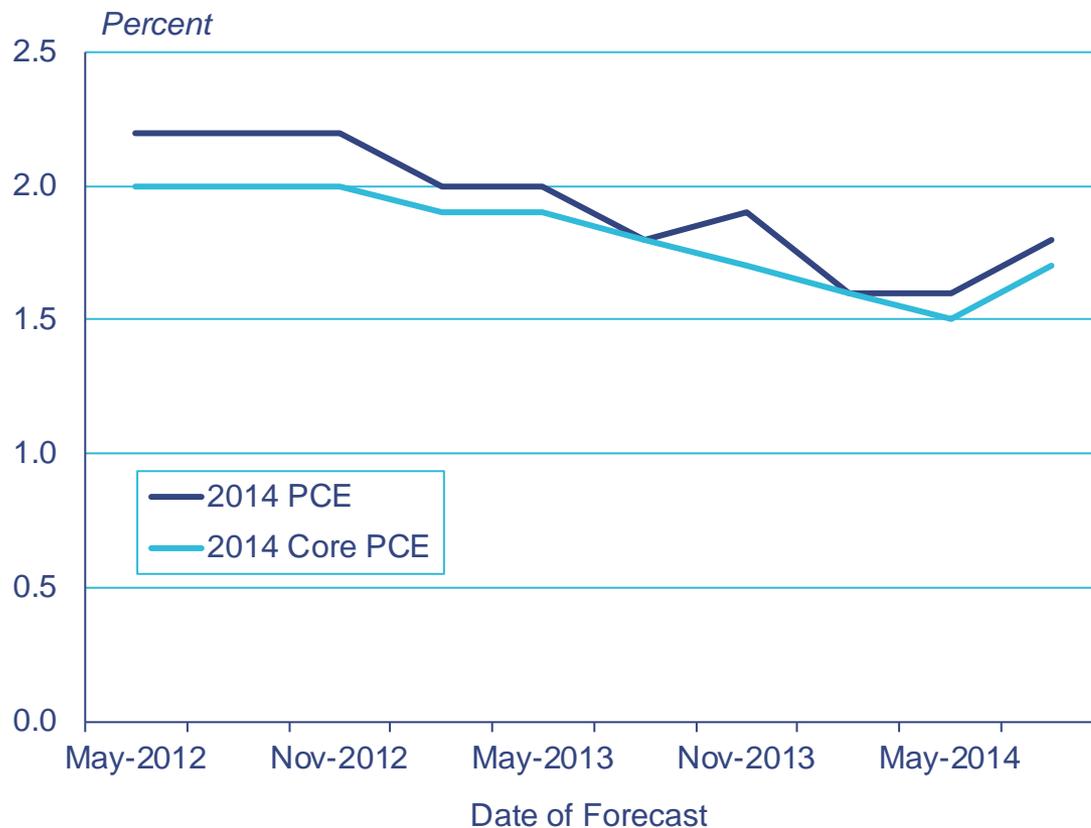


Note: Forecasts for both measures of inflation are for the percent change from the fourth quarter of 2013 to the fourth quarter of 2014.

