Monetary Policy and High Government Debt

BIS 24th Annual Conference

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June 27, 2025

For those of you that may still harbor doubts about the relevance of the topic.

"I would like to get this guy to lower interest rates, because if he doesn't, we have to pay," Trump said during a June 12 White House event, referring to Powell. The president argued that 2 percentage points of Fed rate cuts could save $600 billion a year in interest costs.

As reported by Bloomberg, June 17, 2025

Outline of remarks and main themes

- Public debt landscape: Advanced economies (AEs) and Emerging Market and Developing Economies (EMDEs)
  - Debt levels
  - Debt servicing costs and other pressures on fiscal outlays
  - Sovereign risk and credit ratings
  - Interest rates: Historical context
- A menu of concerns for central banks dealing with high public debt and how these shape *monetary policy space.*
  - Fiscal dominance and central bank independence
  - Bias toward financial repression
  - Financial fragility: Exposure of financial institutions to government debt (doom loops) and "classic" private debt-led financial crises
  - Sudden stops and the role of foreign holdings of government debt
  - Dealing with asymmetric fiscal policy responses and "burden shifting"

Part I. Public Debt Landscape

Debt levels

Debt servicing costs and other pressures on fiscal outlays

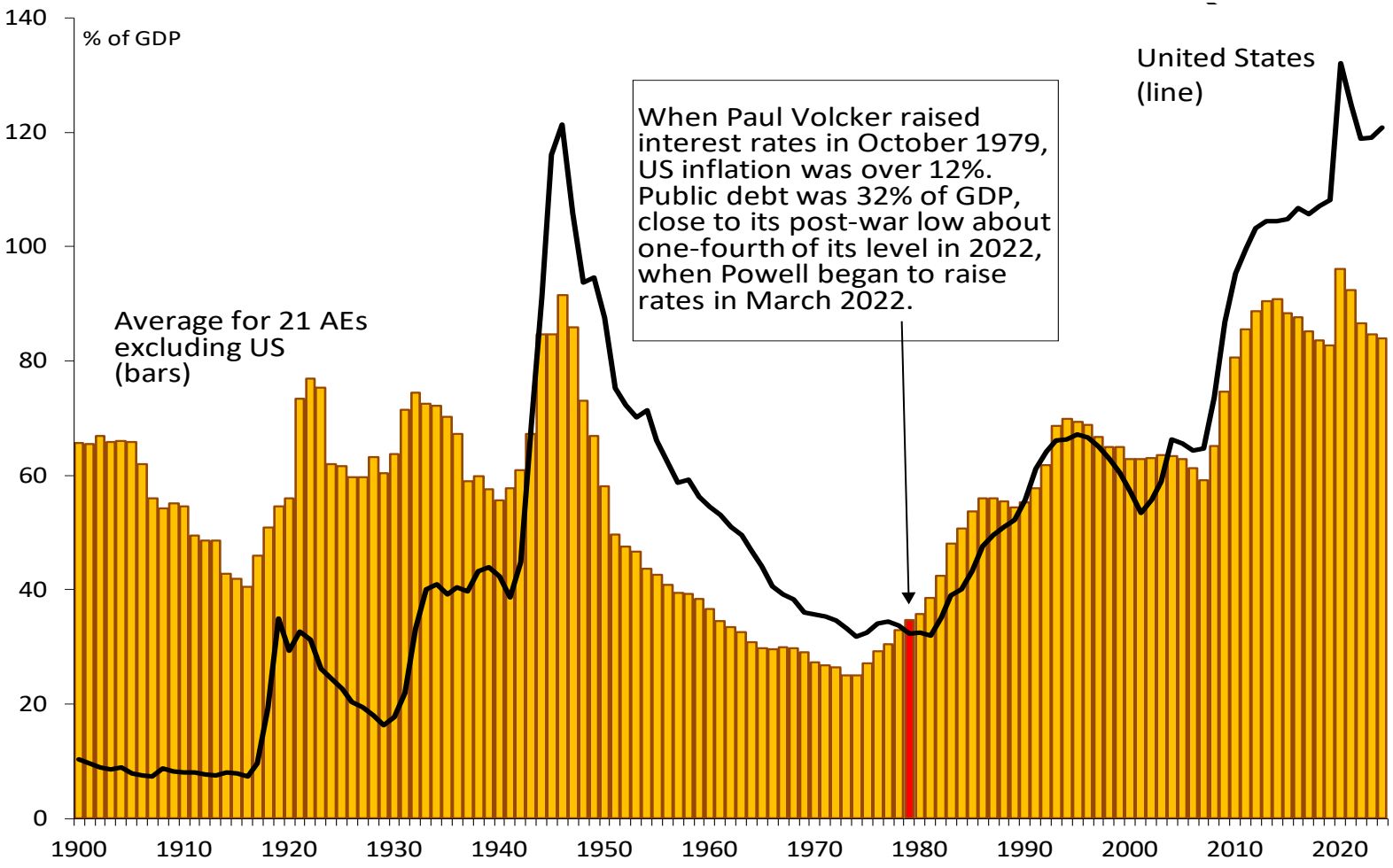
Sovereign risk and credit ratings

Interest rates: Historical context

A preview of some of the key points

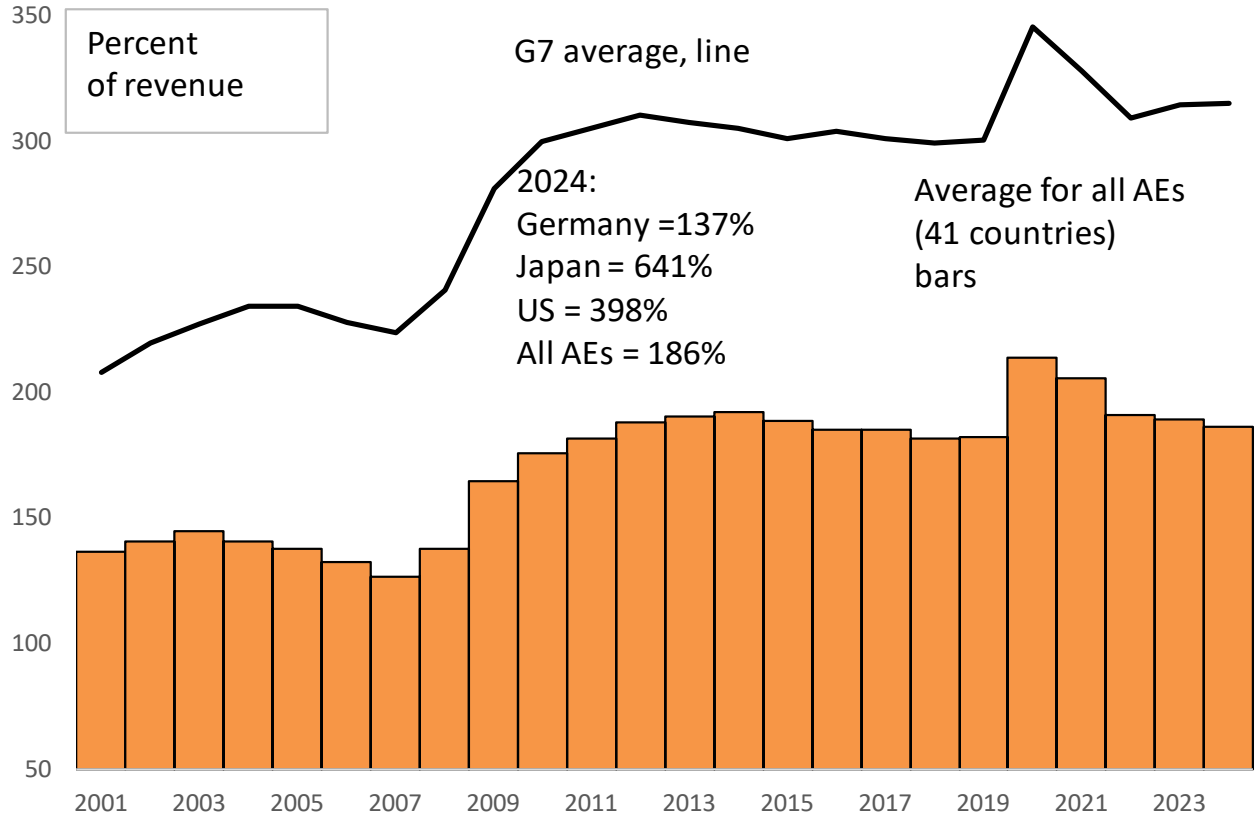
- Among AEs, high public debt is prevalent but not universal.
- Heterogeneity is even greater among EMDEs. Debt crises have largely bypassed the larger EMs. Low-income countries (as a group) are facing the biggest debt crisis since the early 1980s.
- Debt issues are poised to worsen.
- Debt-servicing outlays are on the rise—this cuts across AEs and EMDEs.
- Fiscal adjustment, along with other debt reduction options are politically difficult, economically unappealing, or both.
- High debt is not confined to the public sector. Private debt levels are also high in many countries.
- Periods of sustained negative real interest rates (GFC-2022) are comparatively rare. There were four episodes in the 20th century and none in the 19th century.
- Details follow.

