
Useful Macro Graphs

Charles I. Jones

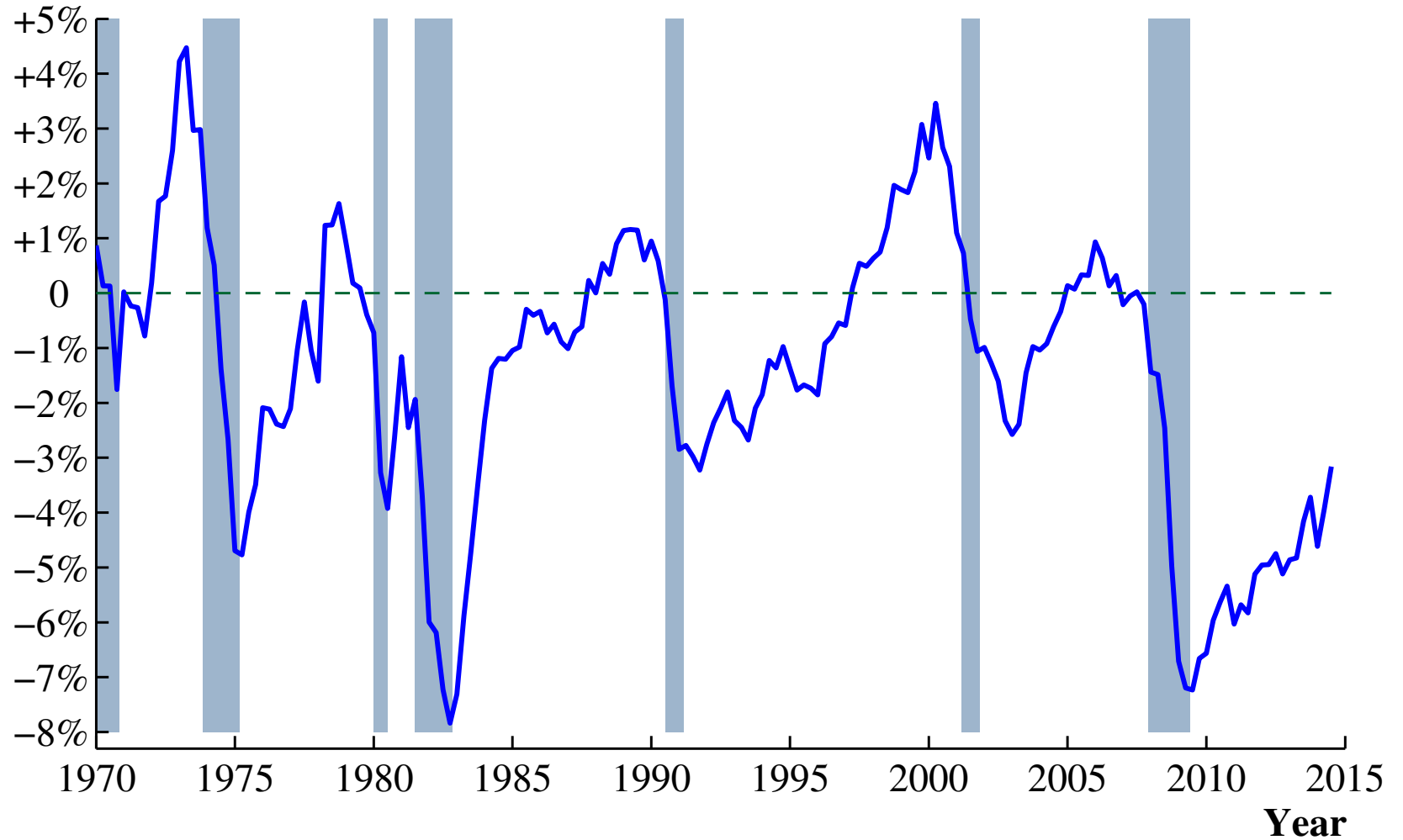
Stanford GSB

January 12, 2015

Many of these graphs are updated versions of graphs in the Short-Run section of my *Macroeconomics* textbook (W.W. Norton, 2014). Others are just graphs that I find useful in my teaching.

Fig 9.3: U.S. Economic Fluctuations

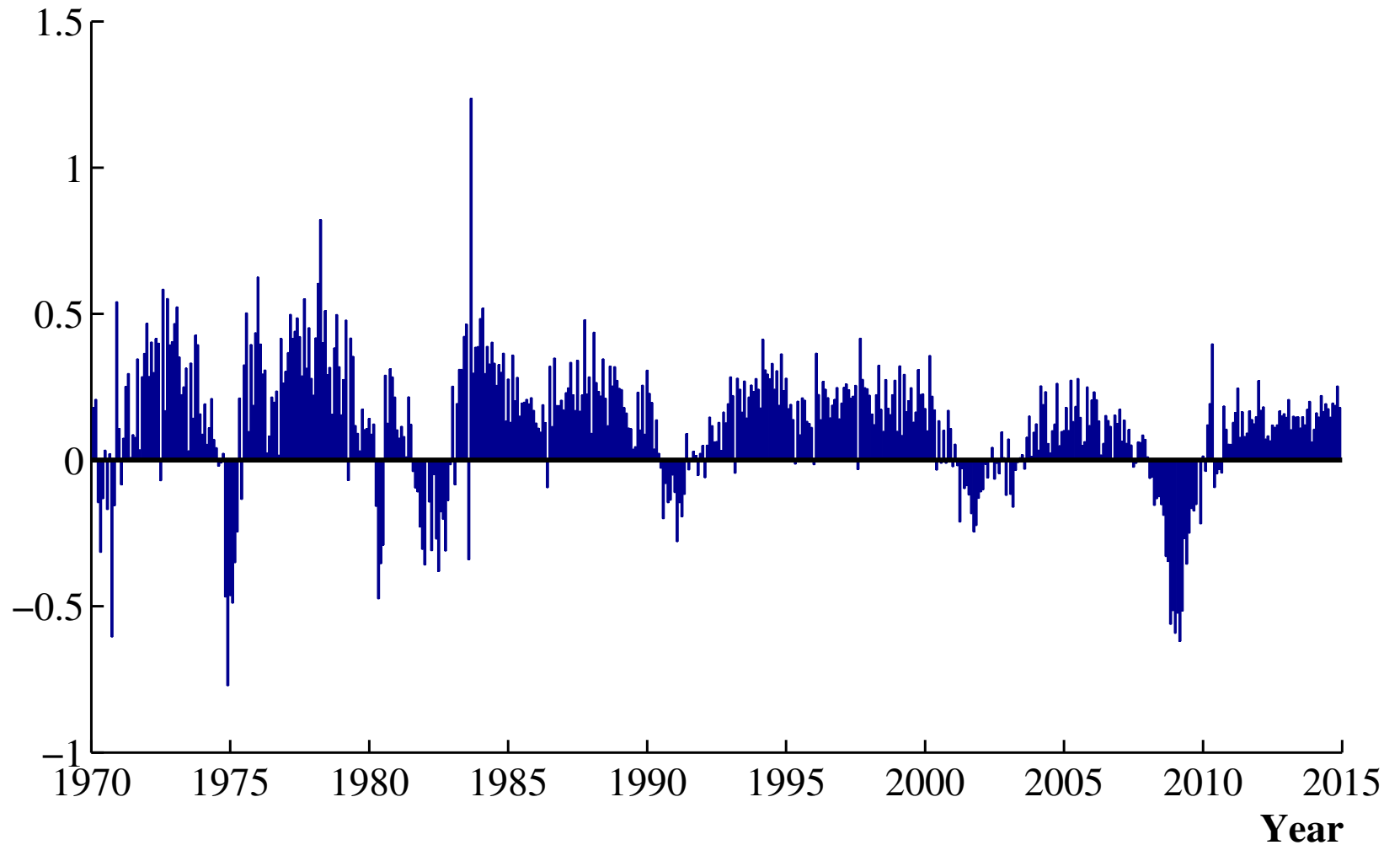
Short-run output, $Y_{t|d}$



Source: Federal Reserve Economic Data

Fig 9.4: Change in U.S. Employment

Monthly change in employment (percent)



Source: Federal Reserve Economic Data

Fig 10.2: The Fed Funds Rate

Percent

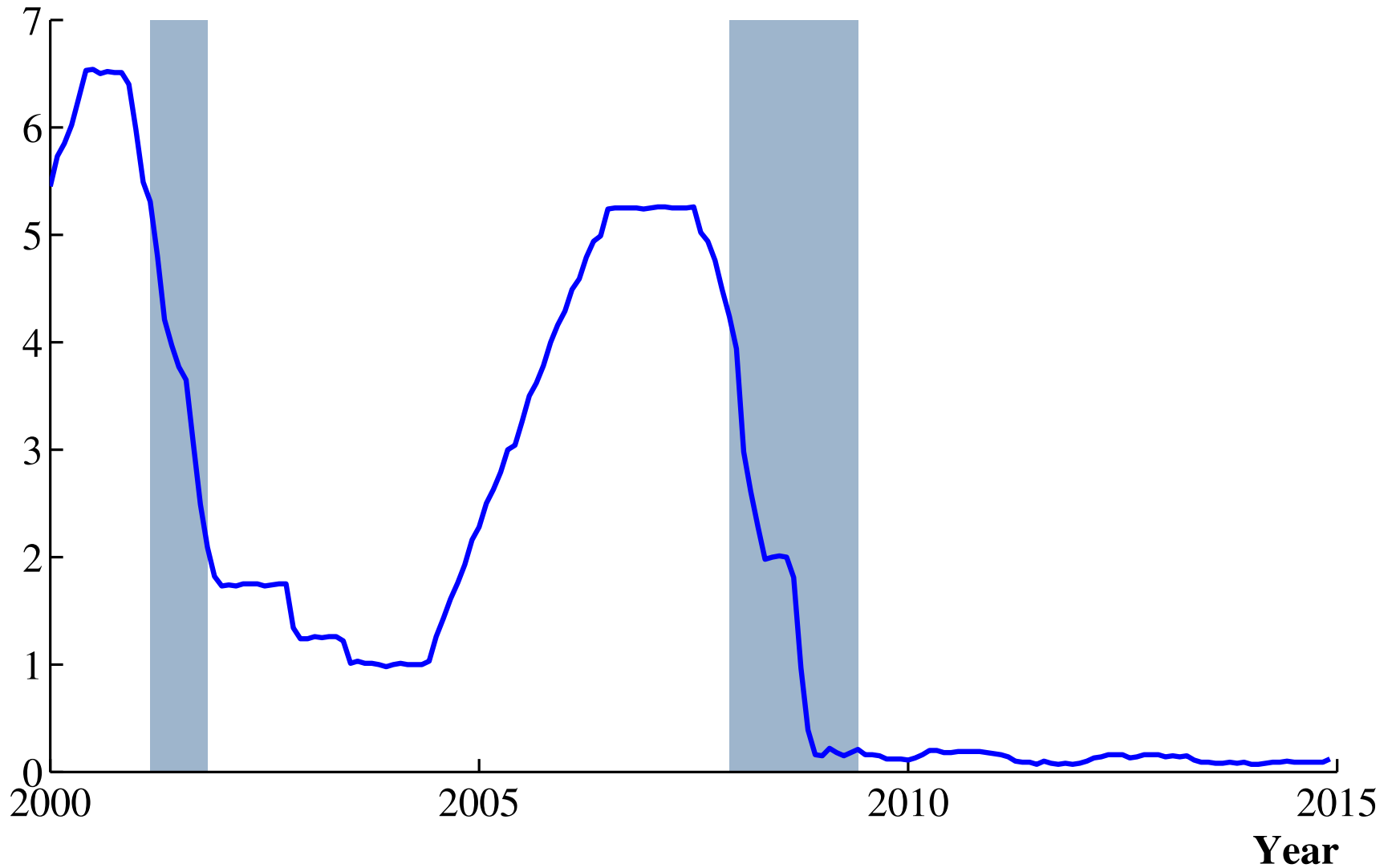
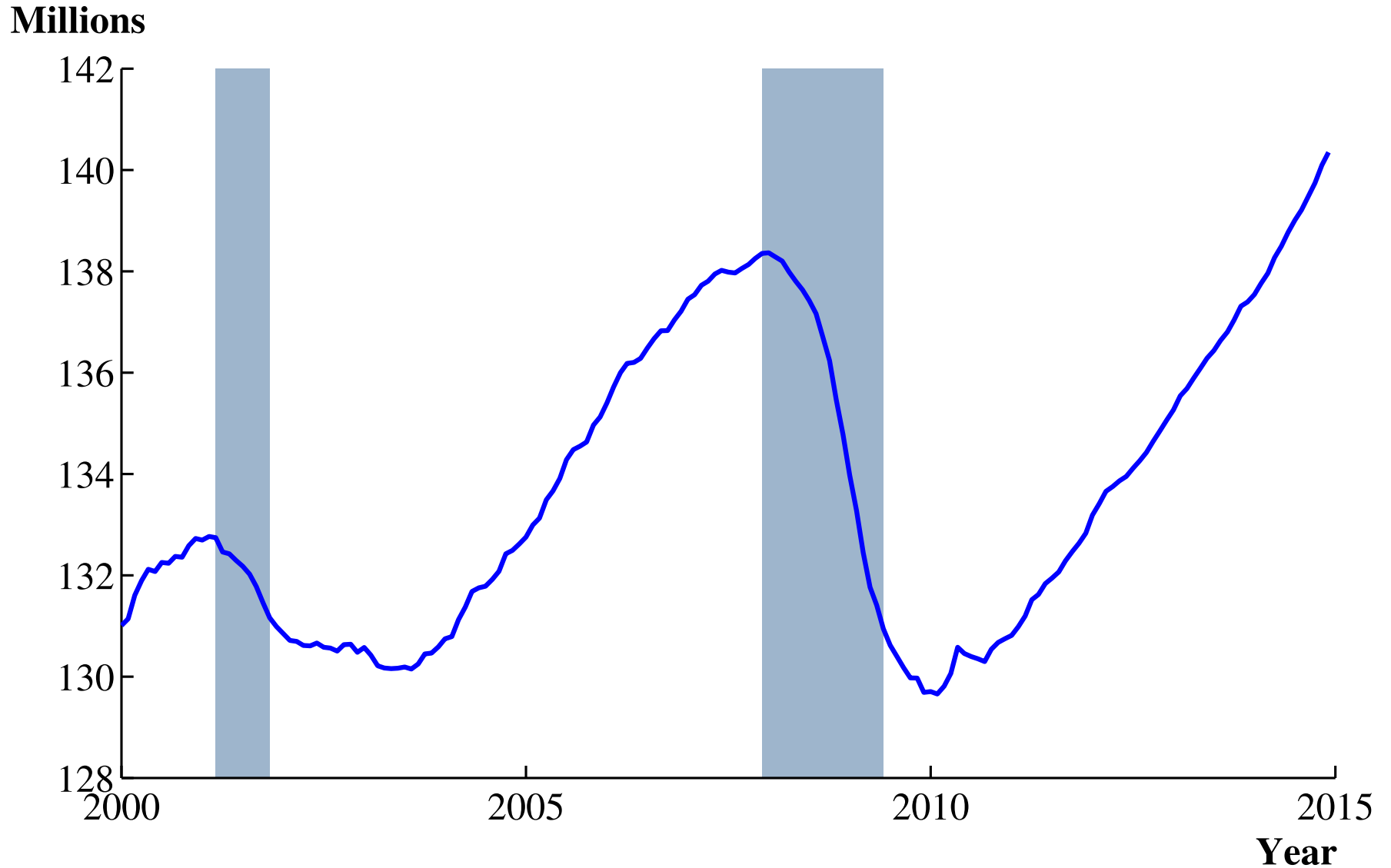


