

Debt, Interest Rates, and Monetary Policy: A Global Sketch

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Roadmap

- **Delayed recovery and the deflation cycle**
- **Why are interest rates so low?**
- **Challenges**
 - **US** tightening of monetary policy: Debt, President Trump, and the Dollar
 - **Japan**: The need for inflation
 - **Eurozone**: Debt overhang and capital flight from the periphery
 - **China**: Lender of last resort vs semi-fixed exchange rate
 - **EMs**: The return of the currency crash and volatility

The 2007-2009 Crisis: 10 years later

- **Of the 11 advanced economies experiencing a systemic crisis starting in 2007-2008 (France, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Portugal, Spain, UK, and US), only Germany and the US have reached their pre-crisis peak in per capita GDP by 2014**
- **3 more (Iceland, Ireland and UK) by 2015**
- **Greece and Italy may set a record for the most delayed recovery.**

Output, Crises and Recovery

Reinhart and Rogoff (2014) updated with World Economic Outlook, October 2016

11 Systemic banking crises in Advanced economies, 2007-2008

Year	Country	% change		Number of years		Severity index	Double dip, yes=1
		Peak to trough	Peak to trough	Peak to recovery	Peak to recovery		
1	2008 France	-3.8	2	9	12.8	1	
2	2008 Germany	-5.3	1	3	8.3	0	
3	2008 Greece	-24.8	6	15	39.8	0	
4	2007 Iceland	-7.6	3	8	15.6	0	
5	2007 Ireland	-10.5	5	8	18.5	1	
6	2008 Italy	-10.9	7	15	25.9	1	
7	2008 Netherlands	-4.1	1	9	13.1	1	
8	2008 Portugal	-7.0	6	13	20.0	1	
9	2008 Spain	-10.3	6	11	21.3	0	
10	2007 United Kingdom	-6.4	2	8	14.4	0	
11	2007 United States	-4.8	2	6	10.8	0	
Summary: Mean		-8.7	3.7	9.5	18.2		
Median		-7.0	3.0	9.0	15.6		
Standard deviation		5.9	2.3	3.7	8.8		
Share of episodes with double dip						45.5	

Note: The italics denote any calculations in which IMF estimates for 2016- are used.

Sluggish recovery even by the standards of the worst crises in history

- The number of years to recover the pre-crisis peak in per capita GDP in 100 of the worst crises since the 1840s is about **8 years** (the median is **6 1/2 years**).
- In the 2007-2008 wave of crises, the average may come in closer to **10 years**.

Debt overhangs and the delayed-recovery-deflation cycle

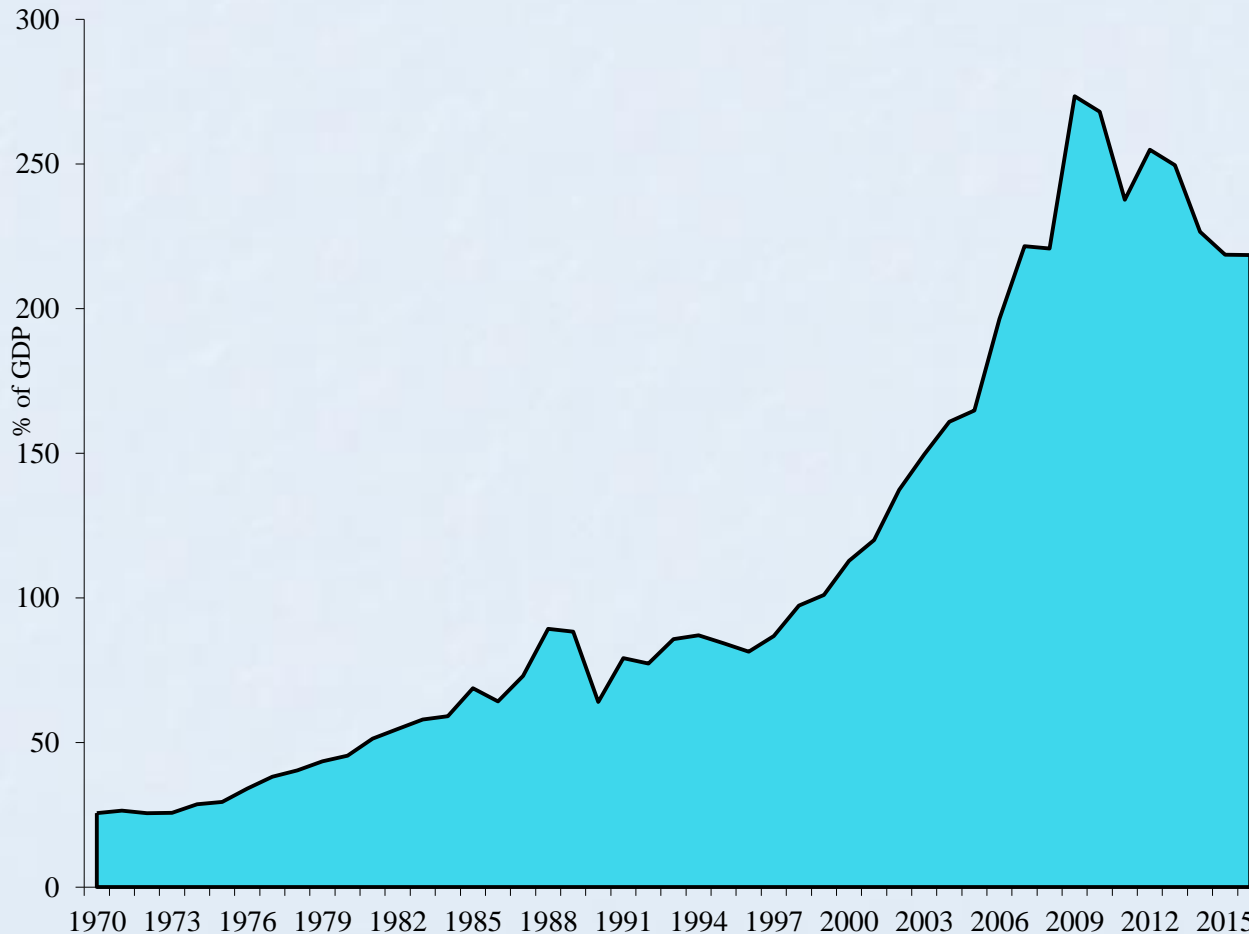
The debt overhang is:

- *Private*
- *Public (general government)*

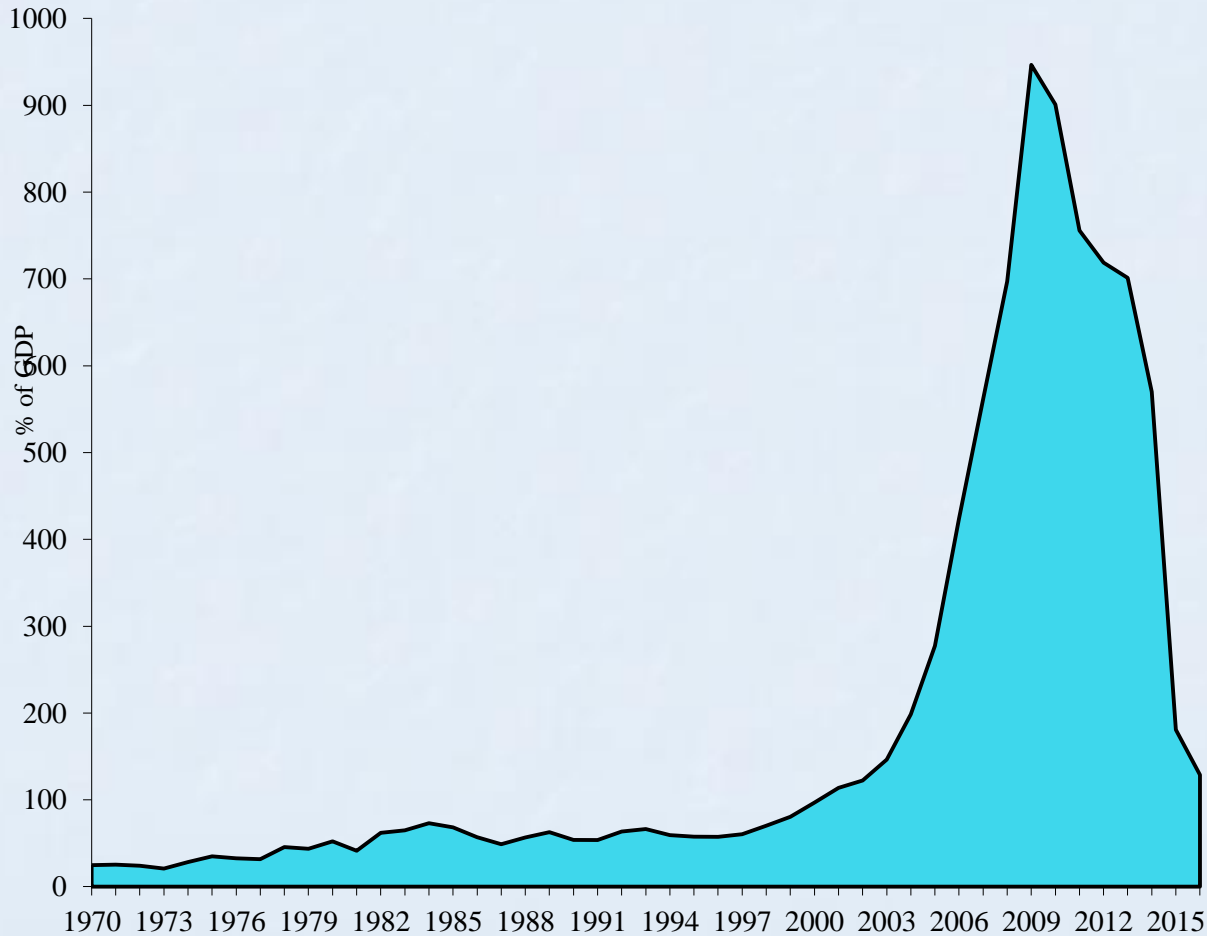
And in much of “periphery” EZ includes also

