Financial Crises: Past and Future

Carmen M Reinhart

Harvard University

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Roadmap

The post-crisis decade	Global risks: Advanced economies	Global risks: EMs and developing economies	The long horizon
• Crisis severity and duration • Delayed European recovery?	• US trade war • Underpriced corporate risk? • Europe’s unresolved debt crises	• The curious case of the missing defaults • External factors and classic EM crises • China’s lending to low income countries	• The US stock/flow problem • The US dollar and the modern Triffin Dilemma

The advanced economies: Protracted post-crisis recoveries

Crisis Year	Country	Real GDP per capita % change peak to trough	peak to recovery	Severity index	Breakeven year	General government gross debt crisis year
2008	France	-3.8	8	11.8	2015	68.7
2008	Germany	-5.2	3	8.2	2011	65.1
2008	Greece	-26.3	16	*42.3*	beyond 2023	109.4
2007	Iceland	-9.2	9	18.2	2016	27.3
2007	Ireland	-9.3	7	16.3	2014	23.9
2008	Italy	-11.9	16	*27.9*	beyond 2023	102.4
2008	Netherlands	-4.1	9	13.1	2017	54.5
2008	Portugal	-7.0	13	20.0	2017	71.7
2008	Spain	-10.6	11	21.6	2017	39.4
2007	UK	-6.1	8	14.1	2015	41.9
2007	US	-4.8	6	10.8	2013	64.6
Summary	Mean	-8.9	9.6	18.5		
	Median	-7.0	9	16.0		
63 crises: Avanced economies from 100 in Reinhart and Rogoff (2014)						
	Mean	-9.5	7.3	16.8		
	Median	-7.0	6	13.0		

Note: The italics denote IMF estimates for 2018-2023 are used.

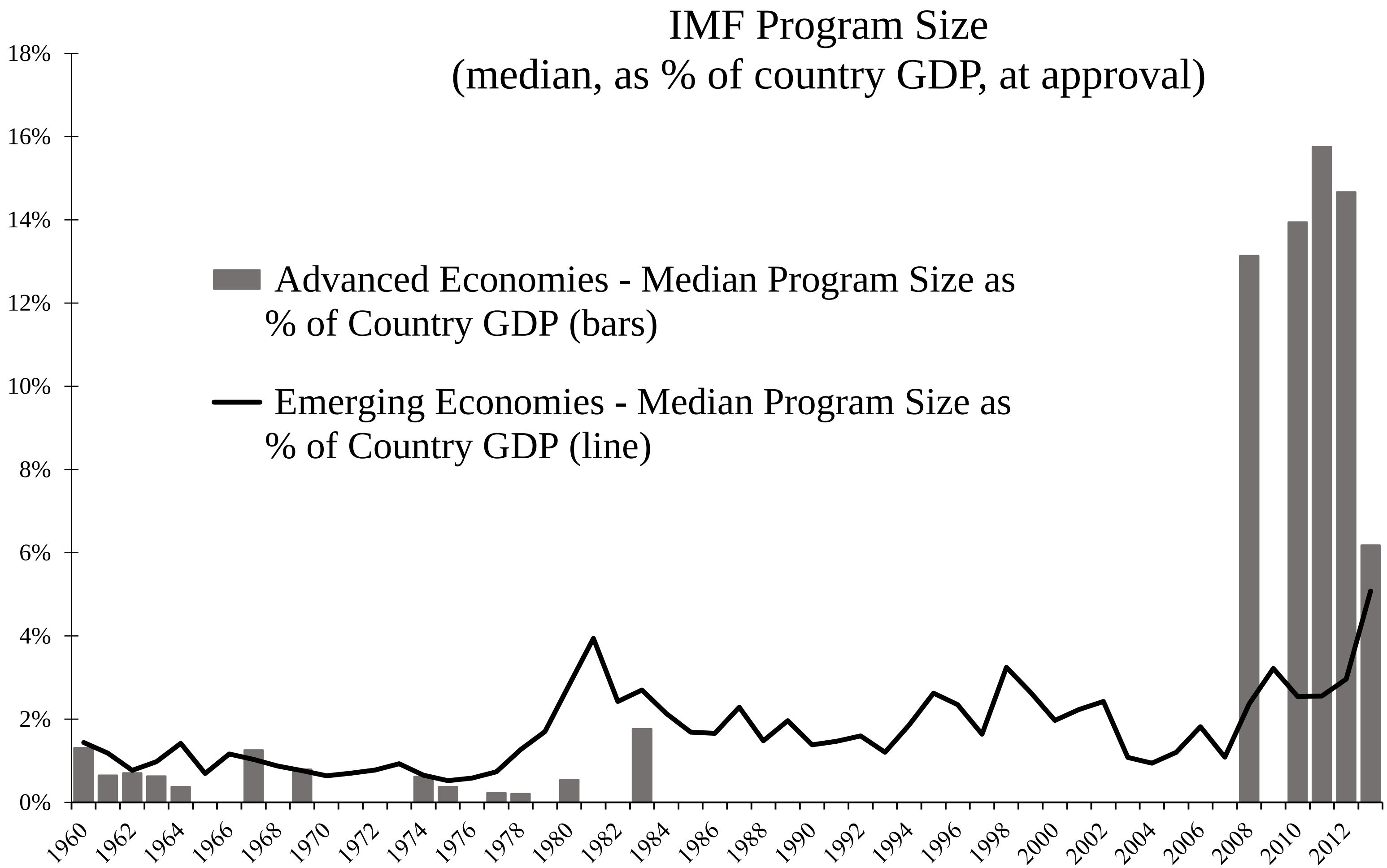
The last crisis is not yet over in Greece and Italy…
By 2023, the IMF projects that their per capita GDP will remain below its 2007 level.

The track record is worse than historic norms, where the mean for advanced economies is about 7 years

Why the delayed and anemic recovery despite policy stimulus?

- In the US is particular, monetary policy responded and rapidly and aggressively to the crisis. ECB and BoJ also became more accommodative.
- Fiscal policy in the advanced economies and some EMs provided concerted stimulus, while China engaged in a fiscal/domestic credit package of unprecedented magnitudes and scope.
- Dozens of countries almost simultaneously significantly expanded their safety nets to depositors to foster confidence.
- The IMF made loans of an unprecedented scale.

The size of the IMF response to the troubles in Greece, Iceland, Ireland, and Portugal set all time records…



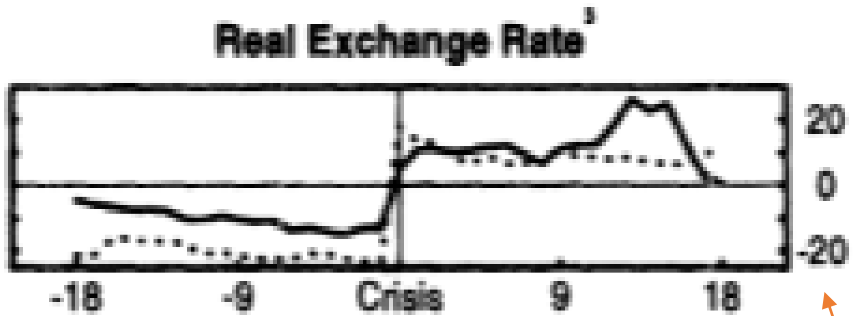
Source: Reinhart and Trebesch (2016).

The synchronicity of the crises in the advanced economies is likely to have contributed to deepening and extending the slump.

But, there is much to be said about the role played by the policy response to the crisis…

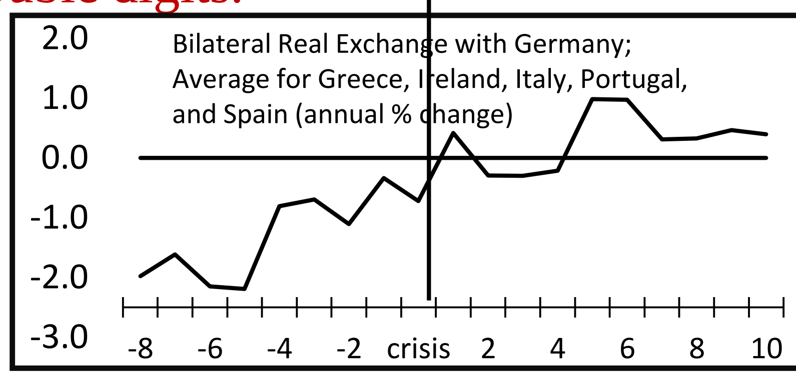
Eurozone periphery: Chronic currency overvaluation

Percent



Kaminsky and Reinhart (1999) present evidence that real exchange rate overvaluation (lower denotes appreciated) is a key feature of the boom phase in the runup to a banking crisis. Overvaluation and loss of competitiveness were an issue for much of periphery Europe and Iceland, where current account deficits swelled into double digits.