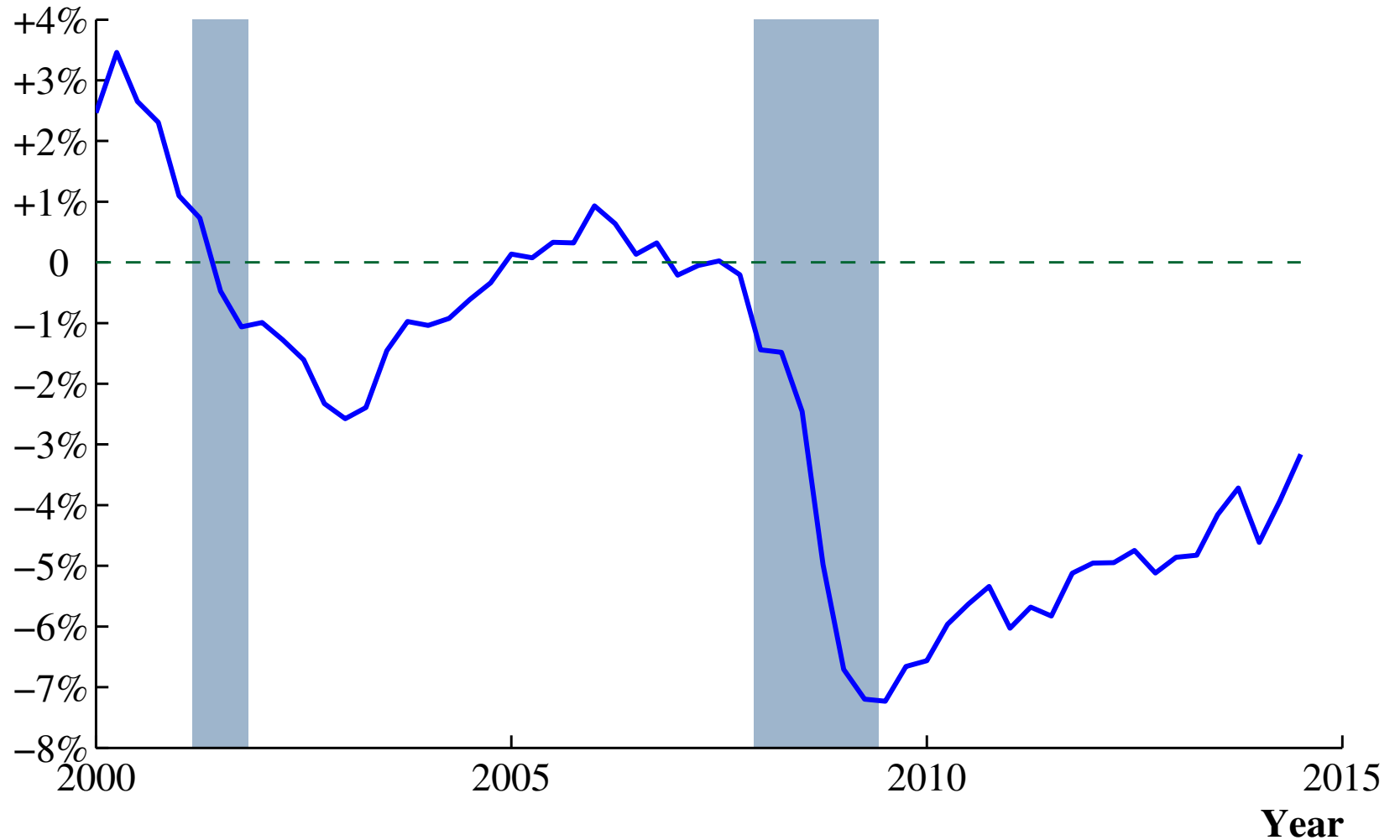
Fig 10.6: U.S. Employment



Source: Federal Reserve Economic Data

Fig 10.7: U.S. Economic Fluctuations since 2000

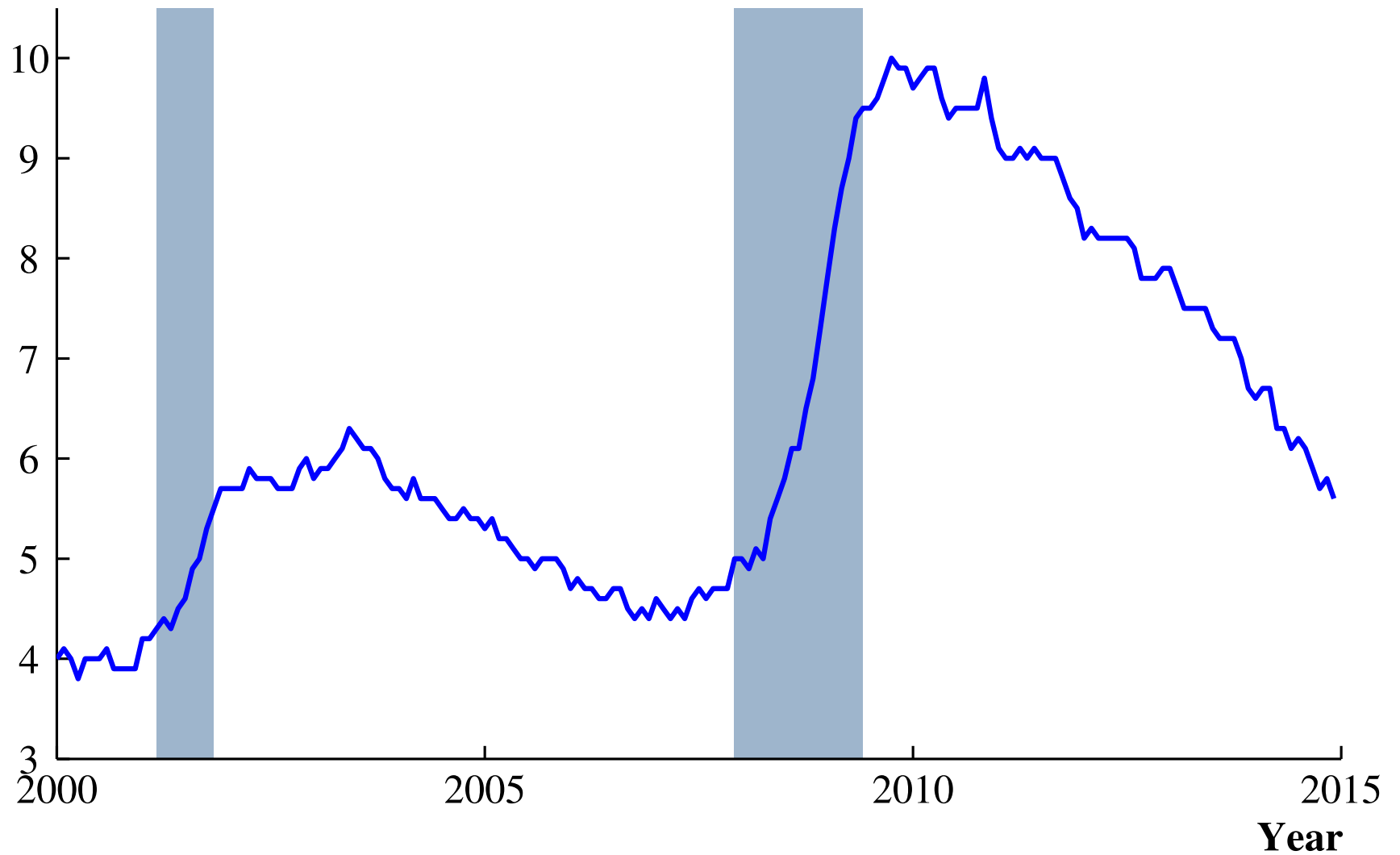
Short-run output, Y_{tild}



Source: Federal Reserve Economic Data

Fig 10.8: U.S. Unemployment Rate

Percent

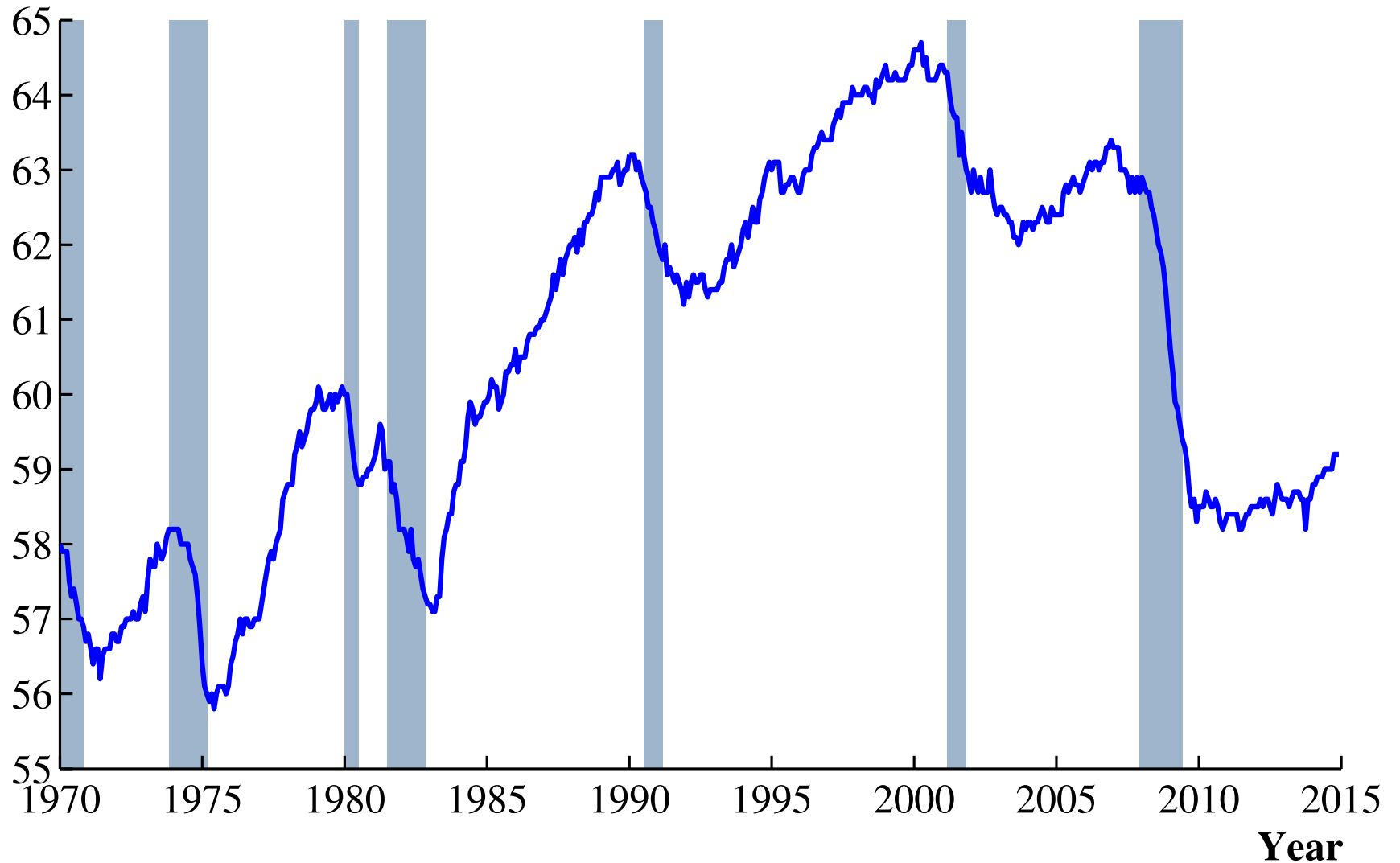


Source: Federal Reserve Economic Data

The U.S. Employment-Population Ratio

Down from 63 to 58
V versus U

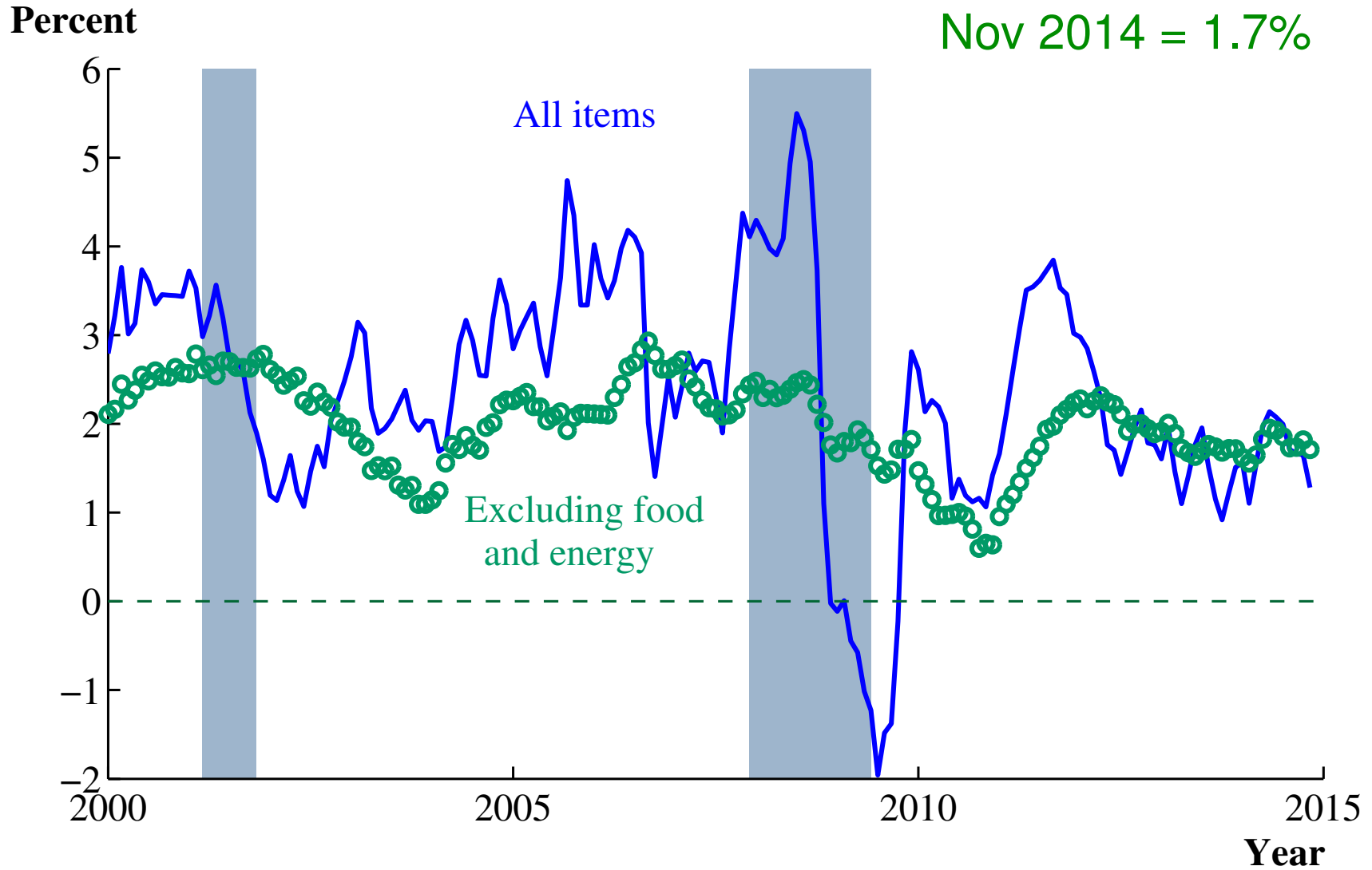
Percent



Source: Federal Reserve Economic Data