- *The central bank (Target2)*
- *It is both internal and external*

Gross Total (Public plus Private) External Debt as a Percent of GDP: 22 Advanced Economies, 1970-2016:Q3

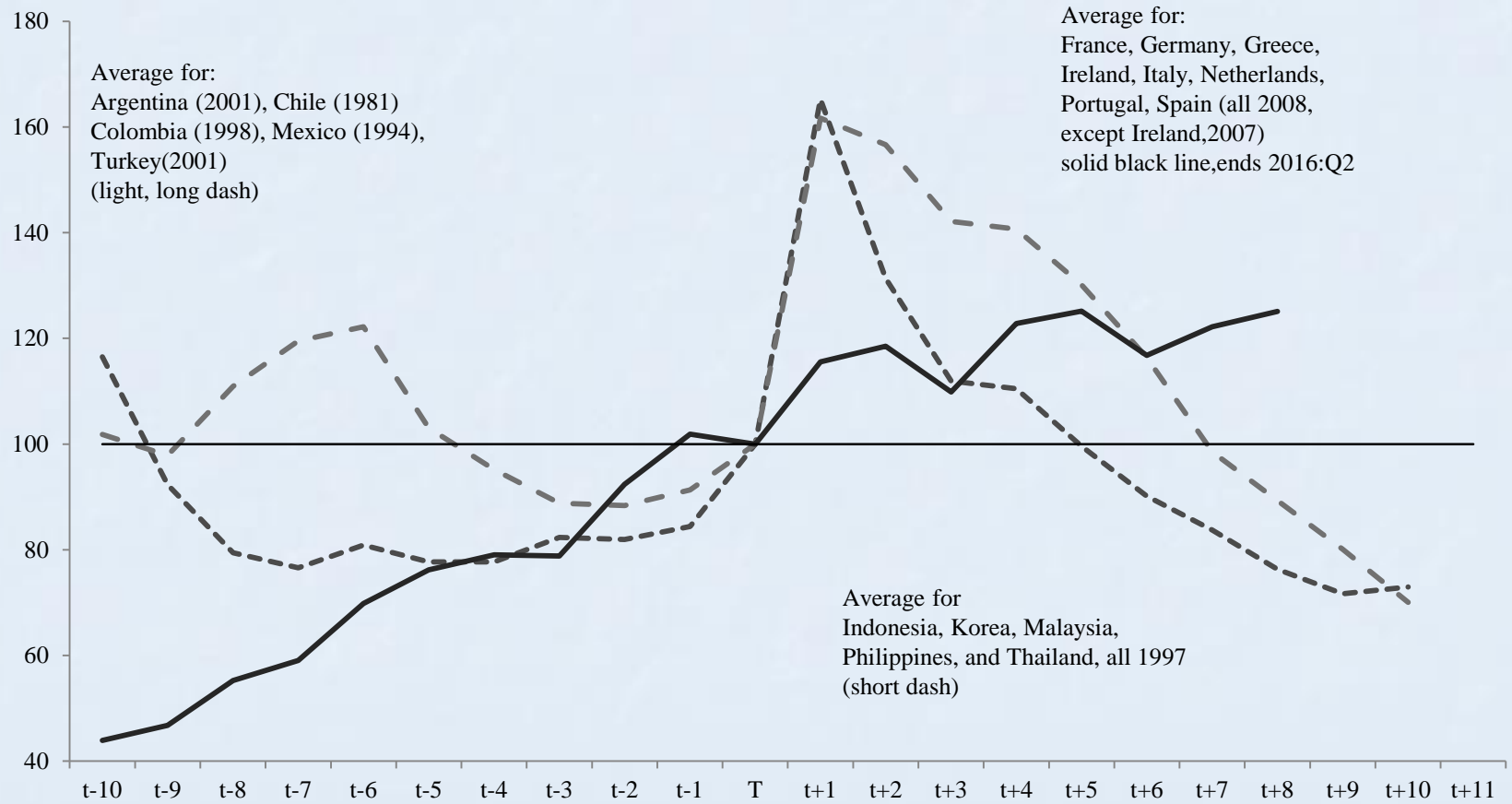


But Iceland accounts for much of the external deleveraging in the previous graph...



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EZ external deleveraging remains elusive—more of this to follow



Why have interest rates remained so low for so long?

- **Saving glut**
- **Secular stagnation**
- **Monetary policy with a heavy dose of financial repression**

Financial repression involves a combination of:

- (i) a large footprint of the official sector in the financial sector;**
- (ii) heavier financial regulation and**
- (iii) sustained low or negative real interest rates.**

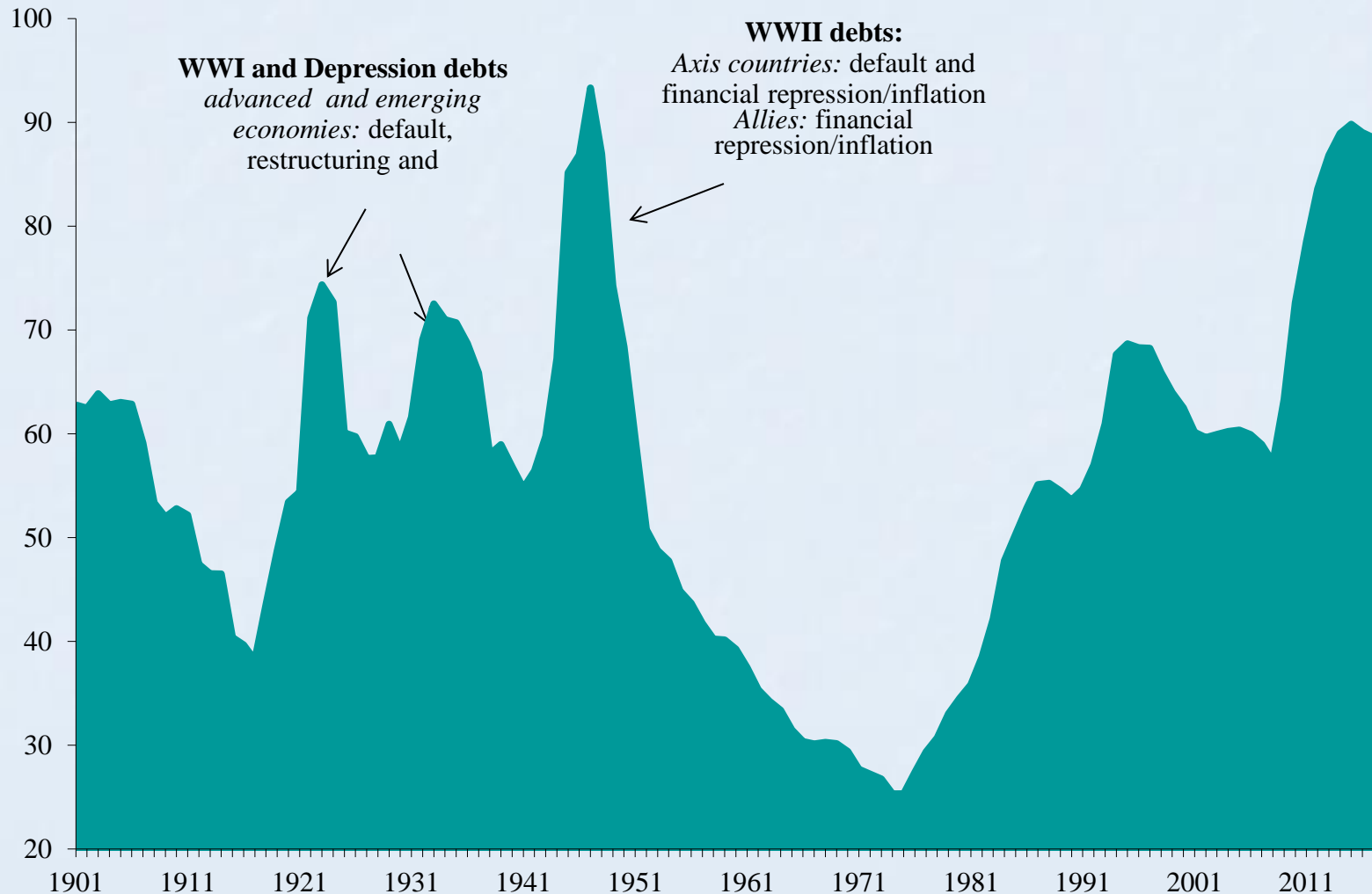
FR is an opaque tax—no legislation or public vote is needed

- **It is a tax on bondholders and, more generally savers**
- **It often is a tax on financial intermediaries (which gets passed on to depositors and borrowers)**
- **As such, it has distributional consequences**