While the pre- and post-crises patterns look similar in both figures, the *scales* reflect the major difference in that periphery Europe's very modest real depreciation has been effected through a recessionary deflation.



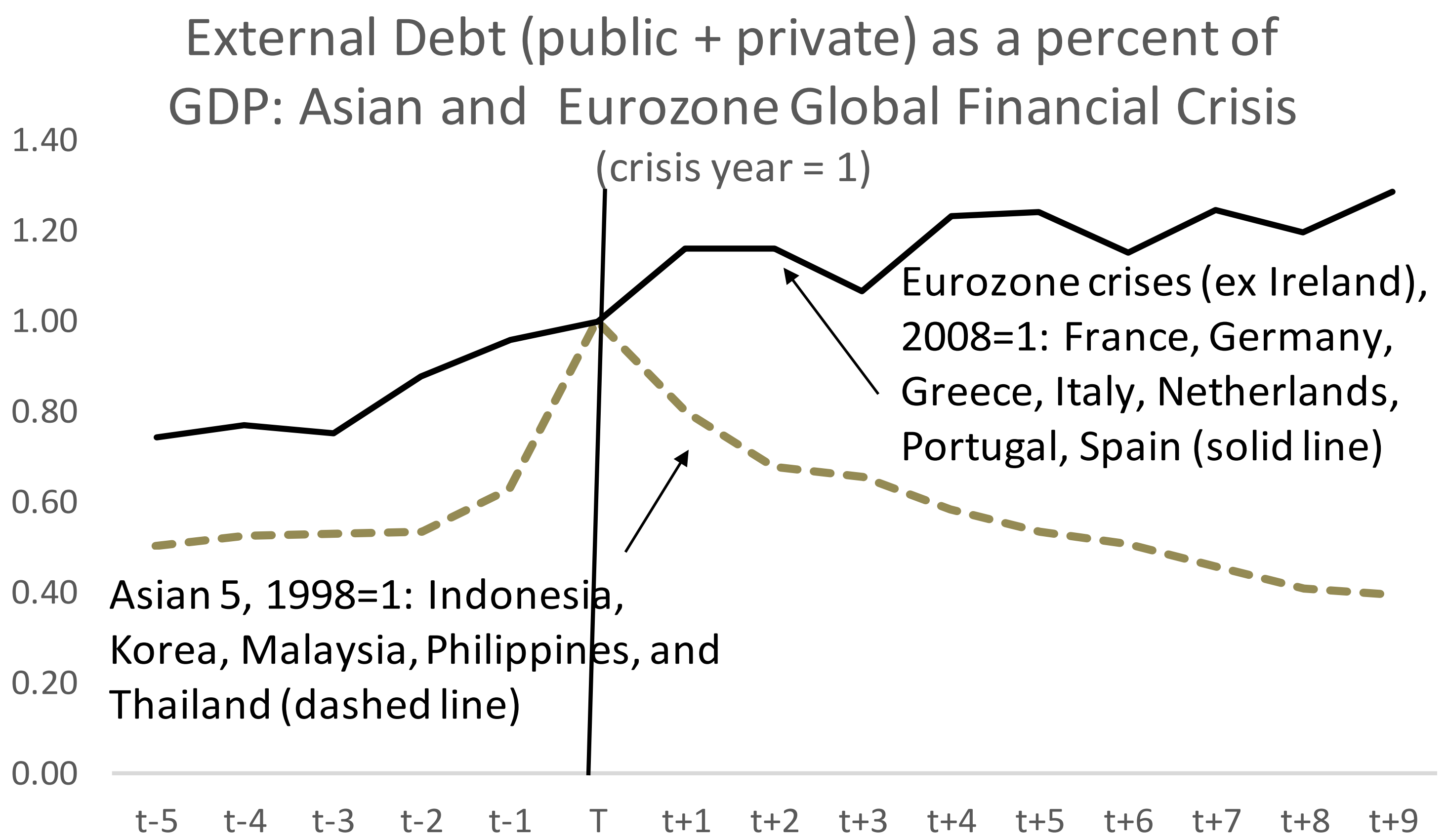
Note: The values of the variables relative to "tranquil" times are reported on the vertical axes. The horizontal axes show the number of months before (negative sign) and after a crisis. The solid lines show the behavior during *twin-crises episodes*, and the dotted lines show the behavior during "single" currency crises.

Sources: Kaminsky and Reinhart (1999); Reinhart (2018) and IMF WEO (2018) for periphery EZ.

Lack of significant and timely debt write-offs (especially Eurozone)

- The aggressive and rapid repair of bank balance sheets that characterized the Nordic banking crises and later emerging market crises did not materialize in Eurozone.
- The sharp reversal in external debt that was a feature of the post-Asian crisis landscape has been absent except for Iceland and Ireland. Large and mostly chronically growing Target2 balances for Greece, Italy, Portugal and Spain show up as significant external liabilities of the national central banks.
- The prevalence of evergreening by banks in much of Europe (much less so in the US) coupled with the placement of government debt in bank balance sheets severely limited the scope for new credit, impairing the transmission channel of monetary policy.

The aftermath of crises with and without external deleveraging



Sources: IMF, World Bank, and author's calculations.
Note: T indicates crisis year and -/+s indicate years prior and after the crisis.

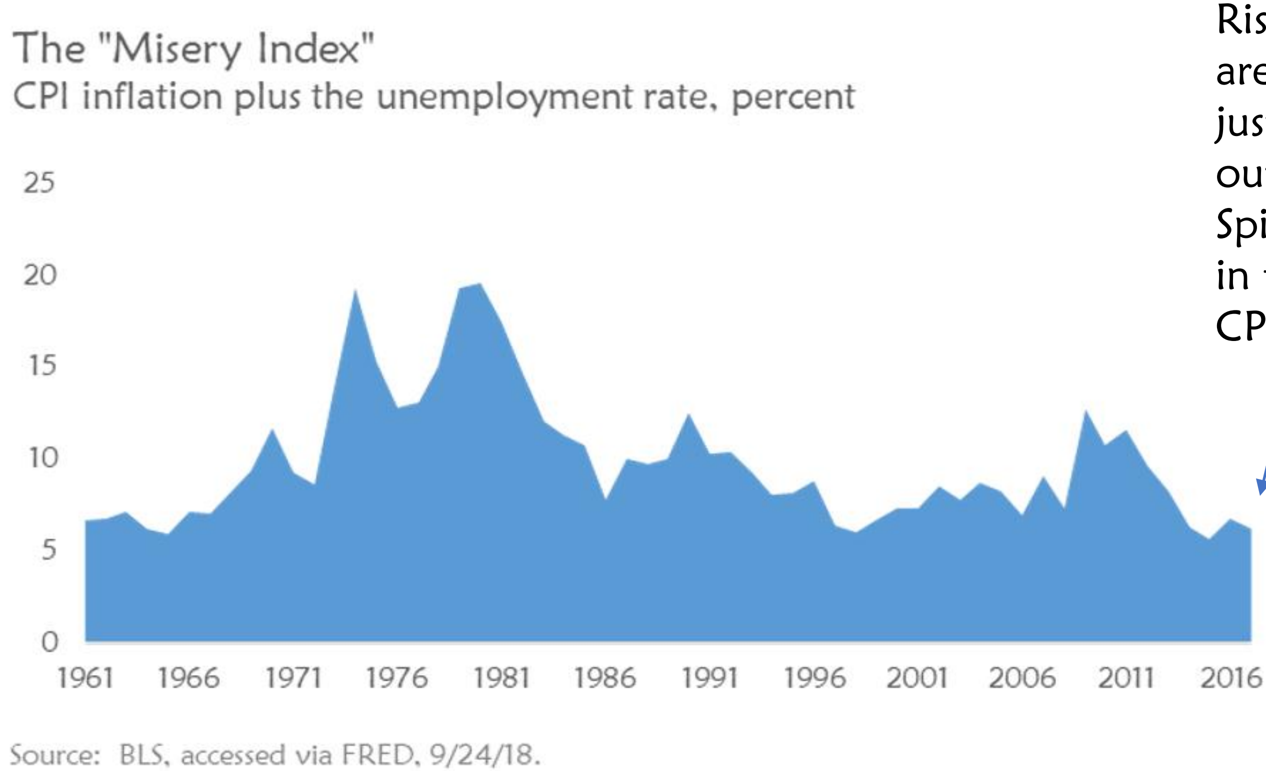
Near-term global risks: The advanced economies