Fig 10.10: Inflation in the U.S.

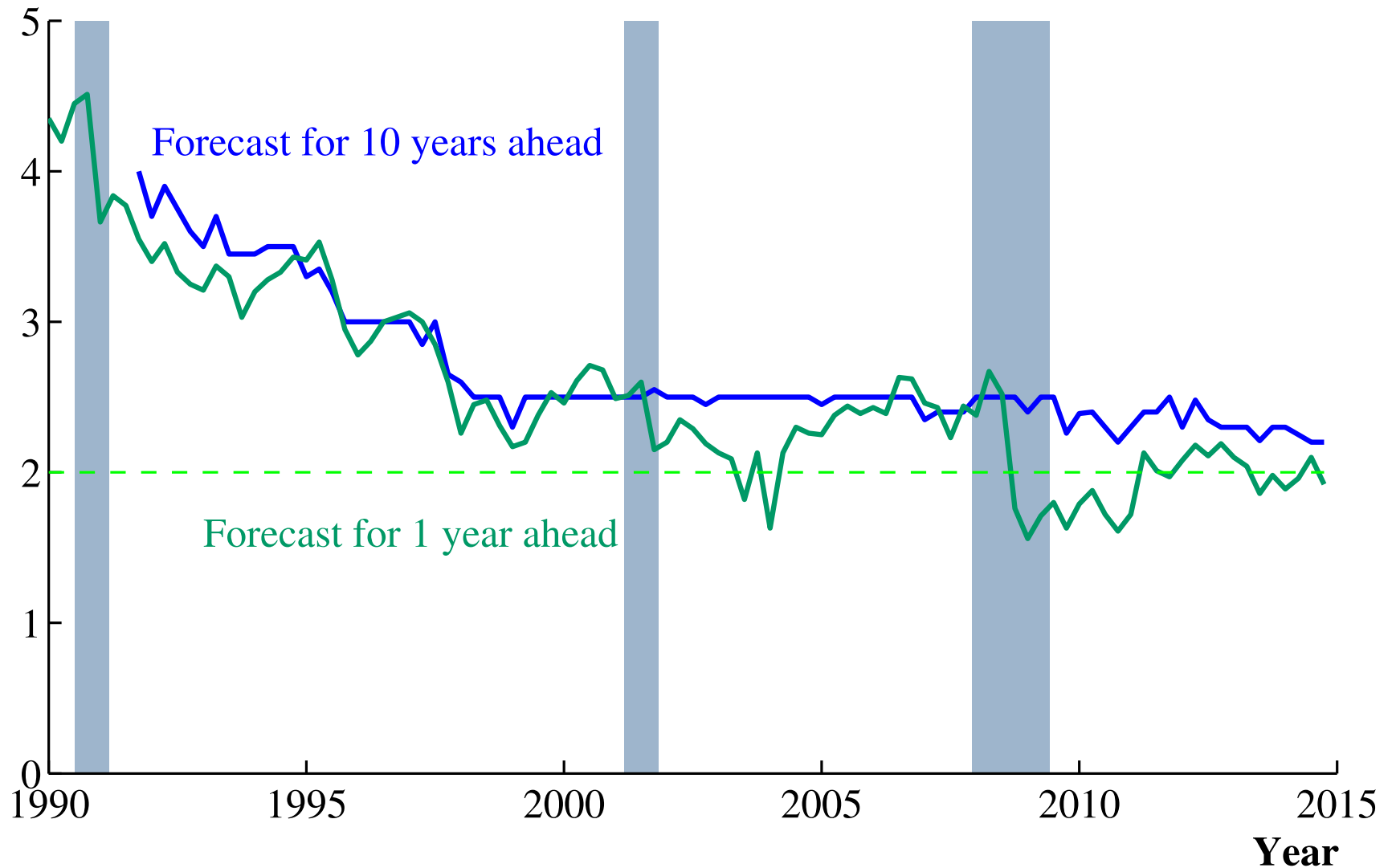
Dec 2007 = 2.4%
Dec 2010 = 0.6%
Nov 2014 = 1.7%



Source: Federal Reserve Economic Data

Forecasts of CPI Inflation, 1 Year and 10 Years Ahead

Percent

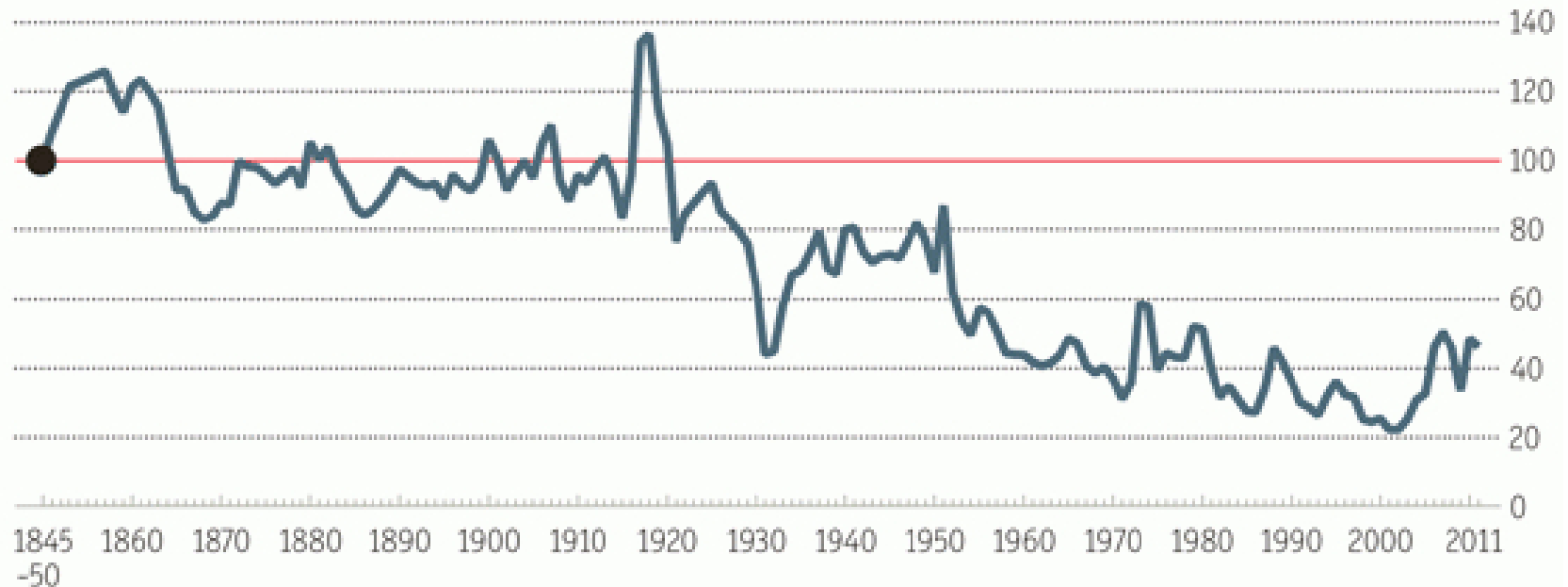


Source: Survey of Professional Forecasters, FRB Philadelphia

Commodity Prices over the Long Run

Metal detector

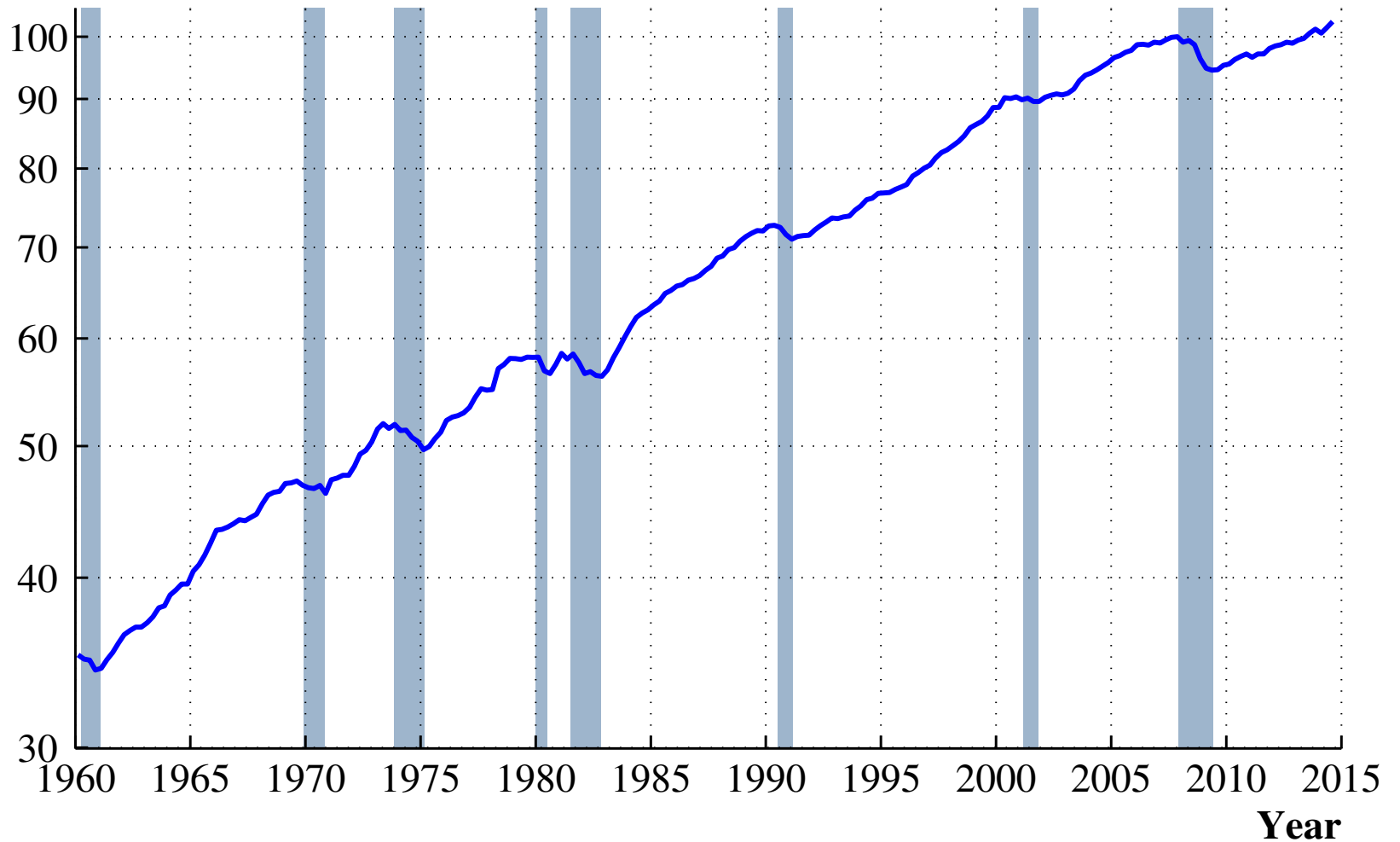
The Economist industrial commodity-price index, real* \$ terms, 1845-50=100



Source: *Economist*, "Resource prices" Oct 14th 2011.