Public debt to GDP: United States and 21 Advanced Economies, 1900-2024



Sources: Reinhart and Rogoff (2009 and 2011), IMF World Economic Outlook, April 2025.
Notes: 22 "core" advanced economies (AEs) as listed in Reinhart and Rogoff (2009 and 2011).

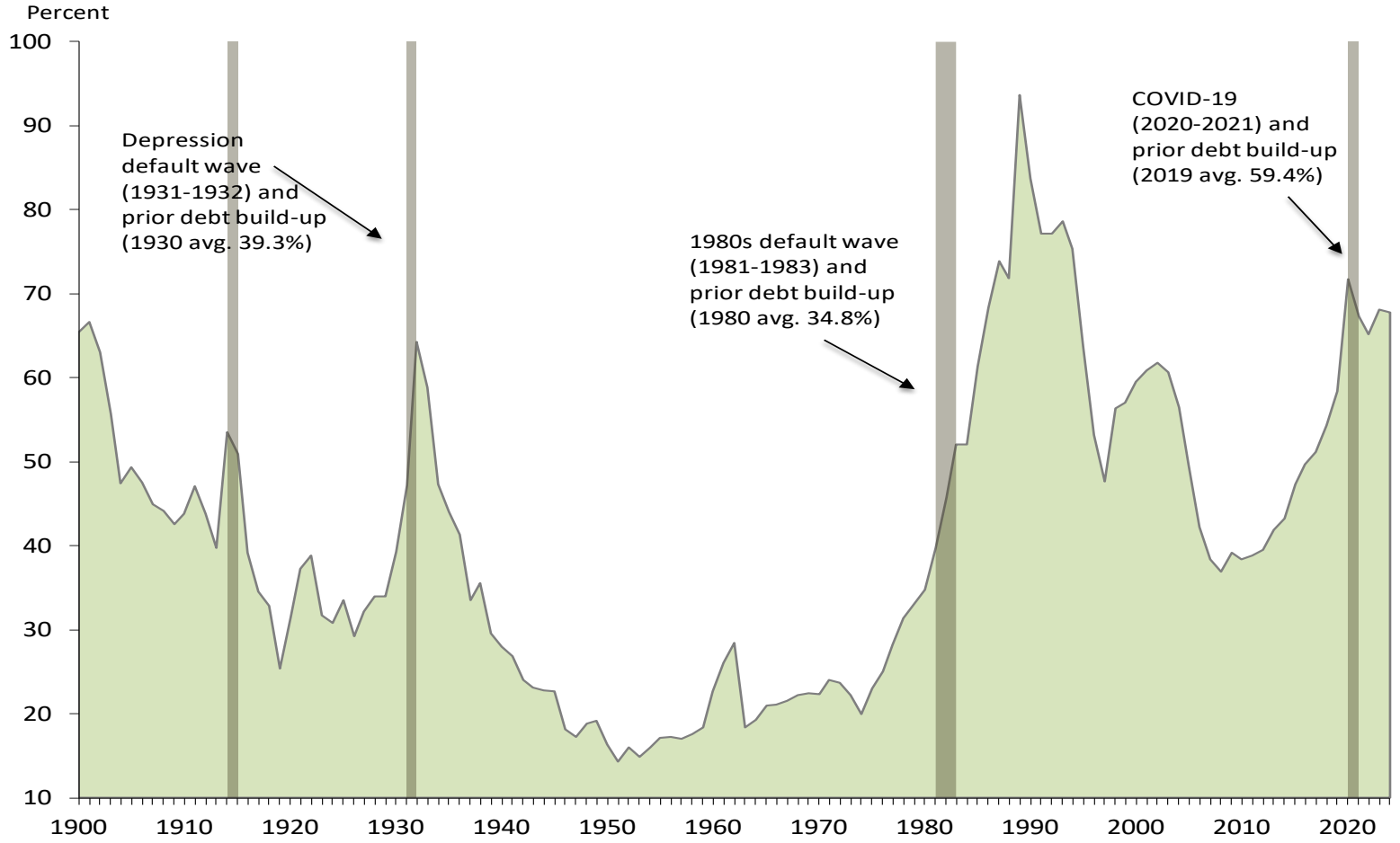
Debt relative to government revenues may be more informative than debt/GDP. Political challenges in raising taxes will not be overcome quickly. US is planning to cut taxes.



Source: IMF World Economic Outlook, April 2025.
Notes: Advanced economies (AEs) classification from IMF, World Economic Outlook. Macau is excluded due to lack of data.

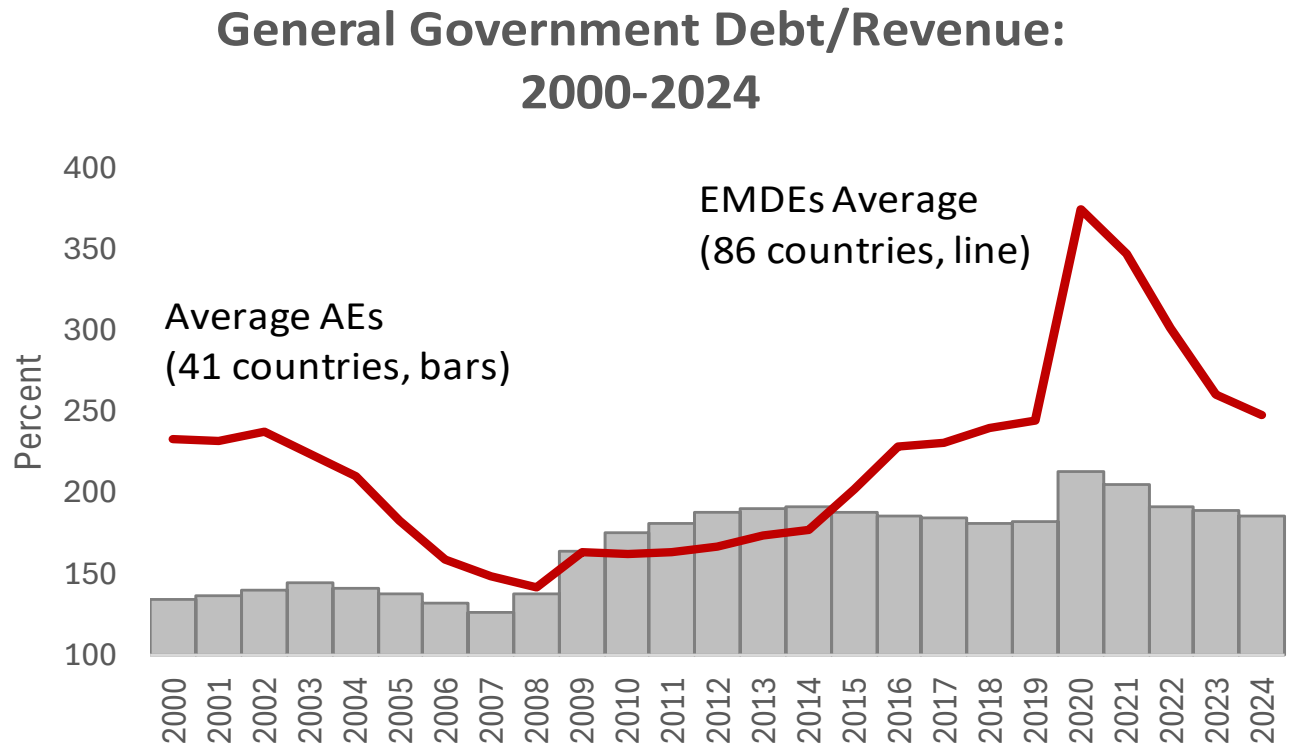
Public debt to GDP and Sovereign Default Waves: Emerging Markets and Developing Countries