Source: FOMC, Summary of Economic Projections (SEP), Minutes of FOMC Meetings



### Figure 3: Median Inflation Forecasts for 2014 from the Survey of Professional Forecasters May 2012 - August 2014



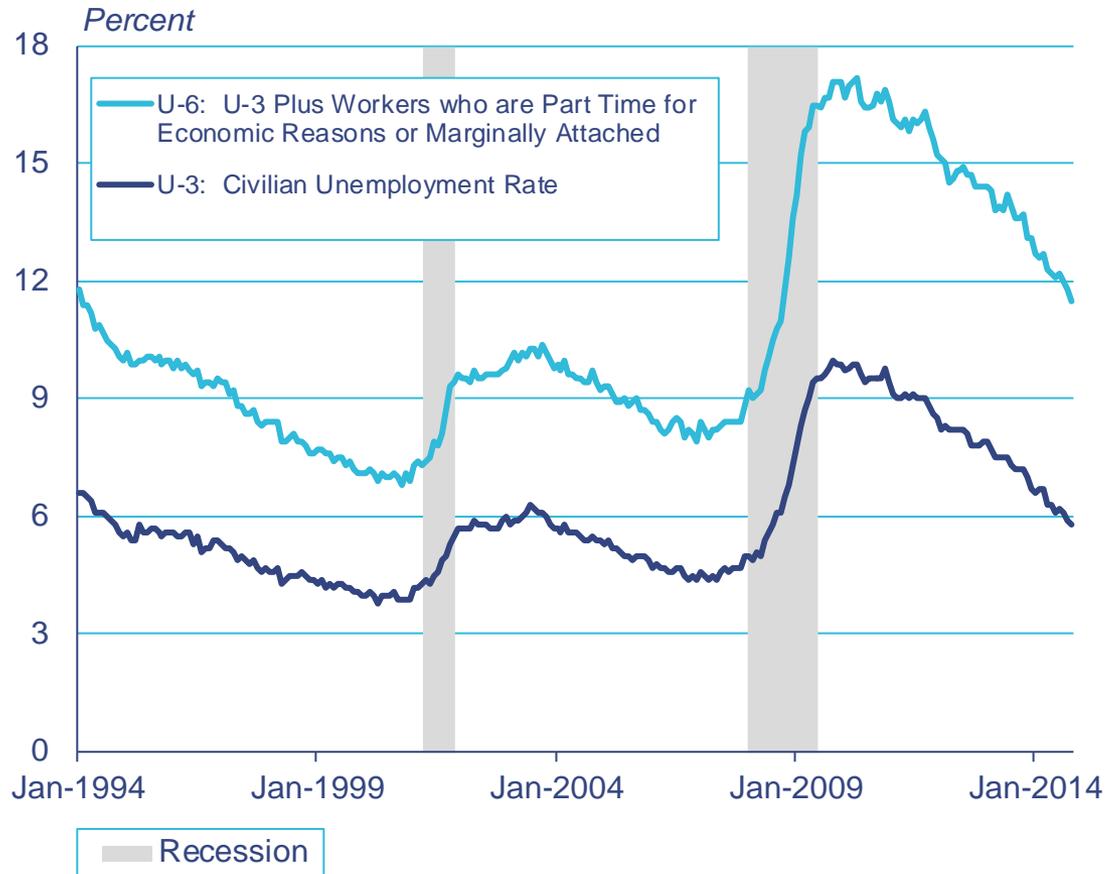
Note: Forecasts for both measures of inflation are for the percent change from the fourth quarter of 2013 to the fourth quarter of 2014.

Source: Federal Reserve Bank of Philadelphia



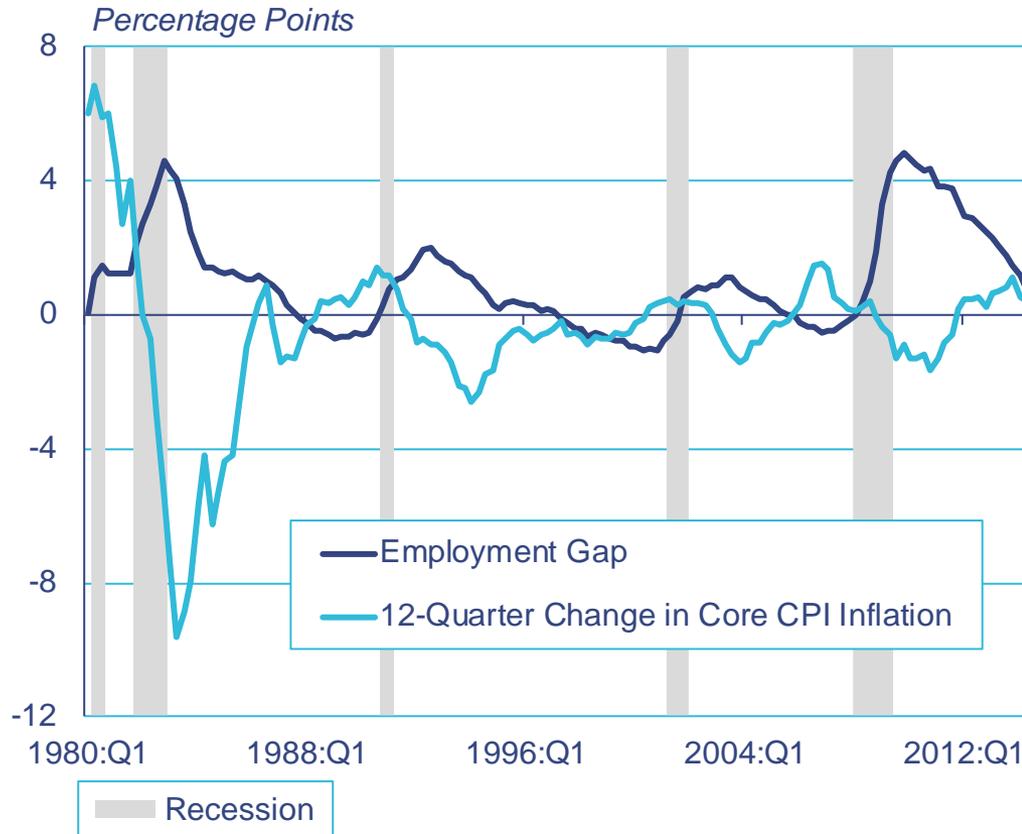
# Figure 4: Measures of Labor Market Slack