US trade war
Underpriced risk in US corporate sector?
Europe's unresolved debt crises

Near-term considerations about the odds of recession

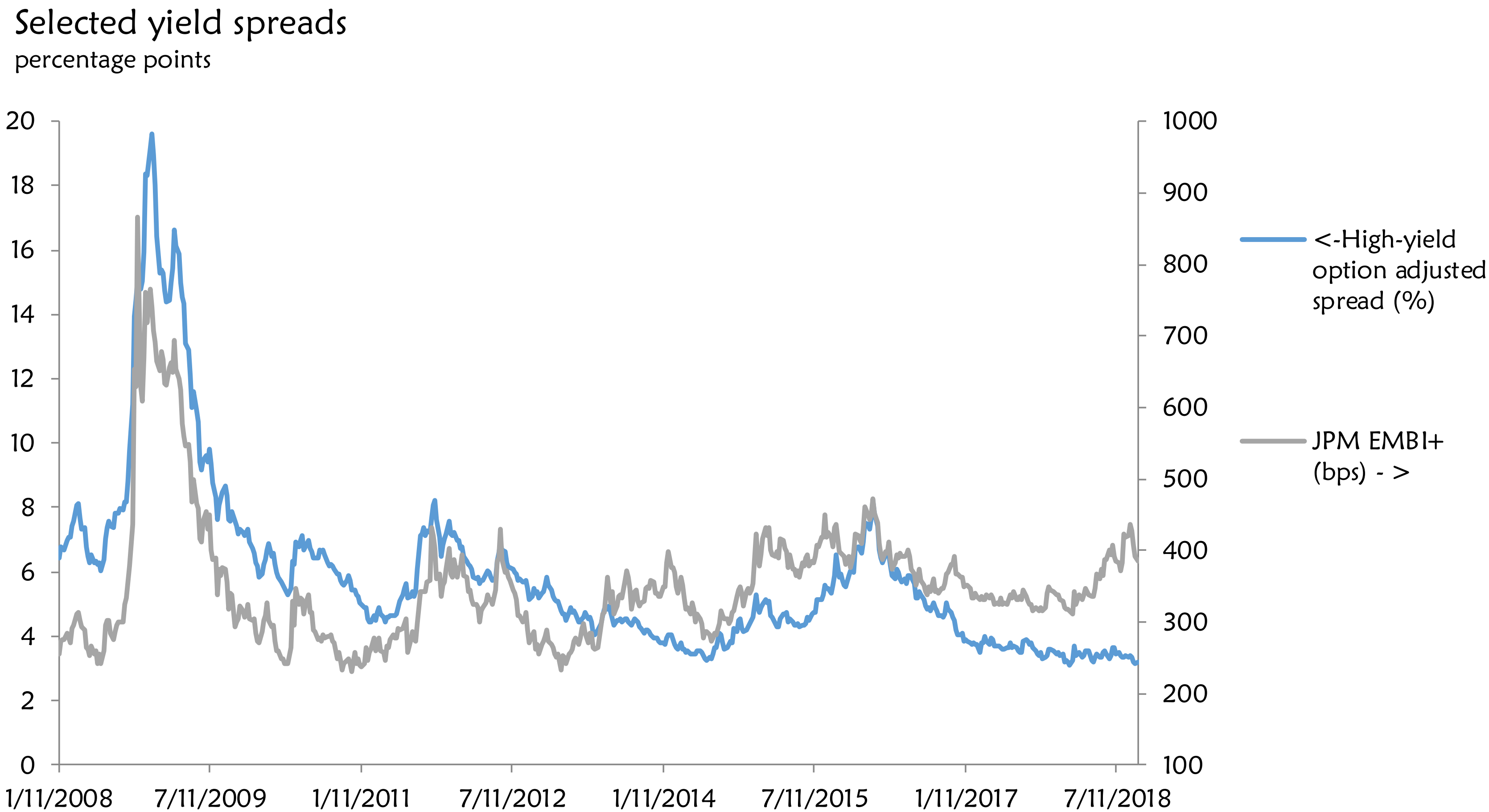
- There is little evidence of duration dependence, in that the longevity of this recovery does not imply that it is about to end soon.
- The recovery has been atypical, but so was the recession. I documented in work with Rogoff (2008 and 2009) and Reinhart (2010) that post-crisis recessions are more severe and halting. The usual excesses in residential housing and business fixed investment often manifest at this stage of the recovery are not evident.
- The”normalization” of monetary policy presents a challenge. The Fed anticipates that it will have to raise the funds rate above its neutral level in 2019 and 2020. However, policy makers do not know the level of the neutral rate, introducing the risk of a mistake.
- Fiscal stimulus of 2019 was an impetus to the level of GDP. When this rolls off, growth will slow just as the Fed induces monetary policy restraint.
- Trade disruptions, both for what it may do to the US and to important global players, elevate risks.

If tariffs increases are a 1970s-style supply shock, remember that the 1970s were not easy to live through.



Risks are not just to output. Spikes in the CPI?

Source: Vincent Reinhart , 2018, "President Trump and Trade"



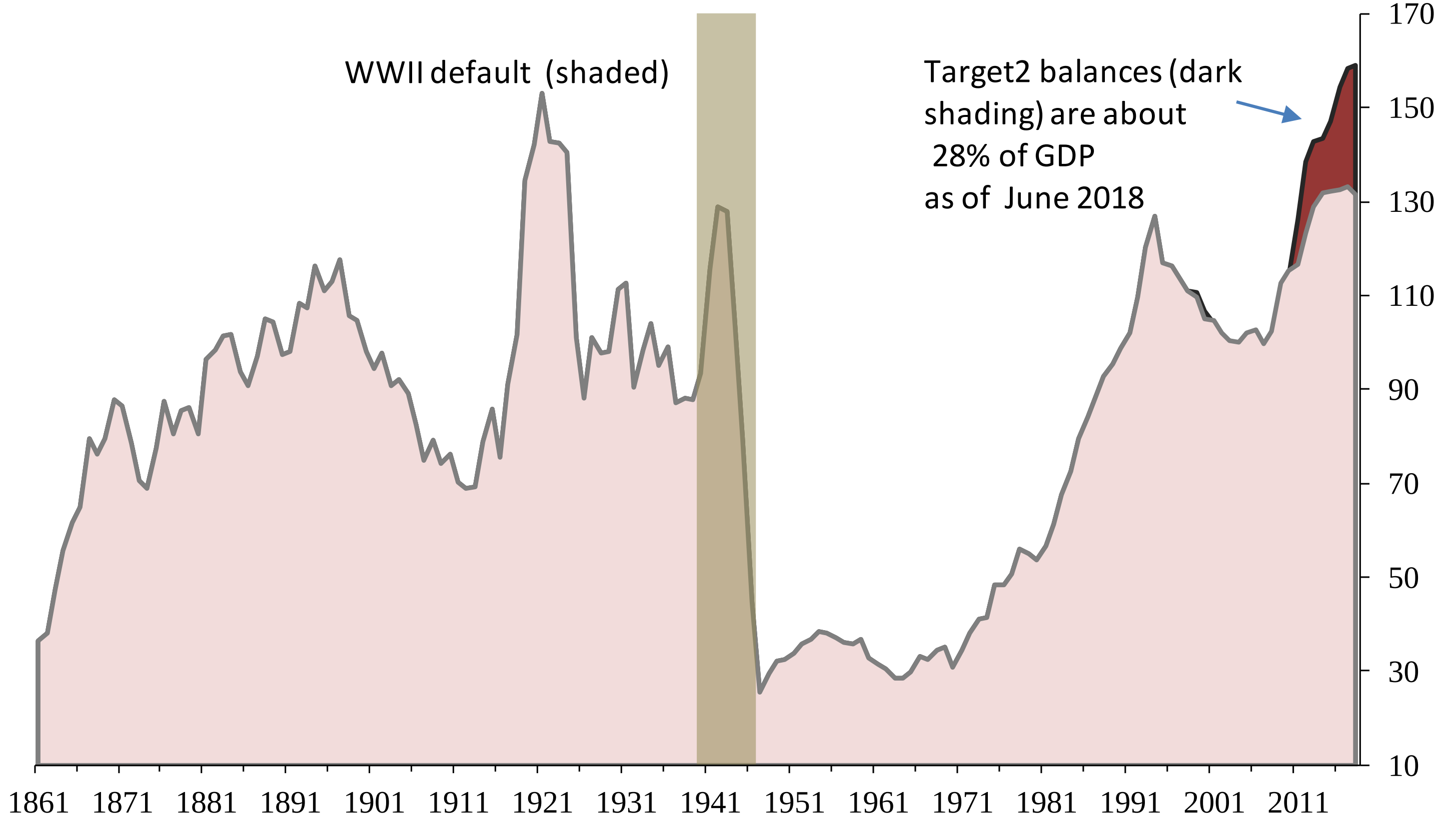
2018 EM-High yield divergence: Are these corporate risks underestimated?