Real GDP per Person in the United States

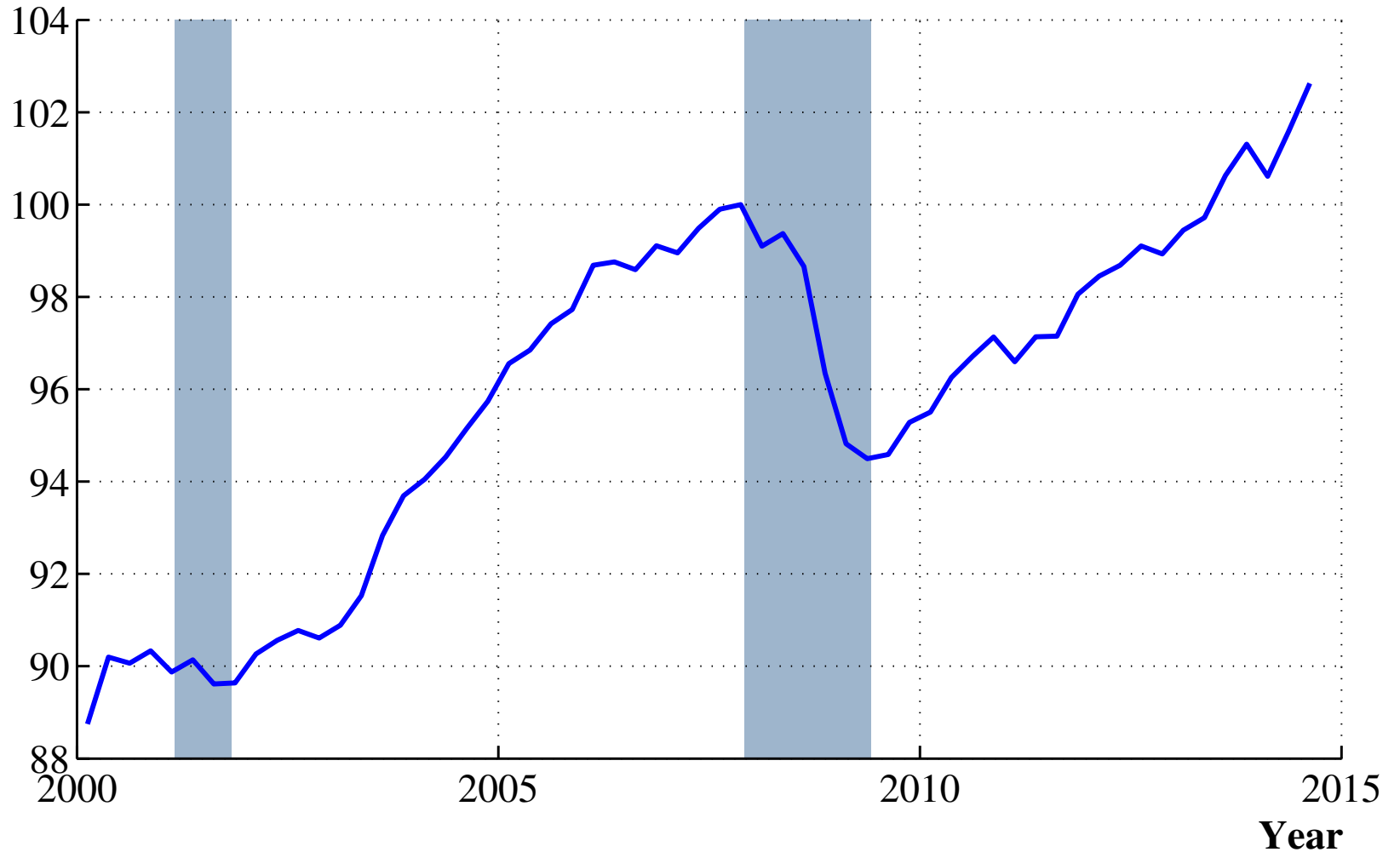
Real GDP per person (2007Q4=100)



Source: Federal Reserve Economic Data

Real GDP per Person – Current Recession

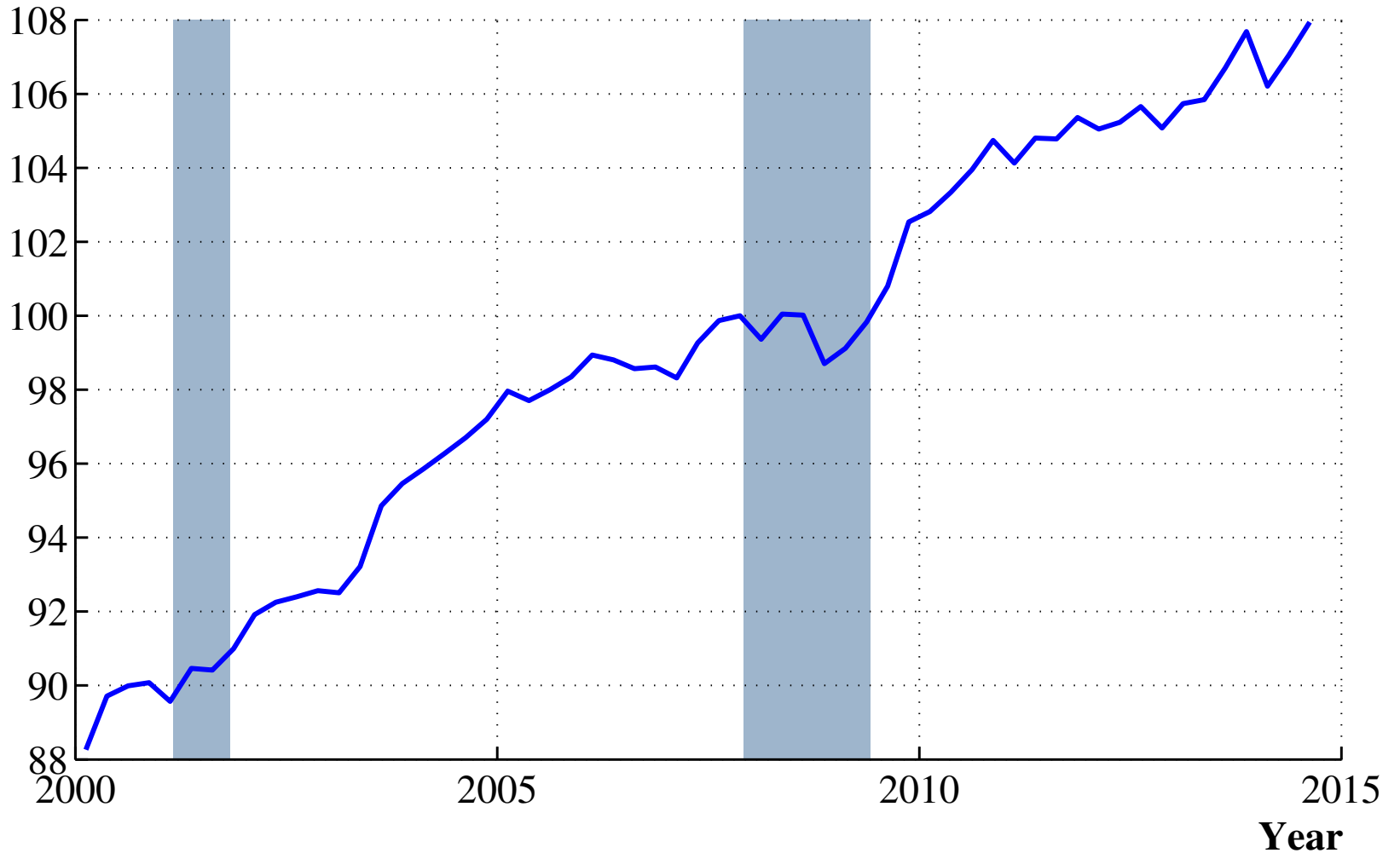
Real GDP per person (2007Q4=100)



Source: Federal Reserve Economic Data

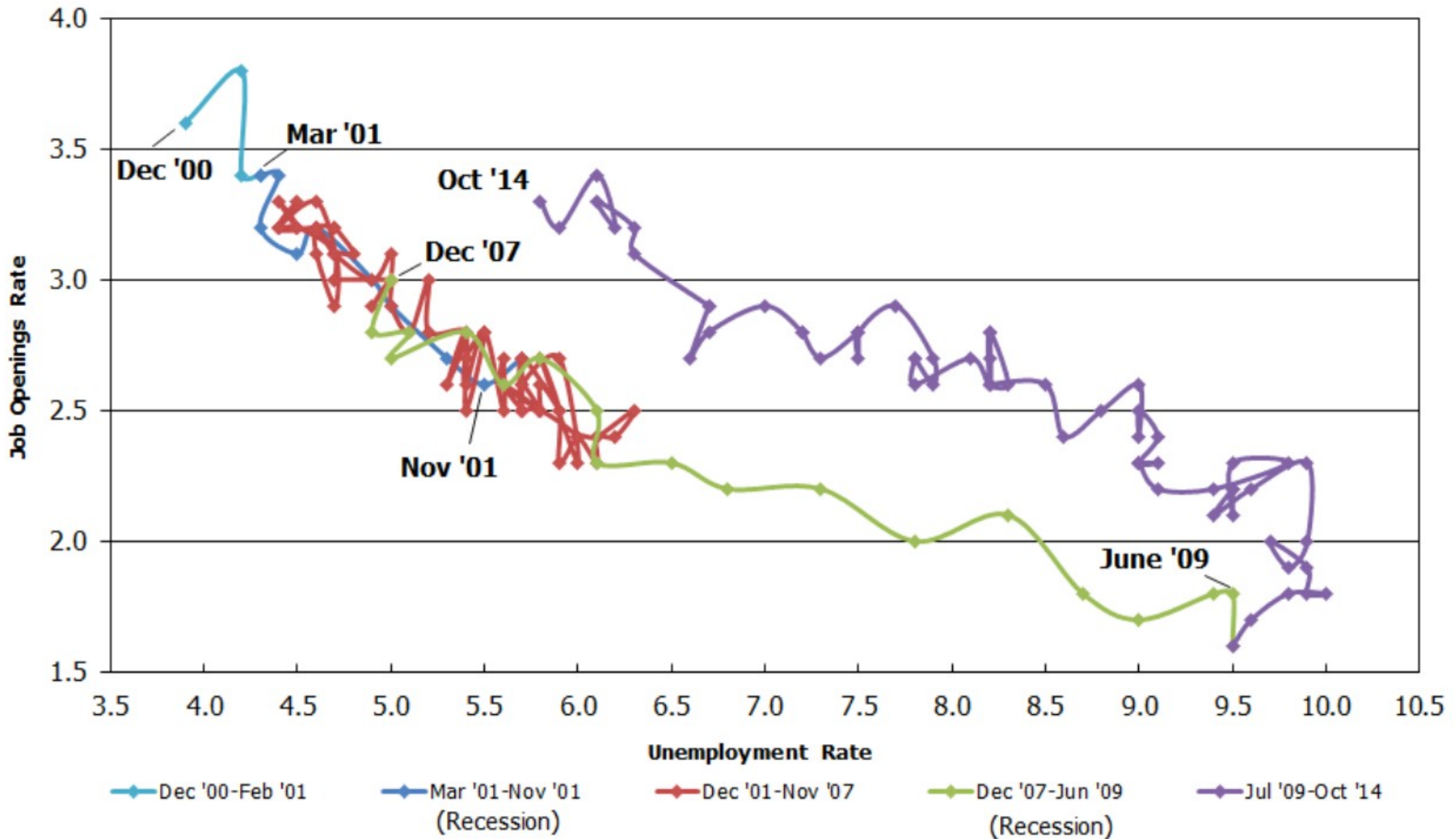
Real GDP per Employee – Current Recession

GDP per Employee



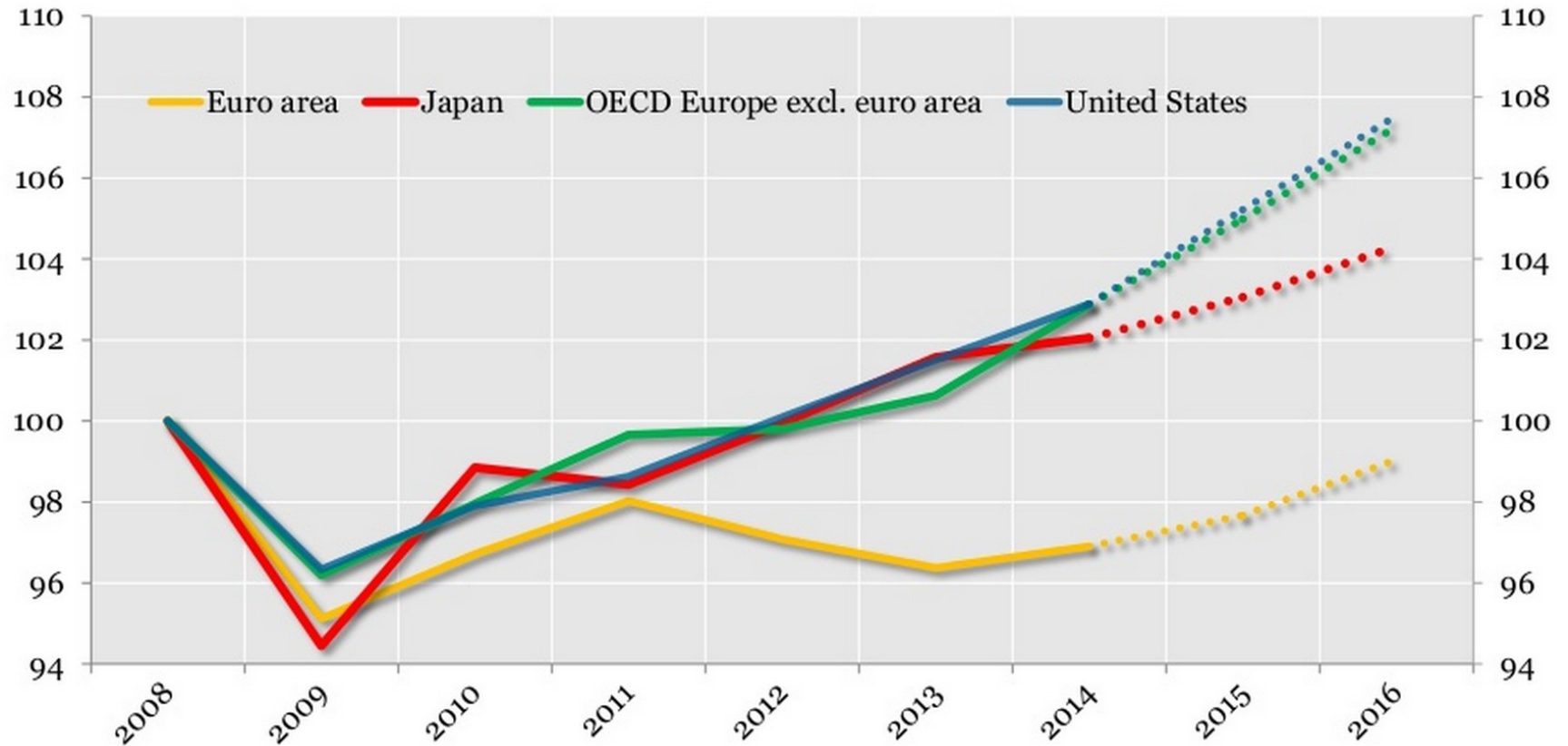
Source: Federal Reserve Economic Data

The Beveridge Curve (2010 Nobel Prize in Economics)



Source: BLS JOLTS Highlights

OECD Outlook: Growth in Real GDP per Person



Source: OECD Economic Outlook, November 2014.