1900-2024, 46 countries



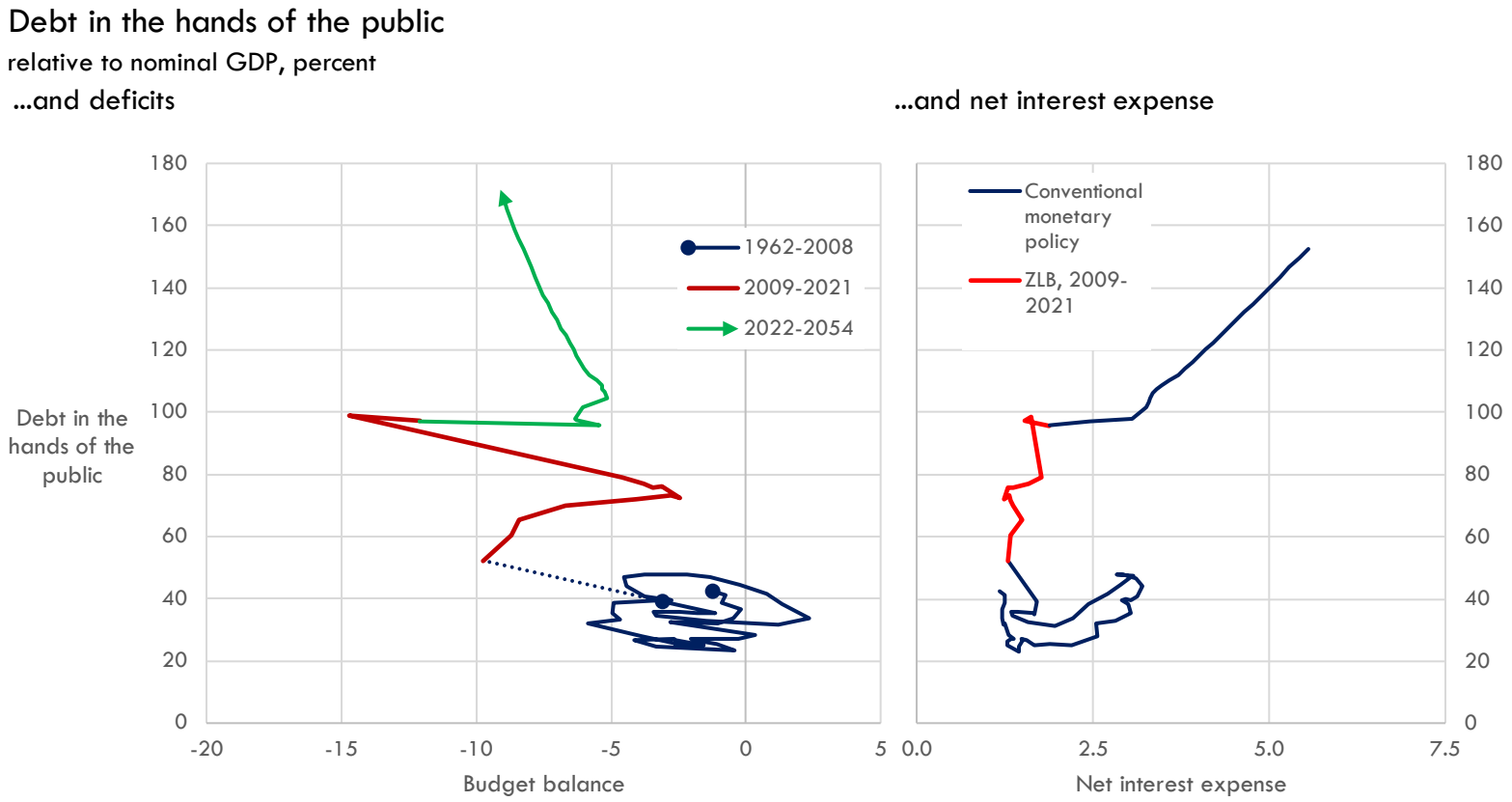
Sources: Reinhart and Rogoff (2009 and 2011) and IMF, World Economic Outlook, April 2025.
Notes: Default waves: Years during which the share of countries entering a new default are ≥ 5%.
Default waves and COVID 19 years are shaded.

The somewhat lower public debt/GDP ratios in EMDEs versus AEs should be interpreted with care. For lower income groups, the domestic revenue base is usually smaller and far more volatile than in AEs, as it is often linked to commodity export revenues.
(Japan's and US 2024 ratios are well above the EMDE average at 248%)



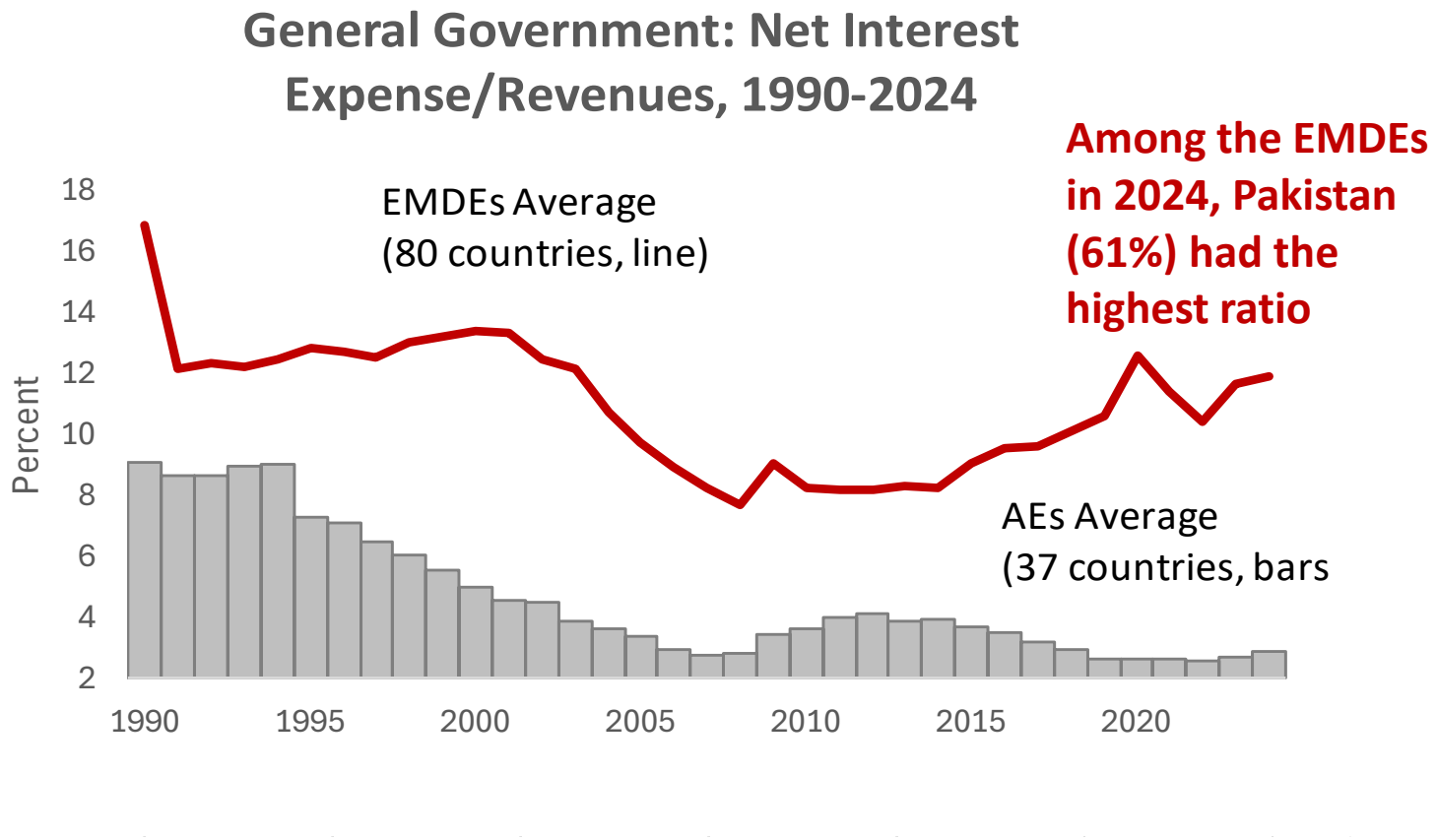
Source: IMF World Economic Outlook, April 2025.
Note: The 68 International Development Assistance (IDA) countries are not included in the EMDE group..