Source: Bloomberg.

Italy: General Government Debt and Target2 Balances (% of GDP), 1861-2018

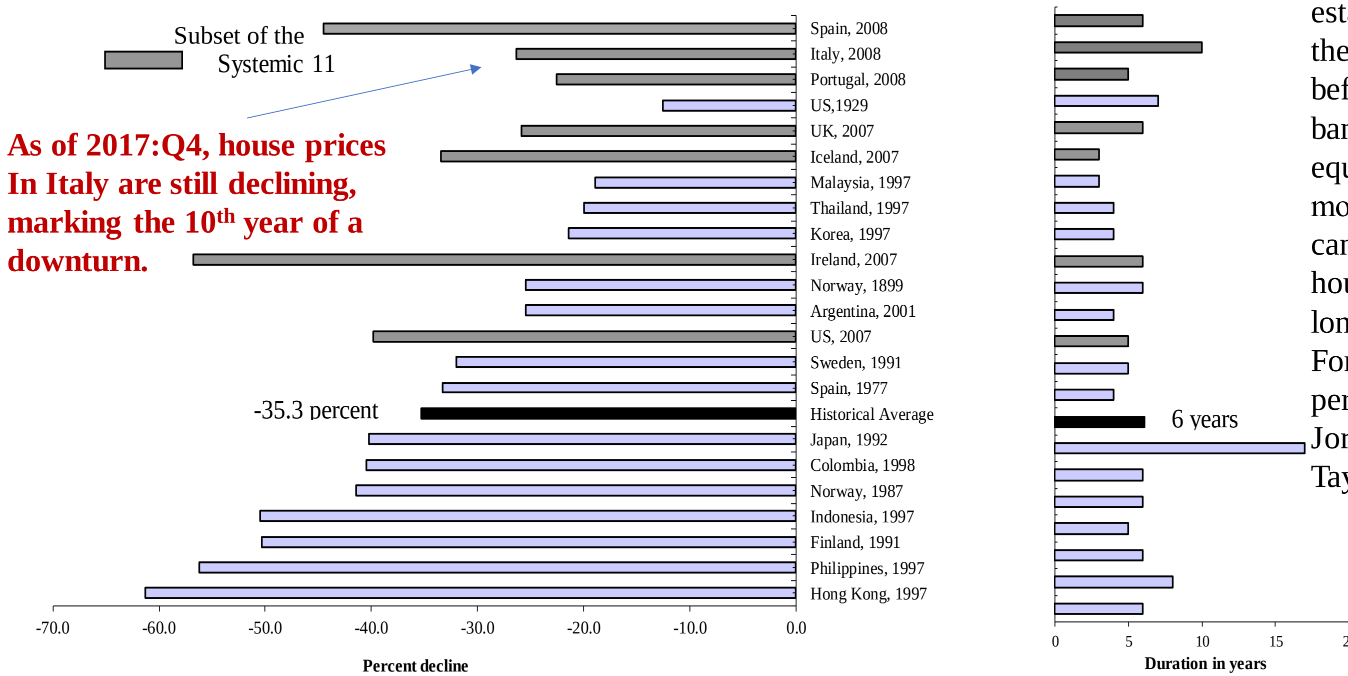
Global spillovers: Bad news from Europe (in general) and earlier in 2018, Italy (in particular) trigger a predictable flight to US dollar assets. Dollar appreciation, in turn, raises risks for emerging markets with dollar debts.

Greece, Ireland and Portugal account for 6% of EZ GDP and 8% of the government debt—Italy alone accounts for 15% of GDP and 24% of the debt (these figures almost double when Spain is included)



Sources: Bank of Italy, ECB. International Monetary Fund and Reinhart (2010 and 2018). https://www.project-syndicate.org/commentary/italy-sovereign-debt-restructuring-by-carmen-reinhart-2018-05

Cycles of past and one ongoing (updated through 2018:Q1) real house prices and banking crises: peak-to-trough price declines (left panel) and years duration of downturn (right panel)



House prices (real estate) usually begin their steep decline before the onset of the banking crises. Unlike equity prices, which are more “spike-prone” and can quickly reverse, housing prices exhibit longer cycles.
For a historical perspective, see Jorda, Schularick and Taylor (2015).

Sources: Reinhart (2018) update of Reinhart and Rogoff (2009); Bank of International Settlements.

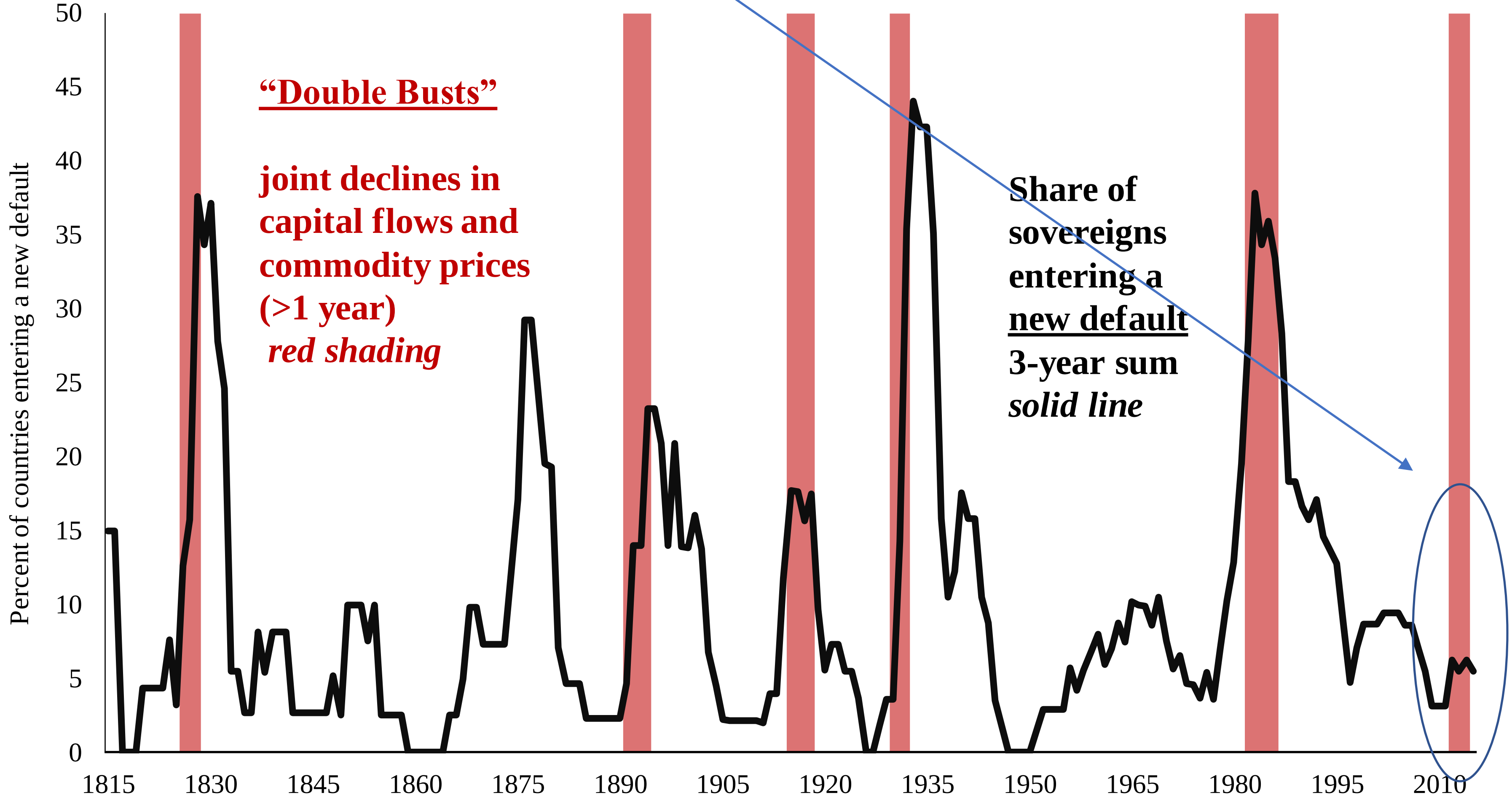
Near-term global risks: The EMs and developing economies

