The Global Economy Seven Years after the Financial Crisis: Vulnerabilities and Policy Issues

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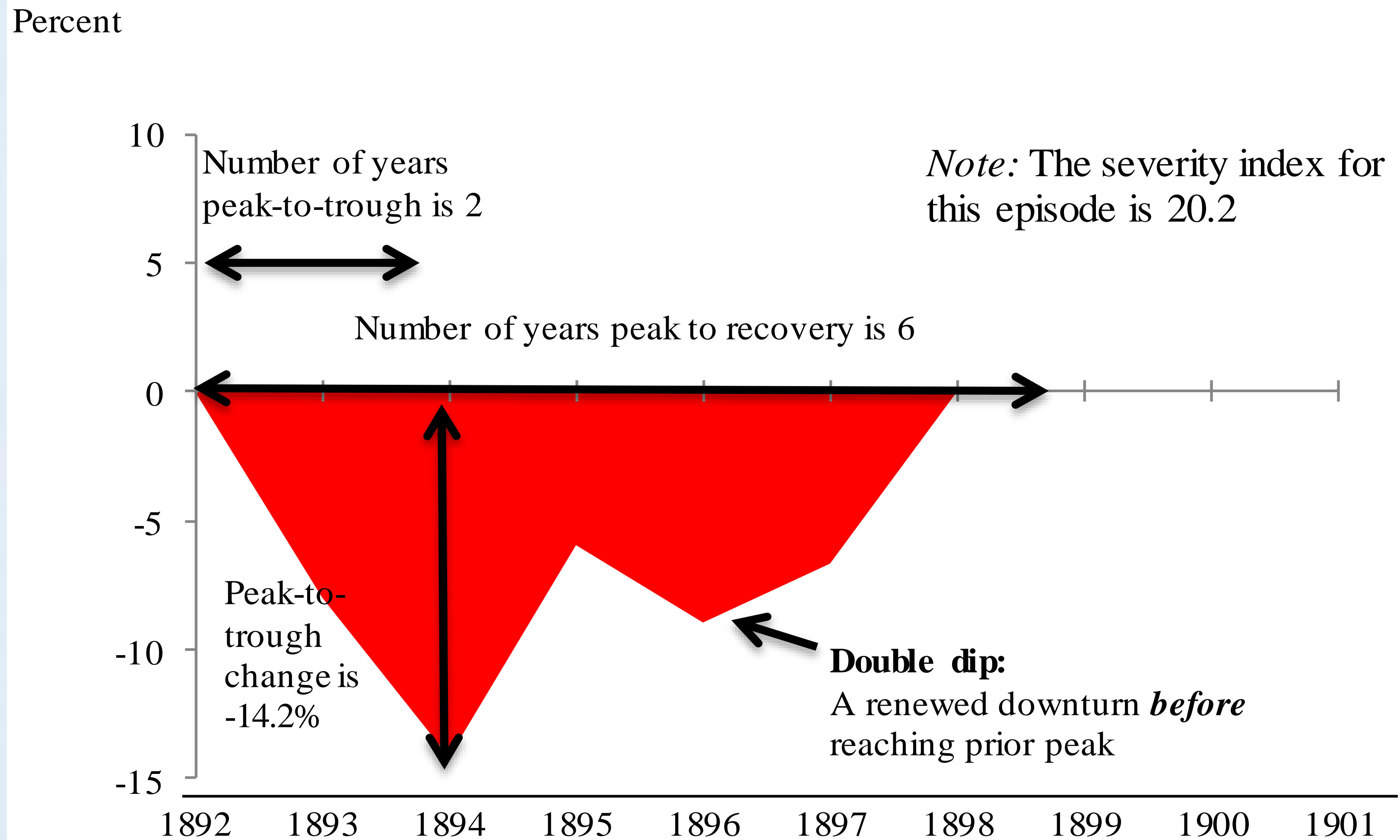
Outline of talk

- **Advanced economies:** ***(i)*** **Delayed recovery,** ***(ii)*** **deflationary tendencies** ***(iii)*** **Debt overhangs and their resolution**
- **Global finance: Equilibrium real interest rates, QE, and the trend toward financial repression**
- **Emerging markets:** ***(i)*** **Capital flow bonanzas and their aftermath.** ***(ii)*** **Where are we in the boom-bust cycle?** ***(iii)*** **persistence and duration--Commodities? China?**

Where are the advanced economies seven years after subprime?

Basic concepts: An Illustration with the US Banking Crisis of 1893



The 2007-2009 Crisis: Severity measures

- It is premature to construct a definitive measure of the severity of the recent crises
- Of the twelve countries experiencing a systemic crisis starting in 2007-2008 (France, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Portugal, Spain, Ukraine, UK, and US), only Germany and the US have reached their pre-crisis peak in per capita GDP.

Output, Crises and Recovery

Reinhart and Rogoff (2014) updated with World Economic Outlook, April 2015

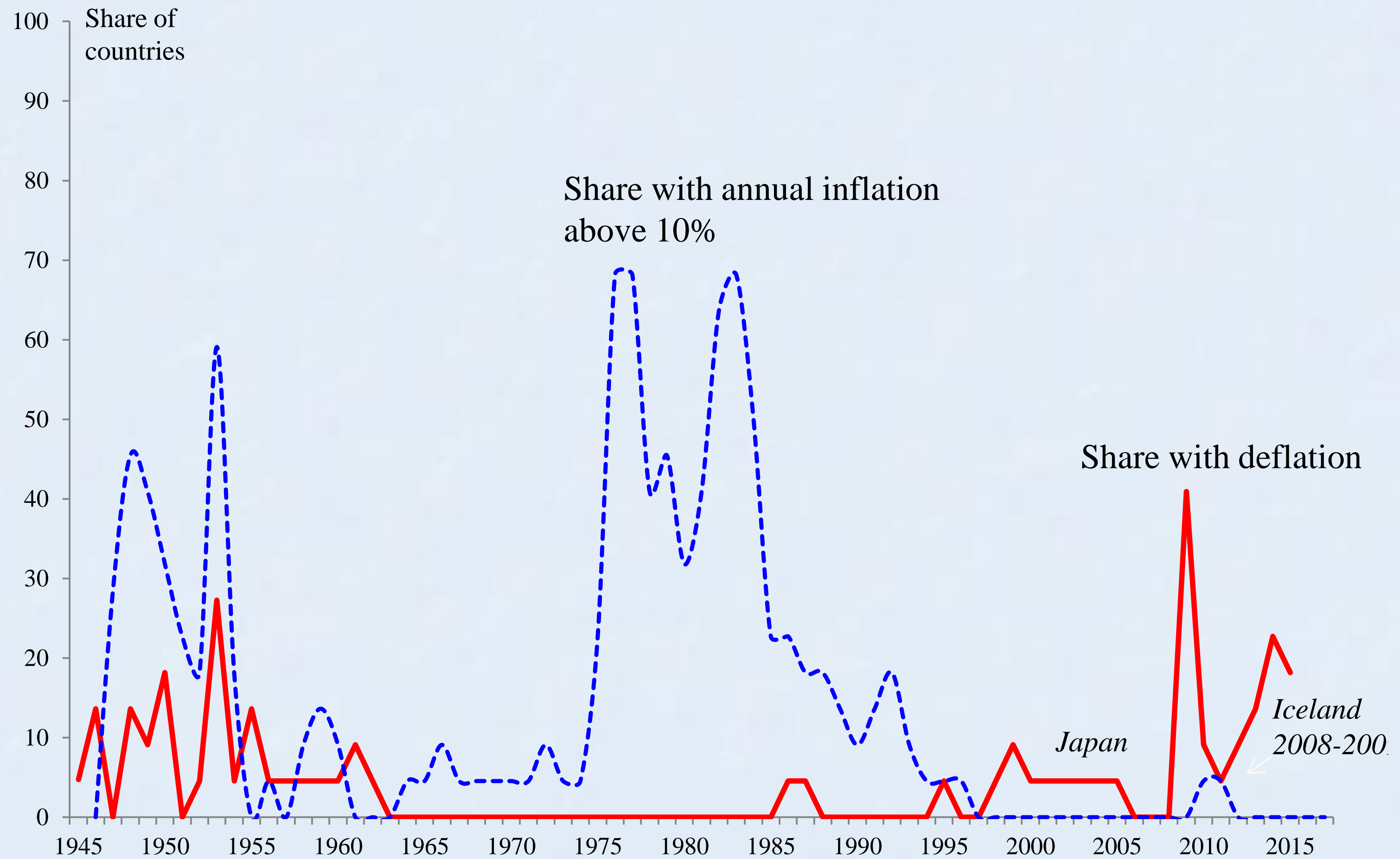
12 Systemic banking crises, 2007-2008

	Year	Country	% change Peak to trough	Number of years Peak to trough	Peak to recovery	Severity index	Breakeven year
1	2008	France	-3.8	2	*9*	*12.8*	*2016*
2	2008	Germany	-5.3	1	3	8.3	2011
3	2008	Greece	-25.8	*6*	*14*	*39.8*	***2021??***
4	2007	Iceland	-9.9	3	*9*	*18.9*	*2016*
5	2007	Ireland	-12.6	3	*11*	*23.6*	*2018*
6	2008	Italy	-10.8	*7*	*14*	*24.8*	***2021??***
7	2008	Netherlands	-5.0	*5*	*10*	*15.0*	*2018*
8	2008	Portugal	-7.4	*6*	*12*	*19.4*	*2019*
9	2008	Spain	-9.0	*6*	*11*	*20.0*	*2018*
10	2008	Ukraine	-14.8	1	*12*	*26.8*	*2020*
11	2007	United Kingdom	-5.9	5	*8*	*13.9*	*2015*
12	2007	United States	-4.8	2	6	10.8	2013
	Summary:	Mean	-9.6	3.9	9.9	19.5	
		Median	-8.2	4.0	10.5	19.2	
		Standard deviation	6.1	2.2	3.2	8.6	