January 1994 - October 2014





# Figure 5: Employment Gap and Inflation 1980:Q1 - 2014:Q3



Note: The employment gap is the difference between the unemployment rate and the CBO estimate of the natural rate of unemployment.

Source: BLS, CBO, NBER, Haver Analytics



## Figure 6: Ten-Year Treasury Yield Minus Ten-Year Inflation-Indexed Treasury Yield

January 3, 2012 - November 6, 2014



Note: Yields at Constant Maturity

Source: Federal Reserve Board, Haver Analytics



## Figure 7: Inflation Expectations January 2012 - October 2014

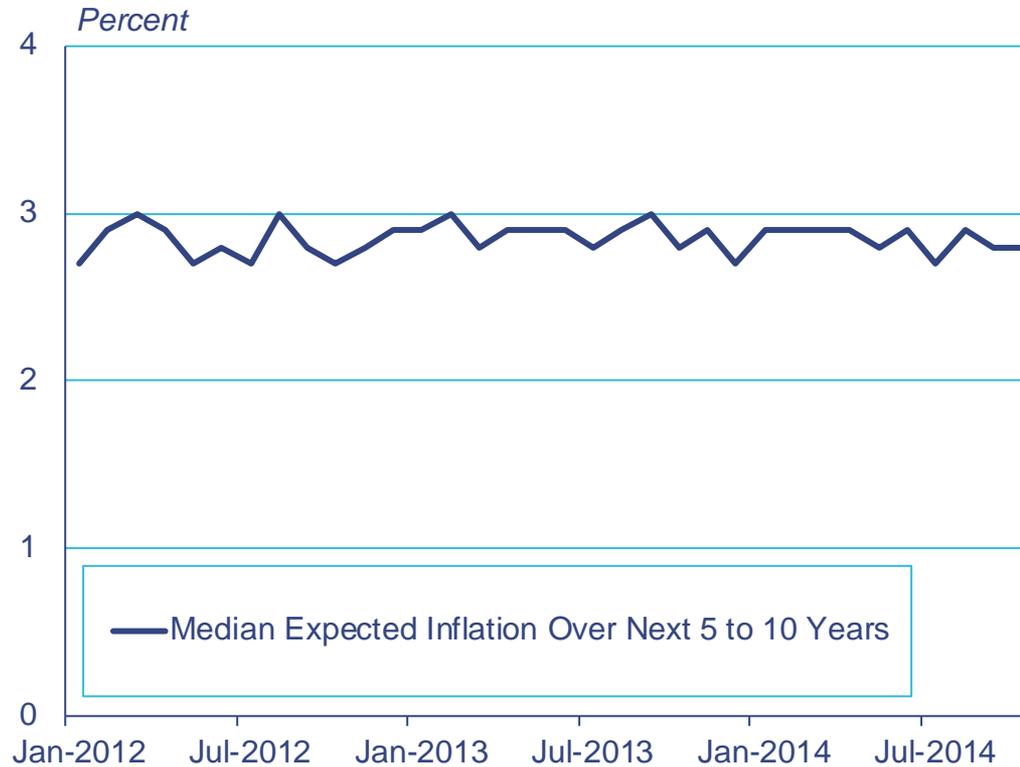




Figure 8: Spot Oil Price:  
West Texas Intermediate Crude Oil  
January 3, 2012 - November 6, 2014