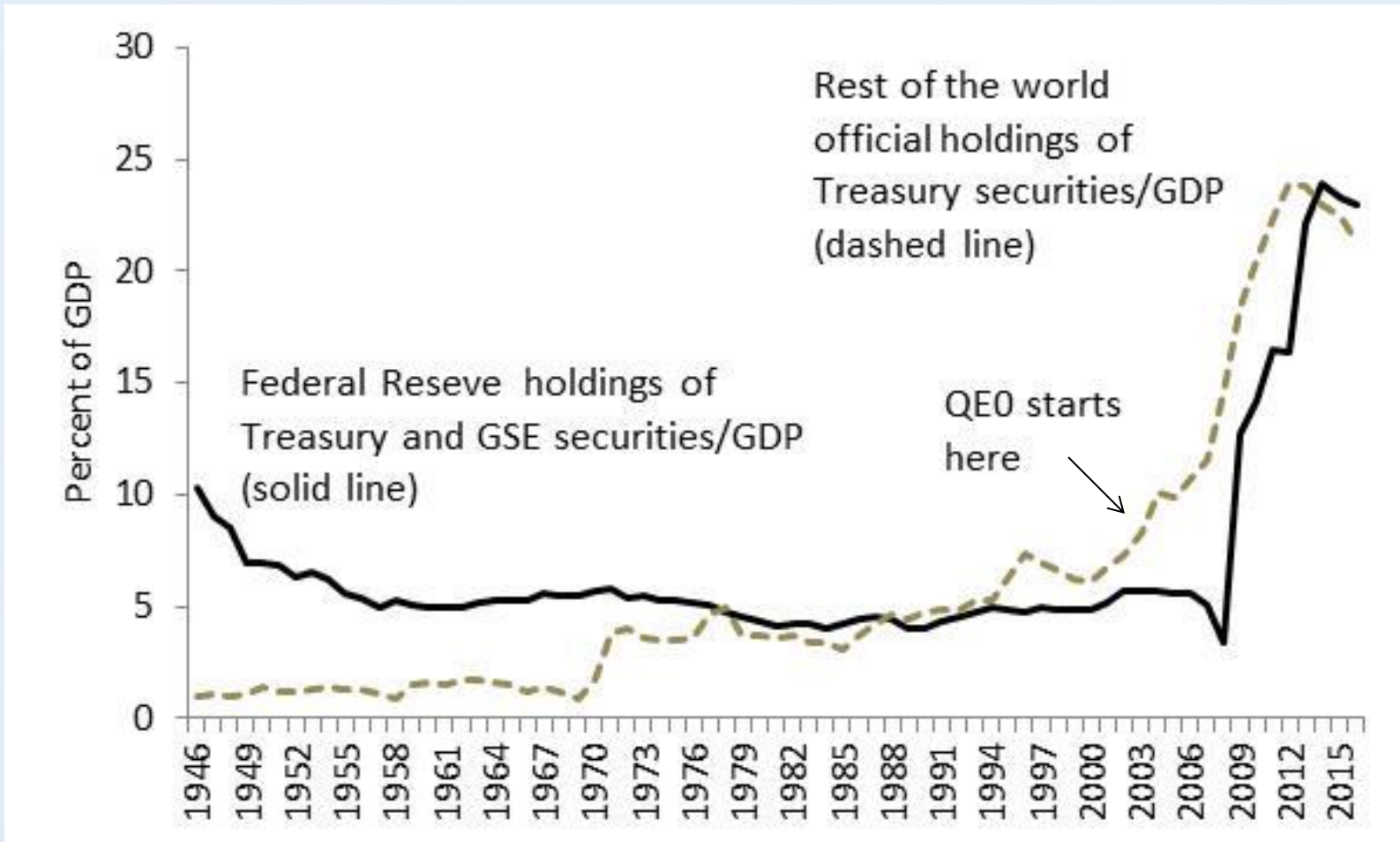
Financial repression is a reason why interest rates have remained so low for so long since the Global Financial Crisis.

Public debt as a percent of GDP: Advanced Economies: 1900-2016

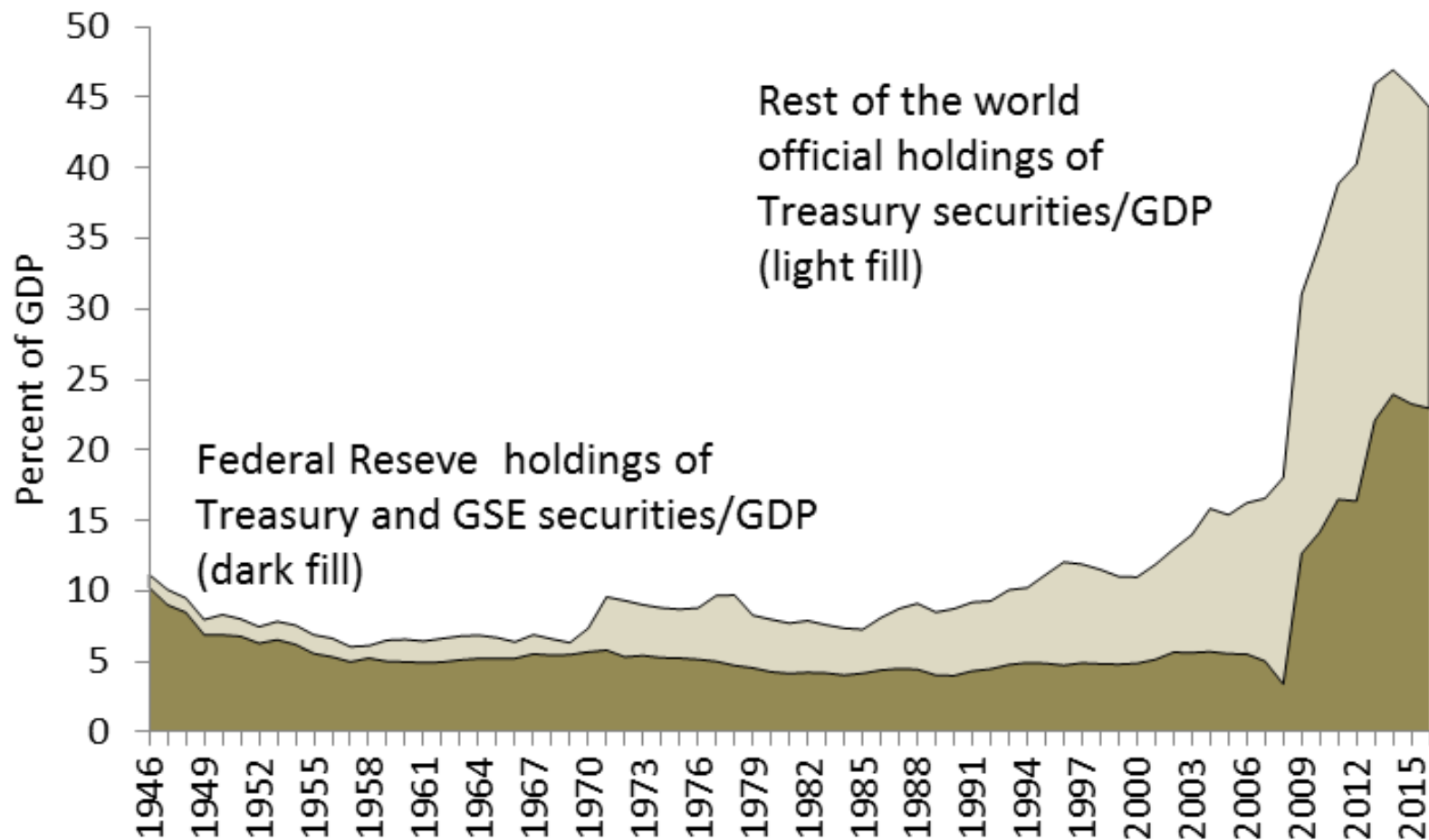
Surges in government debt often set the stage for FR



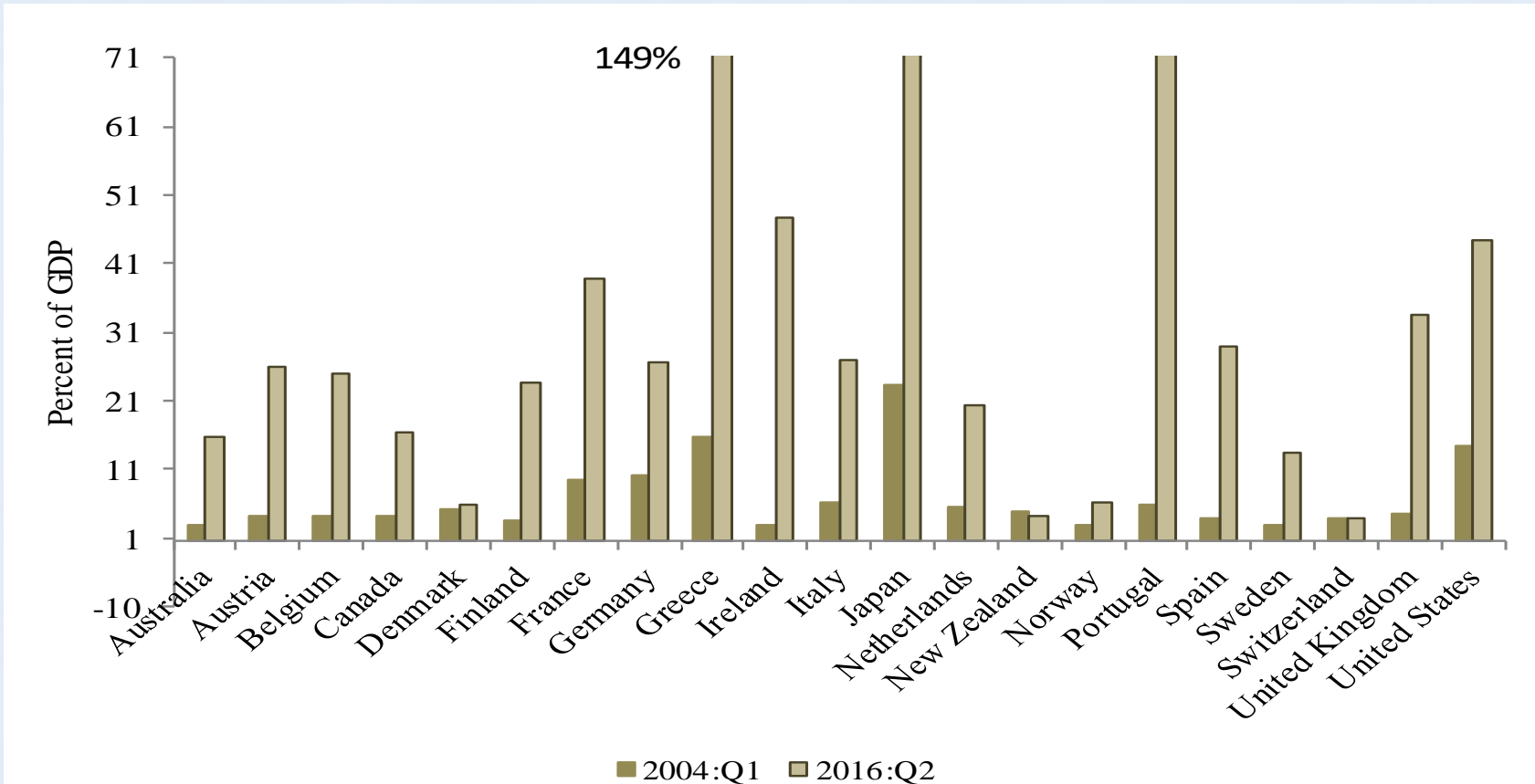
The role in US fixed income markets of the official sector has expanded dramatically...



