

Interest rate cycles and implications for the financial sector: a long-term view

Richard S. Grossman

Wesleyan University, Harvard University, CEPR

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Asset-liability management with ultra-low interest rates

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Outline

- Interest rates in historical context
 - Current central bank benchmarks
 - Experience of the past half-century
- Financial crises and interest rate cycles
 - 19th century experience
- A durable pattern: boom-bust financial crises
- The subprime crisis in historical context
 - Implications of the current low-interest rate environment

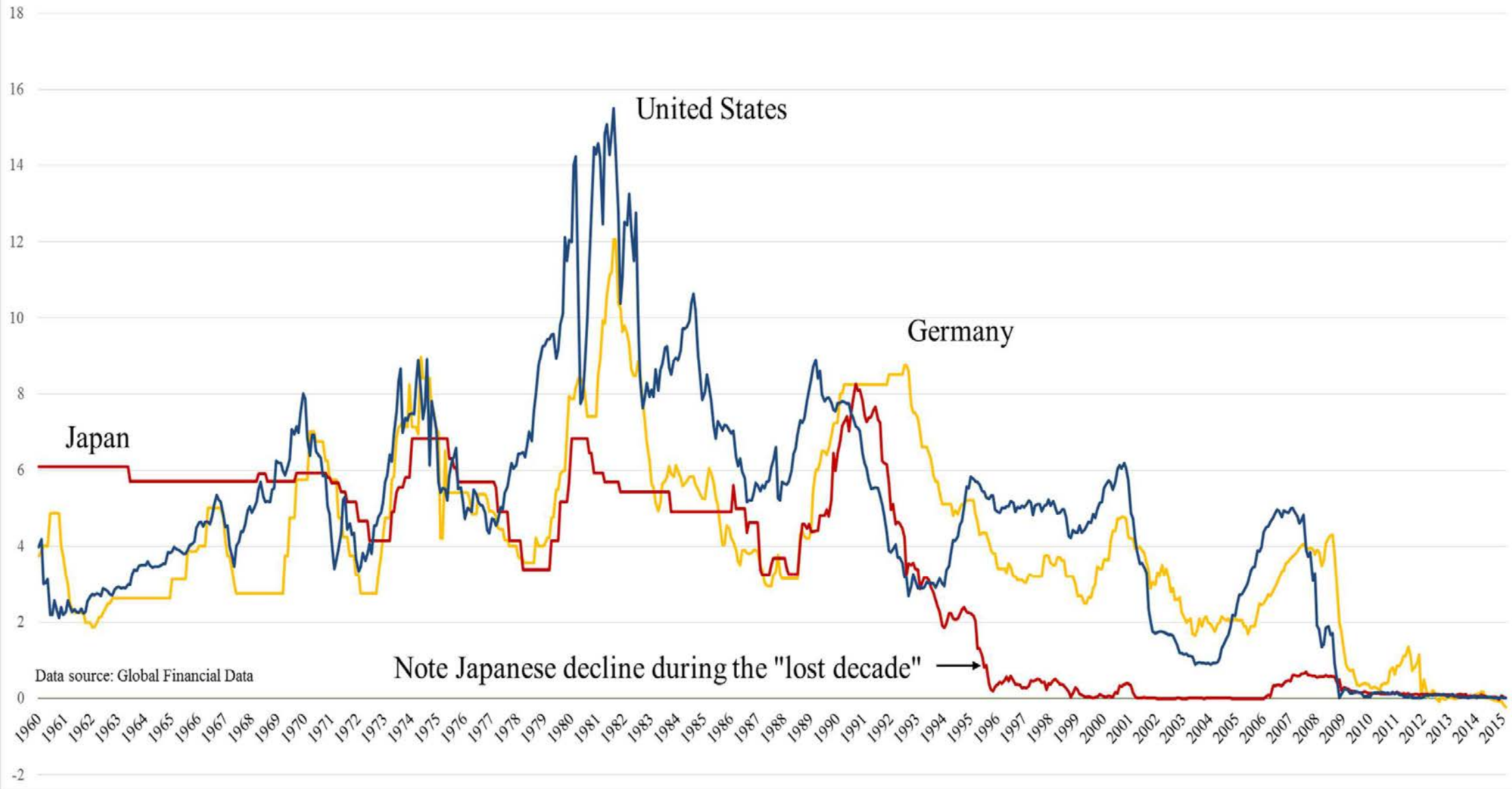
Are current rates “ultra-low”?

- It would be hard to argue that we are not in a period of ultra-low interest rates
- Consider the following low central bank benchmark rates:
 - ECB marginal lending facility: 0.30% (since September 2014)
 - US federal funds rate: 0-0.25% (December 2008)
 - Bank of Japan overnight call rate: 0.10% (October 2010)
 - Bank of England Bank Rate : 0.50% (March 2009)
- And, of course, some central bank benchmark rates are negative:
 - Swedish Riksbank repo rate: -0.10% (February 2015)
 - Swiss National Bank target rate for 3-month Libor CHF deposits: -1.25% to -0.25%

Are these rates ultra-low by historical standards?

- Some relatively recent history
 - 55 years
 - Treasury bill rates, 1960-2015
 - Germany, Japan, Switzerland, UK, and US