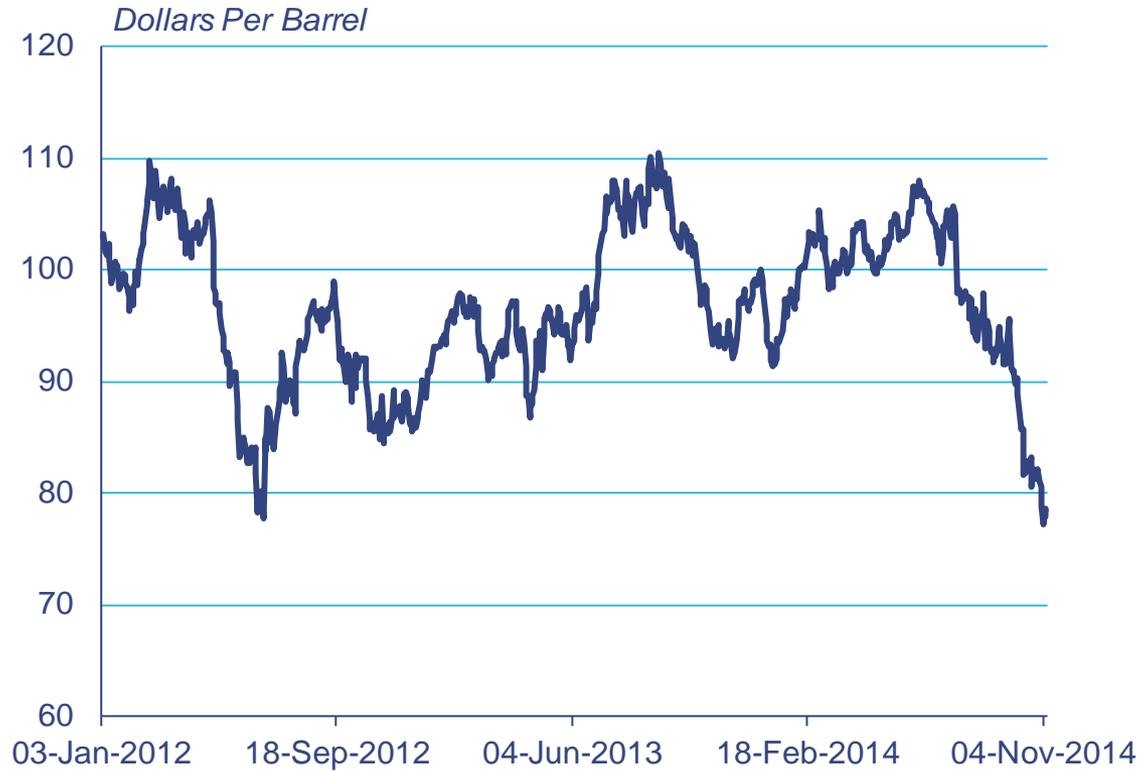
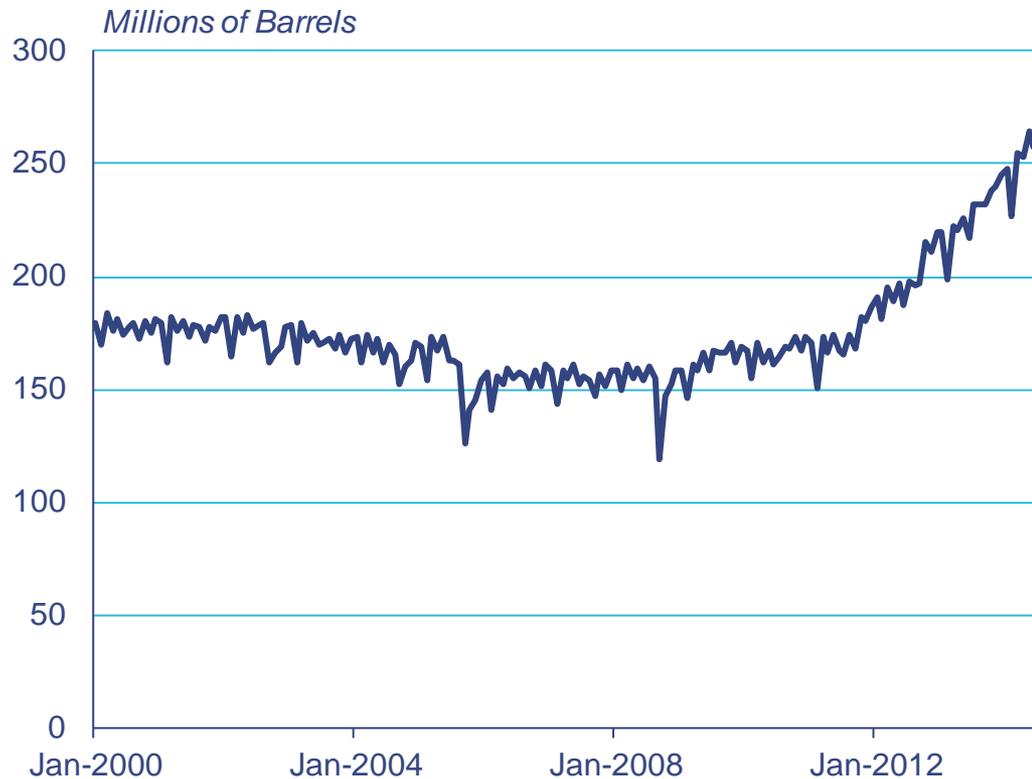