US: While public deficits and debt levels climbed steadily (left panel), interest outlays/GDP (right panel) were contained in the low-for-long interest rate era.



Sources: Congressional Budget Office, February 2025 and Vincent Reinhart.

Rising interest outlays have become a bigger drain on revenues for EMDEs and, more recently, for AEs. The average AE and EMDE ratios in 2024 were about 3% and 12%, respectively. At 12.2%, the US was the highest among AEs and the highest since Greece's 17.2% ratio in 2011.

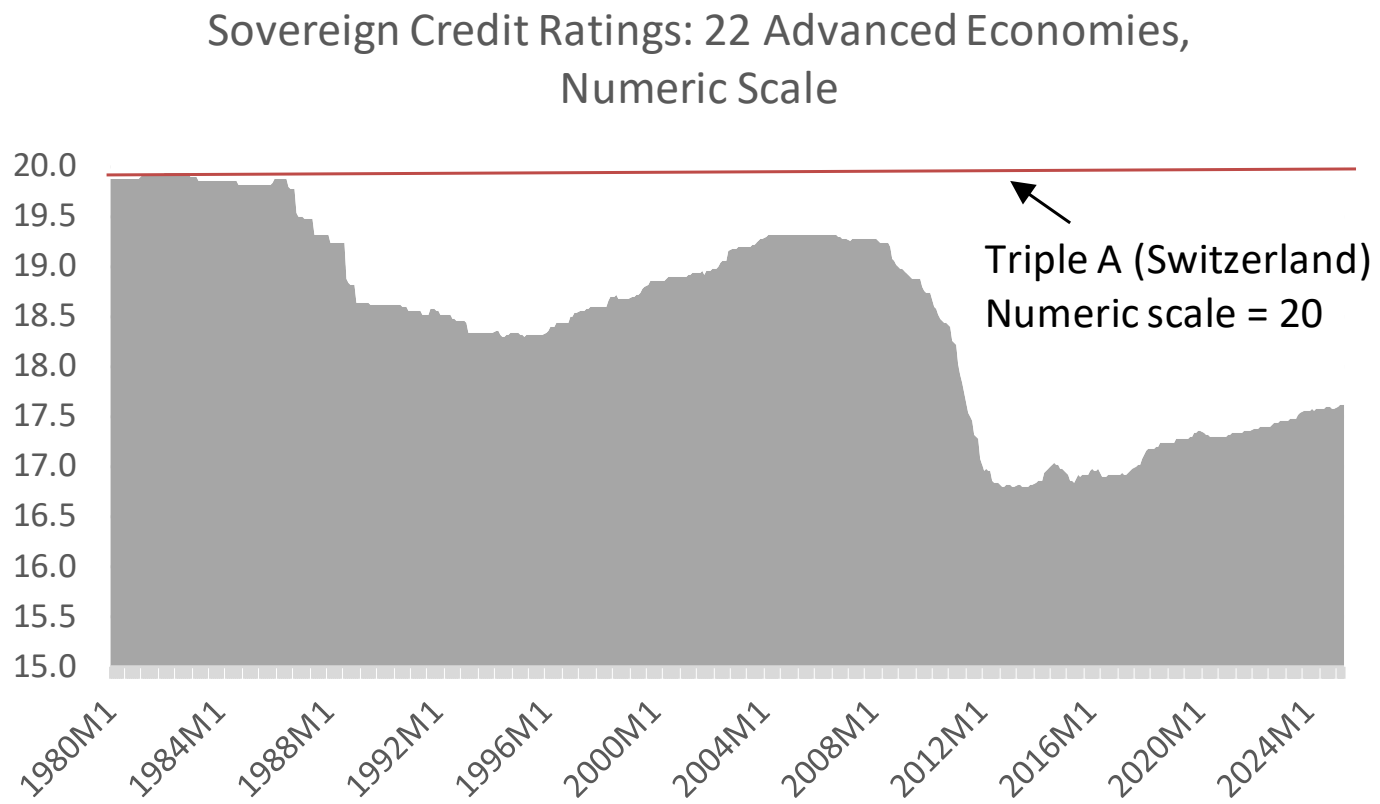


Sources: IMF World Economic Outlook, April 2025 and author's calculations.
Notes: Net interest expense is calculated for general government as primary net lending/borrowing minus net lending/borrowing. EMDE excludes the 68 IDA countries.

Advanced Economies Sovereign Risk, January 1980-May 2025

Average numeric scale for Fitch, Moody's, and S&P

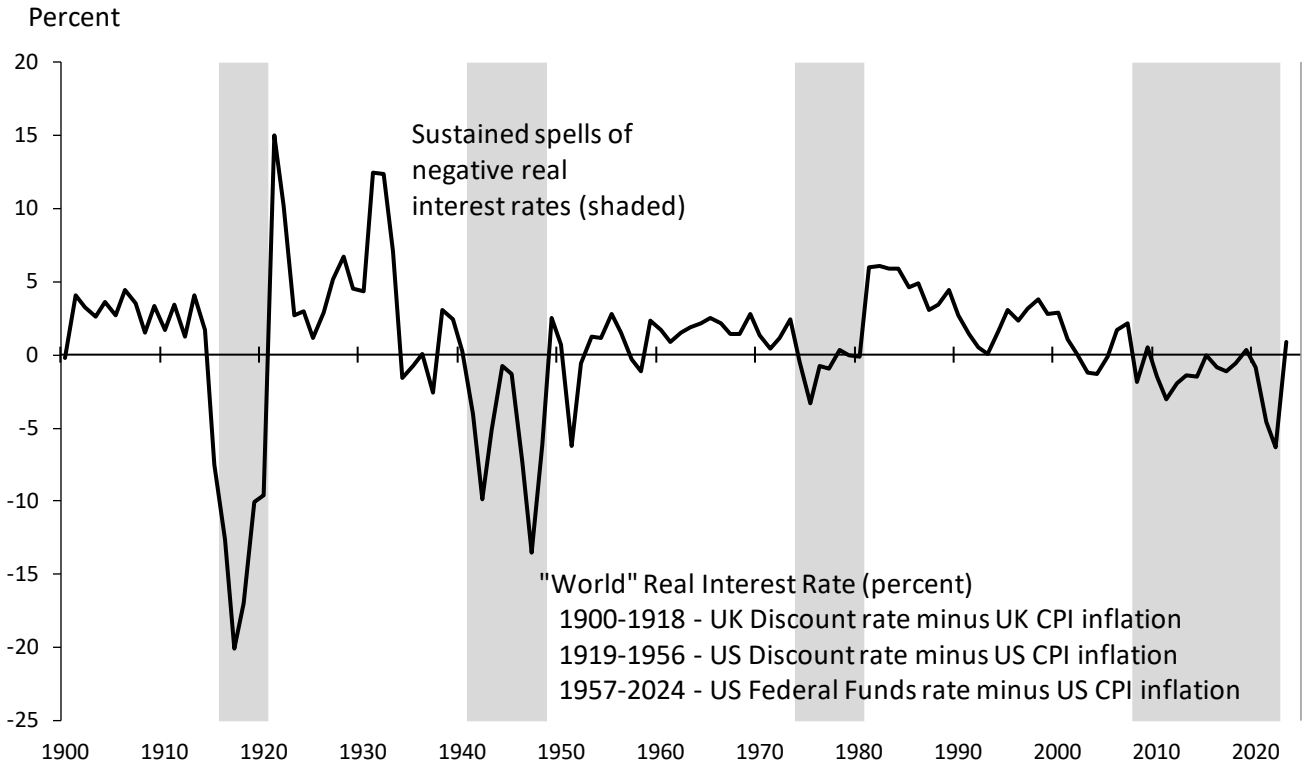
Many long-term AE "market" yields are disconnected from the sovereign credit risk embedded in these ratings. That disconnect is far less prevalent for EMDEs.