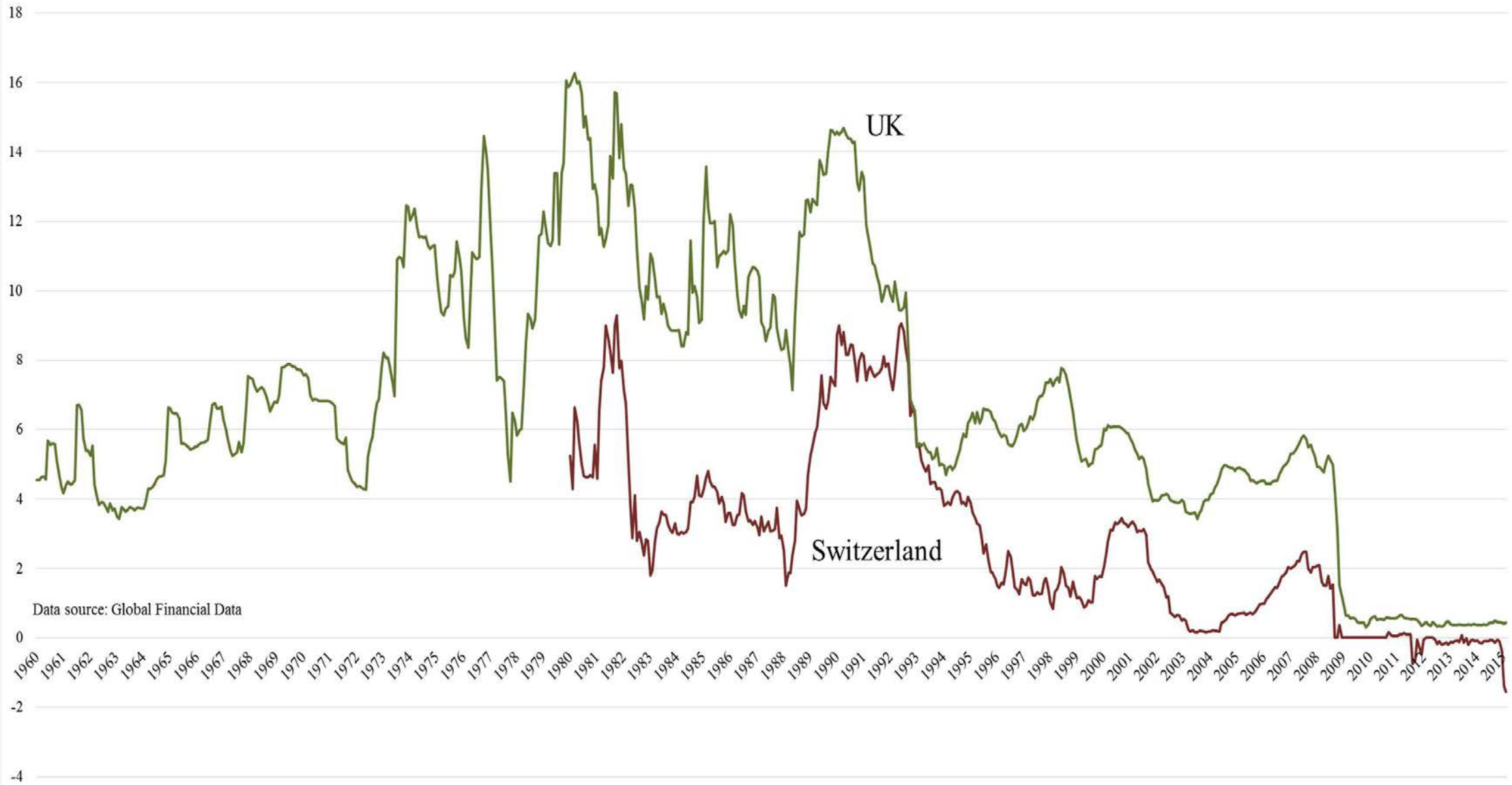
3-month Treasury bill rates, Germany, Japan, USA (Jan 1960-Feb 2015)