Note: The italics denote any calculations in which IMF estimates for 2015-2020 are used.

- **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.**

The incidence of deflation and high inflation, 22 advanced economies, 1945-2015



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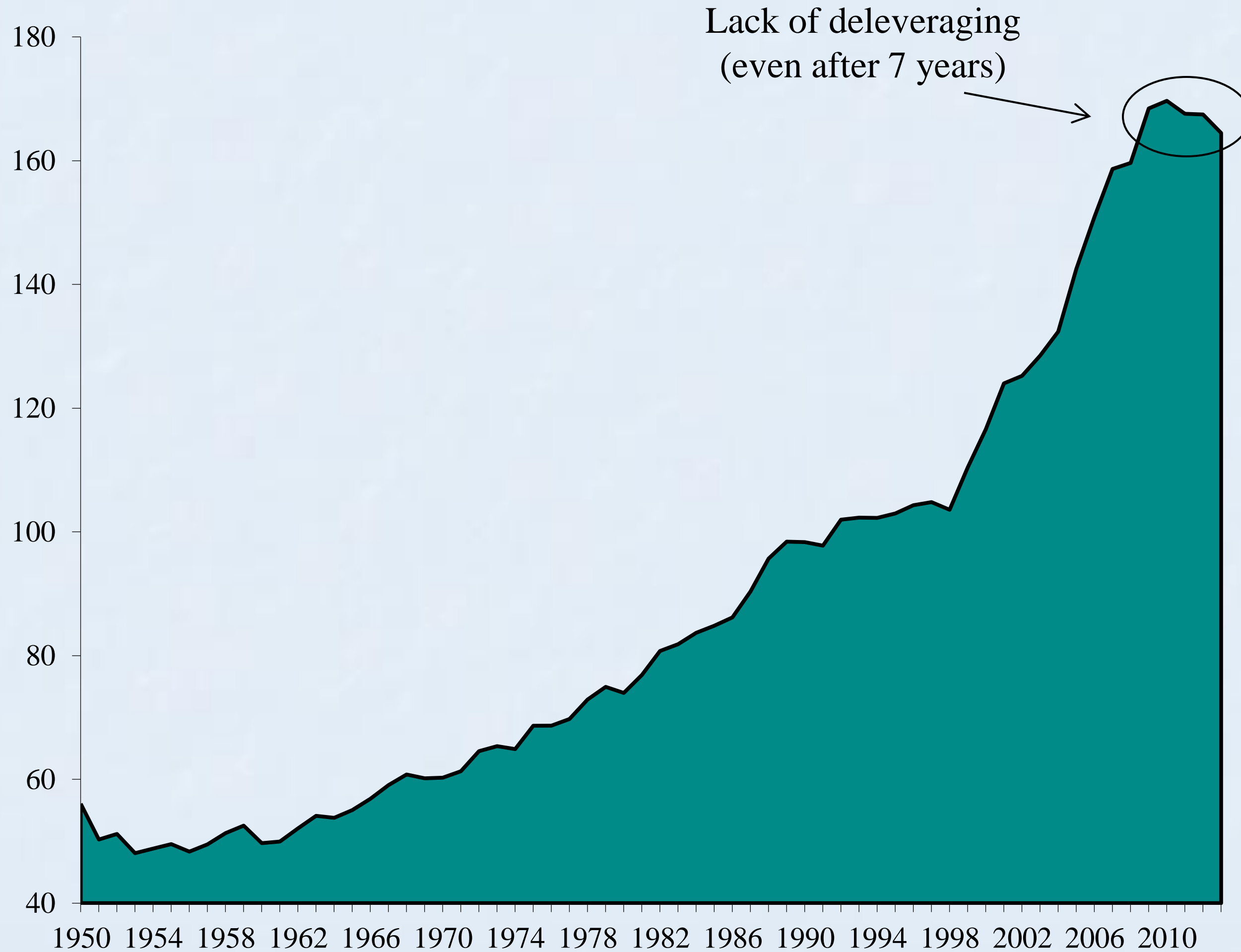
What factors have made this crisis so protracted? What is the end-game?

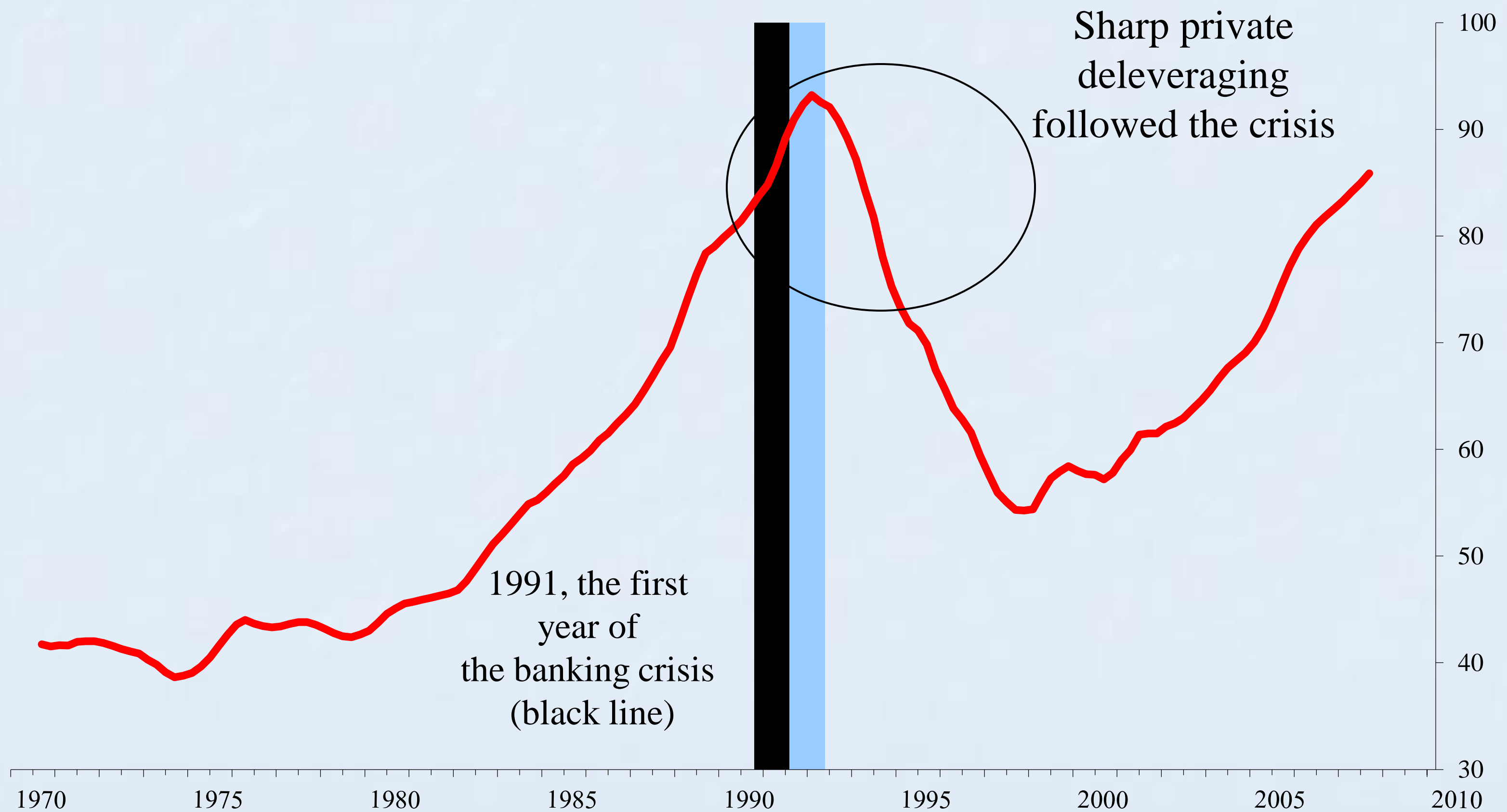
The list includes:

- **the synchronous nature of the crisis,**
- **the absence of greater exchange rate adjustment,**
- **austerity,**
- **the dearth of credit—(external or domestic),**
- ***the lack of deleveraging and write-downs (private or public) almost a decade later.***

Private Domestic Credit as a Percent of GDP Advanced Economies, 1950-2014



The contrast of the Nordic Crises: Finland, domestic credit around the 1991 crisis



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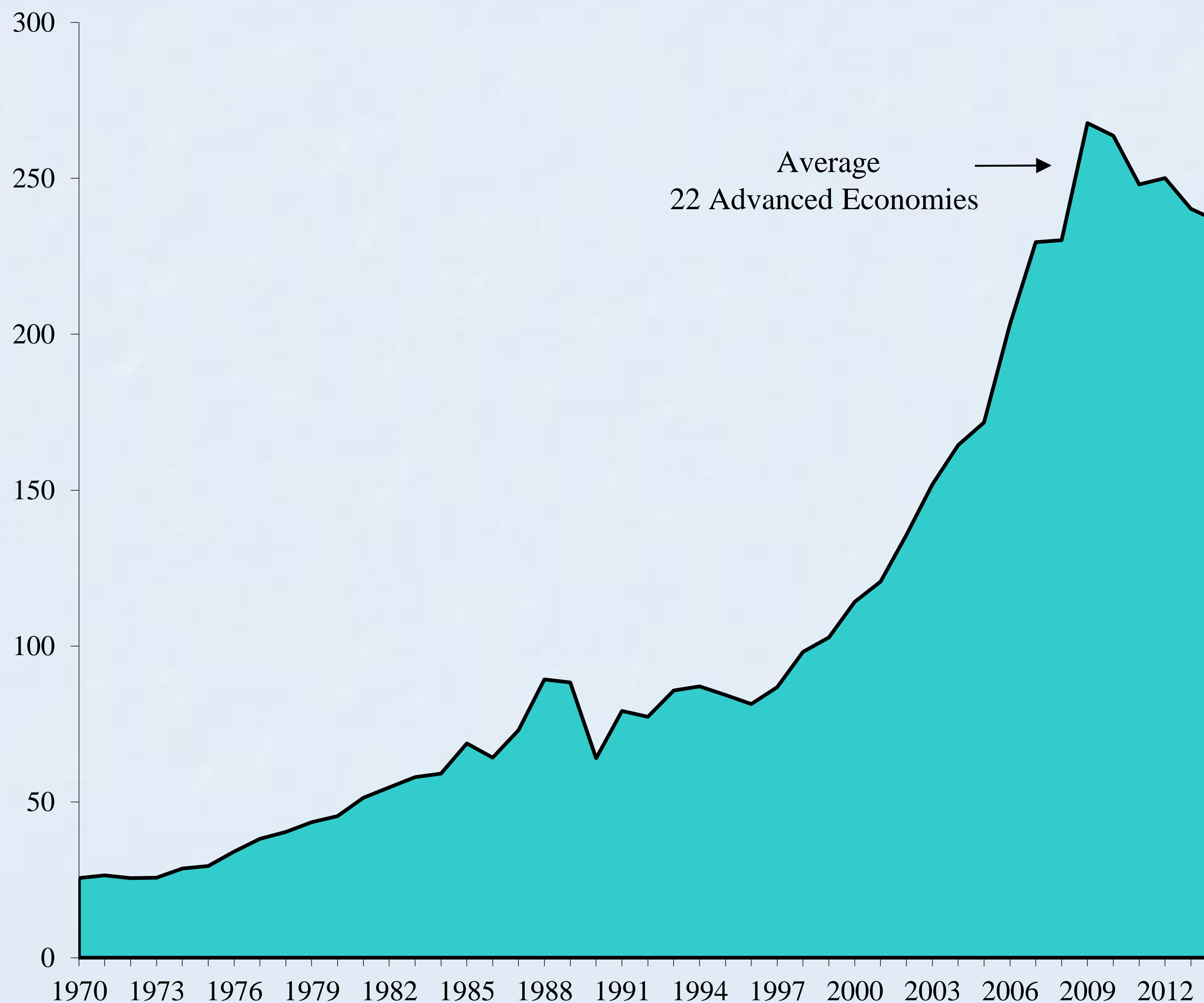
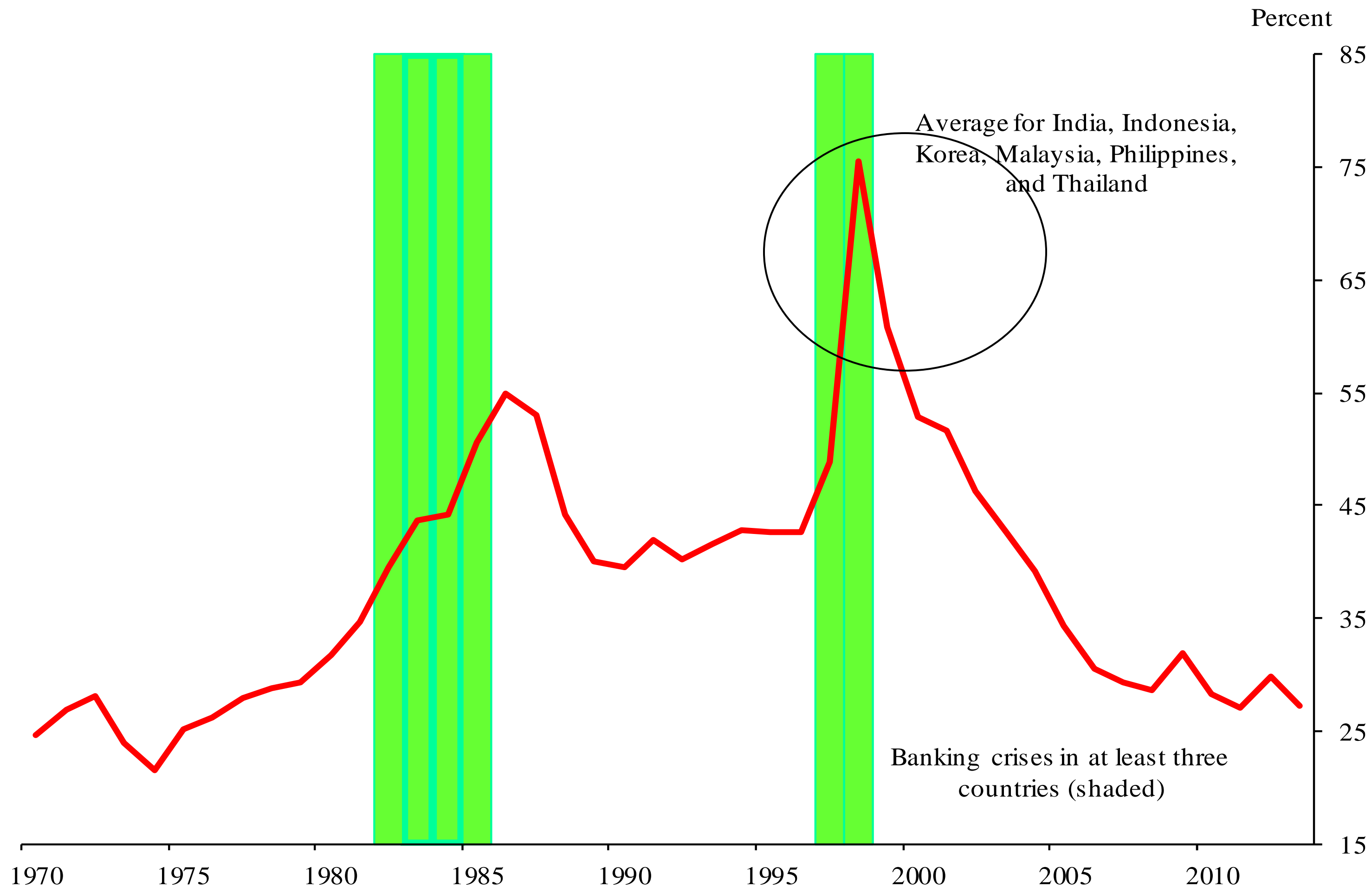
Gross Total (Public plus Private) External Debt as a Percent of GDP: 22 Advanced Economies, 1970-2014