Sources: Fitch, Moody's, S&P, and authors' calculations based on Cruces and Trebesch (2013) Numeric scale.

A long history of short real rates: 1900-2024

Periods of sustained negative real interest rates are comparatively rare. There were four episodes in the 20th, century (all associated with accommodative monetary policy) and none in the 19th century.



Sources: Bureau of Labor Statistics, Board of Governors of the Federal Reserve, and Reinhart, Reinhart, and Trebesch (2016).

Notes: Sustained spells of negative real interest rates are defined as those lasting five years or longer. The four shown in the figure are the only spells since 1800, as there were none in the 19th century.

Undoing debt overhangs: The "unpleasant" menu of options

Throughout history, debt/GDP ratios have been reduced by orthodox and unorthodox policies (or a combination of the two):

The orthodox

(i) economic growth;

(ii) fiscal adjustment;

(iii) Privatization of government assets;

The unorthodox

(iv) explicit default or debt restructuring;

(v) a surprise burst in inflation; and

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

(*Options (v) and (vi) are only viable for domestic currency debts*). ***The desirable Option (i) is an aspiration—not a policy.***

Notes: See Reinhart, Reinhart, and Rogoff (2015) for historical episodes of debt reversals and a discussion of the policy mix.

Recap of takeaways on the current situation.

- High public debt is prevalent but not universal. Australia, Denmark, Germany, Netherlands, Norway, Sweden, Switzerland, and a few others are not facing the challenge of persistently high or rapidly rising public debt.
- Heterogeneity may be even greater among EMDEs. Unlike the early 1980s, when large, upper-middle income EMs went into default alongside their lower income counterparts, more recent defaults (Ethiopia, Ghana, Niger, Sri Lanka, among others) or near defaults (Egypt and Pakistan) are among lower-middle-income or low-income countries. These countries are not “systemic.”
- The IMF and The World Bank group 69 low-income countries into four buckets based on their risk of a debt crisis (or, in their language, debt distress). The groups are low, moderate, high, and in debt distress. In 2015, the number of countries in these four categories were 15, 35, 14, and 4, respectively. By end 2024, the distribution had pivoted for the worst with 7, 25, 27, and 10, respectively. This is equivalent to saying that 53 percent of the 69 countries are at high risk or already in debt distress The line that separates these two buckets is tenuous. A “quiet” debt crisis is unfolding.

- Debt issues are poised to worsen. In Europe, Canada and the US larger defense outlays are probable. Outlays on climate-related needs (whether adaptation, mitigation or fiscal outlays to deal with disasters) will also expand budgets. Debt reversals have been few (Iceland and Ireland).
- Debt-servicing outlays are on the rise—this cuts across AEs and EMDEs. Cyclical fluctuations aside, the exceptionally persistently negative real interest of GFC to 2022 appear improbable. Financial market volatility (notably in fixed income and currency markets) also moved closer to historical norms.
- Fiscal adjustment, along with other debt reduction options listed in the previous menu, are politically difficult, economically unappealing, or both.
- High debt is not confined to the public sector. Private debt levels raise eternal "contingent liability realizations problem." This is also an issue for countries where public debt is low or moderate (Australia, Korea, Switzerland, and Thailand among others). On the eve of the GFC, Ireland's public debt was 24 percent of GDP before private debts became public.
- To reiterate, periods of sustained negative real interest rates (GFC-2022) are comparatively rare and connected to monetary accommodation during two world wars and much of the 1970s. A return to low-for-long appears improbable.

Part II. Central banks dealing with high public debt: What defines "monetary policy space?"

Concerns include:

Fiscal dominance and central bank independence
Bias toward financial repression
Financial fragility: Exposure of financial institutions to government debt (doom loops) and "classic" private debt-led financial crises
Sudden stops and the role of foreign holdings of government debt
Dealing with asymmetric fiscal policy responses and "burden shifting"

Caveats and limitations

In discussing the risks associated with each of the concerns listed, it is important to recognize that:

- The focus on government debt leaves out many important factors, such as the extent of private indebtedness and the nature of their creditors, among many others.
- Some of these concerns are not separable and overlap importantly.
  - Sudden stops often combine with banking crises.
  - Financial repression can facilitate government debt build-ups and increase the exposure of financial institutions to sovereign risk, it can also overlap with banking crises.
- There is also the issue of observational equivalence.
  - Regulation that increases requirements of how much government debt a financial institution is required to hold has a benign interpretation under the umbrella of macroprudential policy. A less benign interpretation is financial repression and the need to expand “captive audiences.”
  - A classic feature of fiscal dominance in periods of rising public debt (wars are often used as examples) is an expanding central bank balance sheet.

Fiscal dominance and central bank independence

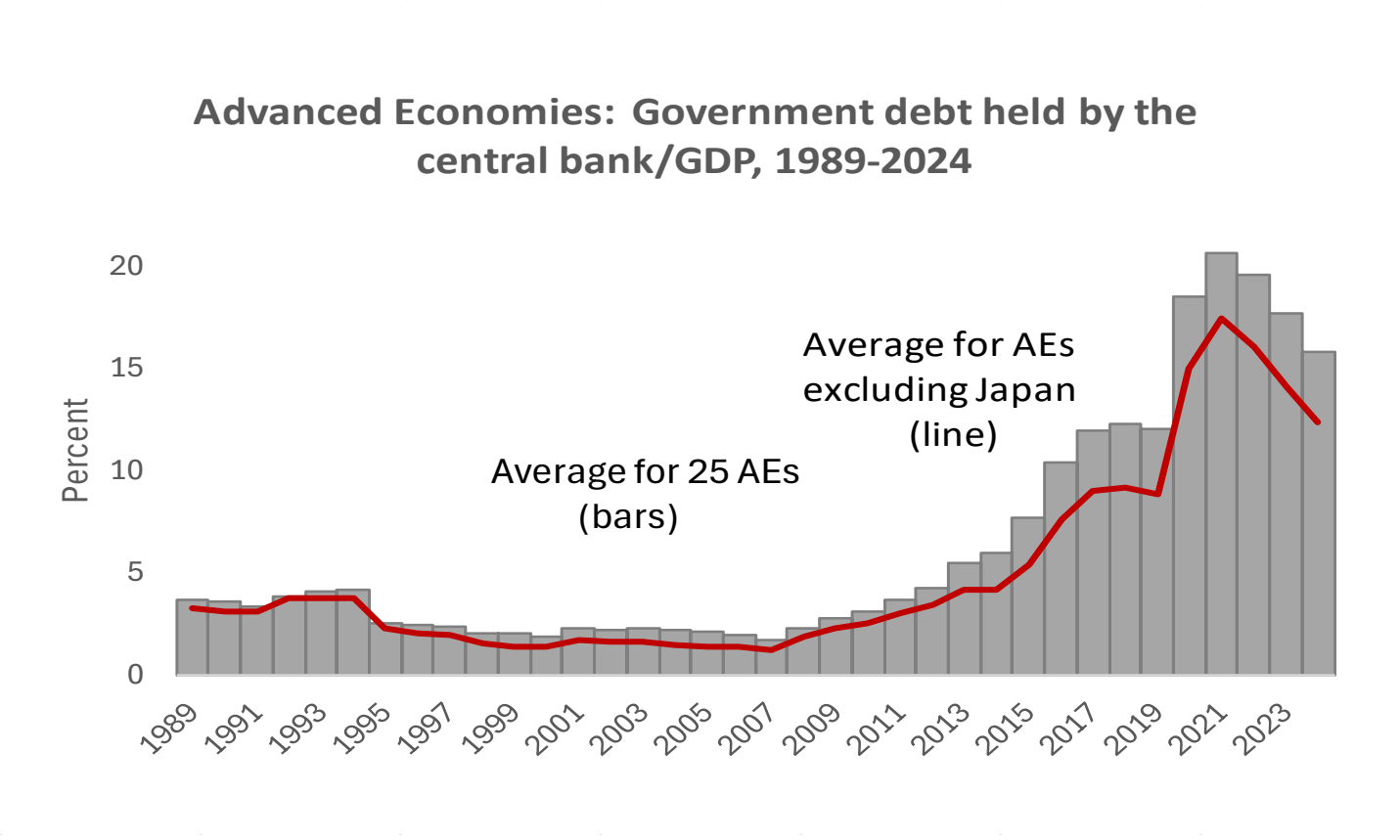
- Fiscal dominance need not involve a de jure loss of central bank independence. A de facto loss is more likely (if the central bank was independent in the first place). As noted, it has been the norm for central banks to prioritize the financing the government as cheaply as possible during wartime.
- Loss of access to external financing for prolonged spells, say owing to a sovereign default on external creditors or sanctions (or both), also provides many examples of fiscal dominance in EMDEs since WWII and additional AE examples in the earlier part of the century. Domestic bond financing usually becomes prohibitively expensive in these situations.
- Some authoritarian governments take on the control of the central bank (Turkey until recently?). We hope we do not have another example in North America.
- To quote Brunnermeier: Fiscal dominance involves the "inability or unwillingness of fiscal authorities to control long-run expenditure/GDP ratio, which limits the monetary authorities' ability to raise interest rates.