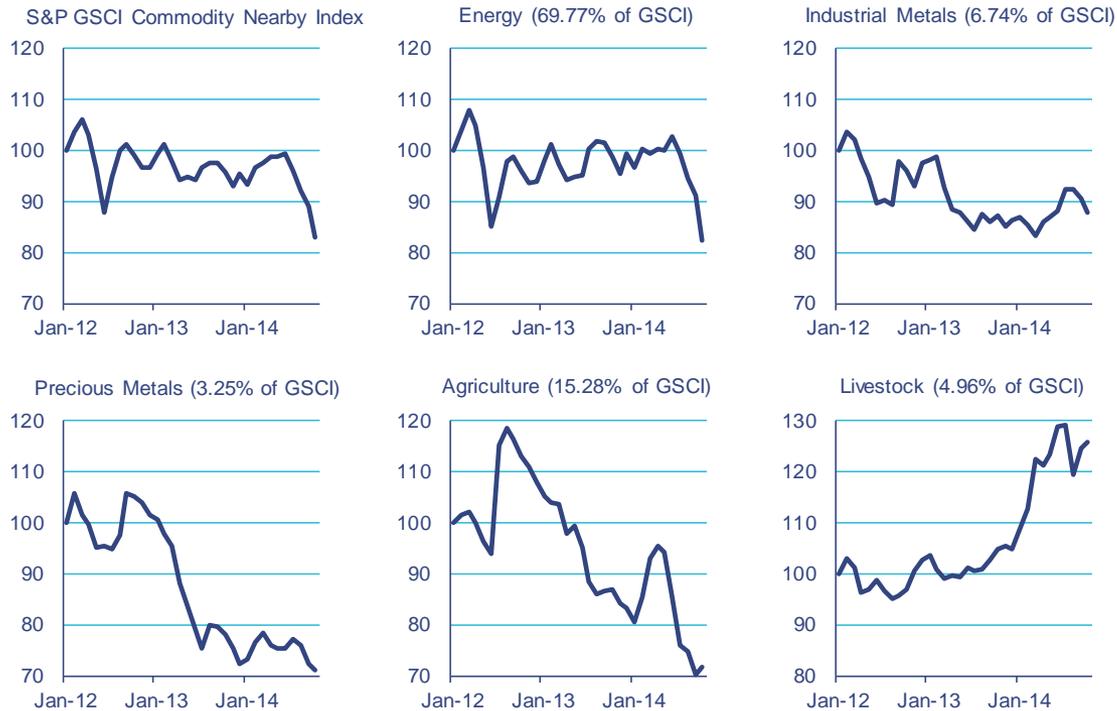
Figure 9: U.S. Field Production of Crude Oil  
January 2000 - August 2014