The combined effect of domestic and official players calls into question to what extent interest rates remain “market-determined”

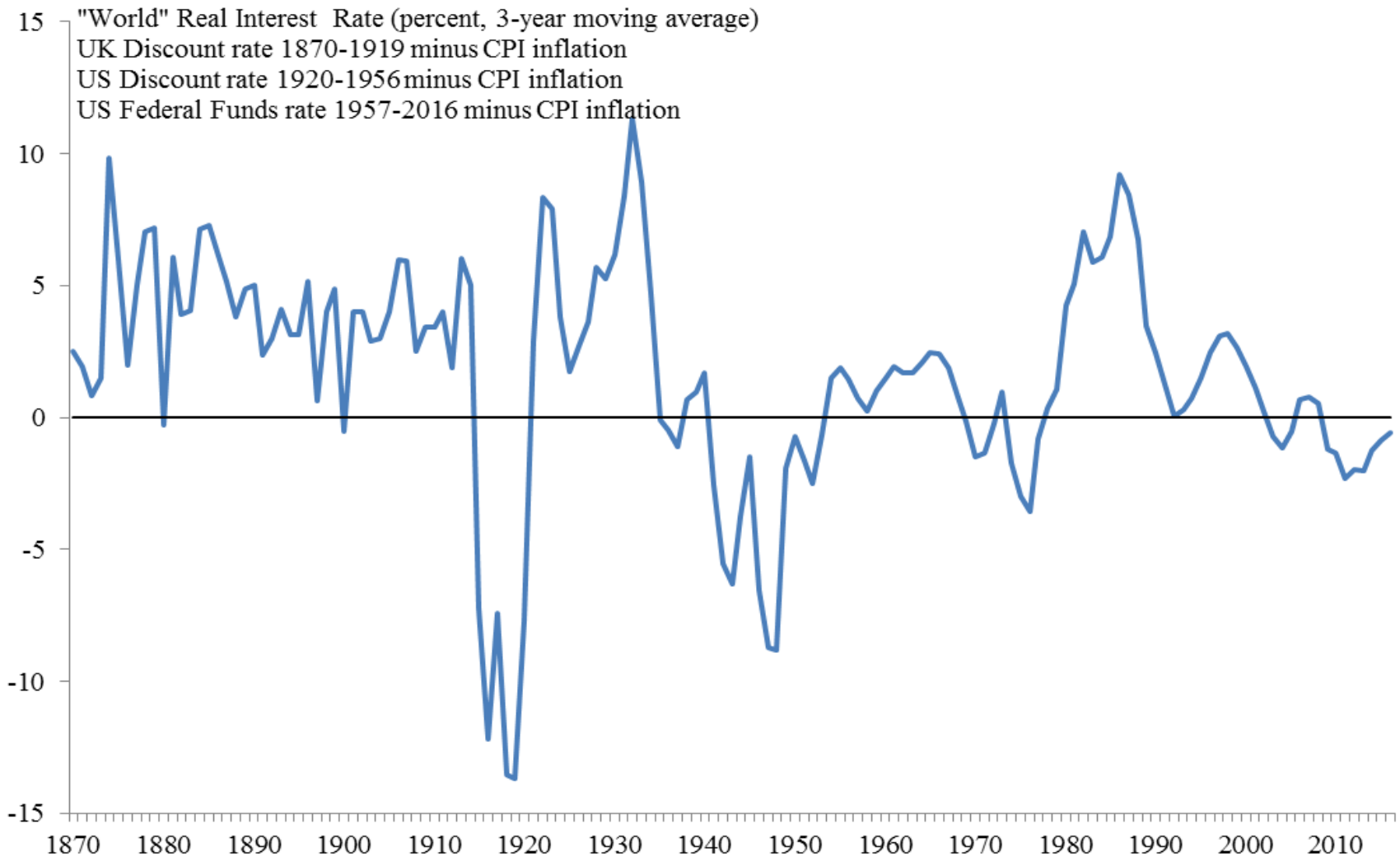


The expanded role of the official players is not just a US phenomenon. General government debt held by official sectors/GDP, 2004:Q1-2016:Q2



Notes: Domestic official sector refers to the central bank; foreign official sector is comprised of foreign central banks, multilateral institutions, and foreign governments. For the US, purchases of GSEs are included.

"World" Real Short-term Interest Rates, 1870-2016: Why are we surprised?



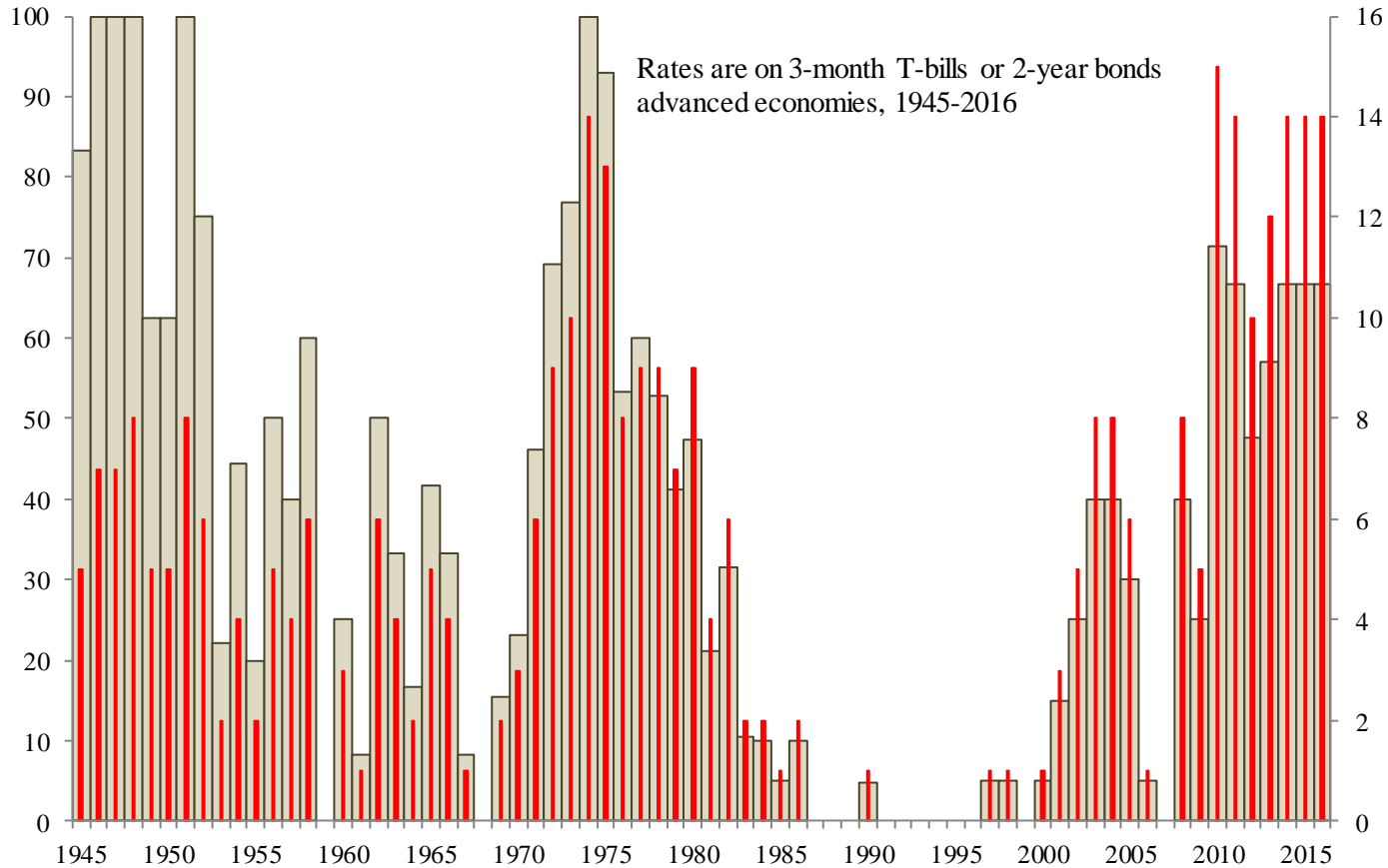
The incidence of negative real short-term interest rates in advanced economies, 1945-2016