The contrast of the Asian Crisis: External Total (Public plus Private) External Debt in Six Asian Economies, 1970-2013



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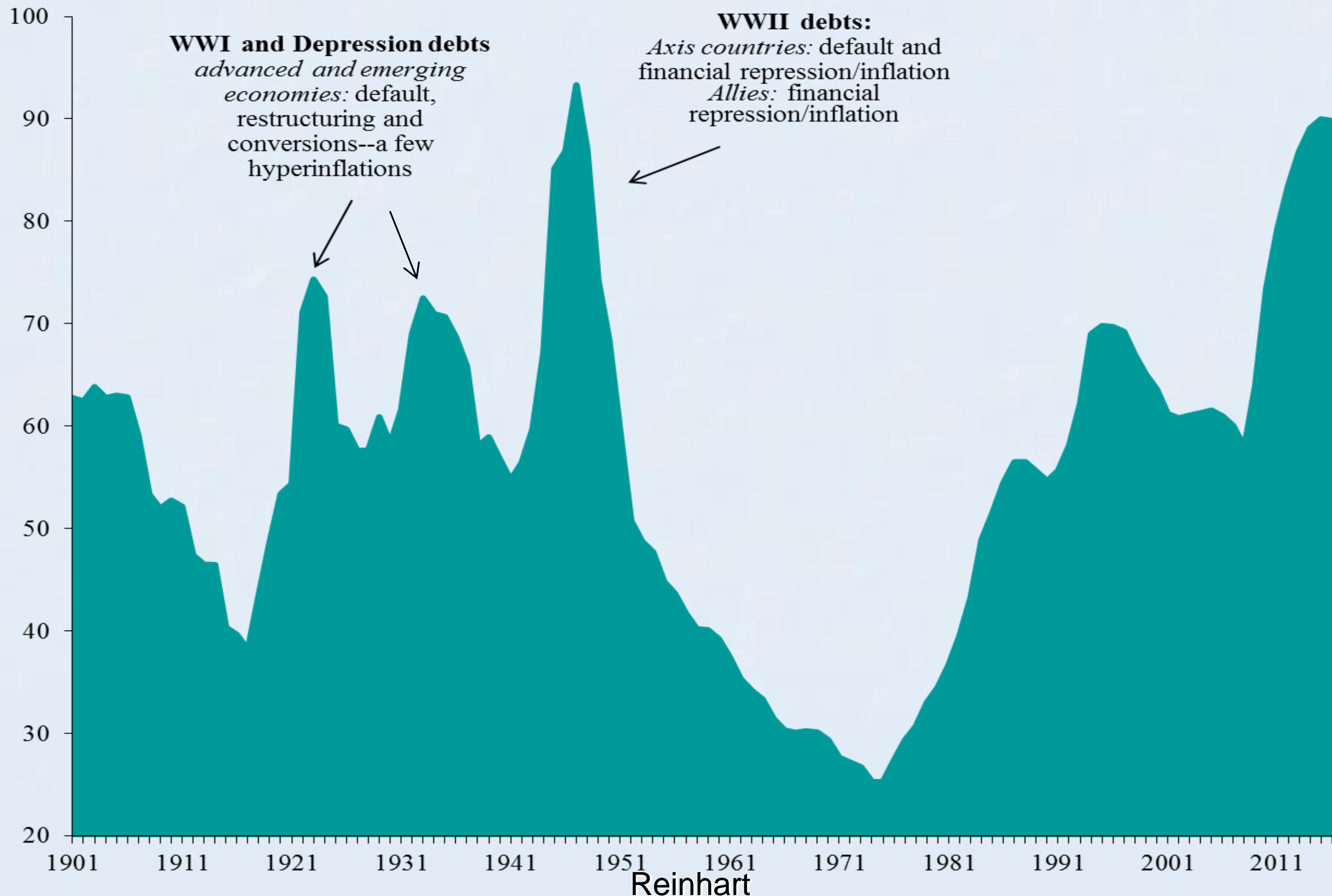
Public debt as a percent of GDP: Advanced Economies: 1900-2015



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What is the endgame?

Throughout history, debt/GDP ratios have been reduced by:

(i) economic growth;

(ii) fiscal adjustment/austerity;

(iii) explicit default or restructuring;

(iv) a sudden surprise burst in inflation; and

(v) a steady dosage of financial repression that is accompanied by an equally steady dosage of inflation.

Public debt reduction has not always been orthodox --even in advanced economies

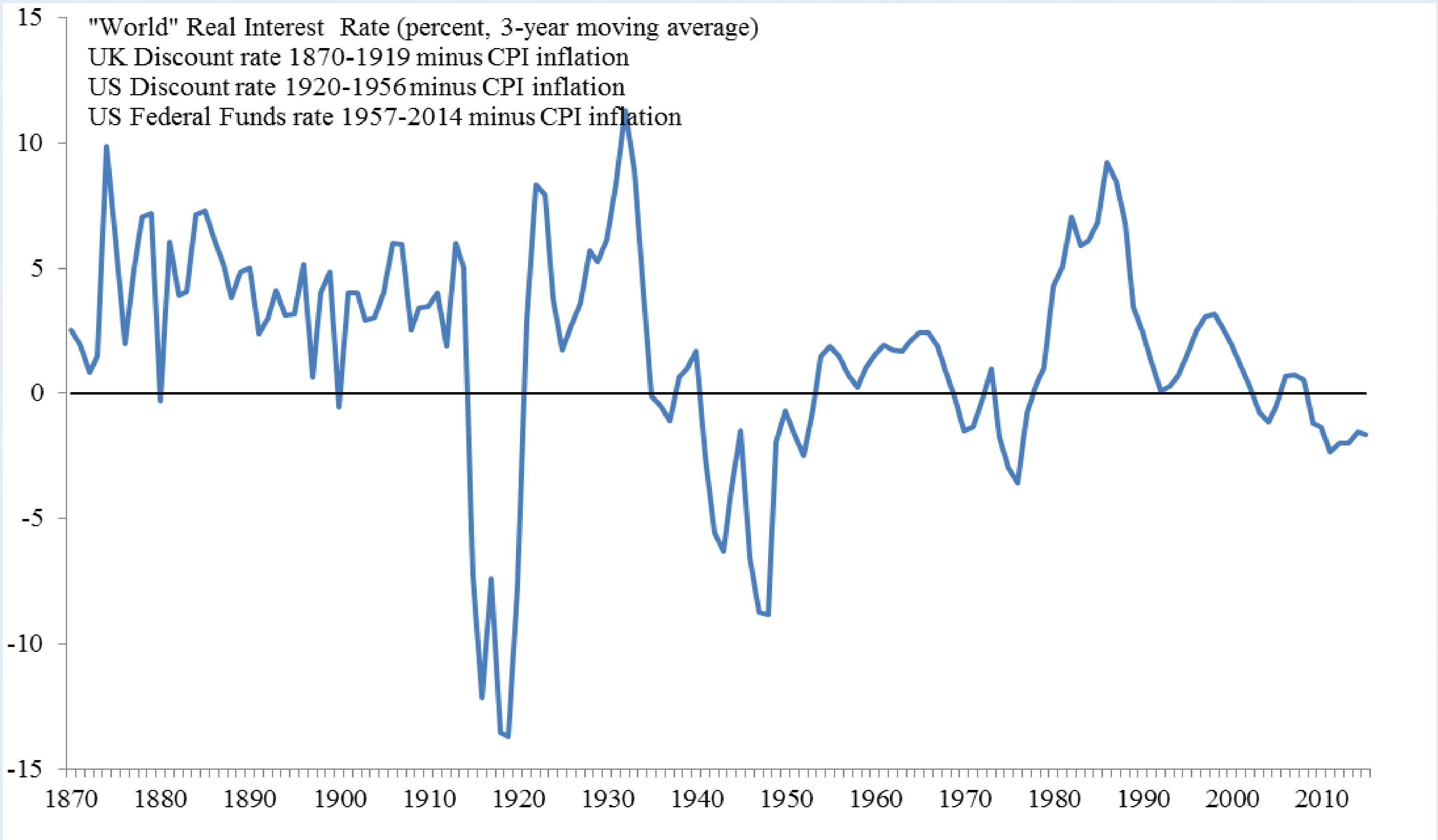
Reinhart, Reinhart and Rogoff (2015)

Factors Behind Debt Reversals:
Fiscal Adjustment, Restructuring, Inflation, Growth, and Real Interest Rates