Central bank balance sheets and debt

(next three figures)

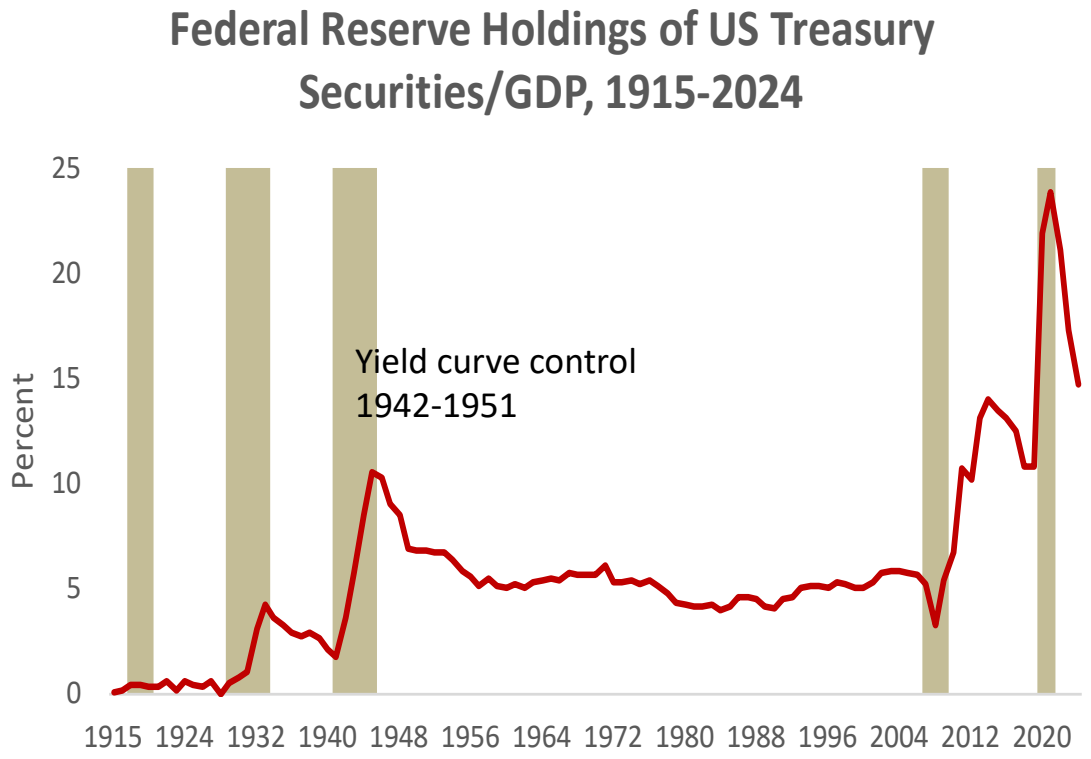
- The upward march in central bank balance sheets has not been universal. Some of the countries with lower levels of debt (Denmark, Korea, Norway and Switzerland) or Iceland, which has reduced its debt levels post GFC, have not seen much change in the size of their balance sheet viz GDP.
- The scatter plots connecting government debt levels with central bank holdings (both as a share of GDP) is for a sample of 24 advanced economies and is based on 682 paired annual observations. It is suggestive, even excluding the extreme case of Japan, of some connection between higher government indebtedness and the size of central bank balance sheets.
- Is this a sign of fiscal dominance? No and yes. Not in the textbook sense of treasury departments running central banks and setting policy goals but yes in that a plausible explanation is that high public (and private) debt levels may encourage central banks to have a larger footprint in sovereign debt markets to better influence interest rates. Fiscal policy looms larger in the conduct of monetary policy.

Central Bank holdings of government debt rose to unprecedented levels over 2008-2022 but inflation remained subdued. These data do not include other asset purchases by central banks (GSE in the US and asset-backed securities by the ECB)



Sources: Arslanalp and Tsuda (2014), May 2, 2025 database update, IMF World Economic Outlook, April 2025, and authors' calculations.

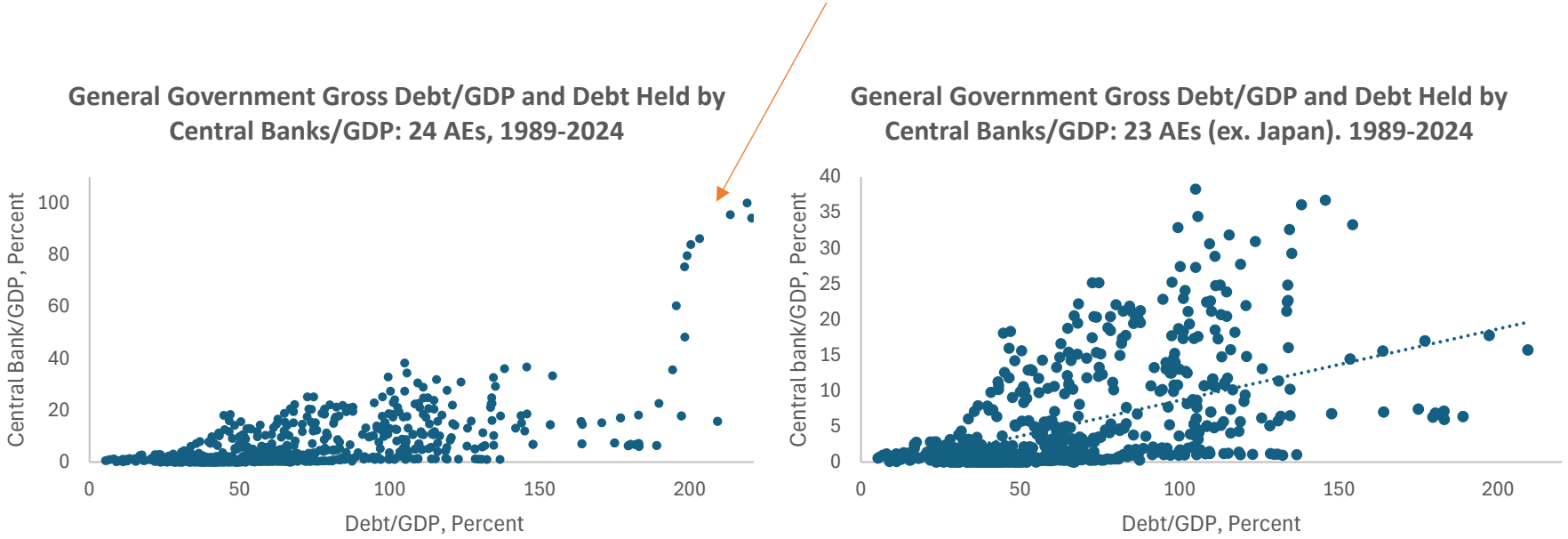
By unprecedented, I do not refer to the common usage, which translates to *I don't know any history.*
The US illustration below includes two World Wars, a global depression and an earlier more deadly pandemic.