(left scale, tan bars)

Share of countries with negative real rates

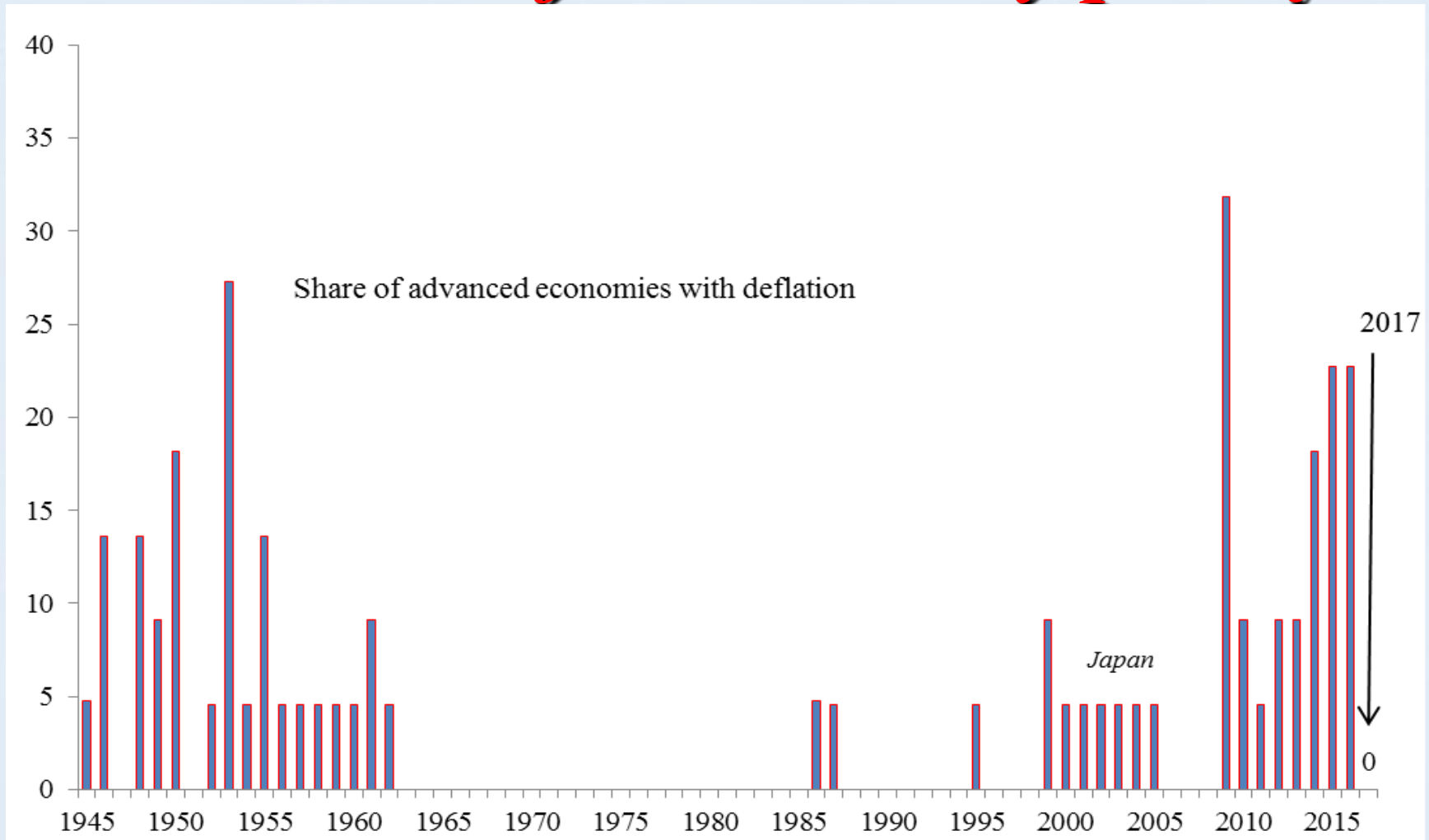
(right scale, red bars)

Number of countries with negative real rates



Is the deflation cycle over?

What's next for monetary policy



Undoing debt overhangs

What is the end-game?

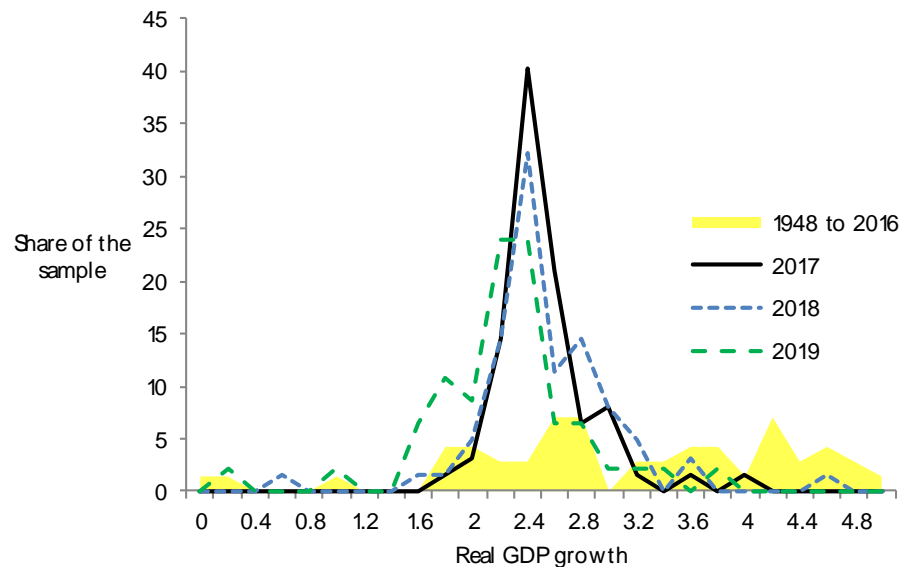
Throughout history, debt/GDP ratios have been reduced by the **conventional** and the **unconventional**:

- (i) economic growth;**
- (ii) fiscal adjustment/austerity;**
- (iii) explicit default or restructuring;**
- (iv) a burst in inflation; and**
- (v) a steady dosage of financial repression that is accompanied by an equally steady dosage of inflation.**

**Challenges to Federal
Reserve tightening:
High debt, President Trump,
and
a strong dollar**

President Trump is an agent of change (or chaos), but economists are in agreement.

Real GDP growth
Actual and surveyed, percent



Share of the sample of real GDP growth between 1 and 3 percent

percent

Economists survey for:

2017	95
2018	89
2019	91

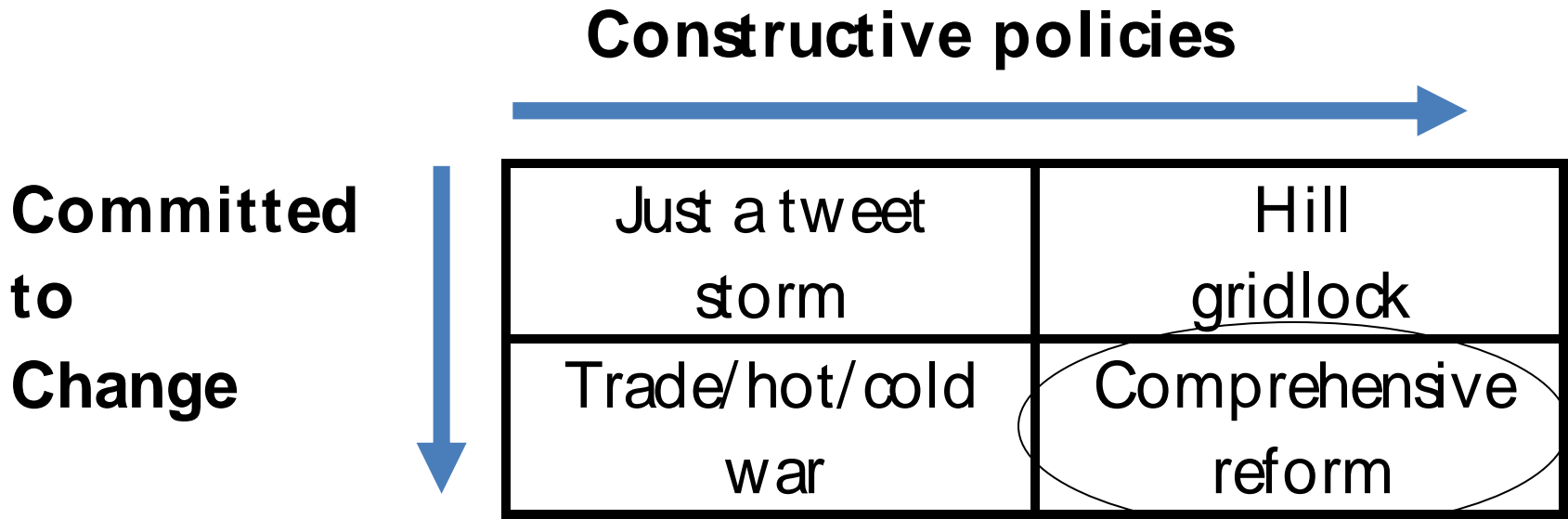
Actual growth, 1948 to 2016

30

Source: Bureau of Economic Analysis (accessed via Bloomberg, 2/13/17) and Wall Street Journal at <http://projects.wsj.com/econforecast/#ind=gdp&r=20>.