	Growth > median	Primary balance > median	Real rates < median	Inflation > median	Default or restructure
Total sample, 70 episodes					
Number of episodes	38	41	41	41	16
Share	0.54	0.61	0.59	0.59	0.23
Post-war cases, 36 episodes					
Number of episodes	21	16	30	30	9
Share	0.58	0.48	0.86	0.83	0.25
Peacetime, 34 episodes					
Number of episodes	17	25	11	11	7
Share	0.50	0.74	0.32	0.32	0.21
Memorandum items:					
Share of debt reduction episodes associated with deflation					
Total	0.07				
War	0.11				
Peace	0.03				

Real interest rates, financial regulation, and the post crisis re-emergence of financial repression

"World" Real Short-term Interest Rates, 1870-2015



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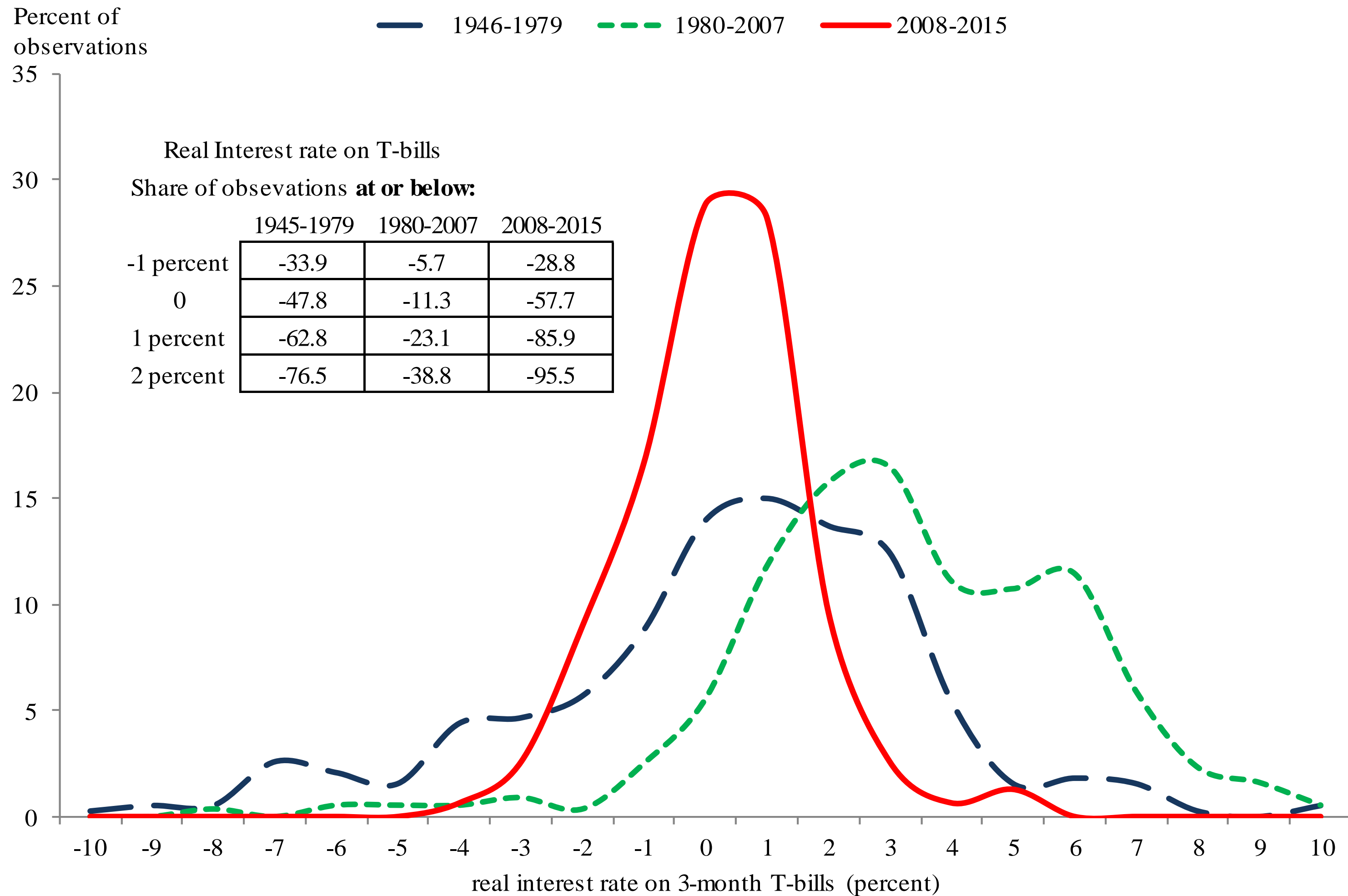
Historical antecedents

Reinhart and Sbrancia (2011 and 2015)

- **For the advanced economies in our sample, real interest rates were negative roughly ½ of the time during 1945-1980.**
- **"Financial repression" was most successful in liquidating debts when accompanied by a steady dose of moderate inflation.**
- **Average annual interest expense savings as a percent of GDP (FR tax) range from about 1 to 5 percent of GDP for the full 1945-1980 sample.**

Real T-bill Rates Frequency Distributions: 22 Advanced Economies, 1945-2015

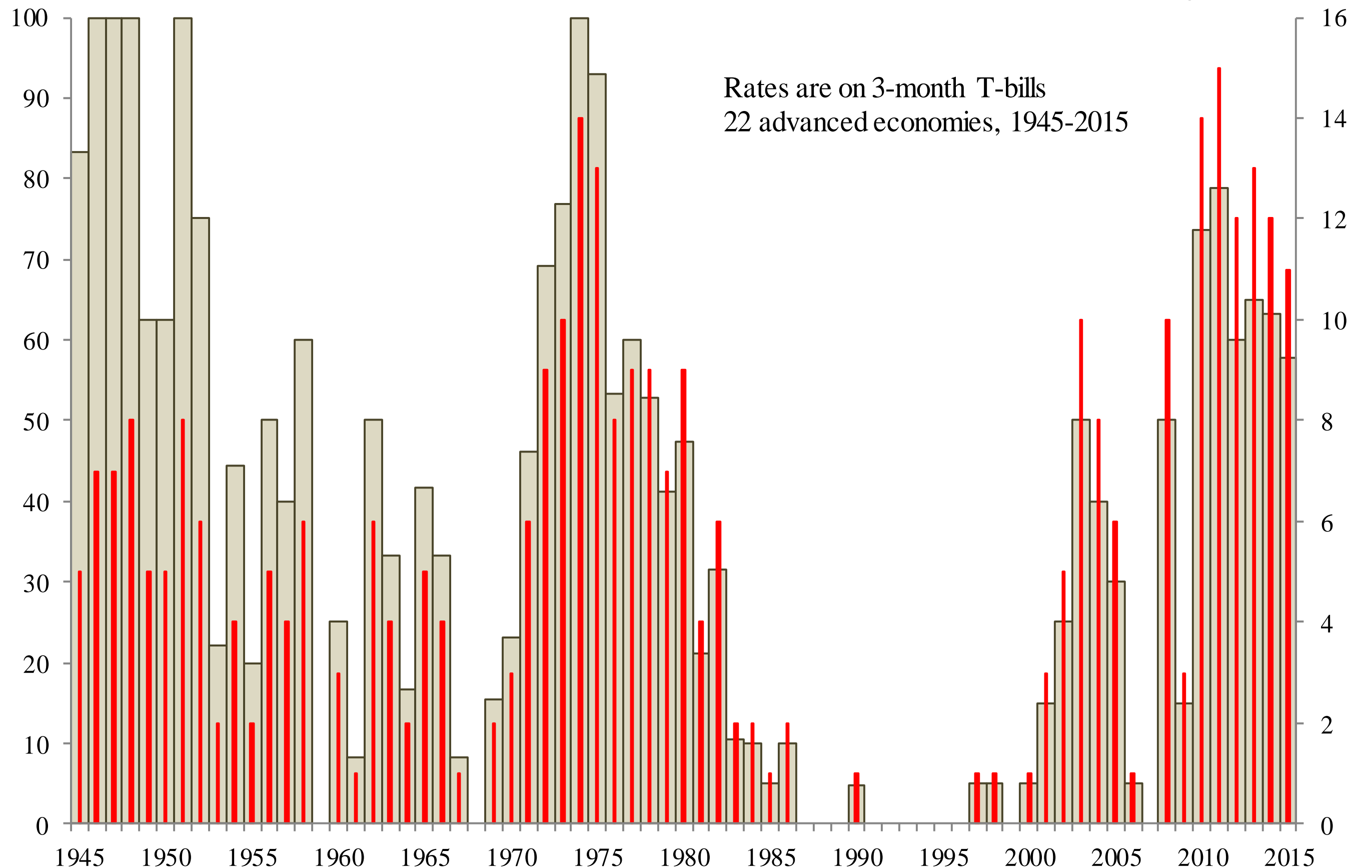


Real Interest rate on T-bills

Share of obsevations **at or below:**

	1945-1979	1980-2007	2008-2015
-1 percent	-33.9	-5.7	-28.8
0	-47.8	-11.3	-57.7
1 percent	-62.8	-23.1	-85.9
2 percent	-76.5	-38.8	-95.5

The cross-country incidence of negative real interest rates in advanced economies



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Selected post crisis regulatory changes with FR features

The Advanced Economies (mostly directing domestic credit to the government)

Cyprus, March 2013: **Severe capital controls limiting credit card transactions, daily withdrawals, money transfers abroad and the cashing of checks.** The controls were announced as a temporary measure to deal with the banking/external debt crisis. How temporary remains to be seen (see Iceland entry).