Data source: Global Financial Data

Note Japanese decline during the "lost decade" →

3- month Treasury bill rates, Switzerland and UK, Jan 1960-Feb 2015



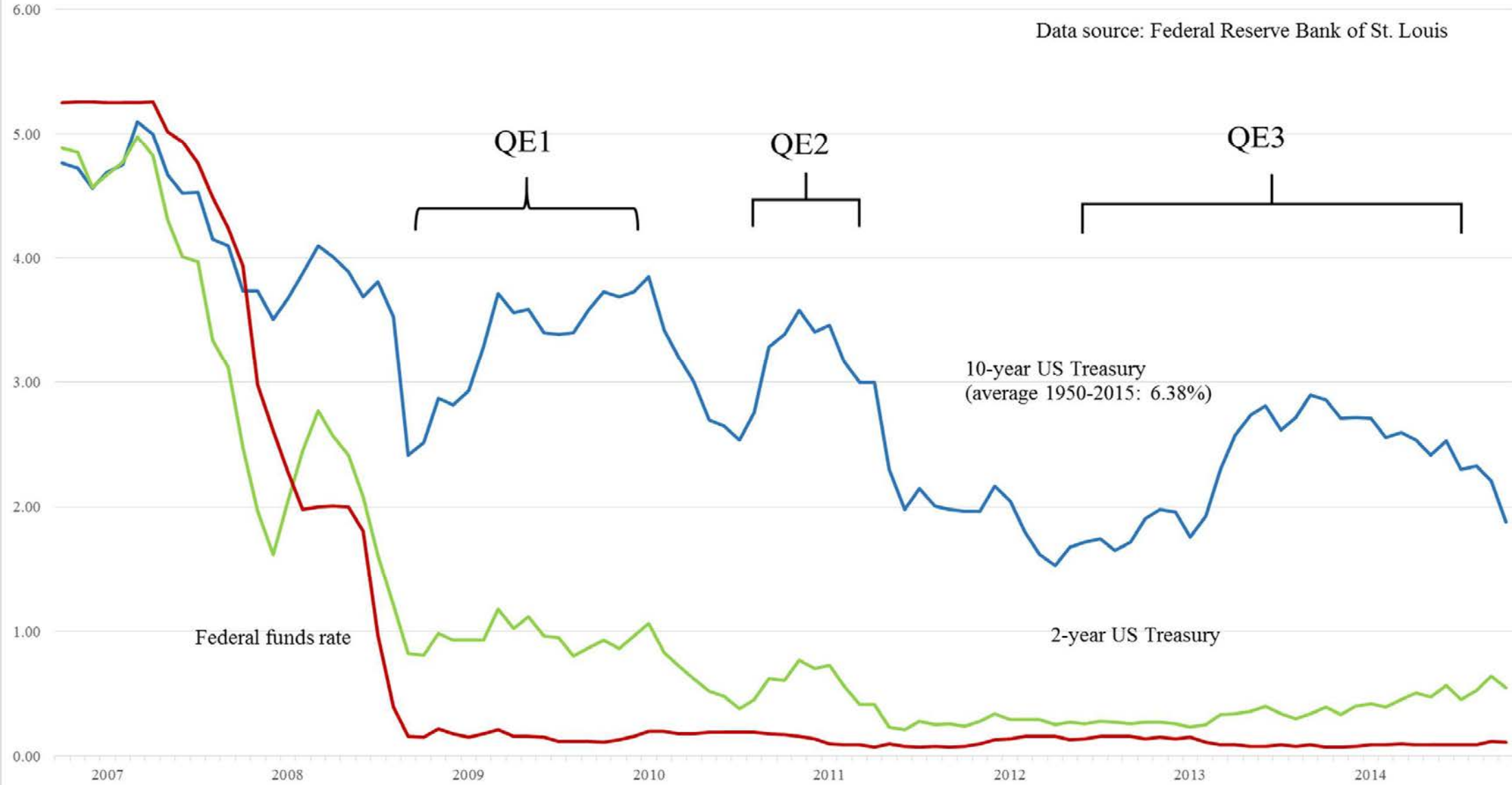
Data source: Global Financial Data

And not just the short end of the market

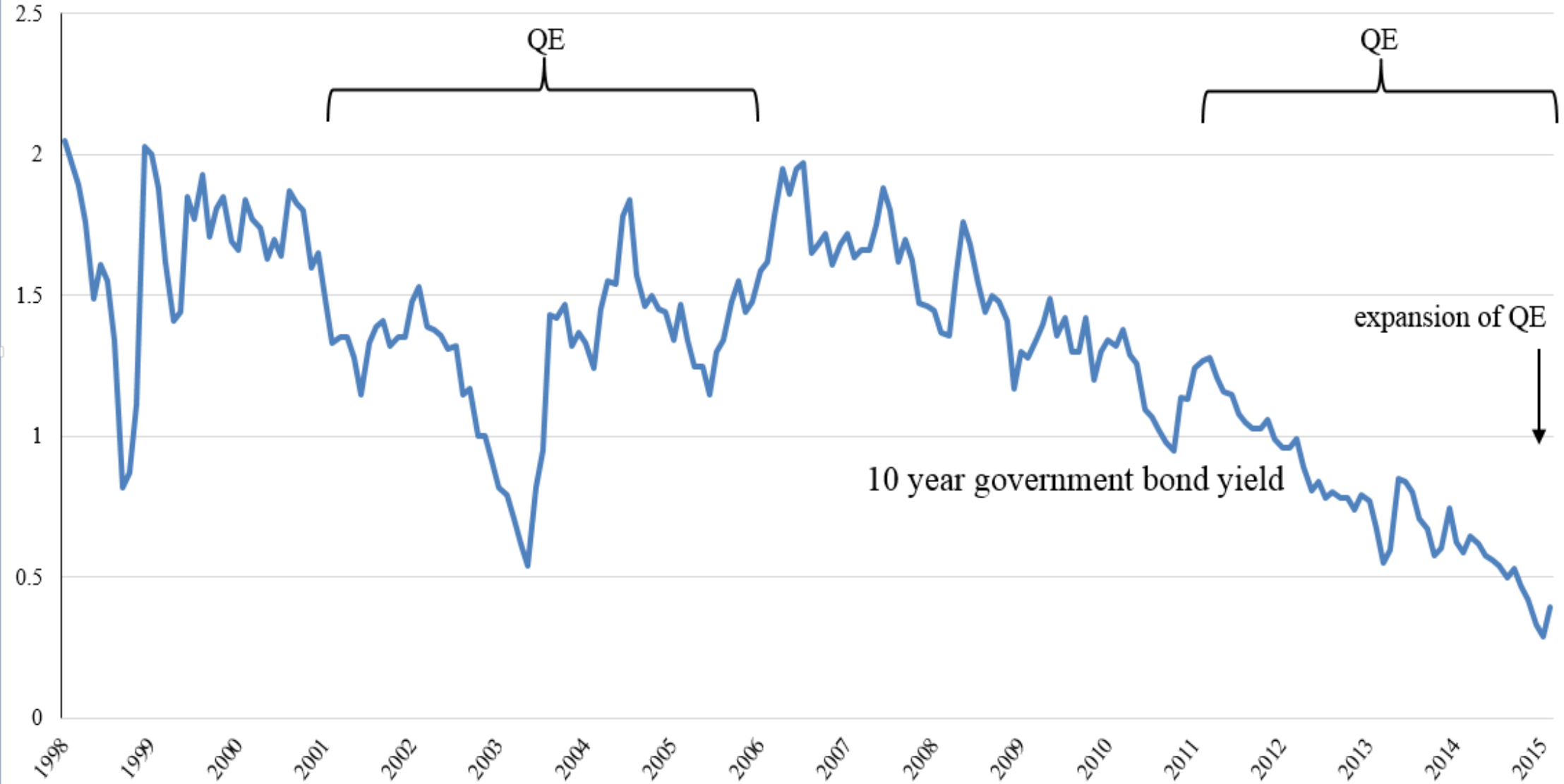
- Quantitative easing has affected the long end
 - Three rounds in the United States:
 - December 2008-March 2010
 - November 2010-June 2011
 - September 2012-October 2014
 - European Central Bank's recent announcement of a €60 billion monthly QE program scheduled to extend through September 2016
 - Riksbank
 - Bank of Japan announced expansion to existing QE in October 2014

Quantitative easing and yields in the US

Data source: Federal Reserve Bank of St. Louis



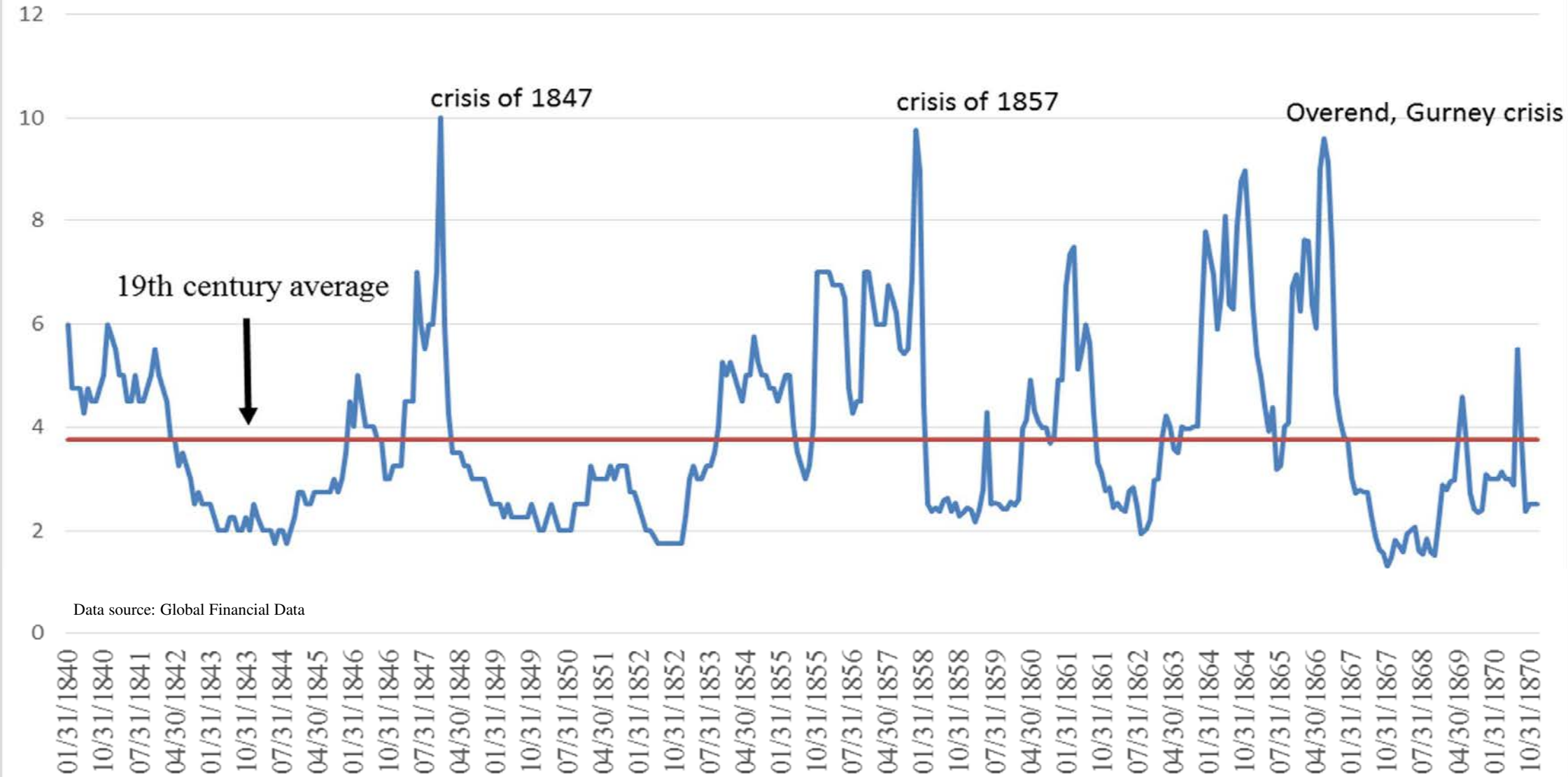
Quantitative easing in Japan



Are these rates low by historical standards?