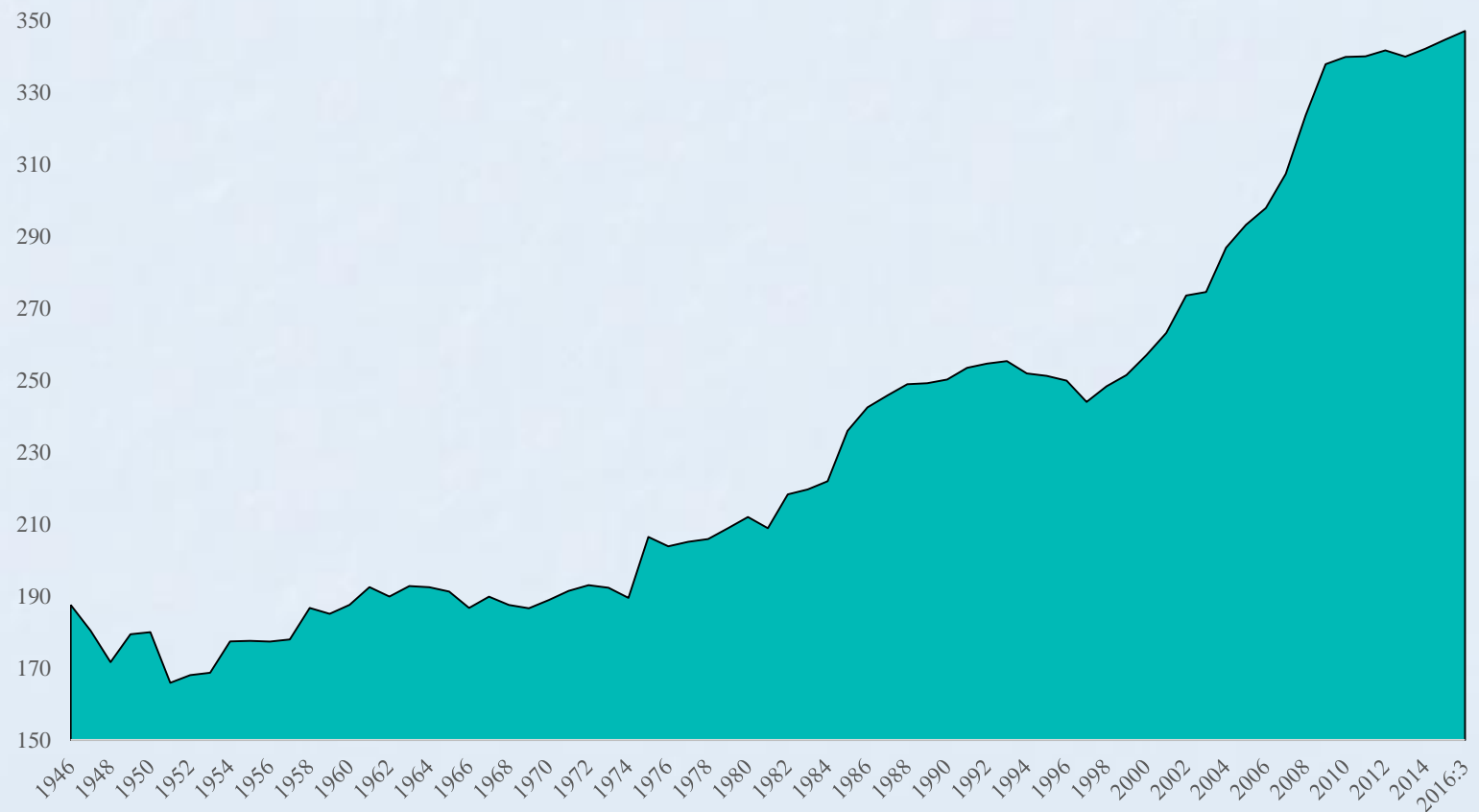
According to another Reinhart, (Standish February 20, 2017)

Potential political outcomes



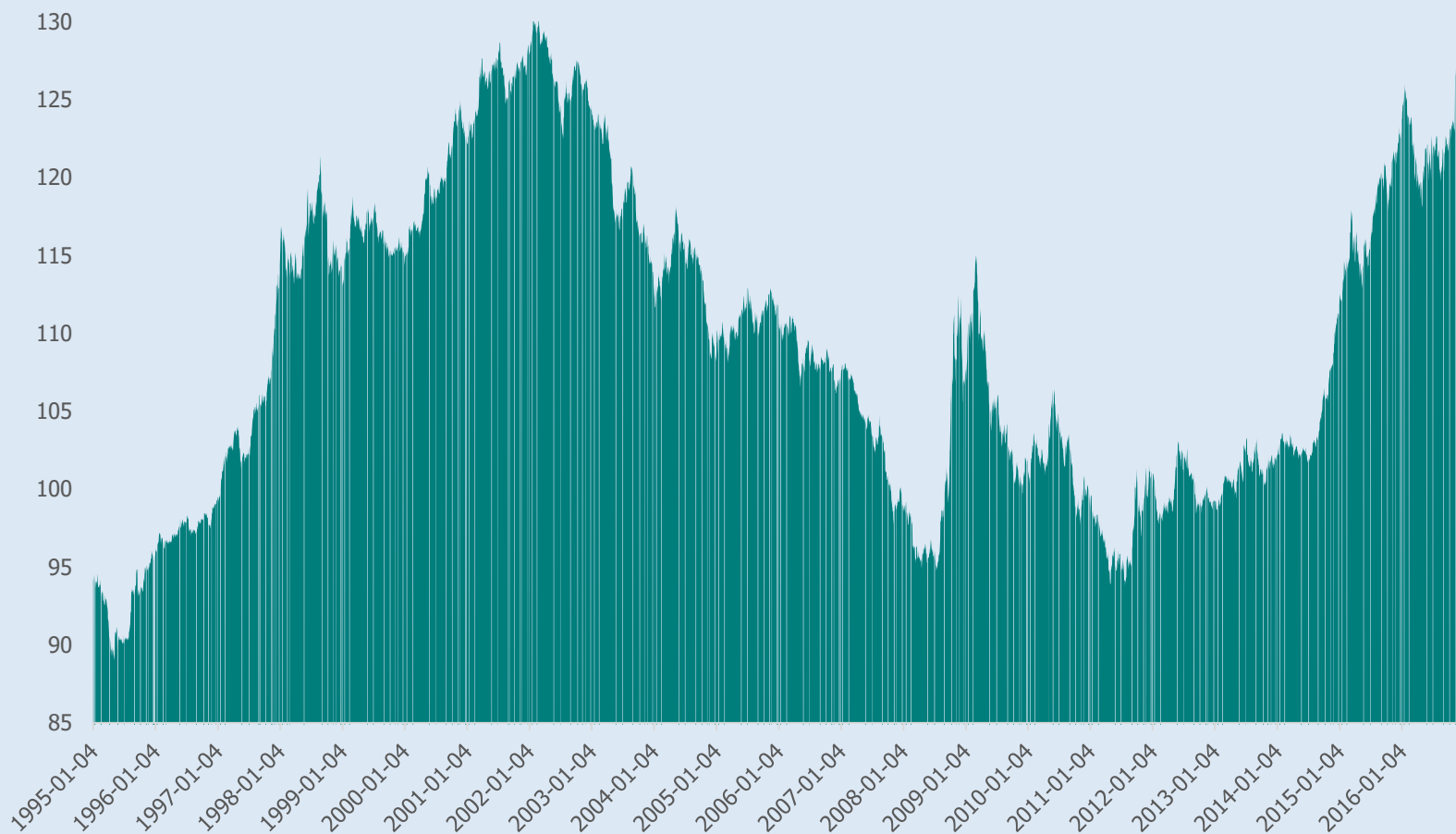
Source: Standish assumptions.

United States, 1946-2016Q3: Total Liabilities of the Nonfinancial Sectors as a Percent of GDP



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Trade Weighted U.S. Dollar Index: Broad, Index Jan 1997=100, Daily, Not Seasonally Adjusted 1995-2016