EU, July 2013: Bank regulation tightens capital requirements and introduces new liquidity rules (new standards phased in from January 2014 to January 2019). Government securities in domestic currency are deemed to be zero-risk, high-quality and liquid assets, which supports the banking sector's demand for sovereign bonds.

France, December 2010: **Liquidation of Fonds de Reserve Pour Les Retraites (FFR)** The French government changed the law to shift the €37bn FFR from providing long-term financial support to the French PAYG pension systemafter 2020 to instead pay an annual €2.1bn to the Caisse d'Amortissement de la Dette Sociale (CADES) from 2011 to 2024 and at that point transfer all remaining assets to the CADES in one lump-sum payment. This shift in FFR's investment horizon has meant a radical shift in asset allocation from longer-term diversified riskier assets to a short-term LDI-strategy dominated by liability matching short-term French government bonds. For the duration of its lifespan the FRR has consequently been transformed into a large captive buyer of French government bonds.

Iceland, October 2010: **Strict controls on both inflows and outflows to stem capital flight during the crisis.** The measures were announced as temporary but the left over debt overhang from the carry trade in some of the largest banks significantly raises the risks associated with lifting the controls. See **Baldursson and Portes, 2013.**

Ireland, 2010: **Use of the National Pension Reserve Fund to Recapitalize Banks** As a result of the banking crisis, Ireland National Pension Reserve Fund (NPRF) may have to contribute up to €17.5bn to recapitalize Ireland's banks. The NPRF was originally set up in 2001 to help finance the long-term costs of Ireland's social welfare and public service pensions from 2025 onwards. However, a 2010 law directed the NPRF to invest in Irish government securities and provides the legal authority for the Irish government to fund capital expenditure from the NPRF from 2011-2013.
April 2011: Levy on pension funds. The Irish government has further recently suggested to fund job creation schemes through a special 0.5% levy on private pension funds.

Japan, March 2010: **Reversal of Post Privatization and Raising of Deposit Ceiling** The new DPJ government reversed the 2007 plan to privatize Japan Post, the world's largest financial conglomerate with more than ¥300tr in assets. Crucially, the DPJ government with the new law also doubled the deposit cap at Japan Post Bank to ¥20mn and raised the life insurance coverage limit at Japan Post Insurance Co. from ¥13mn to ¥25mn. Given Japan Post's traditional roughly 75 percent asset allocation to JGBs, and under the assumption that consumers will transfer deposits to a company certain to enjoy a government guarantee, the reversal of the Japan Post privatization provides additional incentives to a captive customer of Japanese government debt.

Portugal, 2010: **The transfer of the previously privatized Portugal Telecom pension scheme back to the Portuguese government**, which in the process immediately booked €2.8bn (1.6% of GDP) in extra revenues. This enabled the Portuguese government to improve its budget deficit in 2010 sufficiently to cosmetically appear to be in line with annual EU deficit reduction targets.

***Spain*, April 2010: Interest rate ceilings on deposits.** The Ministry of Finance (MoF) requires that institutions offering deposit interest rates that are considered to be above market rates (determined by MoF) double their contributions to the Fondo de Garantía de Depósitos.
***April 2013:* Spain's social security pension reserve fund increased its portfolio allocation to domestic government bonds in 2012 from 90% to 97.5%.** (In 2007, the fund was 50% invested in Spanish bonds.)

***UK, October 2009,* UK Financial Services Authority (FSA) puts a global regulatory liquidity marker.** The proposal by the FSA requires UK banks, investment banks, and subsidiaries or branches of foreign banks operating in the London market to hold more high quality government securities—at least around £110 billion more (at that time), and cut their reliance on short-term funding by 20 percent in the first year alone.

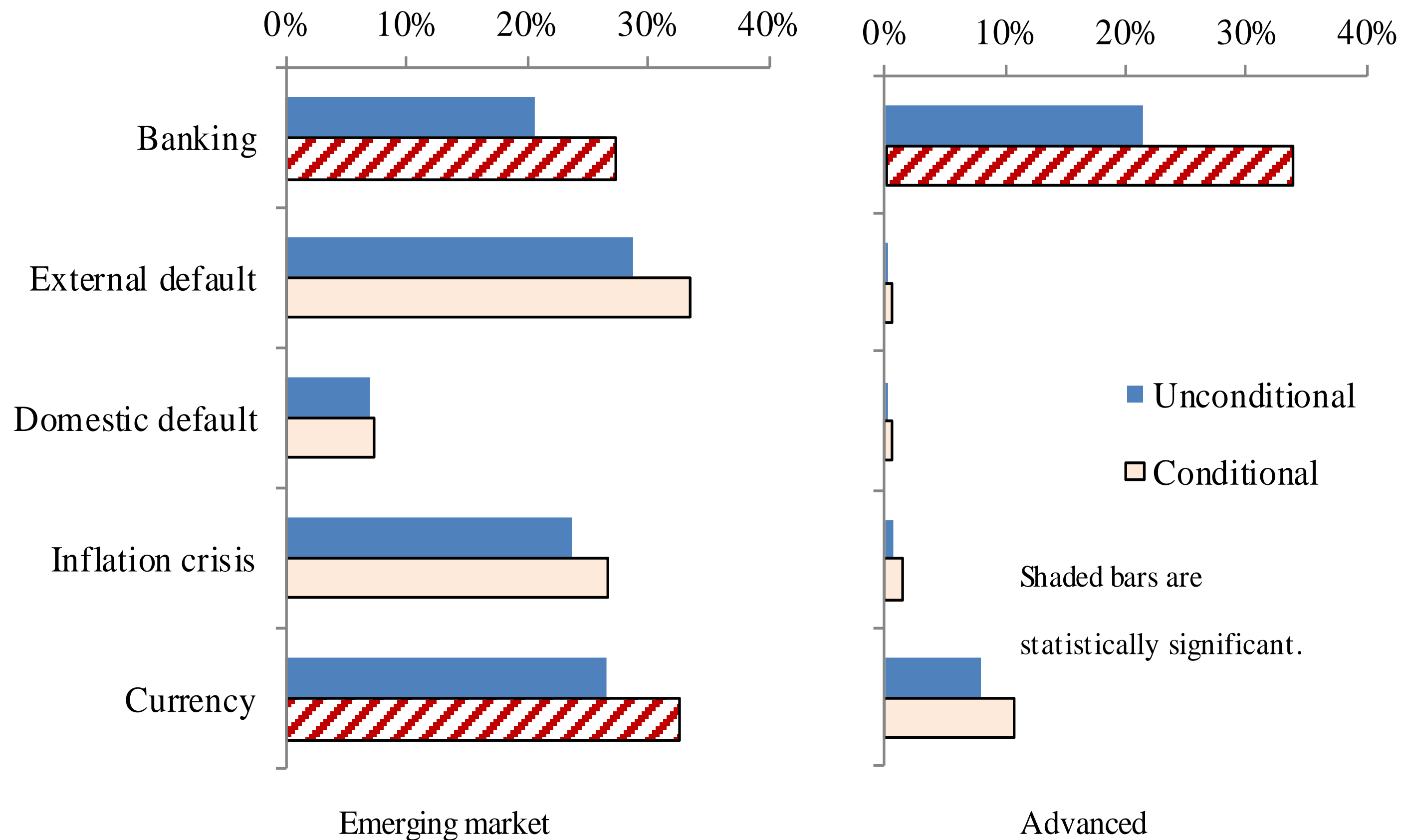
***US, October 2013.* The Federal Reserve Board proposed a rule to strengthen the liquidity positions of large financial institutions.** The proposal would for the first time create a standardized minimum liquidity requirement for large and internationally active banking organizations and systemically important, non-bank financial companies designated by the Financial Stability Oversight Council. These institutions would be required to hold minimum amounts of high-quality, liquid assets such as government and corporate debt that can be converted easily and quickly into cash.

Sources: **Baldursson and Portes, (2013),** International Monetary Fund *Global Markets Monitor,* various years, Reinhart (2012) and Magud, Reinhart, Rogoff (2011), van Riet (2013).