- Comparison with aftermath of earlier crises
 - UK, 1840-1870
 - US, 1863-1910

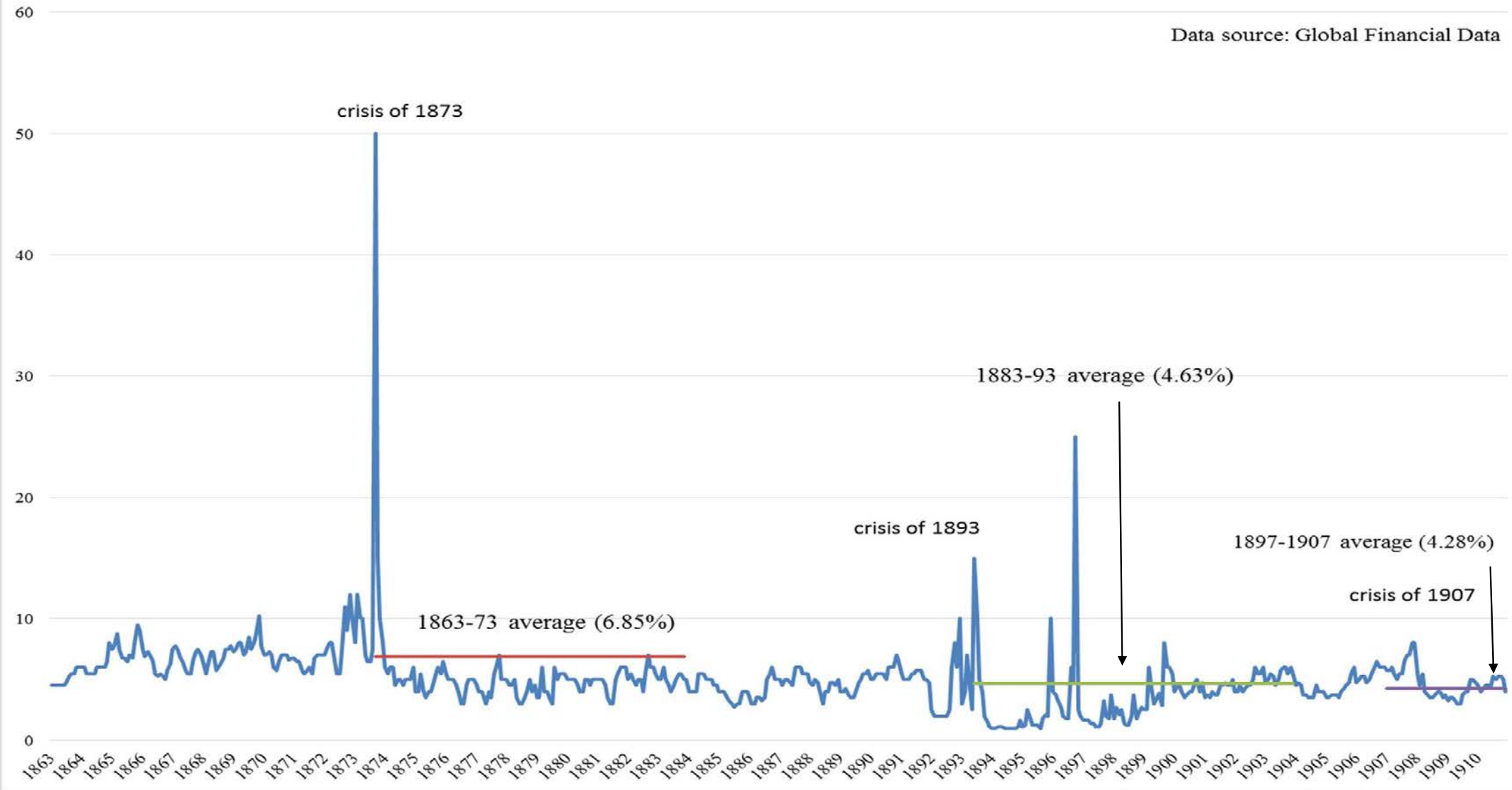
Private discount rate in England, 1840-1870