# Figure 10: S&P Goldman Sachs Commodity Price Indices (January 2012 = 100)

January 2012 - October 2014



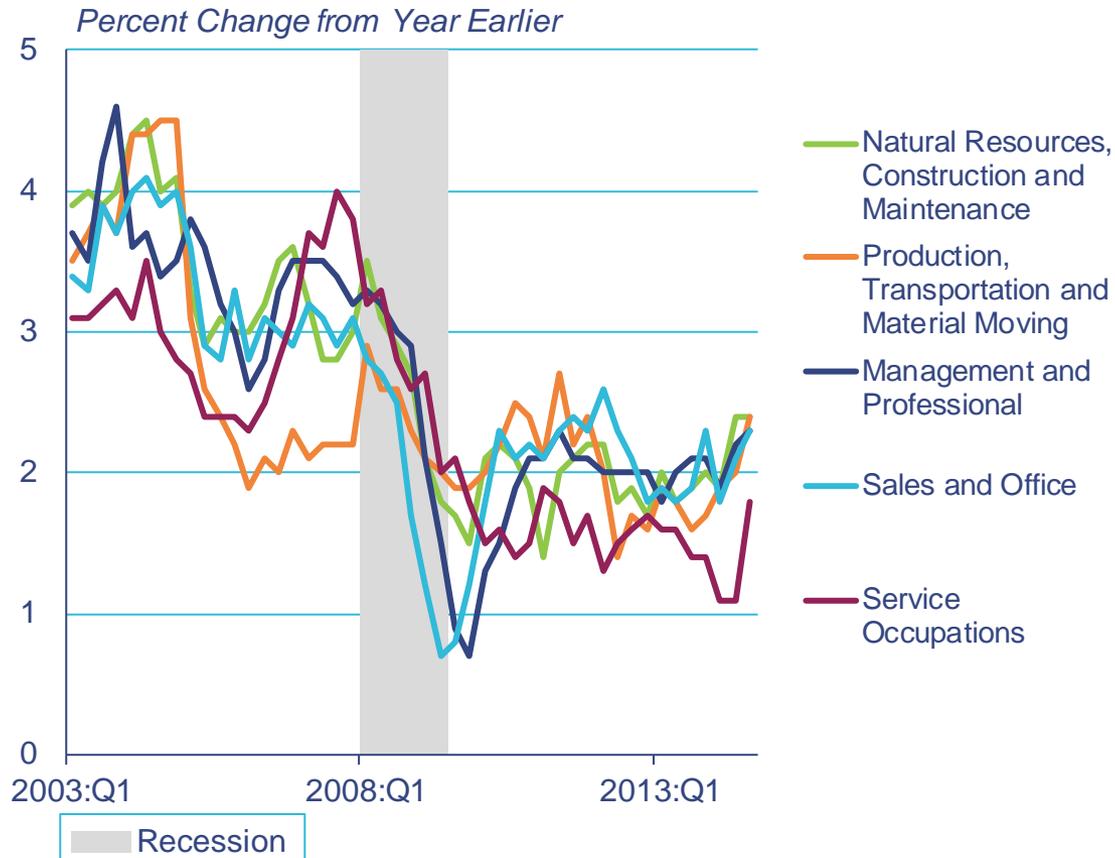
# Figure 11: JP Morgan Nominal Broad Trade-Weighted Effective Exchange Rate Index for the U.S. Dollar