Emerging markets

2008-2013: **The "capital inflow problem" again…**
2013-present: **The aftermath of the capital flow and commodity bonanza.**
Where does that leave EMs in the boom-bust cycle?

Crisis probabilities and the capital flow cycle
Reinhart and Reinhart (2015)



By early 2013, in major emerging markets

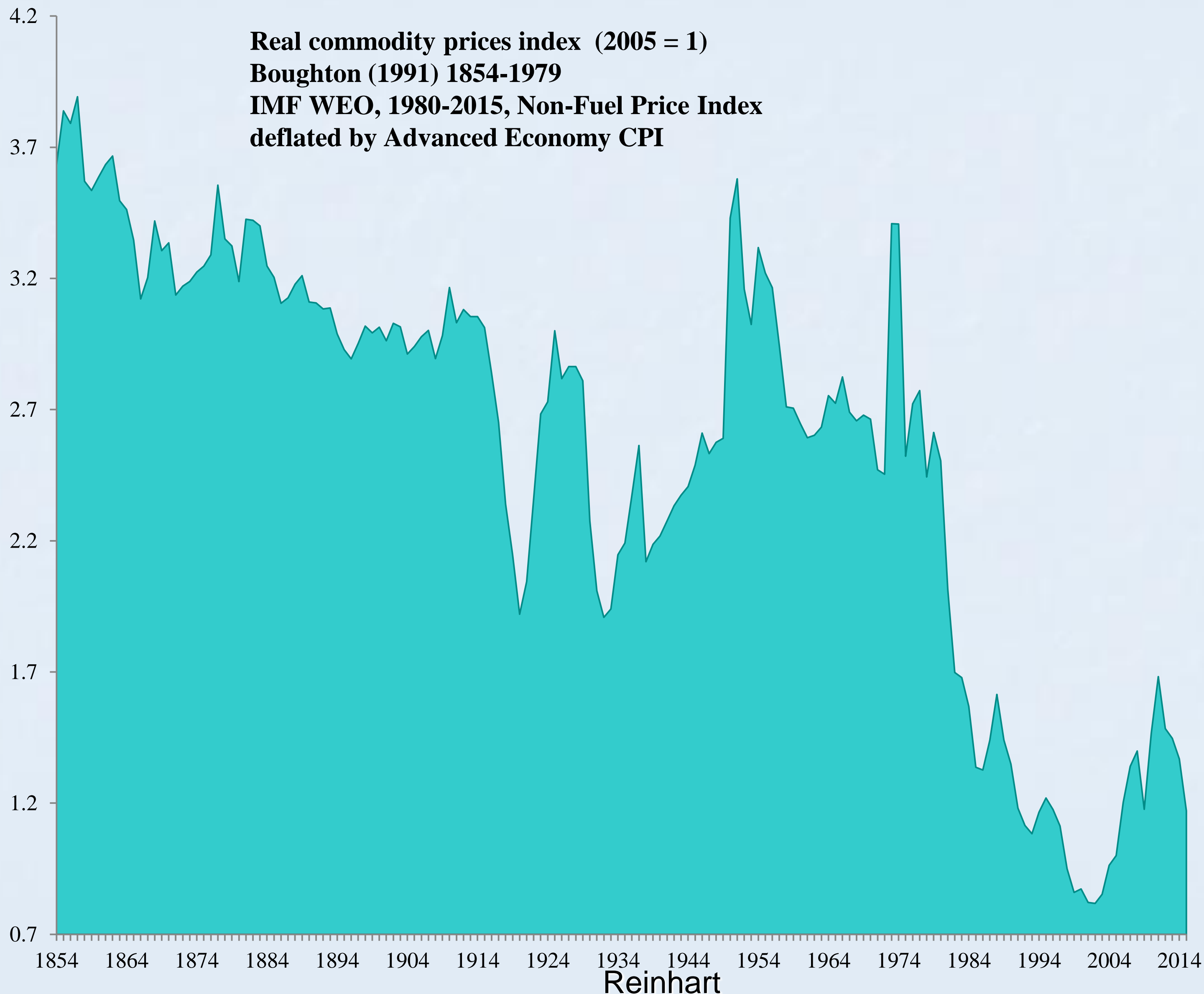
- Current account deficits had reappeared
- As did credit booms
- And currency overvaluation
- Growth had begun to slow
- Inflation had resurfaced as a concern

And then came the announcement of QE tapering…

Since the May 2013 tapering announcement, global factors have deteriorated for many EMs

(i) commodity prices have declined further (and sharply);
(ii) China's slowdown has intensified;
(iii) global investors have turned to advanced economies equity markets in increasing numbers.
(iv) an appreciating US dollar increased the burden of dollar debts

Real Commodity Prices: 1854-2015



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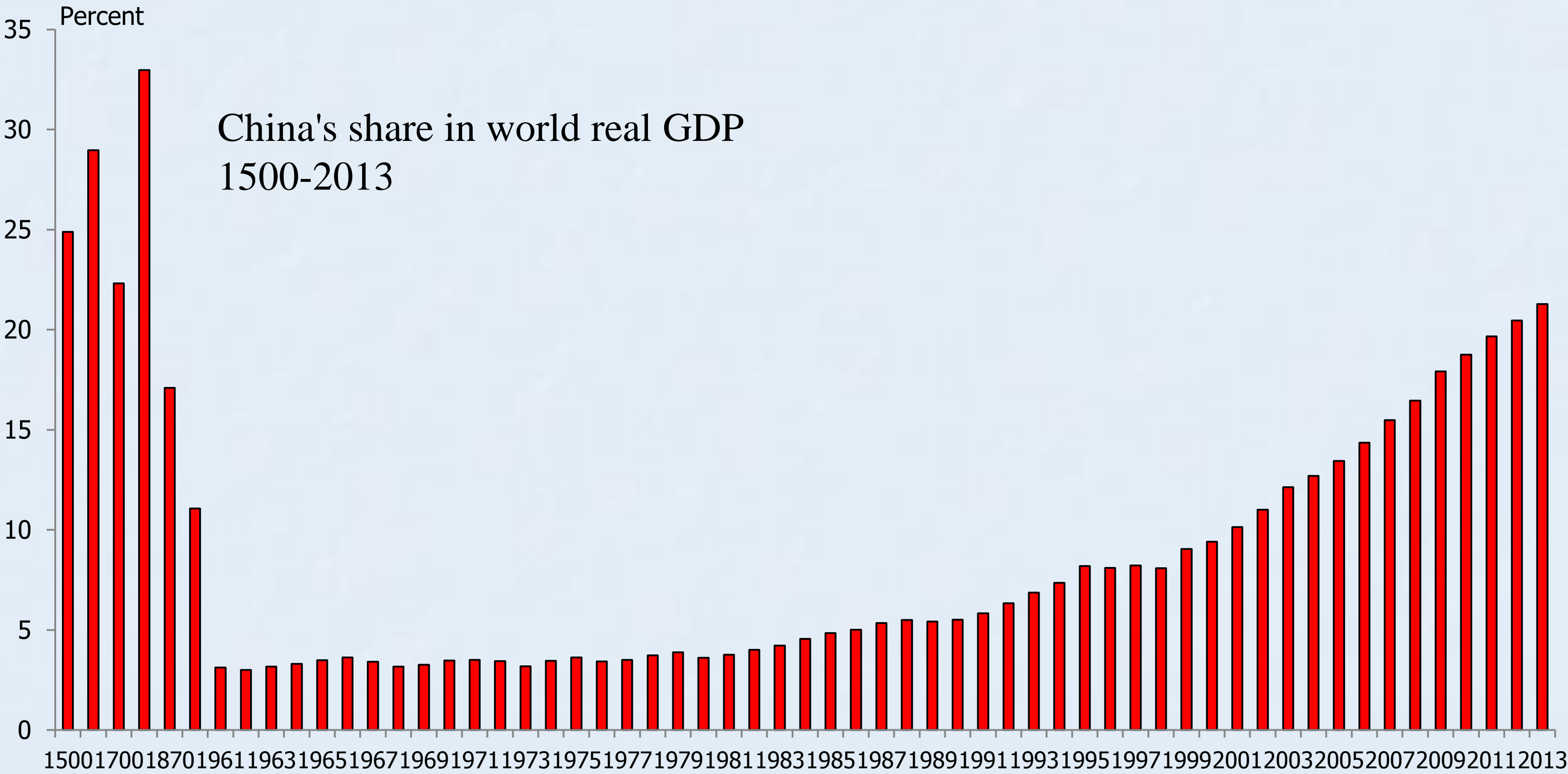
China's fall and rise, 1500-2013