Data source: Global Financial Data

US commercial paper rate, 1863-1910

Data source: Global Financial Data



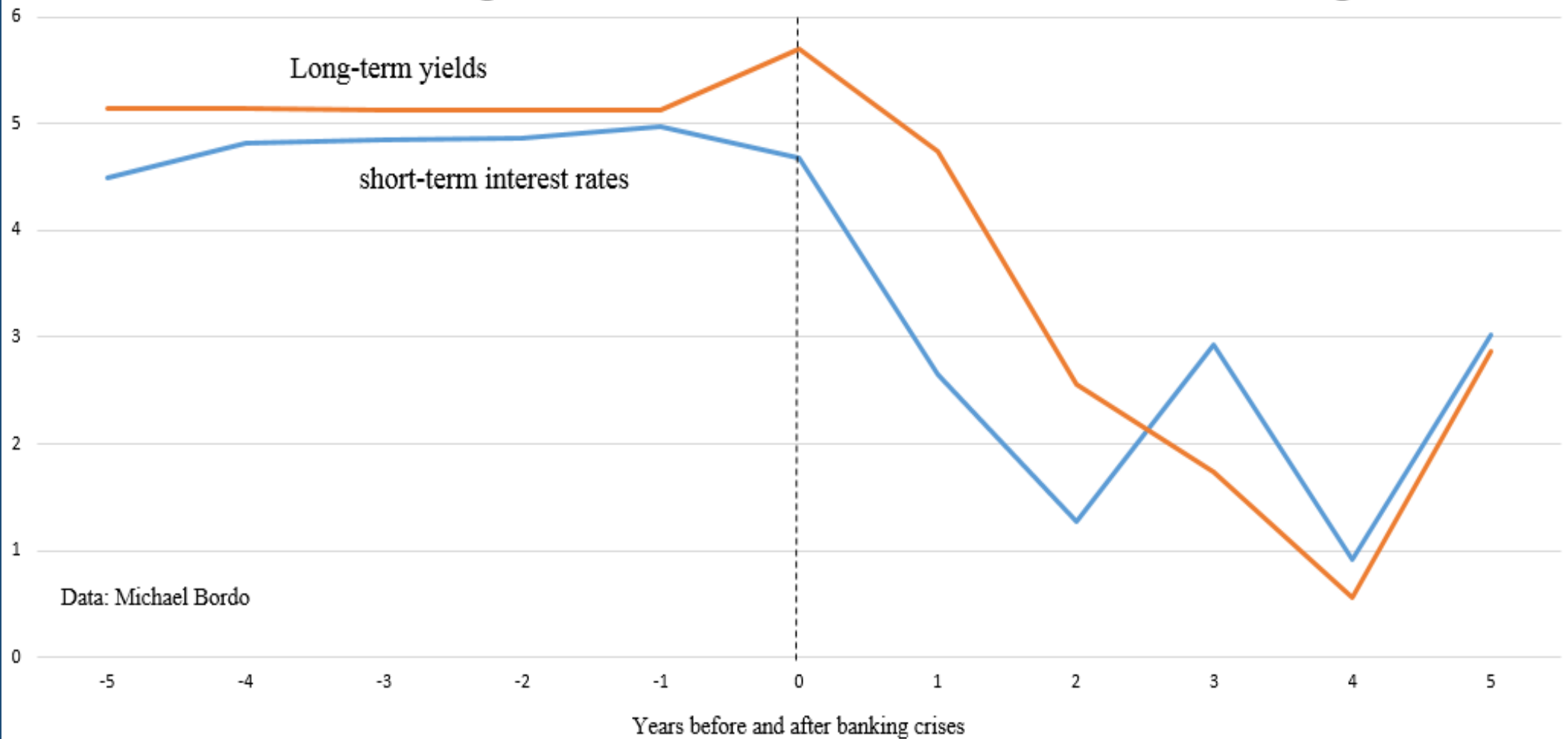
Interest rates following crises

- Data from Michael Bordo
- Annual data
- Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, UK, and US
- 1880-1997
- Average short- and long-term interest rates in the years before and after crisis

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Short- and long-term interest rates before and after banking crises



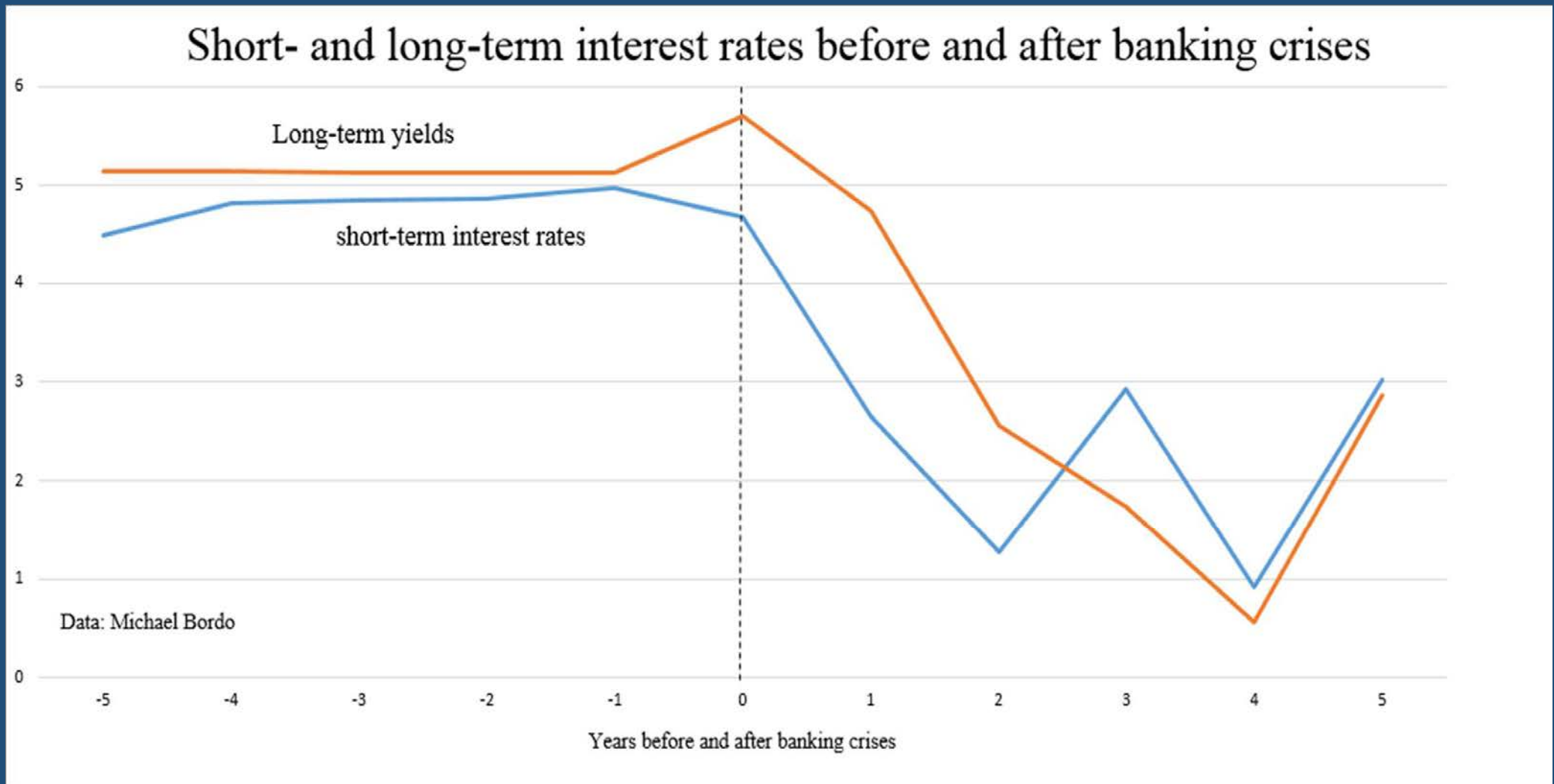
Current rates in light of historical experience

- Nominal rates are low in absolute terms by historical standards.
- Rates have remained low for a considerable—but not unprecedented—amount of time.
- Rates remain low following crises for years.

Consequences of prolonged ultra-low rates

- Many and varied
 - Investment spending
 - Positive consequences for large borrowers
 - \$1.6 trillion for US, UK, and euro-zone governments during 2007-2012 according to McKinsey
 - \$710 billion for non-financial corporations
 - Negative consequences for lenders
 - Interest rate margins squeezed
 - Insurance companies
 - Households, particularly those living on savings
 - Pension funds
 - Consequences for exchange rates, exporters, importers, etc.
 - Inflation
 - And more
- Most importantly: asset-price inflation, greater risk-taking, renewed boom/bust cycle, crisis.
- How concerned should we be about this?

Just looking at interest rates, not very much



How then do boom-bust cycles occur?

One journalist's view

Within the last sixty years, at comparatively short intervals, the commercial world has been disturbed by a succession of those terrible convulsions that are now but too familiar to every ear by the expressive name "panic." Each separate panic has its own distinctive features, but all have resembled each other in occurring immediately after a period of apparent prosperity, the hollowness of which it has exposed. So uniform is this sequence, that whenever we find ourselves under circumstances that enable the acquisition of rapid fortunes, otherwise than by the road of plodding industry, we may almost be justified in arguing that the time for panic is at hand.