Major events (shaded)	Date
1 WWI	1917-1918
2 Spanish Influenza	1918-1920
3 Banking cisis	1929-1933
4 WWII	1941-1945
5 GFC	2007-2009
6 COVID-19	2020-2021

Sources: Board of Governors of the Federal Reserve, Measuring Worth, Arsnalalp and Tsuda (2013) and May 2025 update, and authors calculations.

Yield curve control (BoJ, 2016-2024, US, 1942-1951) in the context of rising debt implies that the central bank balance sheet will expand passively to whatever fiscal policy delivers. Textbooks highlight how monetary policy independence is lost when the exchange rate is pegged. In this case, monetary policy is "imported" from the anchor country rather than from the fiscal authorities. Excluding Japan (right panel) does not alter the message.



Sources: Arslanalp and Tsuda (2014), May 2, 2025 database update, IMF World Economic Outlook, April 2025, and authors' calculations.

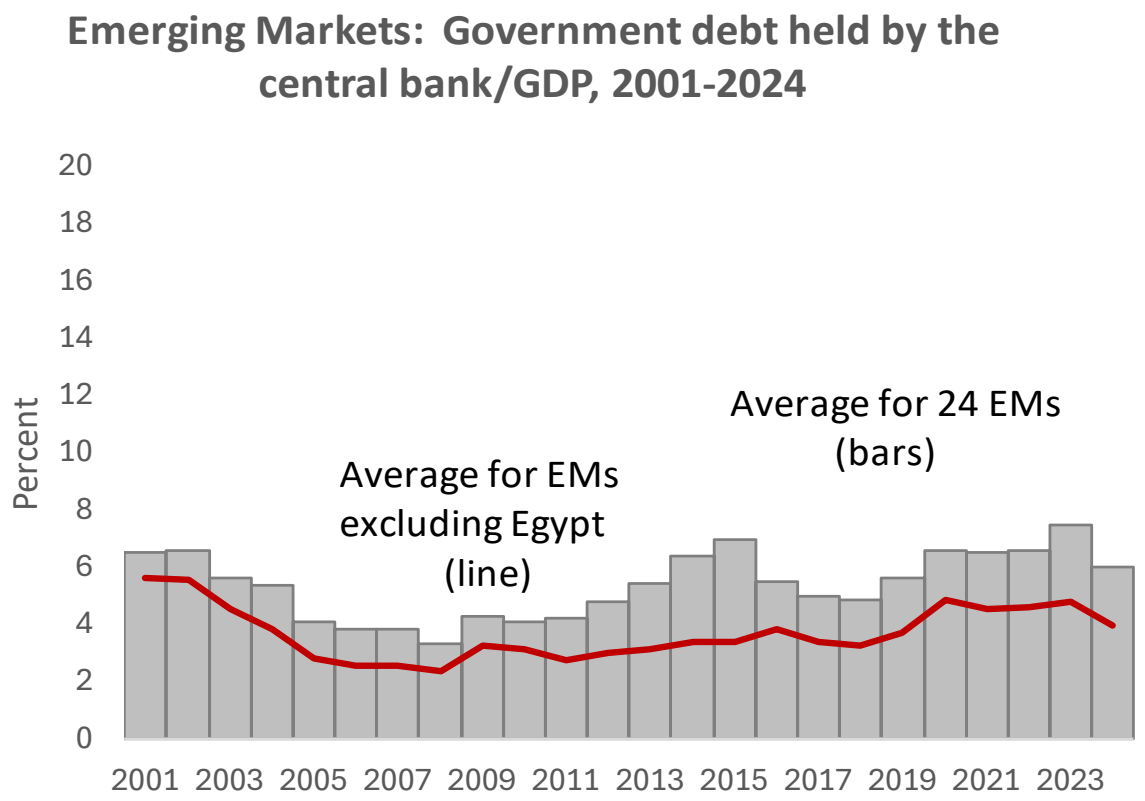
Notes: Figures are based on 682 paired annual observations.

Fiscal dominance and central bank balance sheets in EMDEs

- In this large and heterogeneous pool of countries, examples of fiscal dominance are not difficult to find at any point in time, especially among countries that have precarious (or no) access to international capital markets.
- Given that such episodes are also usually marked by spectacular currency crashes, the inflationary consequences of fiscal dominance usually become more apparent. Hyperinflations accompanied the sovereign defaults in Venezuela and Lebanon. Other defaults have also produced inflation surges (peak inflation in Ghana, Sri Lanka, and Surinam were 52%, 65%, 73%, respectively). Near-default episodes in Egypt and Pakistan were accompanied by inflation rates of 35-40%. Argentina's inflation peak last year was close to 300%.
- Despite sustained capital market access in the past decade, Turkey's inflation peaked at 86% in 2022. The country has also had 7 central bank governors during that period.
- **These episodes, however, are not representative of EMDE monetary policy. In a broader sample of 150 countries, only about 12% of the countries currently have inflation rates above 5%.**

Notwithstanding a crash in commodity prices (30% real decline 2013-2015), multiple reversals in capital flows, the pandemic, and the sharp hike in international interest rates since 2022, the size of central bank balance sheets has been relatively stable in this group of EMDEs, which includes all the largest ones.

The scale in this figure is the same as that shown For AEs.



Sources: Arslanalp and Tsuda (2014), May 2, 2025 database update, IMF World Economic Outlook, April 2025, and authors' calculations.

Financial repression has often overlapped with high public debt levels and fiscal dominance in AEs and EMDEs