The curious case of the missing defaults

External factors and classic EM crises

China’s lending to low income countries

The curious case of the missing defaults: commodity and capital flow "double busts" and sovereign defaults



Source: Reinhart, Reinhart, and Trebesch (2017)

Double and Triple Busts and the "missing" defaults since 2011

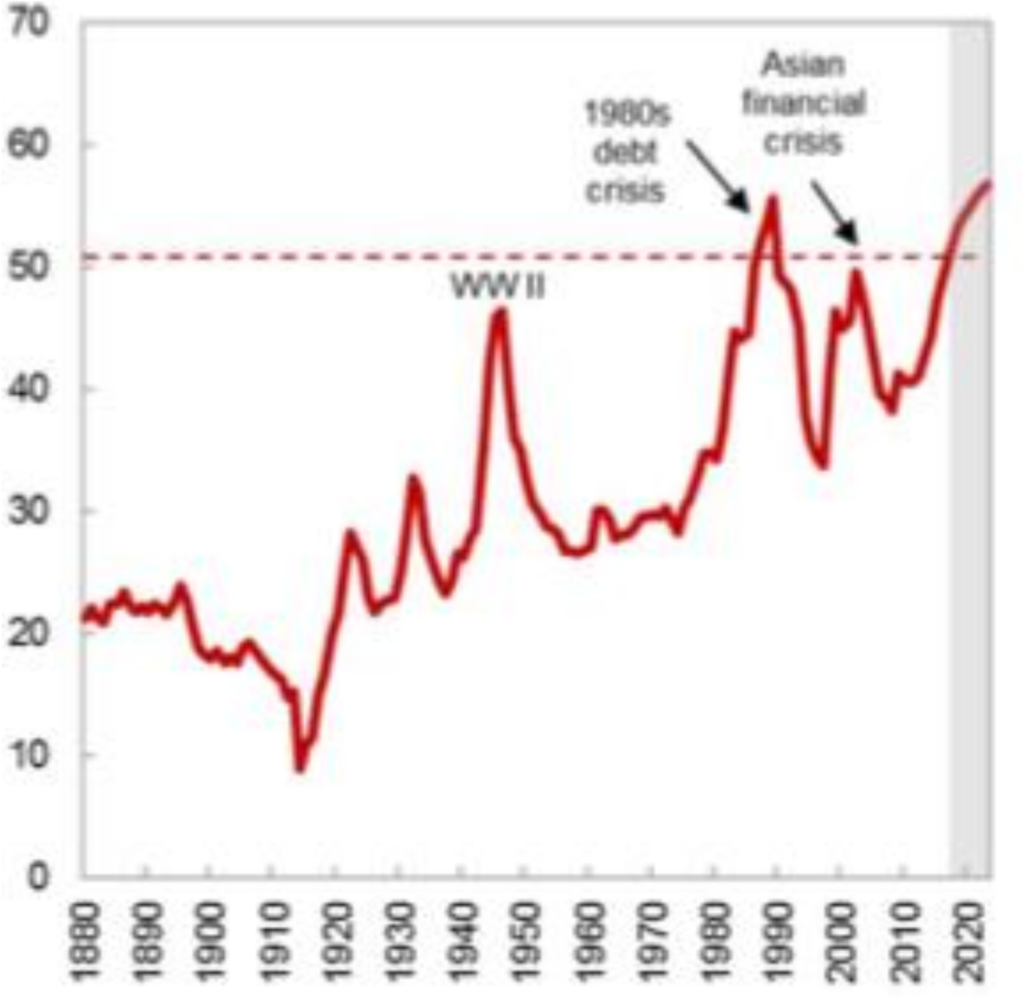
Double bust episodes	**Capital flow Bust**	**Commodity Bust**	**Interest Rate Spike (real)?**	Share of Countries **in Default** (in peak year)
1824 - 1828	yes	yes	yes	43.75
1890 - 1894	yes	yes	*no*	18.60
1914 - 1918	yes	yes	yes	17.65
1929 - 1933	yes	yes	yes	46.43
1981 - 1986	yes	yes	yes	42.74
1991 - 1999	yes	yes	yes	46.34
2011 - 2016	yes	yes	*no*	13.82

About 15-20 new defaults "missing" since 2011 (in historical comparison)

- Lower rates in US and other financial centers?
- Better macroeconomic management?
- Mismeasurement?
- China's emergence as a push factor (both real and in finance)?

Some not mutually exclusive hypotheses for the missing defaults

- Better macroeconomic management, including macroprudential and more hedging.
- Better luck, external factors have remained more favorable than in past cycles
  - low interest rates in US and other advanced economies
  - high growth in China (the newest push factor)?
- Mis-measured (under-reported) defaults, arrears on official creditors.
- Arrears on Chinese lending to low income commodity producers?

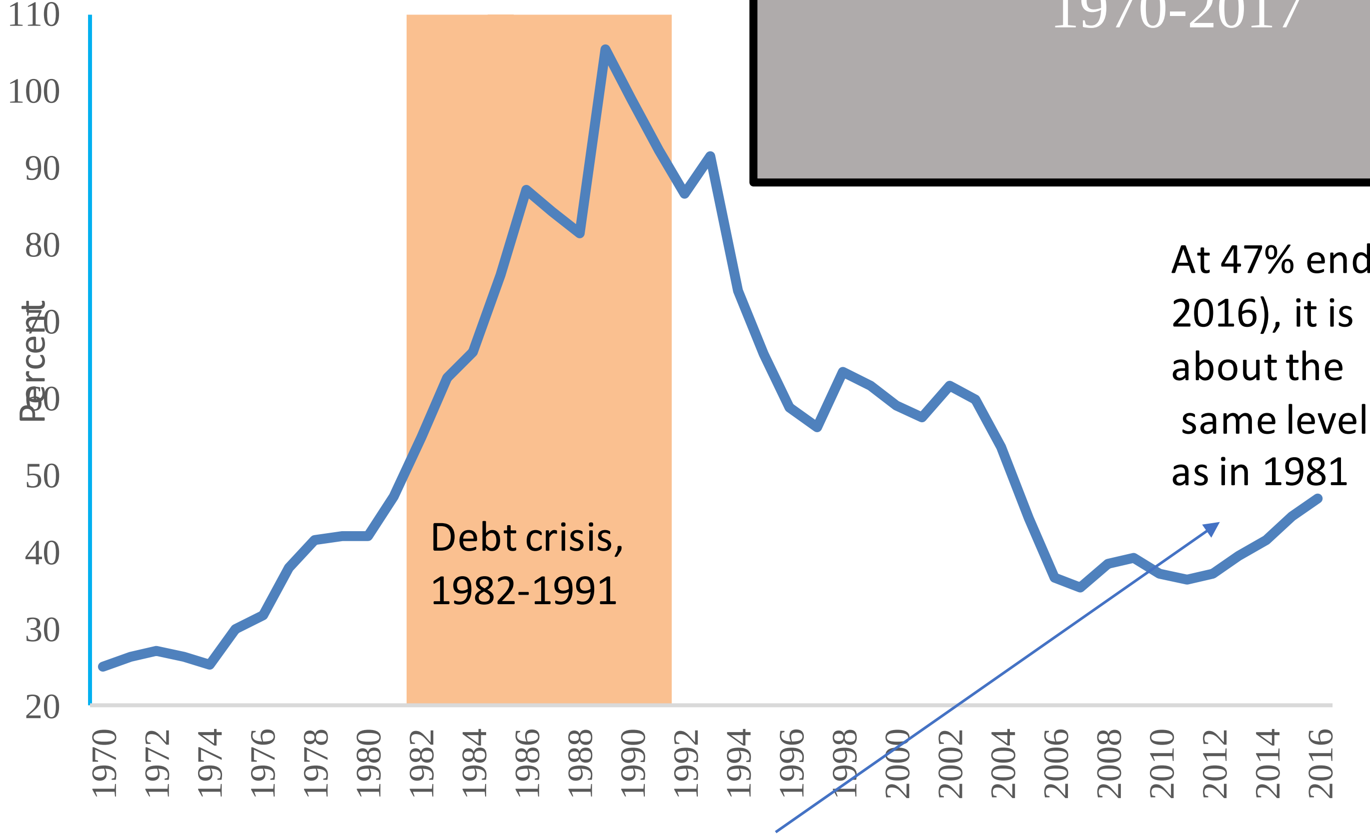


Source: Hugh Bredenkamp, Ricardo Hausmann, Alex Pienkowski and Carmen Reinhart (2018) https://www.imf.org/en/News/Seminars/Conferences/2018/05/24/sovereign-debt-a-guide-for-economists-and-practitioners

EMs: General government debt, 1880-2023 (percent of GDP) These countries have been historically debt intolerant

EM turbulence contributes to a flight to US dollar assets… A brewing debt crisis?