-D. Morier Evans

1859

Boom-bust crises

- Irving Fisher, Hyman Minsky, Charles Kindleberger
- Preceded by rapid expansion (e.g., good harvests, recovery from war, AD shock)
- Speculation, aided by new techniques/instruments
 - Grain
 - Railroads
 - Turnpikes
 - Limited liability companies
 - Latin American securities
- Fed by expansion of liquidity (banks, debt conversion, international capital flows)

A partial list

- Land (real estate), agricultural/mining products: Australia (1826, 43, 93), Finland (1878), France (1889), Italy (1893), Norway (1922-23), UK (1847), US (1837, 1857, 1907, 2008)
- Railroads: Austria (1857, 1873), France (1882), Sweden (1878-79), UK (1847), US (1873)
- Foreign securities: Belgium (Russian securities, 1900-01), UK (Latin American securities 1825, 1890)
- Joint stock company formation: UK (1866), Italy (1873)

Business cycle expansions, 1883-1913

- How do business cycles that culminate in banking crises differ from those that don't?

Macroeconomic and Banking Conditions during Crisis and Non-Crisis Cyclical Expansions, 1883–1913

	<i>Change in real GDP (percent)</i>				<i>Change in number of commercial banks (percent)</i>		
	<i>Crisis</i>	<i>Non-crisis</i>	<i>Crisis minus non-crisis</i>		<i>Crisis</i>	<i>Non-crisis</i>	<i>Crisis minus non-crisis</i>
Australia	5.53	3.26	2.27	Australia	0.022	-0.009	0.031
Canada	7.53	5.09	2.44	Canada	0.000	-0.048	0.048
Denmark	3.28	2.94	0.34	Denmark	0.061	0.037	0.024
Finland	5.93	3.63	2.30	England	-0.011	-0.040	0.029
France	1.39	1.59	-0.20	Finland	0.042	0.033	0.009
Germany	3.42	2.90	0.52	Germany	0.020	-0.007	0.027
Italy	2.27	5.83	-3.56	Italy	0.005	-0.011	0.016
Japan	0.87	2.60	-1.73	Japan	-0.029	0.057	-0.086
Norway	2.11	2.71	-0.60	Norway	0.112	0.094	0.018
United Kingdom	3.16	2.26	0.90	United States	0.076	0.060	0.016
United States	3.42	4.19	-0.77				
				All cycles	0.033	0.023	
All cycles	3.43	2.93					

Source: Grossman (2010)

	<i>Inflation (percent)</i>				<i>Change in commercial bank assets (percent)</i>		
	<i>Crisis</i>	<i>Non-crisis</i>	<i>Crisis minus non-crisis</i>		<i>Crisis</i>	<i>Non-crisis</i>	<i>Crisis minus non-crisis</i>
Canada	1.15	1.63	-0.48	Canada	0.113	0.069	0.044
Denmark	0.02	0.56	-0.54	Denmark	0.129	0.050	0.079
Finland	-4.18	-0.99	-3.19	England	0.042	0.033	0.009
France	-4.32	0.07	-4.39	Finland	0.163	0.061	0.102
Germany	1.14	0.41	0.73	Italy	0.067	0.106	-0.039
Italy	1.52	-0.08	1.60	Norway	0.064	0.064	0.000
Norway	1.75	1.67	0.08	United States	0.063	0.064	-0.001
United Kingdom	0.21	0.12	0.09				
United States	0.31	-0.48	0.79	All cycles	0.082	0.059	
All cycles	0.49	0.24					

	<i>Change in short-term interest rate (percentage points)</i>		
	<i>Crisis</i>	<i>Non-crisis</i>	<i>Crisis minus non-crisis</i>
France	0.11	-0.01	0.12
Germany	0.04	0.01	0.03
United Kingdom	0.30	0.17	0.13
United States	0.19	-0.42	0.61
All cycles	0.14	-0.14	

Source: Grossman (2010)