January 3, 2012 - November 6, 2014



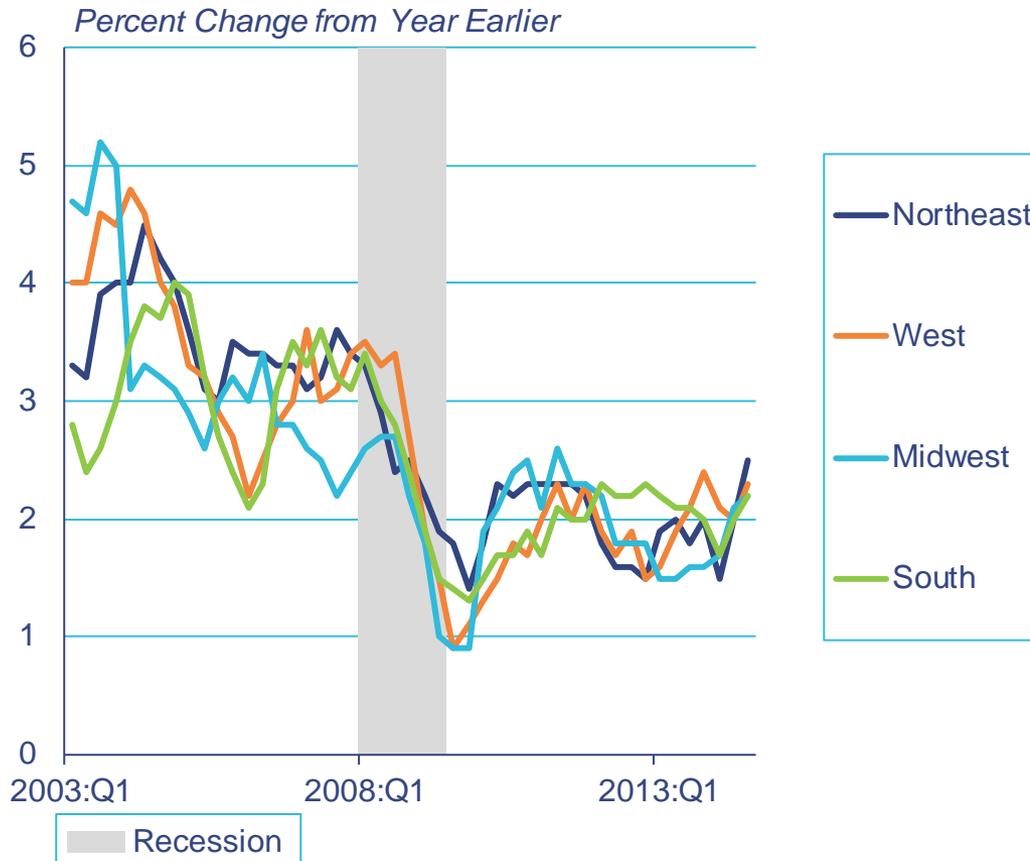
# Figure 12: Employment Cost Index for Total Compensation for Private Industry Workers by Occupational Group