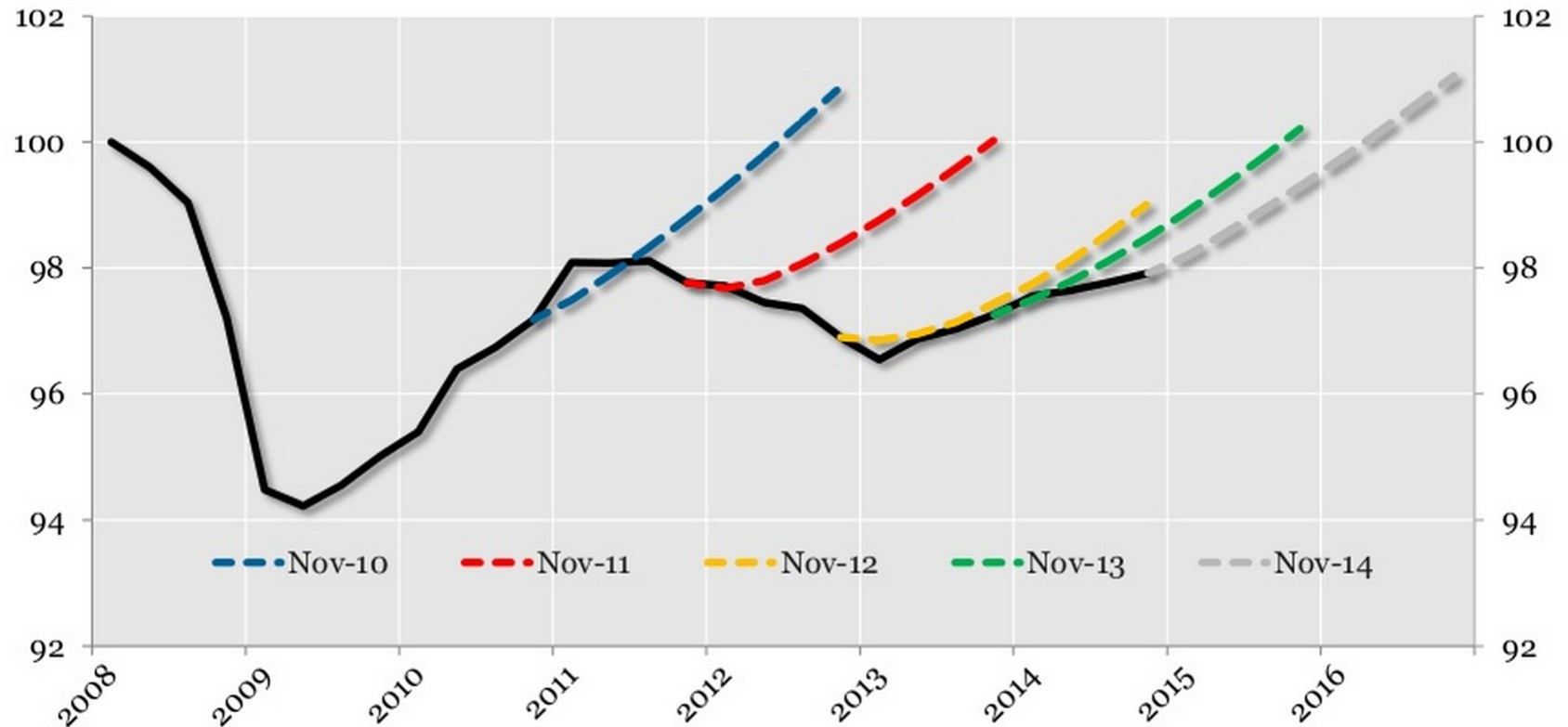
World Outlook: Real GDP Growth

	Average 2002-2011	2012	2013	2014	2015	2016
Per cent						
Real GDP growth¹						
World ²	3.8	3.1	3.1	3.3	3.7	3.9
OECD ²	1.7	1.3	1.4	1.8	2.3	2.6
United States	1.7	2.3	2.2	2.2	3.1	3.0
Euro area	1.1	-0.7	-0.4	0.8	1.1	1.7
Japan	0.7	1.5	1.5	0.4	0.8	1.0
Non-OECD ²	7.1	5.2	5.0	4.8	5.1	5.3
China	10.6	7.7	7.7	7.3	7.1	6.9

Source: OECD Economic Outlook, November 2014.

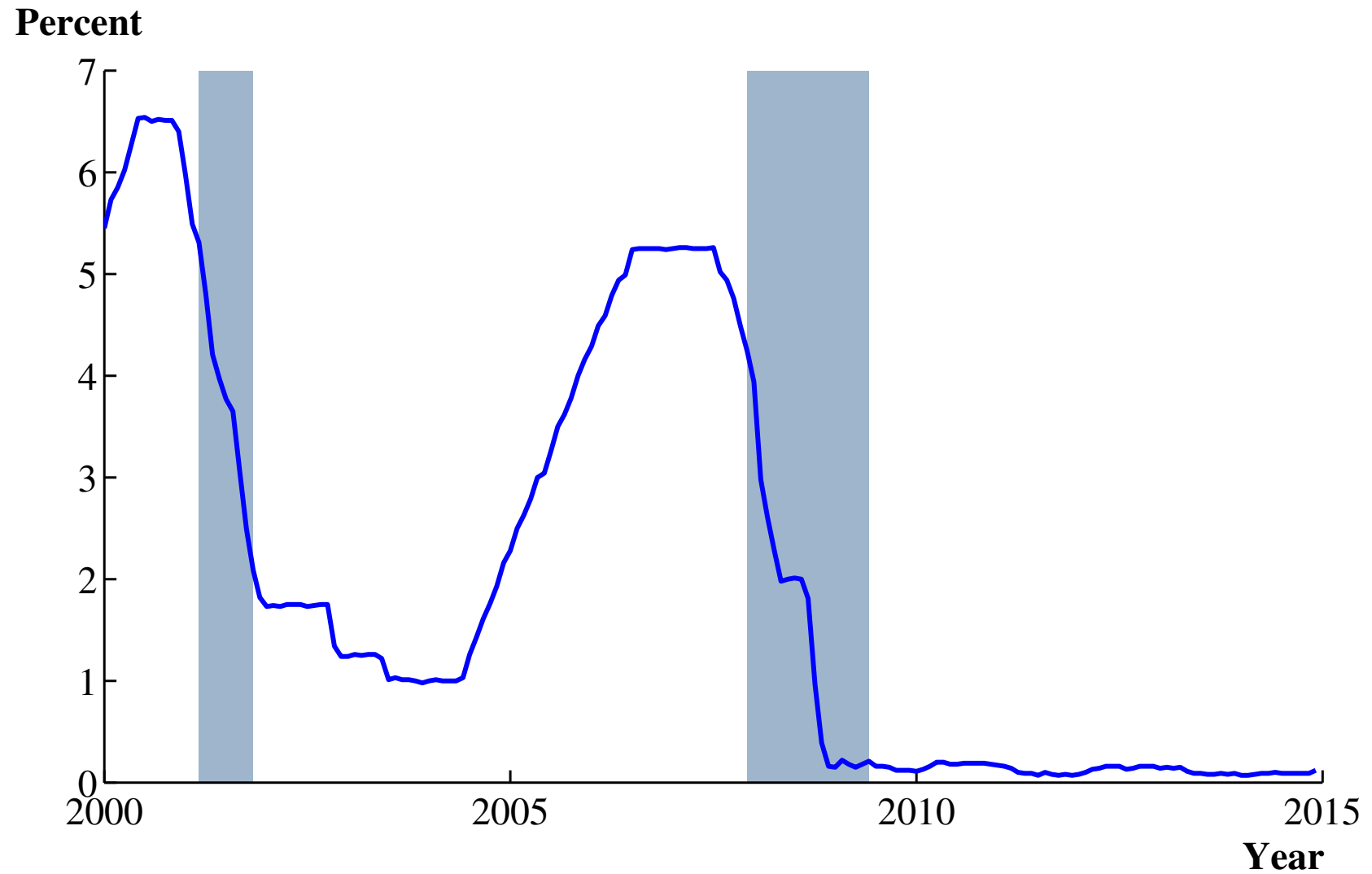
OECD Outlook: Forecast Errors

Past Economic Outlook projections of euro area GDP
Volume index, Q1 2008 = 100

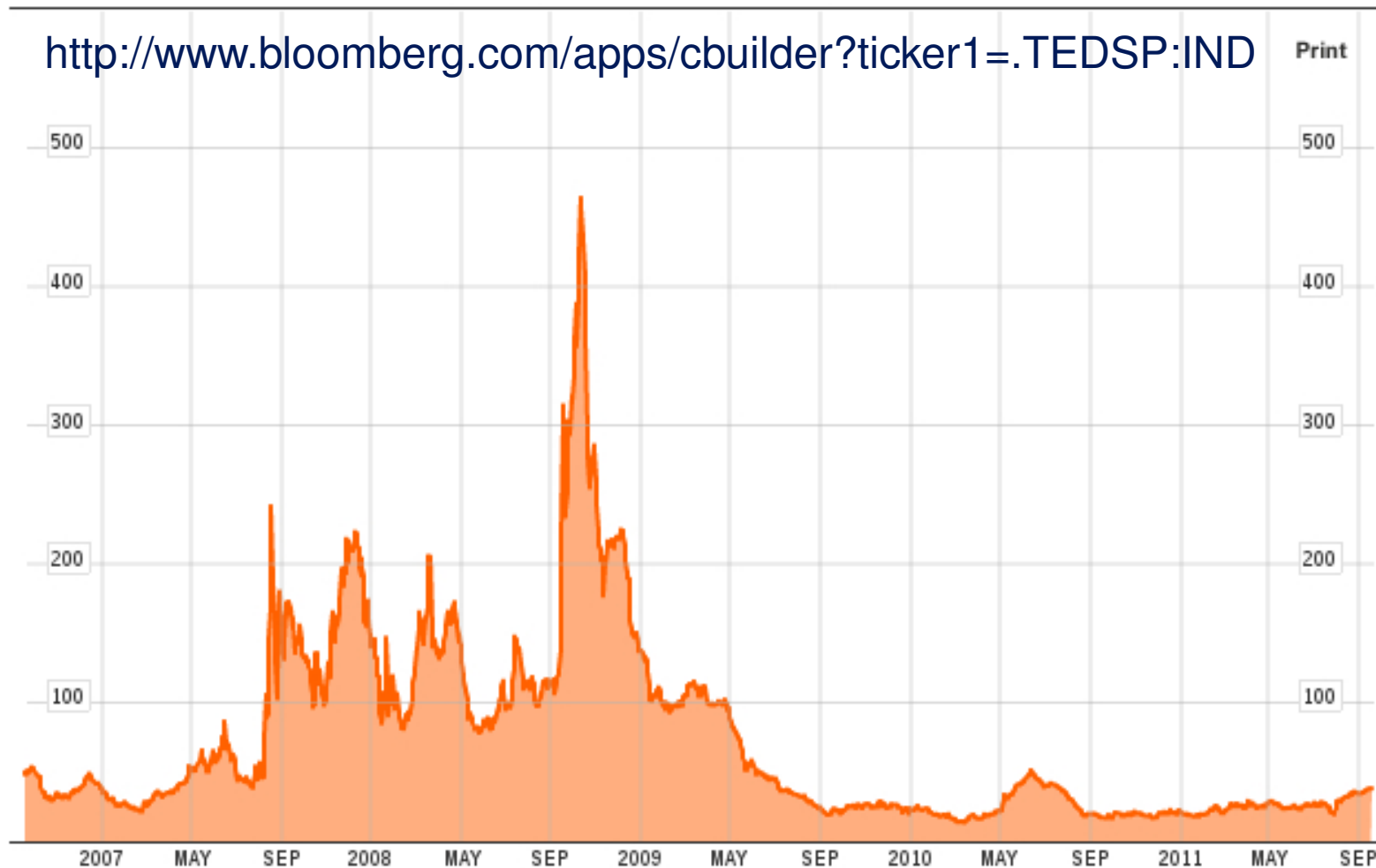


Source: OECD Economic Outlook, November 2014.