Developing and emerging markets: External (public + private) debt as a percent of GDP, 1970-2017

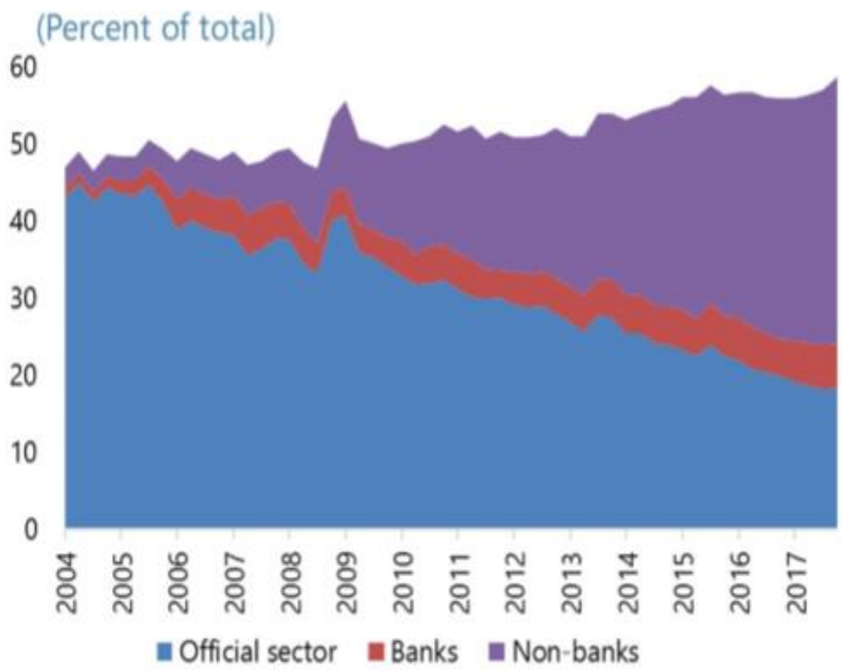


External debts to China, not well measured and not included in WB data, are estimated to **add another 15%** or so to this ratio in 2016-2017.

Sources: Reinhart, Reinhart, and Trebesch (2017) and sources cited therein and World Bank

Holdings by the official sector (bilateral and multilateral development agencies, etc.) have fallen, debt held by non-bank investors, such as pension and hedge funds, has increased dramatically. The rise in foreign ownership has been particularly acute for domestic-currency debt. And there are reasons to think that this creditor base may be particularly volatile.

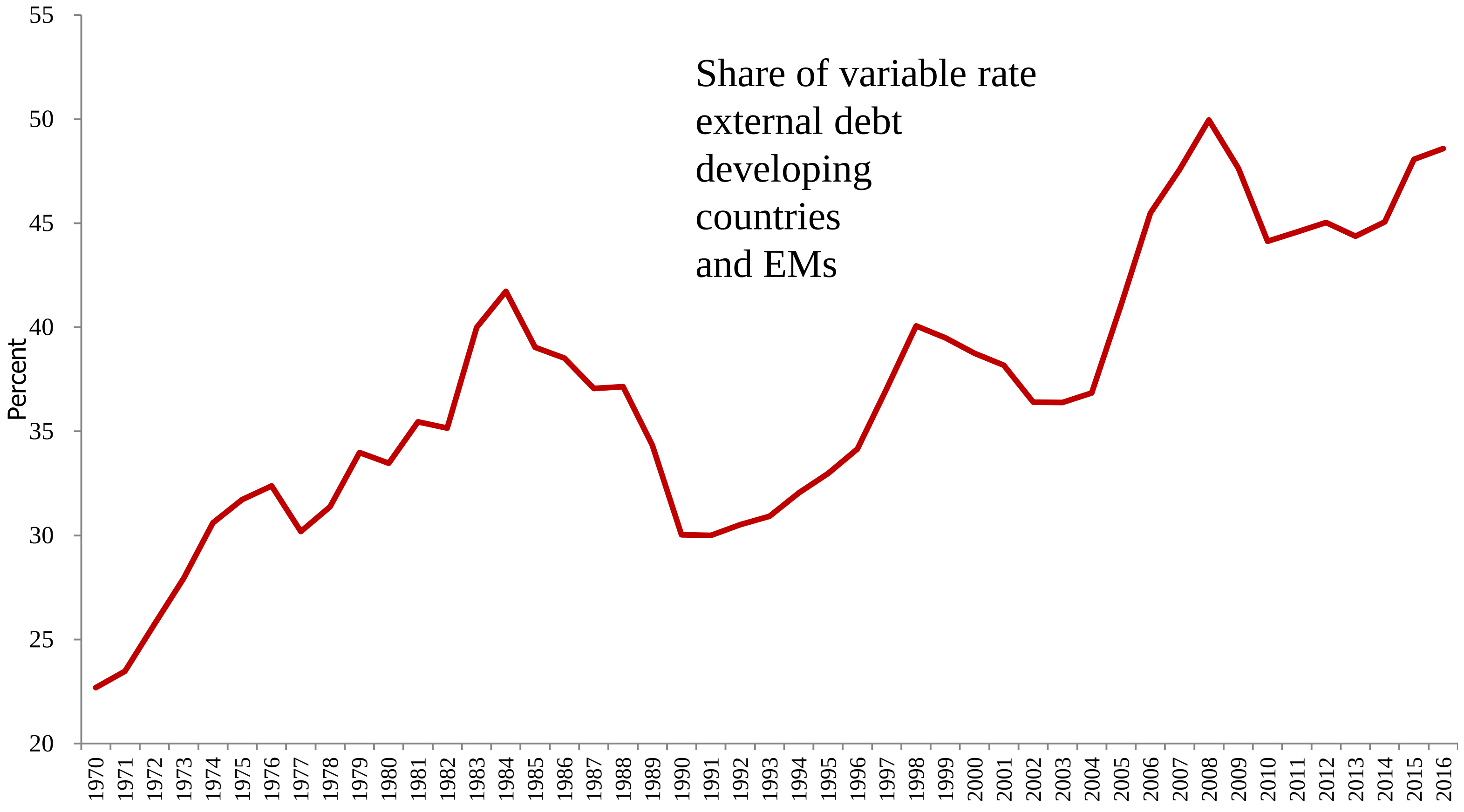
EMs: Debt held by non-residents, 2004-2017



Sources: Arsnalalp and Tsuda (2014 and 2018 update) Hugh Bredenkamp, Ricardo Hausmann, Alex Pienkowski and Carmen Reinhart (2018) https://www.imf.org/en/News/Seminars/Conferences/2018/05/24/sovereign-debt-a-guide-for-economists-and-practitioners

Vulnerability to changes in international interest rates, which are expected to continue to rise…