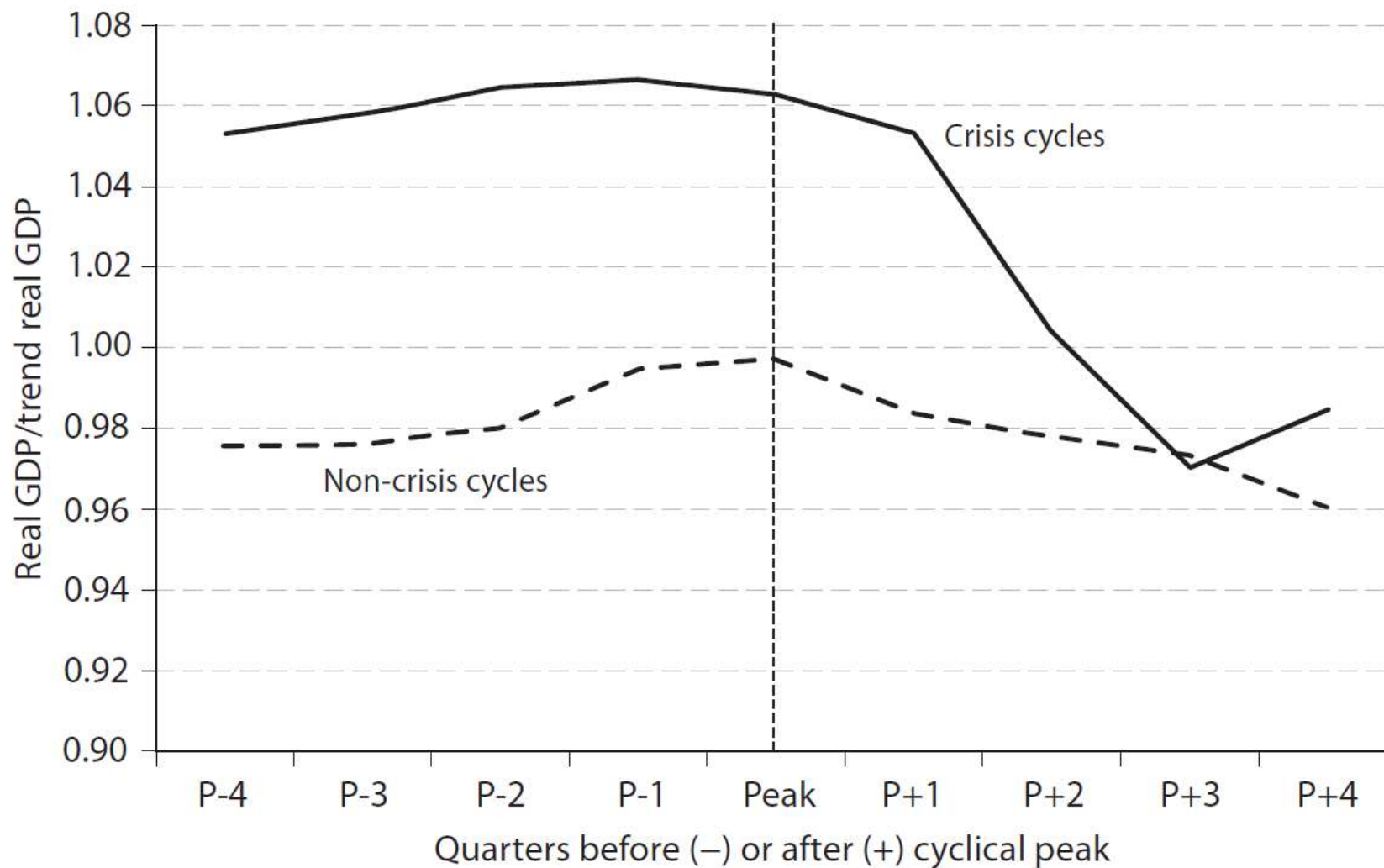


Figure 3.1. Real GDP during crisis and non-crisis cycles: The United States, 1879–1912. *Sources:* Real GDP and trend real GDP from Balke and Gordon (1986); business-cycle dating from Burns and Mitchell (1946: 78).

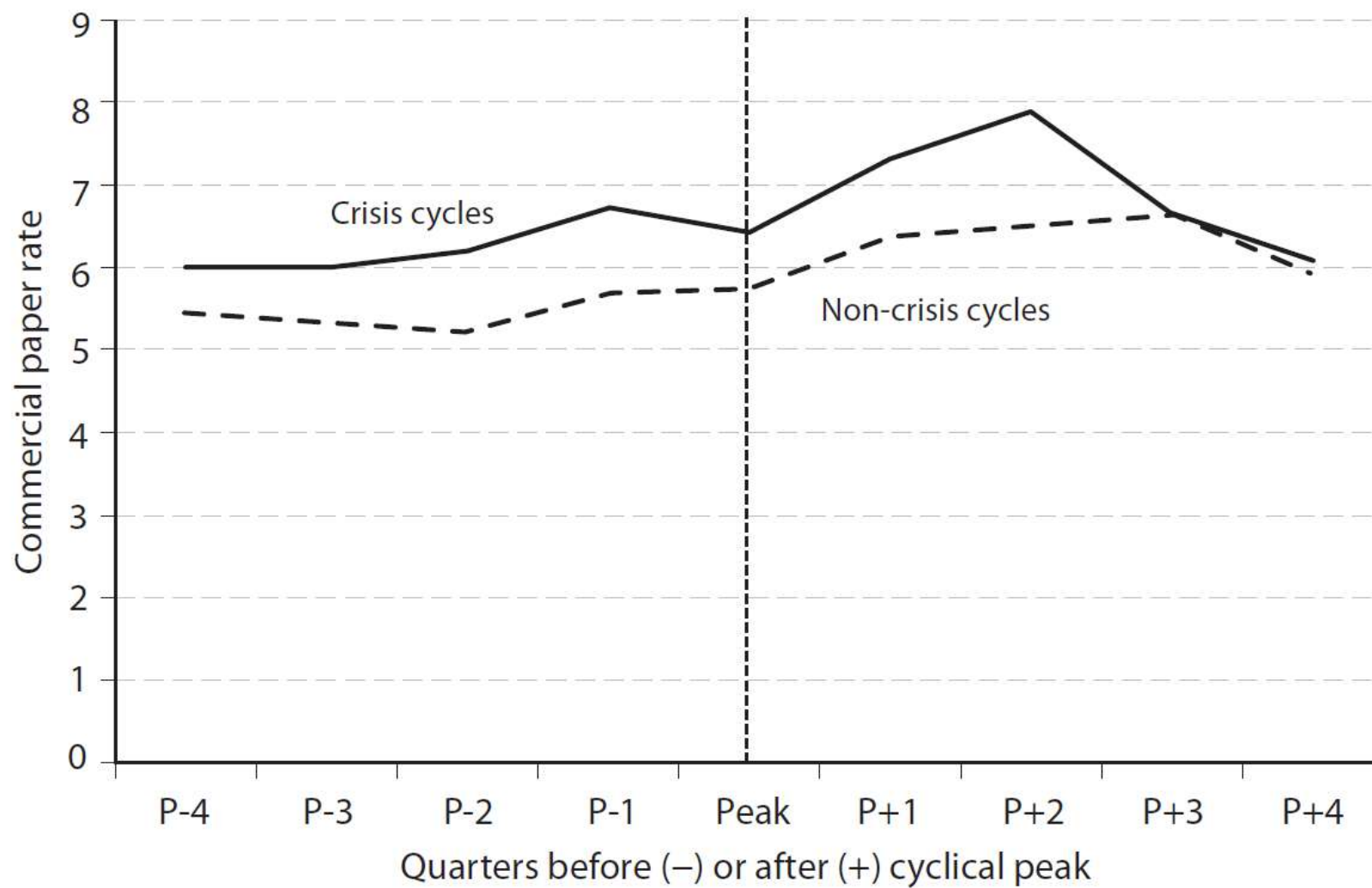


Figure 3.3. Interest rates during crisis and non-crisis cycles: The United States, 1879–1912. *Sources:* Commercial paper rate from Balke and Gordon (1986); business-cycle dating from Burns and Mitchell (1946: 78).

The US subprime crisis

- How bad was it?
- Christina Romer, an economic historian, who was the first chair of President's Obama's Council of Economic Advisors
- Rahm Emmanuel
- “You’re an expert on the Great Depression, and we really thought we might need one.”