Dropping the Fed Funds rate to zero

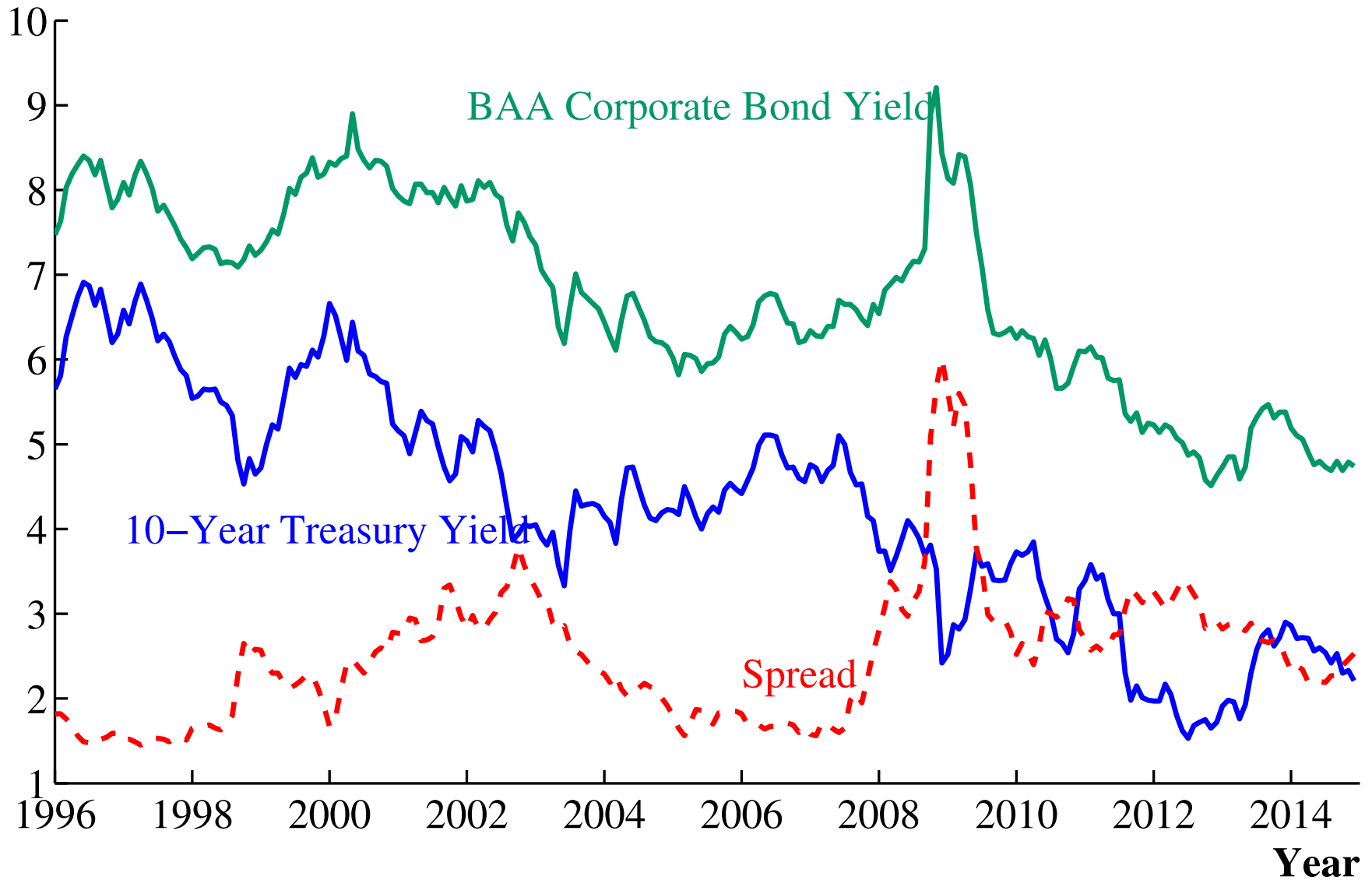


Risk spreads in interbank lending



TED Spread: difference between the 3-month LIBOR rate and the 3-month U.S. treasury yield

Fig 14.1: Ten Year Bond Spreads



Percent

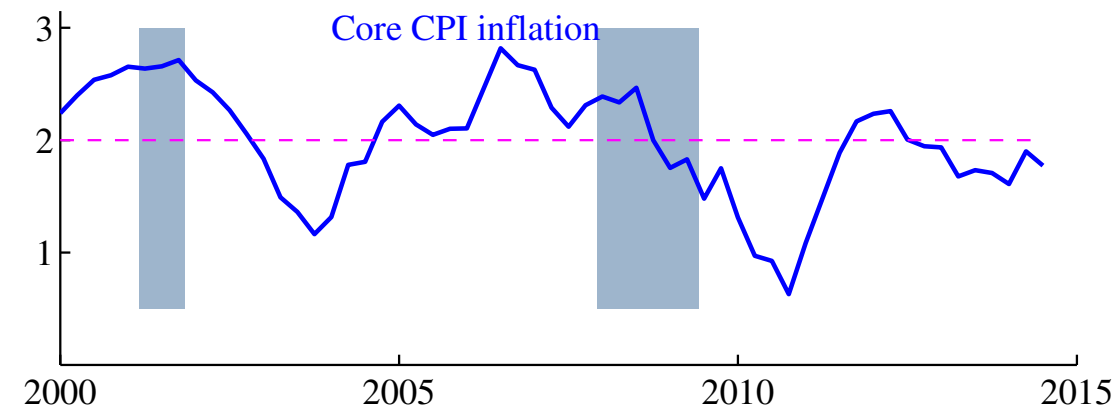
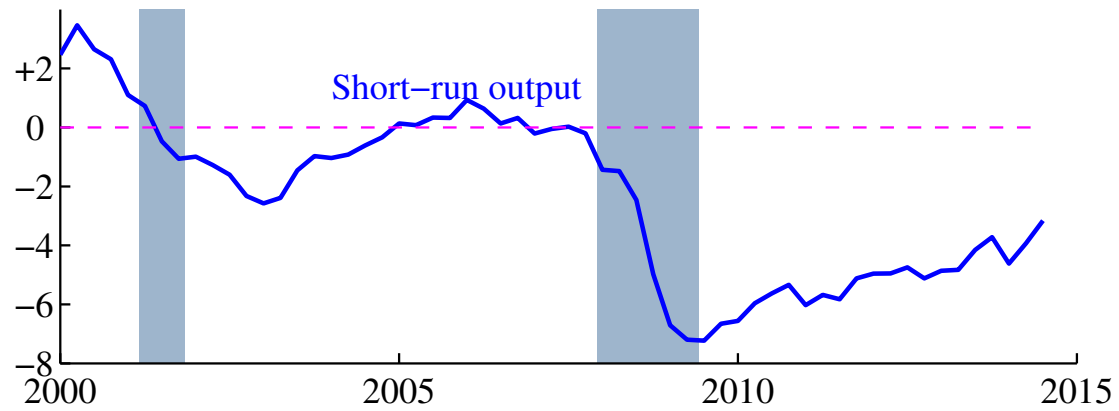
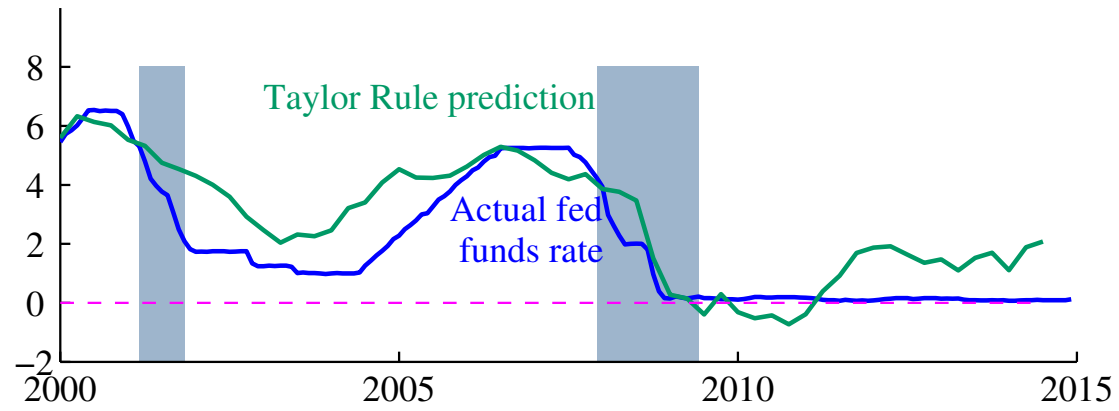
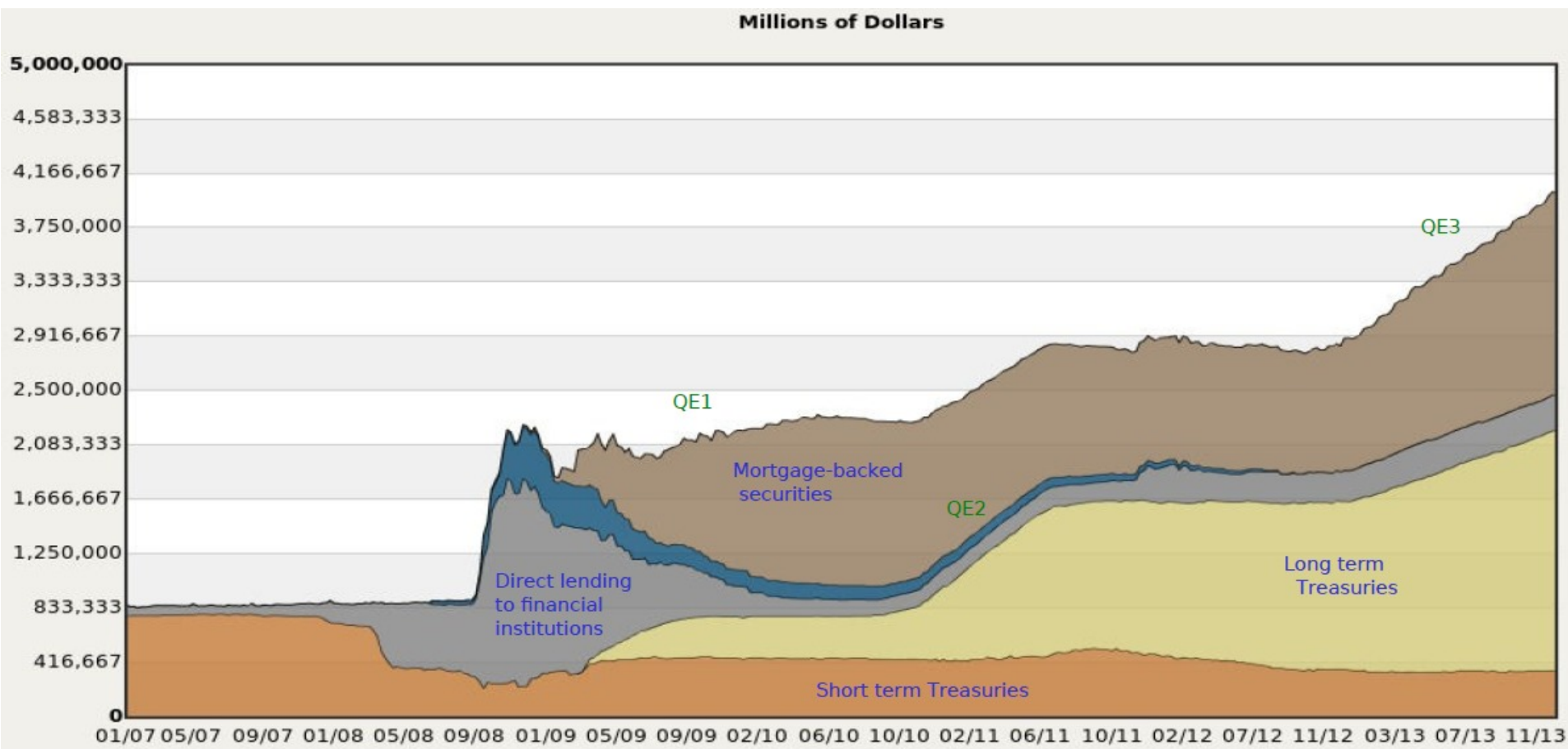
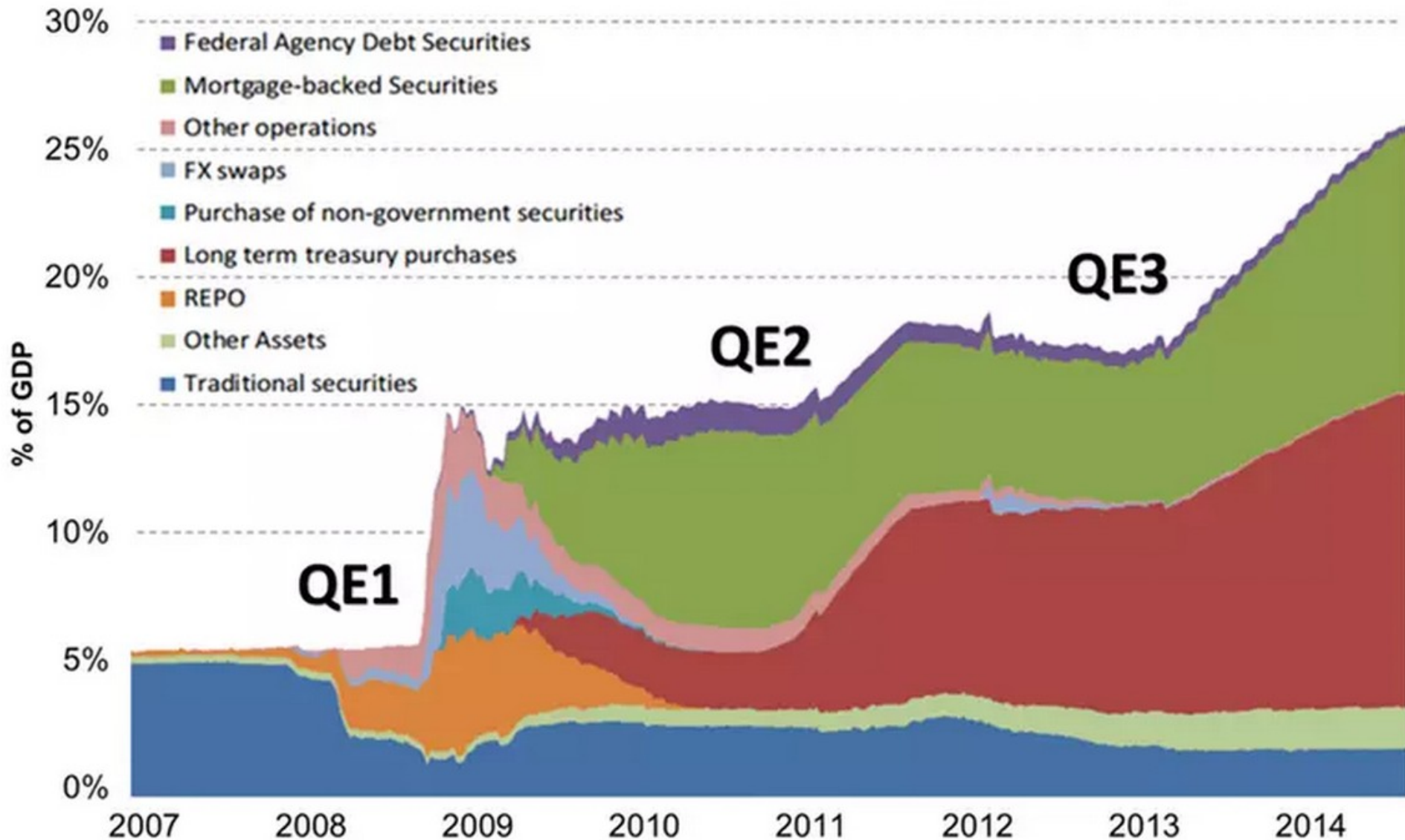