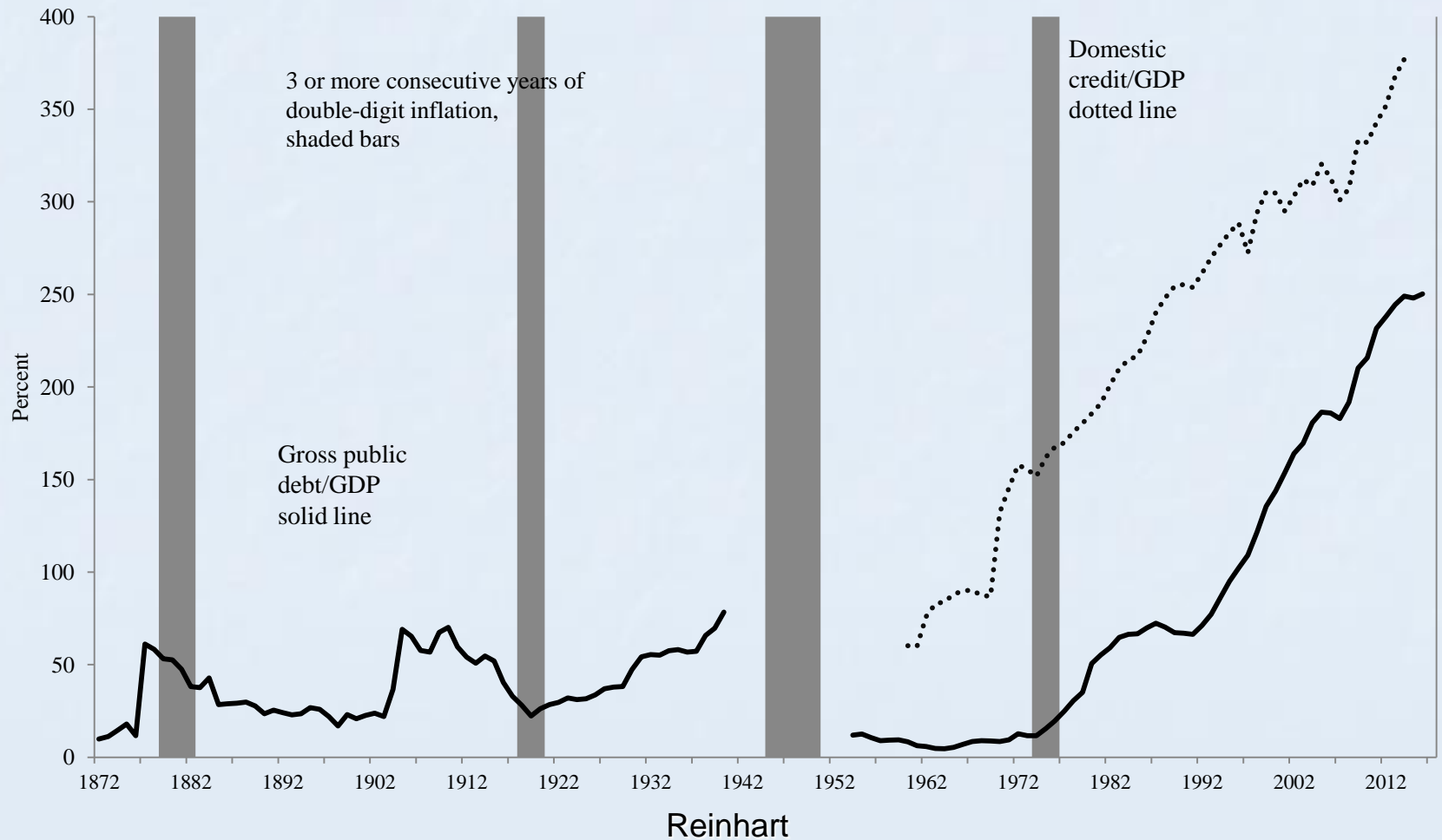


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- There are three openings at the Federal Reserve's Board.
- There is a rift between the Board and the Congress, potentially threatening independence
- Chair Yellen has less than a year left in her term

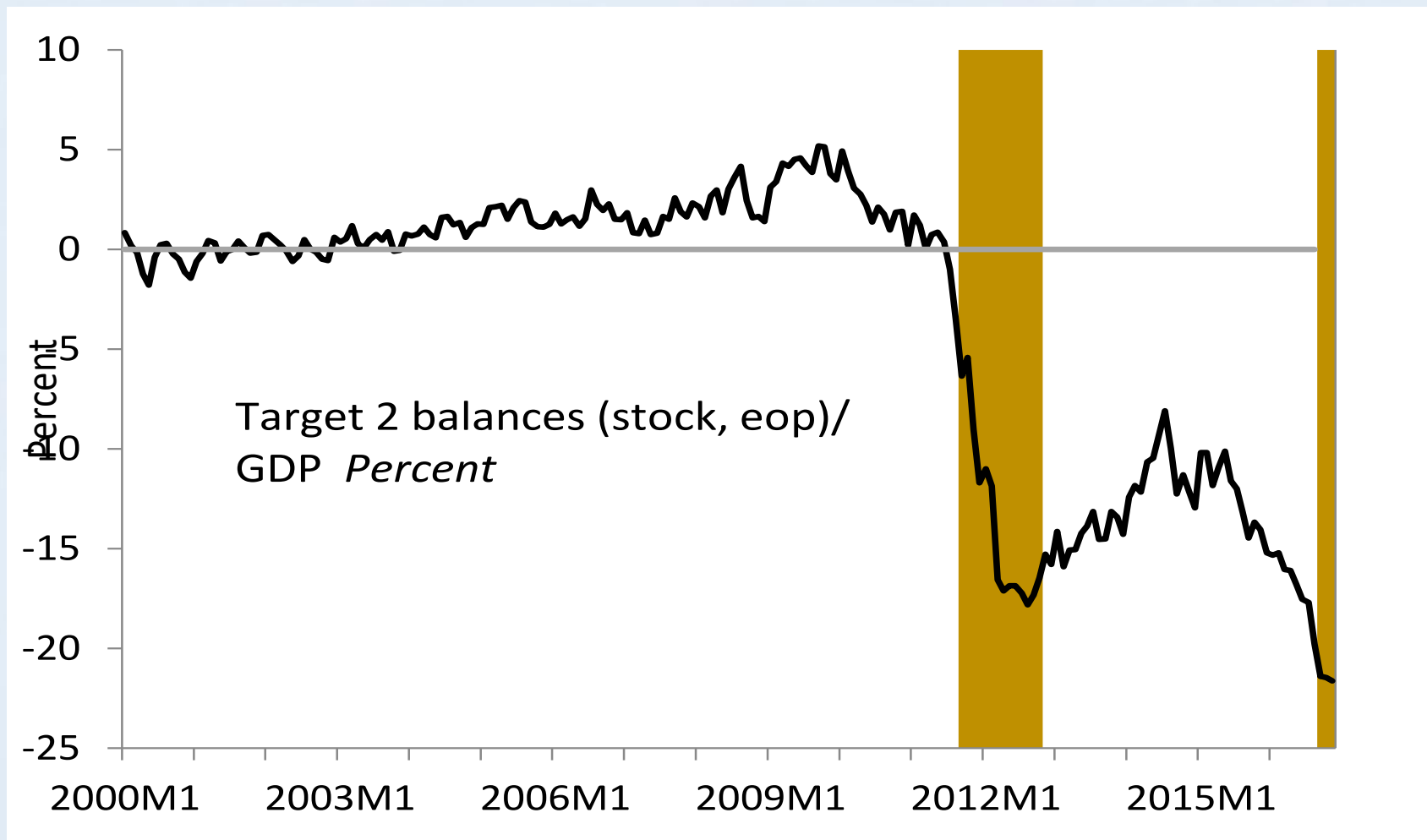
**Why does Japan needs inflation
and continued monetary policy
accommodation?**

Public debt, private credit, and inflation: Japan 1872-2016

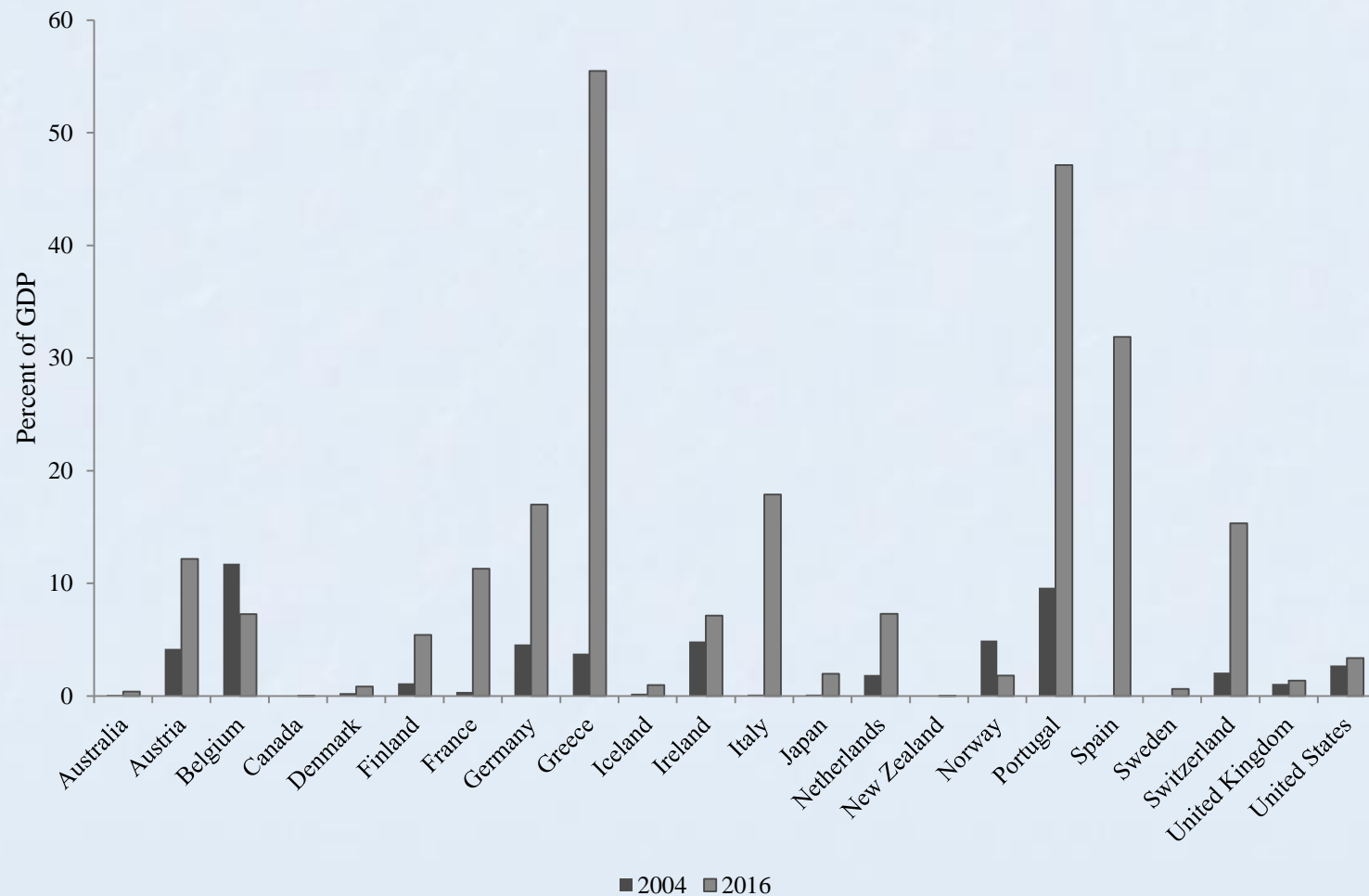


Eurozone's North-South divide: Debt overhang, selected banking problems, and capital flight in the periphery (with a fixed intra-Eurozone exchange rate)