2003:Q1 - 2014:Q3



# Figure 13: Employment Cost Index for Total Compensation for Private Industry Workers by Census Region

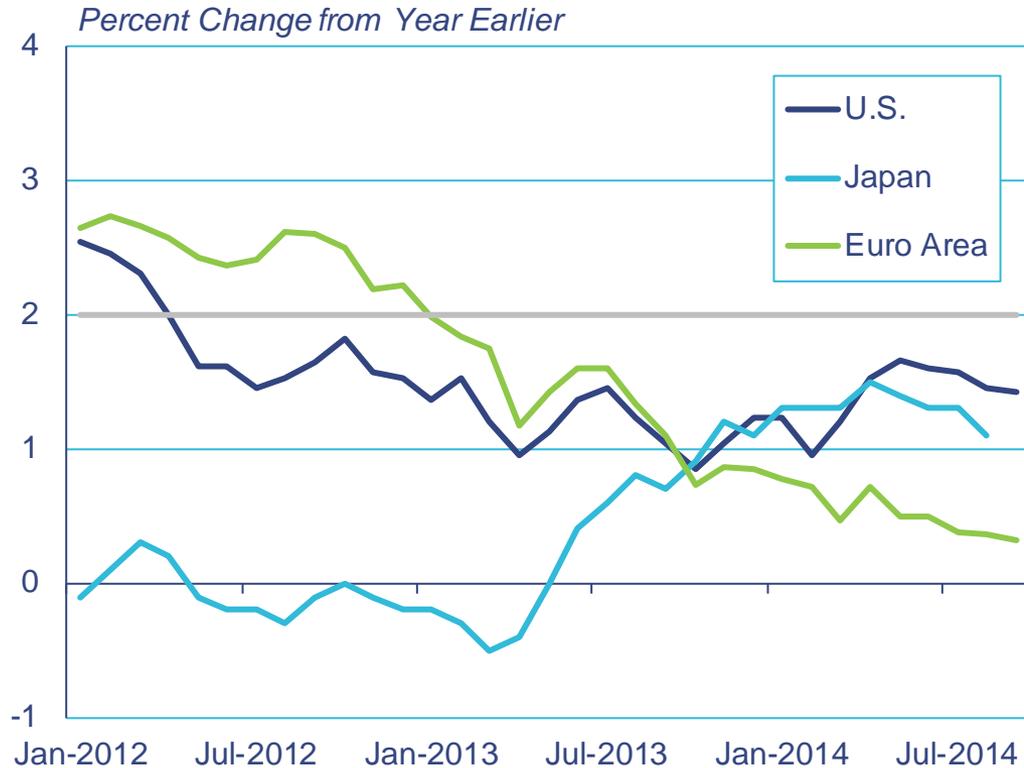
2003:Q1 - 2014:Q3





# Figure 14: Measures of Inflation Targeted by Central Banks

January 2012 - September 2014



Note: The U.S. series is the PCE. The Euro Area series is the Harmonized Index of Consumer Prices. Japan's series is the CPI, All Items less Fresh Food, and adjusted for Japan's April 2014 consumption tax increase.

Source: BEA, Eurostat, Japan's Ministry of Internal Affairs and Communications, Bank of Japan, Haver Analytics

# Figure 15: Overnight/Policy Rates for the Euro Area, Japan, and the U.S.

January 3, 2012 - November 6, 2014

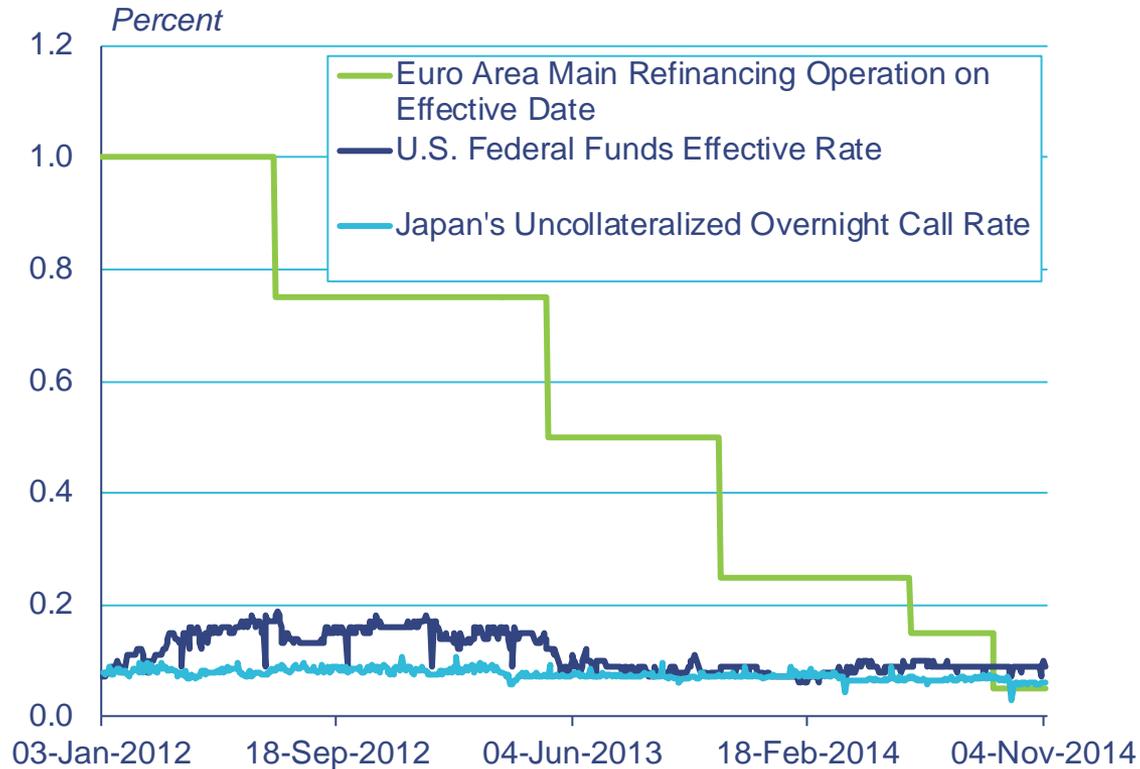




Figure 16: Ten-Year Government Bond Yields  
January 3, 2012 - November 6, 2014