Fig 14.8: The Fed's Use of Unconventional Policies



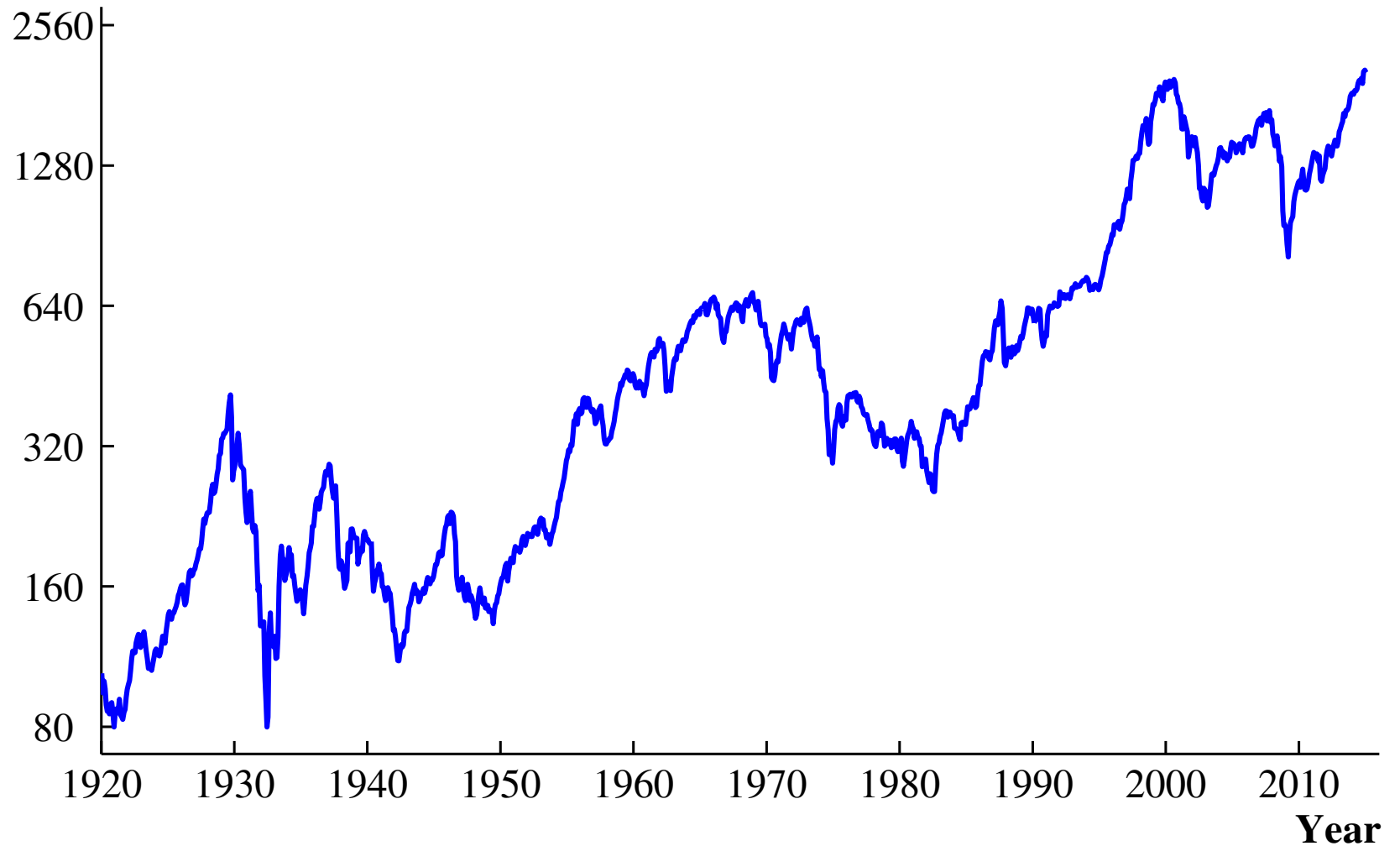
Source: http://www.clevelandfed.org/research/data/credit_easing/index.cfm

The Fed's Stunning Use of Unconventional Policies



The S&P 500 Stock Price Index (real)

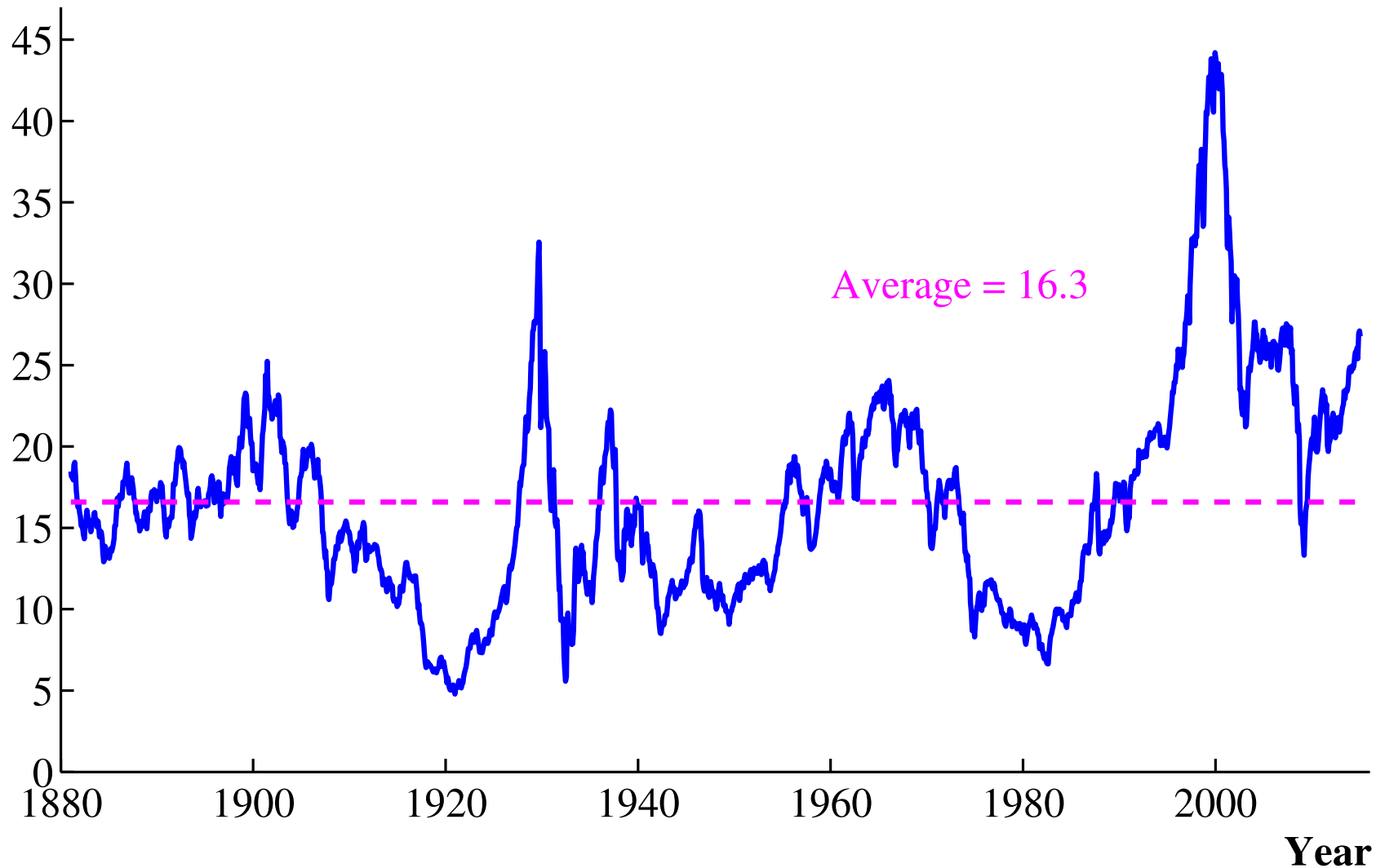
Real Stock Price Index (ratio scale)



Source: Robert Shiller, <http://www.econ.yale.edu/~shiller/data.htm>

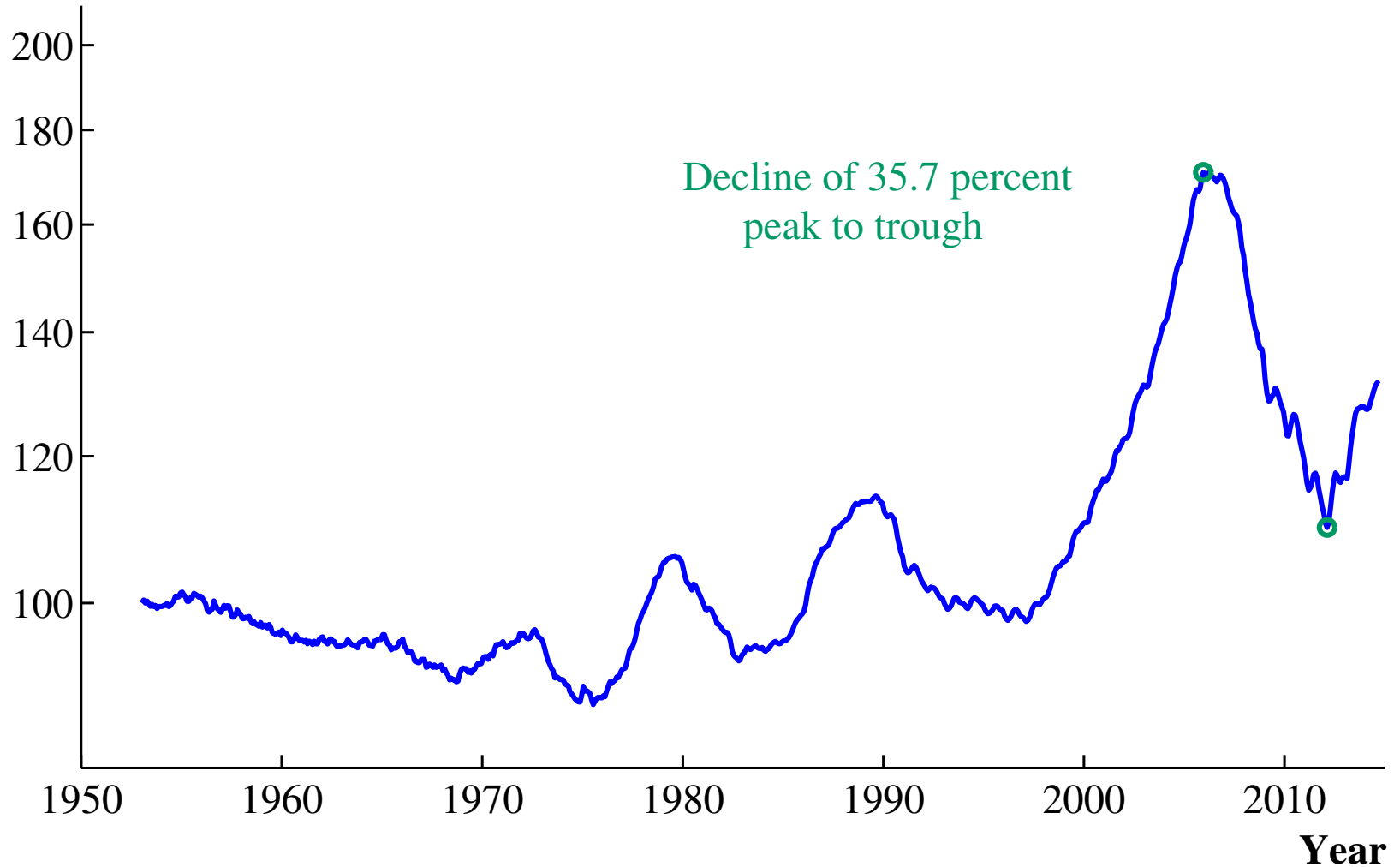
Bubbles in the stock market?

P/E Ratio



Bubbles in housing prices?

Real Home Price Index (1953=100, ratio scale)



Source: Robert Shiller, <http://www.econ.yale.edu/~shiller/data.htm>

World Housing Prices (The Economist, August 2014)

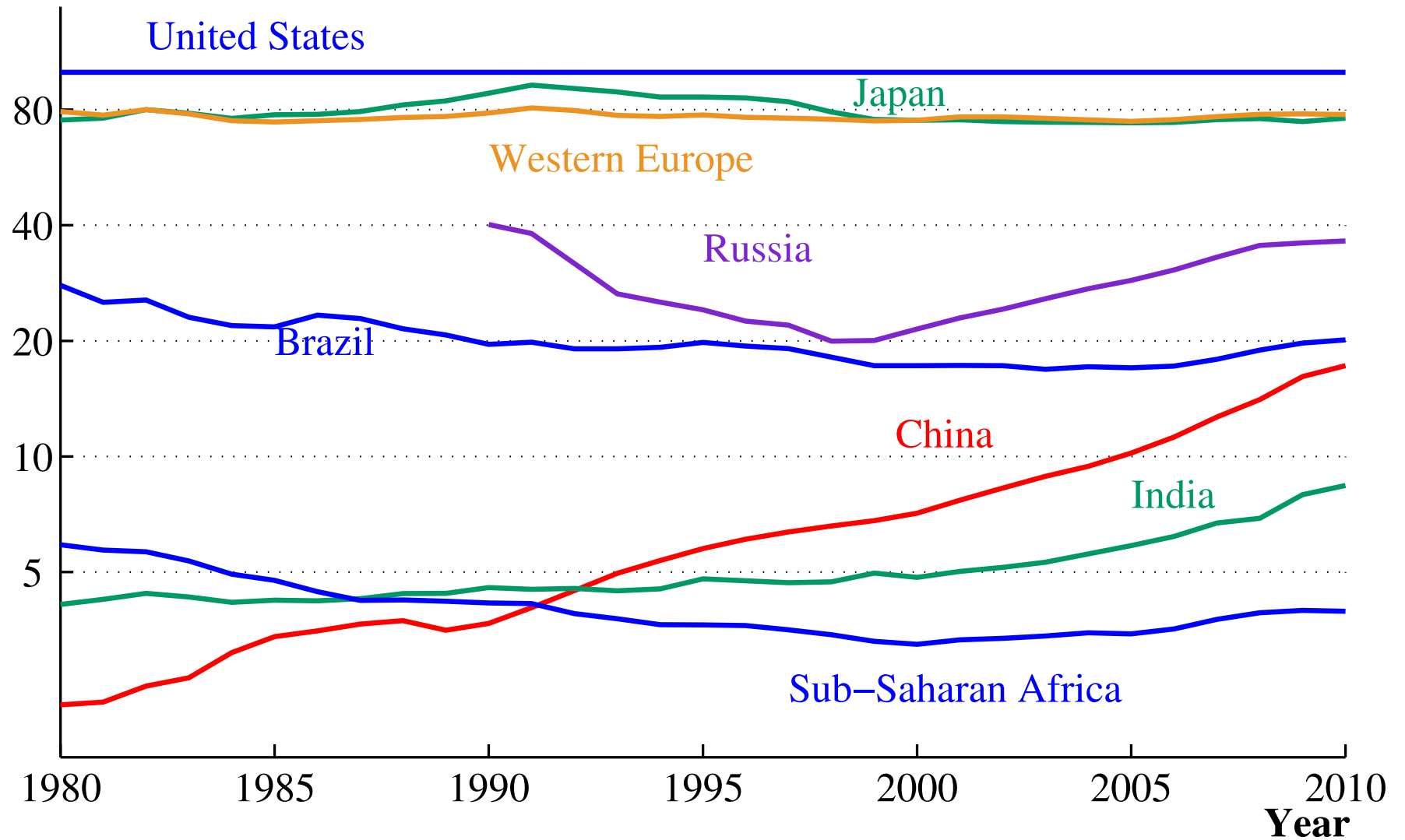
The Economist house-price indicators

	Latest, % change:		Under(-)/over(+) valued, %, against*:	
	on a year earlier	since Q1 2008	rents	income [†]
Ireland	12.5	-42.2	2	-8
Australia	10.4	26.4	55	33
Brazil	10.4	na	na	na
Britain	10.2	9.7	43	24
South Africa	9.8	32.2	na	3
New Zealand	7.3	14.5	74	30
United States	6.2	-1.8	7	-8
Germany	5.1	27.7	-11	-15
Canada	4.9	26.5	76	32
Sweden	4.5	15.2	34	19
India	4.3	na	na	na
Austria	4.2	39.0	12	17