Causes of the boom

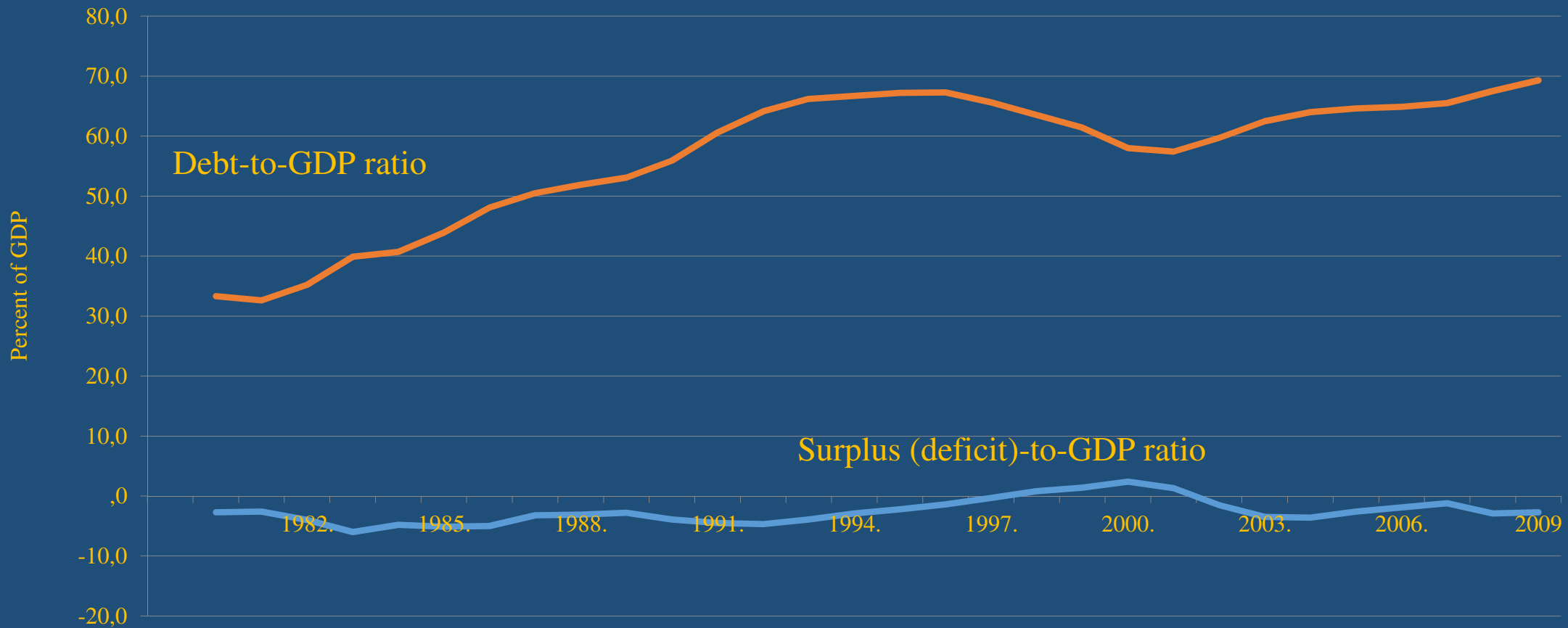
- Government tax and spending policies
- Consumer spending (household debt)
- Easy monetary policy
- Financial innovation (which outpaced regulation)

Fiscal policy

Today, our high taxes fund a surplus. Some say that growing federal surplus means Washington has more money to spend. But they've got it backwards. The surplus is not the government's money. The surplus is the people's money. I will use this moment of opportunity to bring common sense and fairness to the tax code. And I will act on principle. On principle . . . every family, every farmer and small businessperson, should be free to pass on their life's work to those they love. So we will abolish the death tax. On principle . . . no one in America should have to pay more than a third of their income to the federal government. So we will reduce tax rates for everyone, in every bracket.

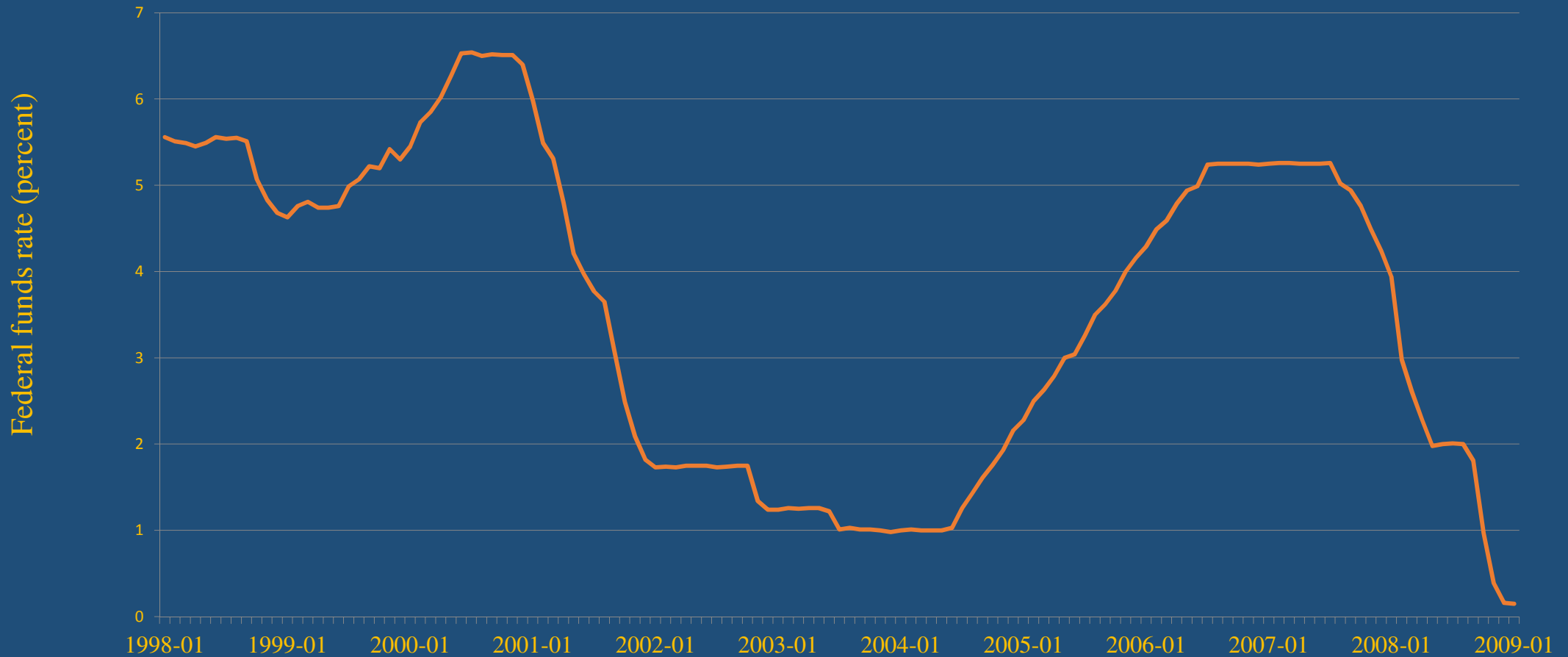
George W. Bush, accepting the Republican presidential nomination (2000)

US government debt and deficit, 1980-2009



Source: Economic Report of the President

Easy monetary policy



Source: Federal Reserve Board

Fear and greed and the subprime crisis

- Two competing motivations
 - Greed leads us to chase higher returns
 - Fear restrains us
- Greed
 - fiscal stimulus
- Fear was mostly absent
 - regulation
 - tighter credit
- Even if fear had been present (and it wasn't), the incentive to take risk was overwhelming

Do prolonged low rates precede crises?

- Not always
- Low interest rates did contribute to the subprime crisis.
 - Without the massive incentives brought about by the fiscal stimulus, low interest rates would not have caused the crisis
 - The clear counter-example: Japan, which has had rock-bottom interest rates since the mid-1990s
- Bubbles may emerge from the low interest rate environment—we have seen increases in some assets (e.g., commodities, real estate)
 - We need to be wary of them
 - In the US, rates are poised to rise
- Without substantial macroeconomic pressure, the risk of a boom-bust cycle leading to another financial is not yet upon us