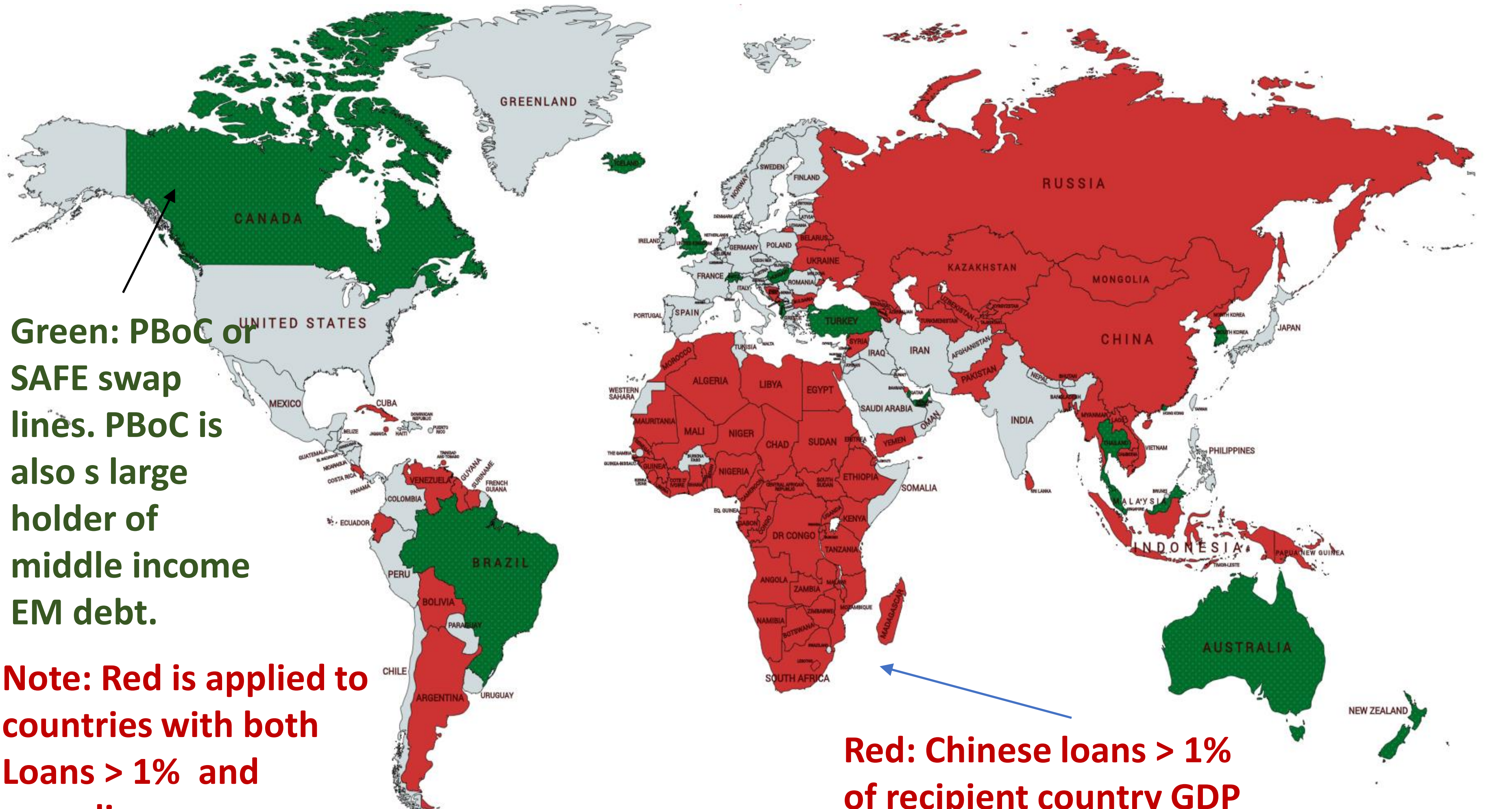
Share of variable rate external debt, 1970-2016



Source: World Bank (2018).

China's expanding global financial links: 2000-2017

Through 2016 there have been 16 debt restructurings

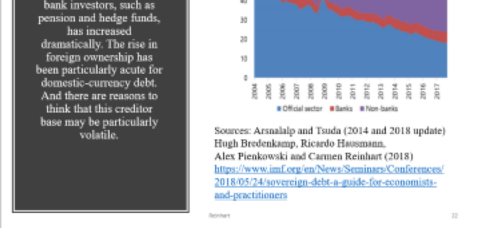


Green: PBoC or SAFE swap lines. PBoC is also s large holder of middle income EM debt.

Note: Red is applied to countries with both Loans > 1% and swap lines.

Red: Chinese loans > 1% of recipient country GDP

Source: Reinhart, Reinhart, and Trebesch (2017) and Horn, Reinhart, and Trebesch (2018).

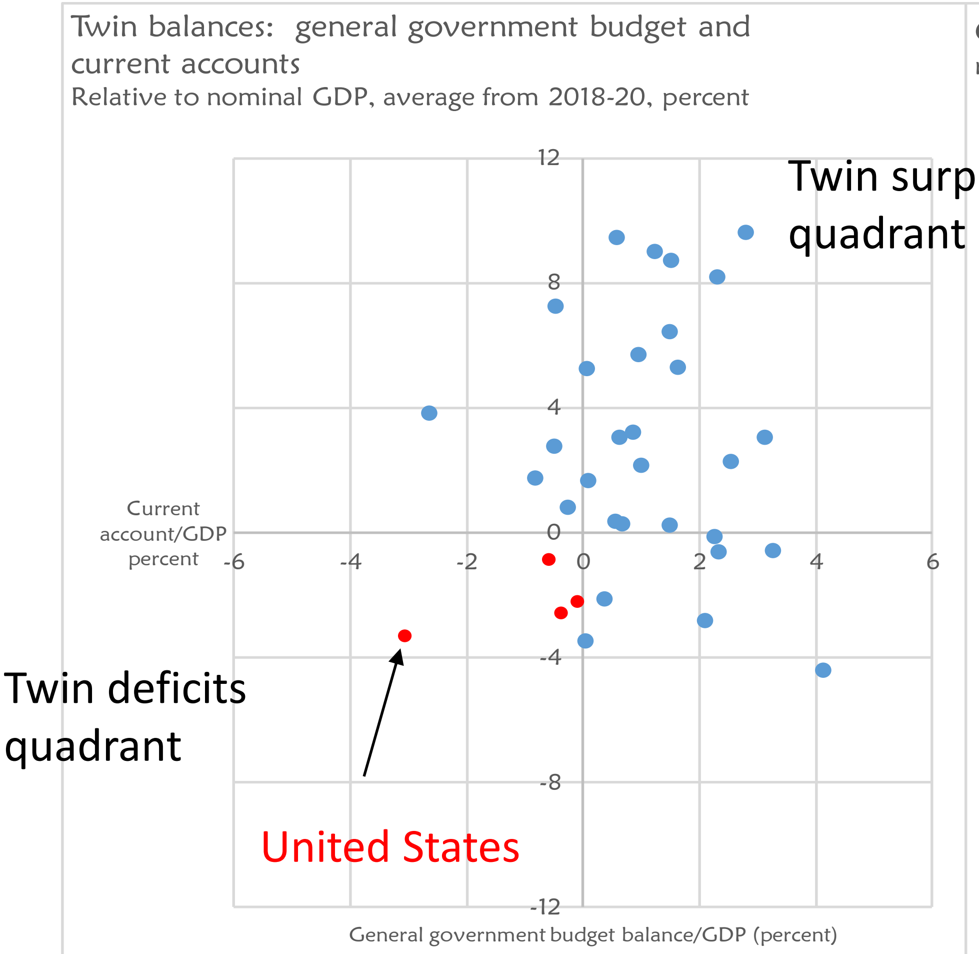


The long horizon

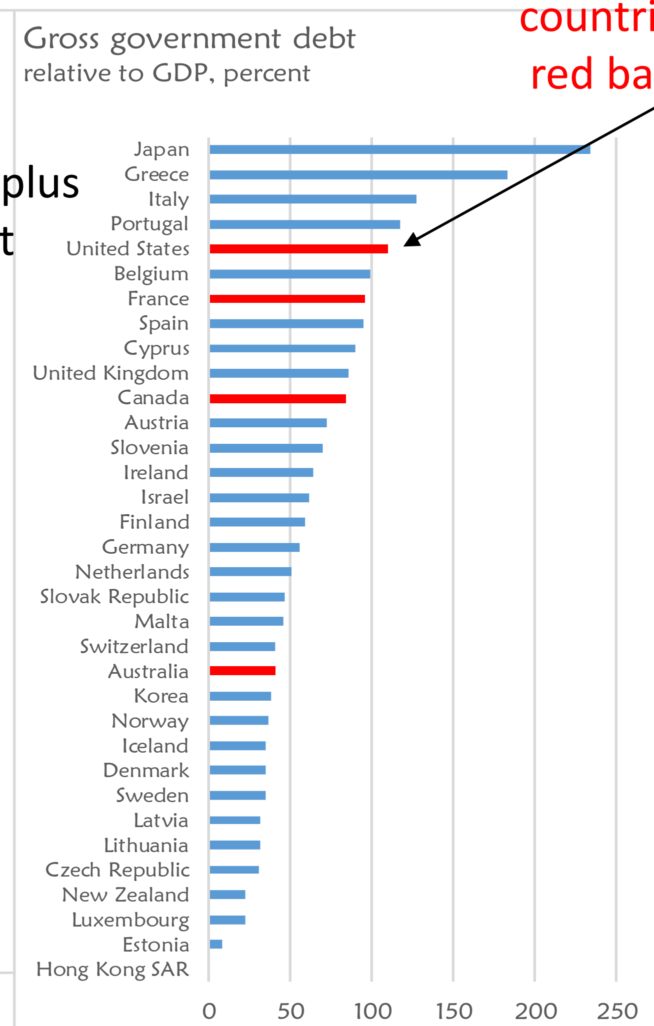
The US stock/flow problem

The US dollar and the modern day Triffin Dilemma

An old problem which is getting worse: It used to be about flows (**twin deficits**=current account + fiscal deficit)—now it is stocks (**debt**) *and* flows 2018-2020. What does it imply long-term for the US dollar?