	Latest, % change:		Under(-)/over(+) valued, %, against*:	
	on a year earlier	since Q1 2008	rents	income [†]
Hong Kong	2.7	99.8	79	na
Denmark	2.3	-14.6	13	9
China	2.2	24.6	7	-38
Netherlands	1.9	-17.9	2	18
Switzerland	1.4	28.5	2	-7
Belgium	1.2	14.7	58	46
Japan	-1.1	-15.8	-37	-39
France	-1.6	-1.5	31	27
Singapore	-2.8	18.2	54	na
Spain	-4.2	-31.6	11	10
Italy	-4.5	-15.2	-7	4

*Relative to long-run average †Disposable income per person

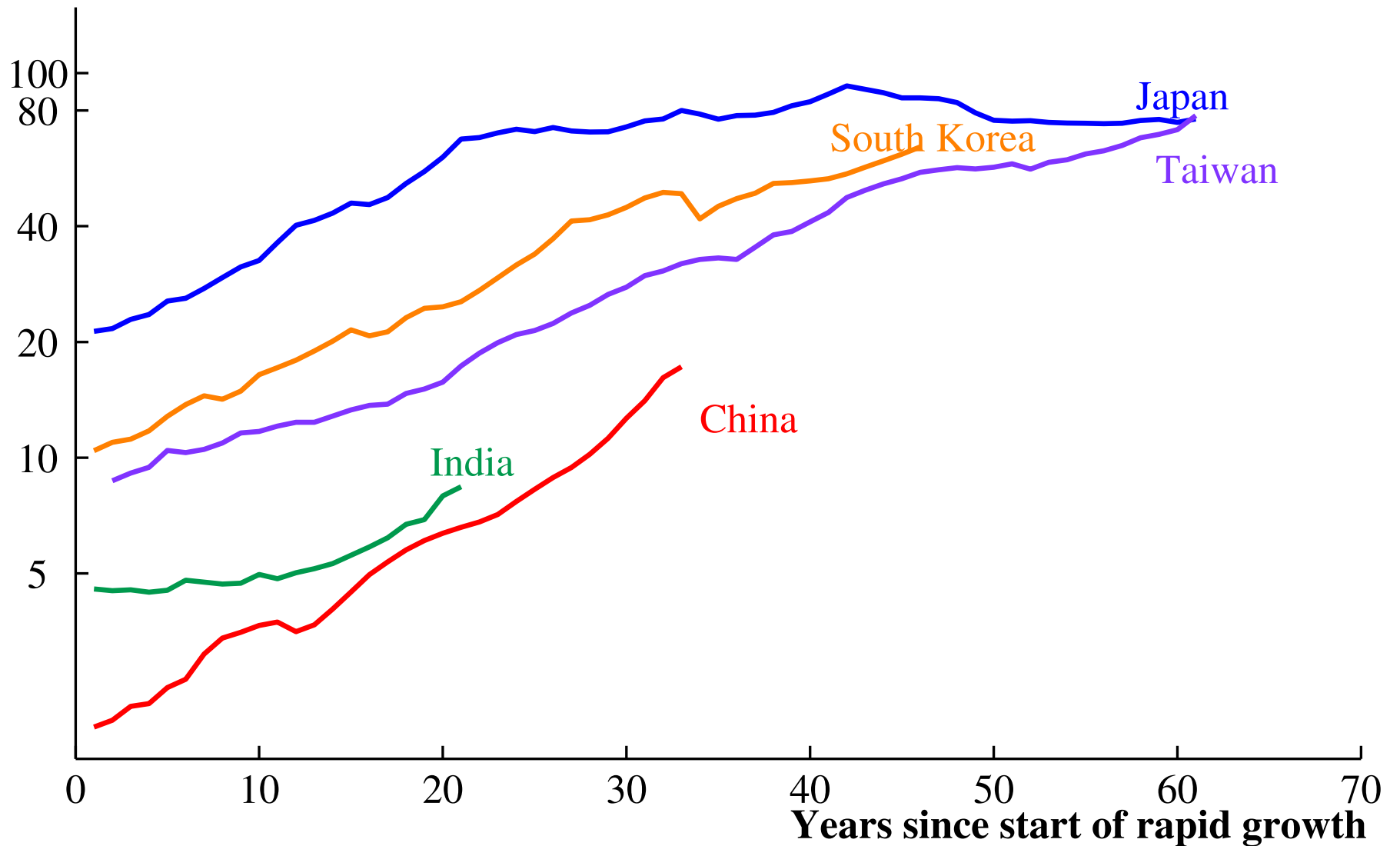
Per capita GDP (US=100)



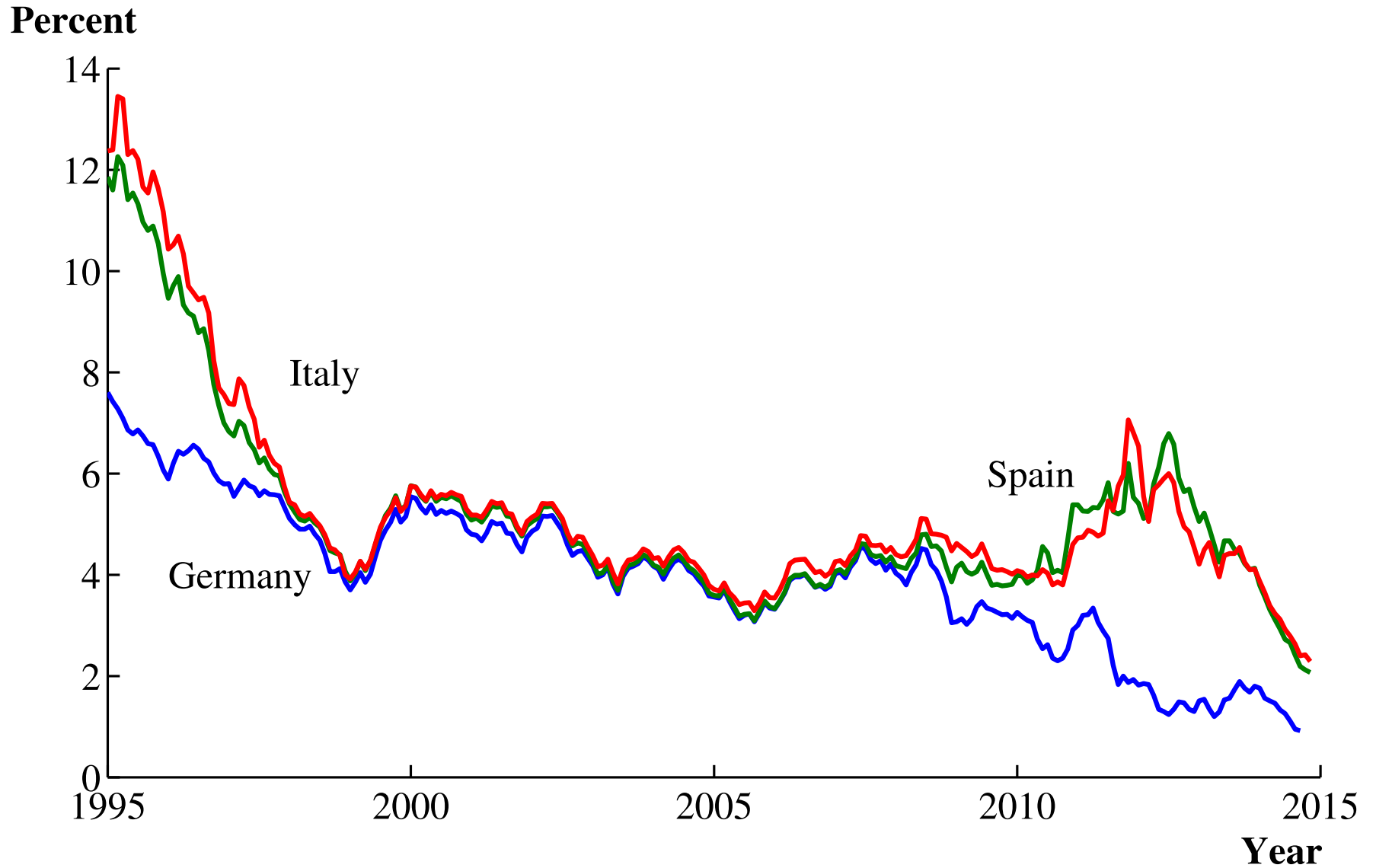
Source: Author's calculations using Penn World Tables

The Dynamics of Catch-Up Growth

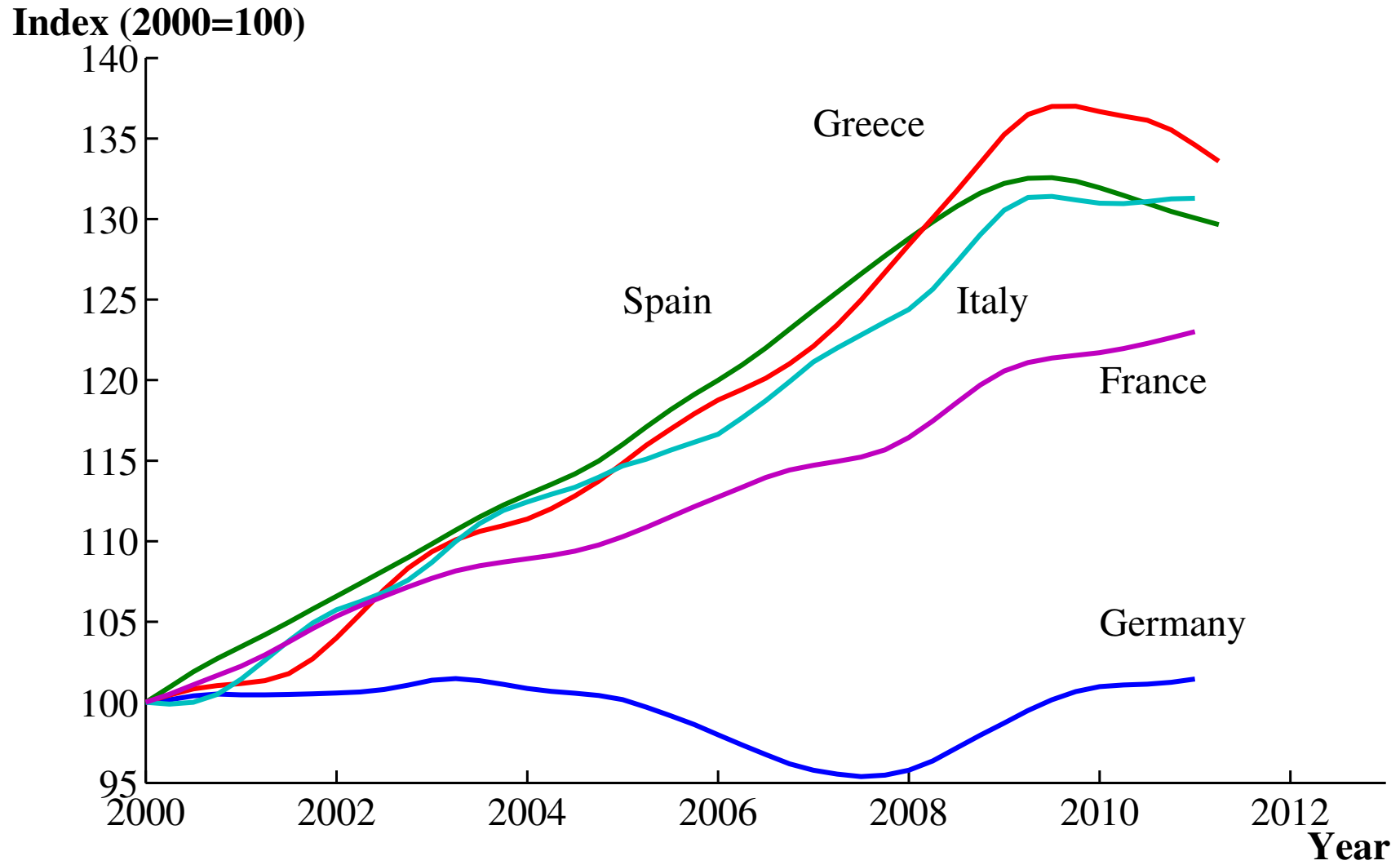
GDP per person (US=100)



The Euro Area Crisis: Ten Year Bond Yields



Unit Labor Costs in Europe



Source: FRED