In the case of Italy (2000:1-2016:11), the decline in shadow reserves (Target 2) defines an ongoing BoP crisis



Central Bank External Debt: 2004 and 2016 (as a percent of GDP)

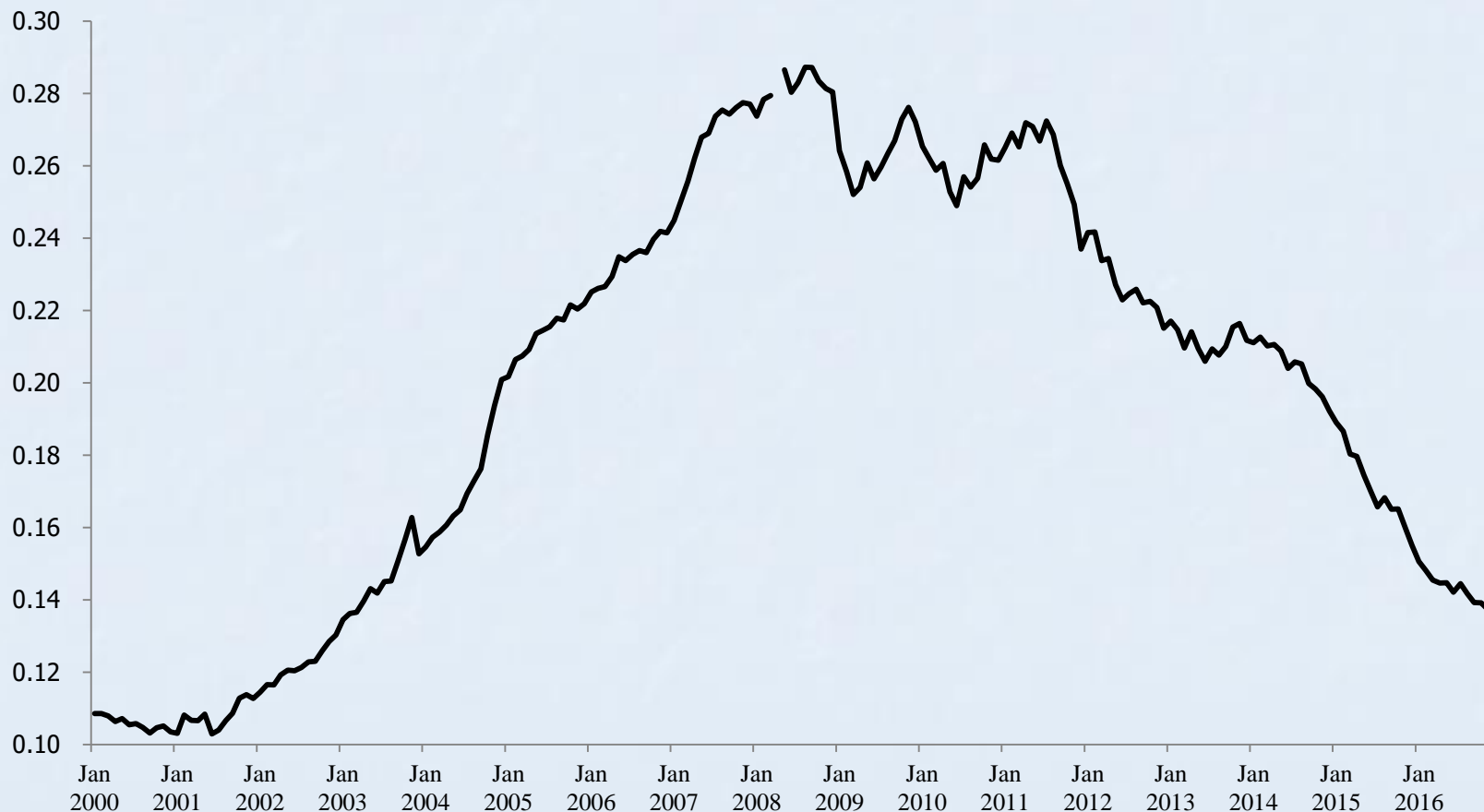


China:

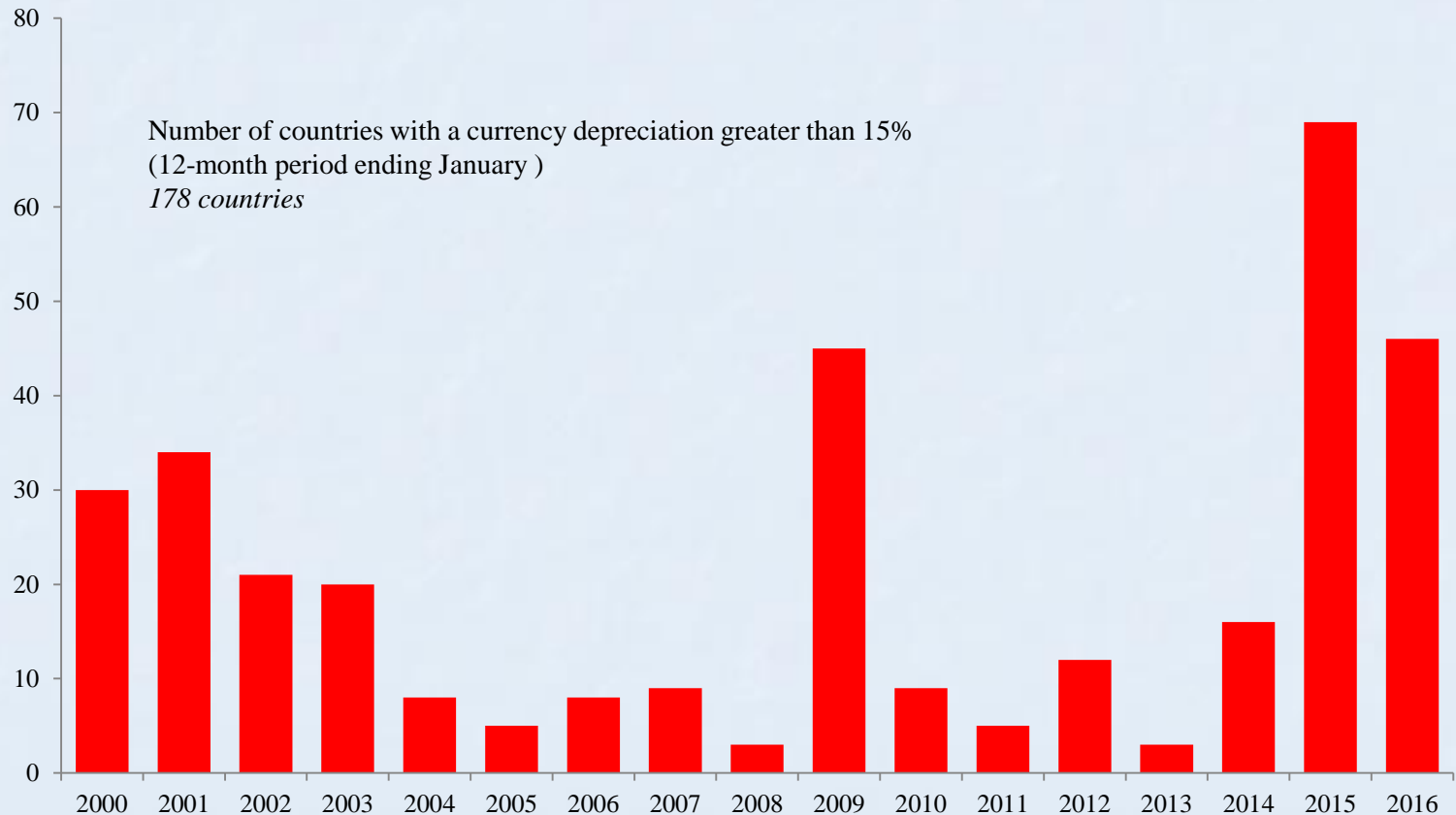
Another historical example of a central bank's policy inconsistency between a lender of last resort and a (semi) fixed exchange rate.

Usually—it is the exchange rate that gives.

China's Capital flight: Central bank reserves/M2 (broad money)—reserves are not the full story *January 2000 to November 2016*



Emerging Markets: The return of the currency crash and volatility



Pass-through (thus far) has been modest by historical standards...

October 2013 to January (or February) 2016		Inflation (eop)			
Currency depreciation (percent)		2013	2014	2015	2016
Brazil	84.6	5.9	6.4	10.7	7.2
Chile	44.1	2.8	4.7	4.4	3.5
Colombia	77.9	1.9	3.7	6.8	6.0
Malaysia	31.7	3.2	2.7	2.7	2.1
Mexico	42.0	4.0	4.1	2.1	3.2
Peru	26.6	2.9	3.2	4.4	2.9
Russia	140.8	6.5	11.4	12.9	5.9
South Africa	65.1	5.4	5.3	5.2	6.7
Turkey	50.8	7.4	8.2	8.8	9.1
October 2013 to February 2017					
Mexico	55.0				

Sources: International Monetary Fund, *International Financial Statistics* and *World Economic Outlook*

**To conclude:
Is inflation on the rise?**