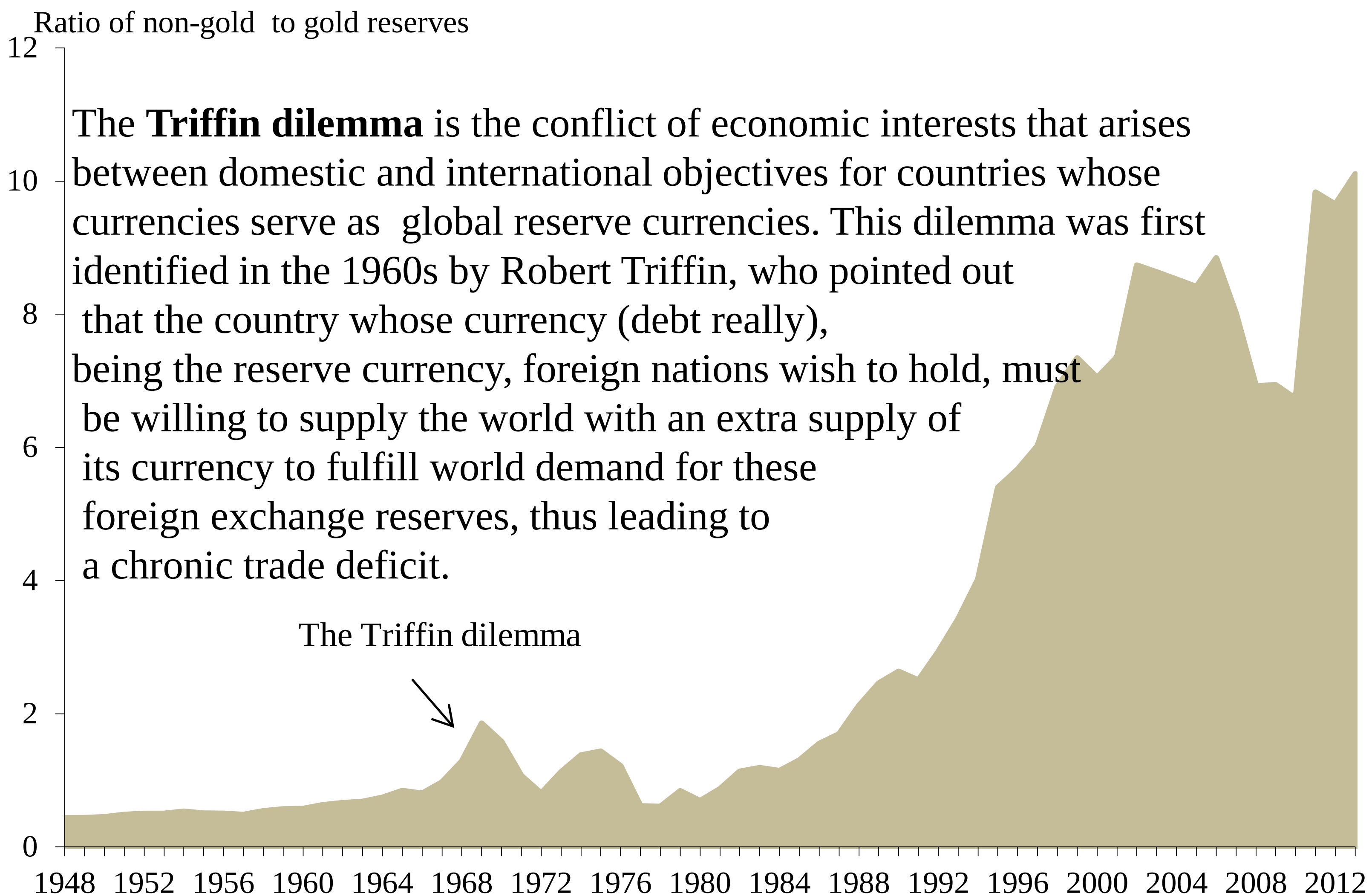


Twin deficit countries red bars



Source: IMF, WEO April 2018.

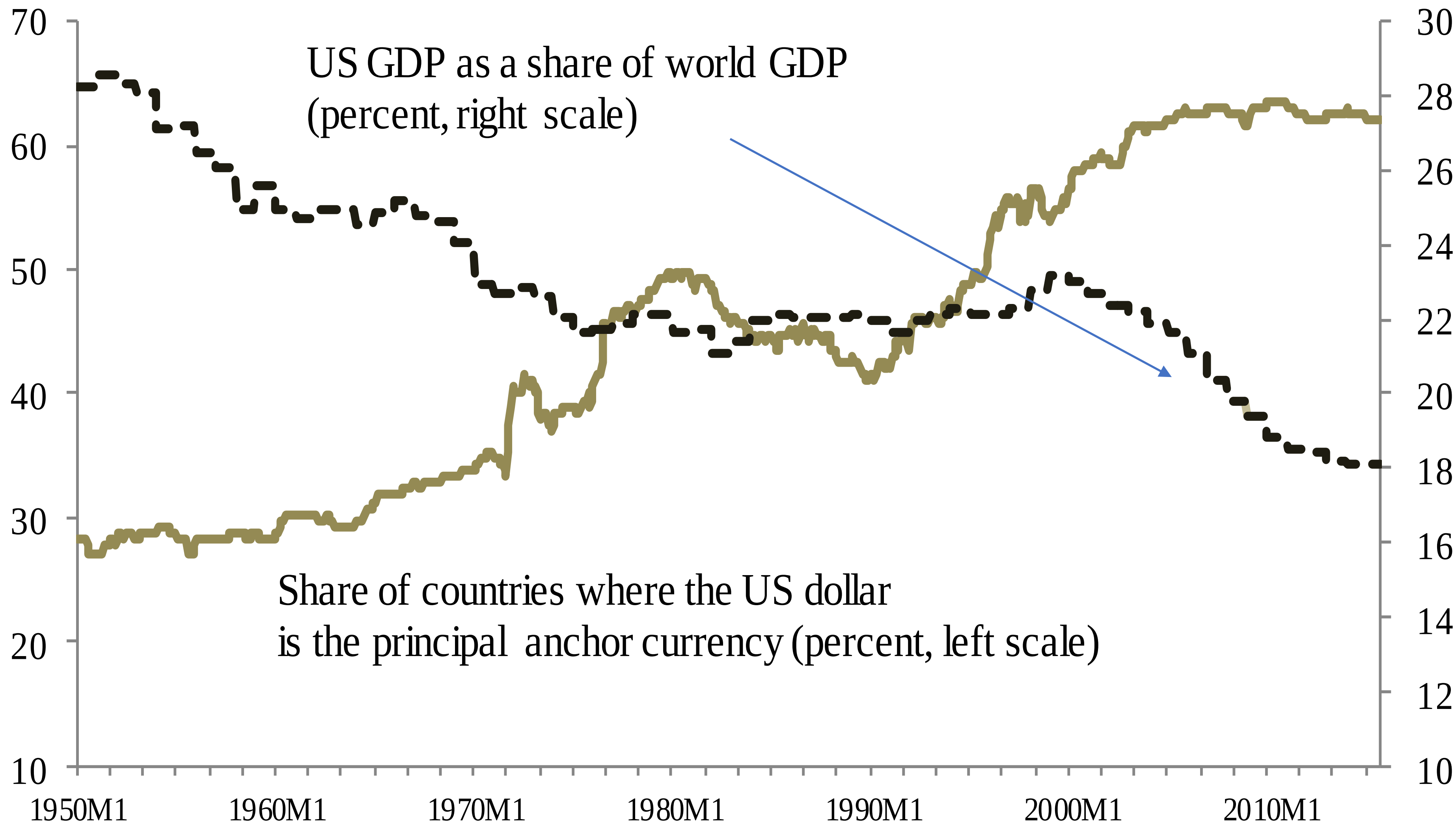
The original Triffin Dilemma: Ratio of total reserves minus gold (US dollars) to gold reserves (US dollars), World since1948



The **Triffin dilemma** is the conflict of economic interests that arises between domestic and international objectives for countries whose currencies serve as global reserve currencies. This dilemma was first identified in the 1960s by Robert Triffin, who pointed out that the country whose currency (debt really), being the reserve currency, foreign nations wish to hold, must be willing to supply the world with an extra supply of its currency to fulfill world demand for these foreign exchange reserves, thus leading to a chronic trade deficit.

Source: Ilzetzki, Reinhart, and Rogoff (2017).

Role of the Dollar and US Economy 1950-2016
Share of countries



Source: Ilzetzki, Reinhart, and Rogoff (2017).