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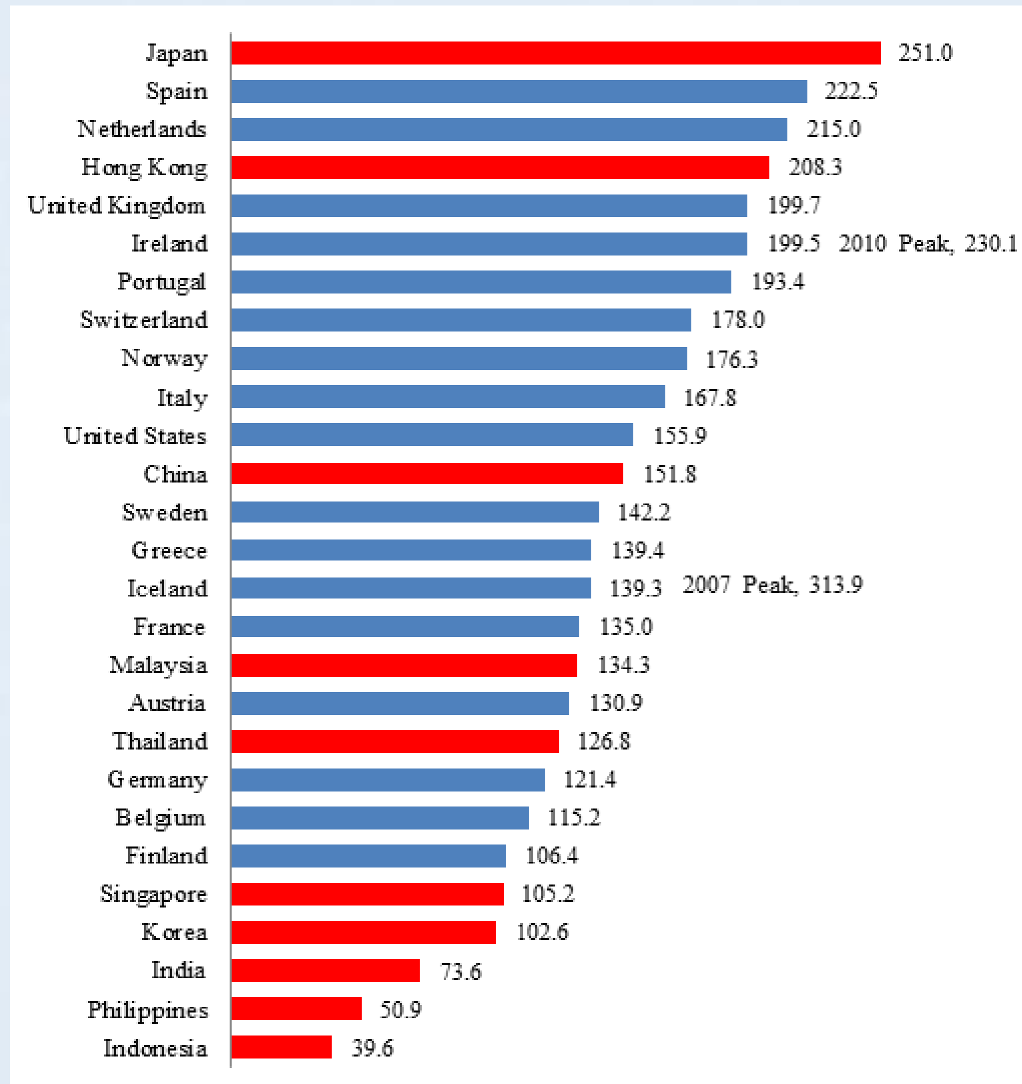
Private Sector Domestic Credit/GDP, 2014

(most of those above China have already had banking crises)



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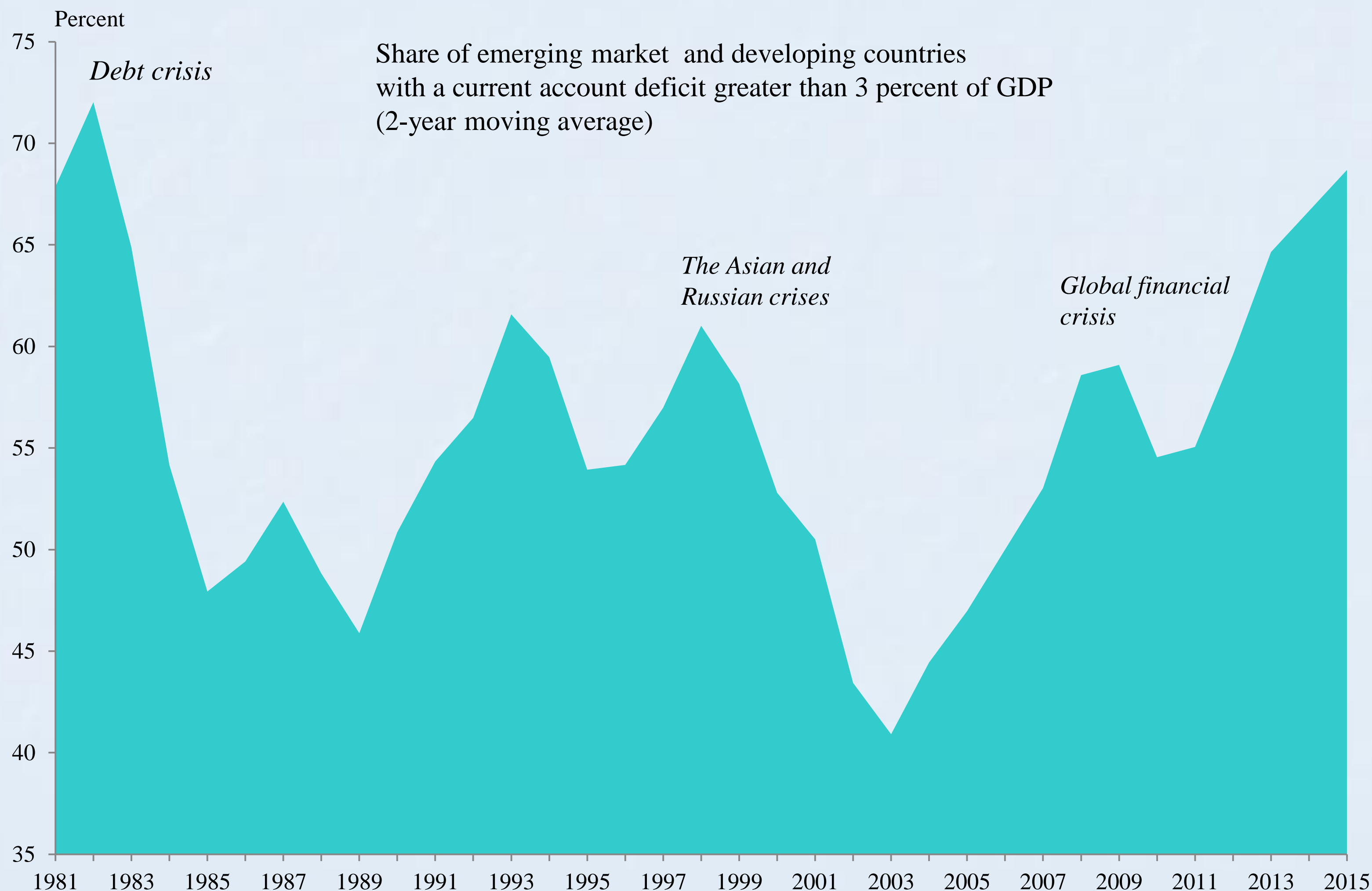
The share of EMs with significant current account deficits has risen markedly



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Final thoughts: Advanced economies

- Now in seventh year post crisis, there are signs of stabilization and recovery in Europe but output remains well below its pre-crisis peak in most of the crisis countries. A Grexit setback is possible…
- Public debt overhangs usually last more than two decades (see Reinhart, Reinhart and Rogoff, 2012). The combination of sluggish growth and deflation or low inflation does not contribute to their resolution.
- Low and (often negative) real interest rates may be necessary to unwind the public and private debt loads.

The return of financial repression?

To deal with the current debt overhang, policies like those documented here have re-emerged, sometimes in the guise of prudential regulation.

Moreover, the process where debts are being "placed" at below market interest rates in pension funds and other captive domestic financial institutions is already under way in several countries in Europe and to a lesser degree the US.

As to Emerging Markets

Even remembering that many EMs are debt intolerant, the indicators for early 2015 do not match (in magnitude) the usual vulnerabilities associated with the onset of past financial crises. Qualitatively the direction in many indicators is a source of deep concern.

The bonanza decade of 2003-2013 is over.

A key source of present policy vulnerability is treating what are likely to be persistent adverse shocks as temporary.

Downgrades may be a matter of time…