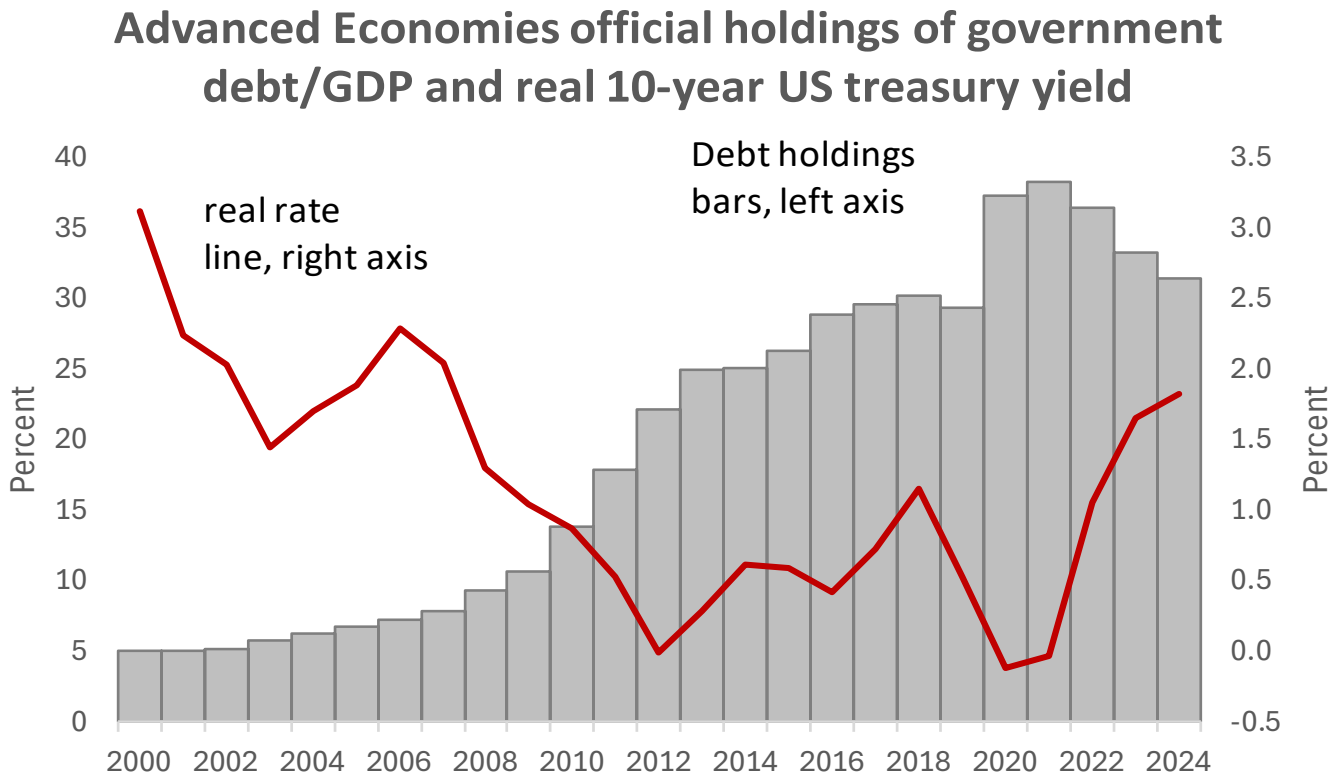
- Financial repression involves a combination of (i) a large footprint of the official sector in financial markets (ii) tighter financial regulation and (iii) sustained low or negative real interest rates. It is an opaque tax on creditors (McKinnon and Shaw, 1973, Reinhart and Sbrancia, 2011 and 2016).
- It can direct lending to the government by:
- Creating or broadening captive domestic audiences (by requiring domestic financial institutions to hold more government debt), explicit or implicit caps on interest rates, restrictions of cross-border capital movements, and a tighter connection between government and banks, either explicitly through public ownership of some of the banks, balance sheet exposure, or heavy "moral suasion".
- Financial repression is also sometimes associated with relatively high reserve requirements (or liquidity requirements), securities transaction taxes, prohibition of gold purchases (as in the US from 1933 to 1974), or the placement of significant amounts of government debt that is nonmarketable.
- As with other taxes, it can range from mild to extreme.

Somewhat irrelevant note: I presented this paper at the 10th BIS Annual Conference in 2011.

Financial repression: Official versus private ownership of government debt defined

- Foreign creditors are broadly grouped into private and official. For all countries, debt held as foreign exchange reserves by foreign central banks are recorded as official.
- For Eurozone countries, the ECB's sovereign debt holdings are included in official category. For Greece, the European Stability Mechanism and the European Financial Stability Facility are the major official creditors. The ESM is the country's largest creditor.
- EMDE's official creditors include debt to multilateral institutions (IMF, The World Bank, and others) and bilateral government-to-government loans to traditional Paris Club creditors and, importantly (among the non-Paris Club lenders) China. China's lending to EMDEs is far larger than the entire Paris Club combined and, until the pandemic, it was bigger than The World Bank lending. (Horn, Reinhart, and Trebesch, 2022 and 2025).
- The domestic creditor base is likewise comprised of official creditors (domestic central banks) with all others counted as private creditors.

Secular factors related to an aging population, diminished productivity, and inequality trends were held to be the main drivers of the exceptionally low real interest rates in AEs, especially post-GFC and despite rising debt levels. Such explanations have ignored the role played by policy via the sustained surge in official holdings of government debt.

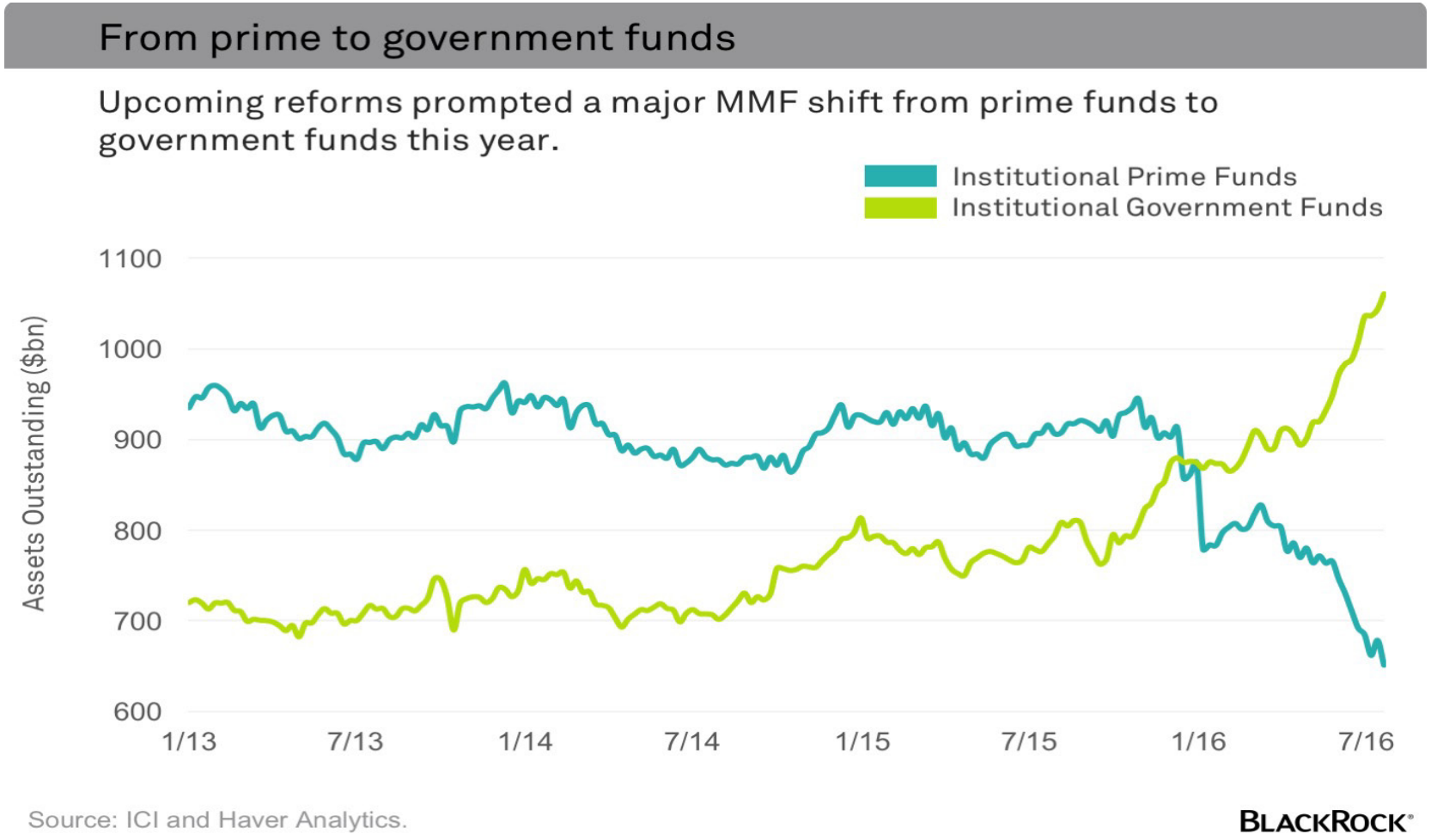


Sources: Arsnalalp and Tsuda (2013) and updates, IMF *World Economic Outlook* (April 2025), and Federal Reserve Bank of Cleveland accessed via FRED.

Financial repression and the observational equivalence problem

- Basel III, which introduced the Liquidity Coverage Ratio and Net Stable Funding Ratio, led banks to hold a greater amount of government bonds to meet liquidity requirements.
- Are all government bonds liquid and risk free in times of crisis?
- In 20 out of the 23 AEs (87%) that I have focused on in this discussion, banks' holdings of government bonds have increased post-GFC (notwithstanding large purchases by central banks).
- Post-GFC, we have (i) a large official footprint in financial markets, (ii) sustained negative real policy interest rates, (iii) heavier regulation that delivers a larger captive audience for government debt, and an explicit interest rate ceiling in the case of Japan. These have been pillars of financial repression historically. The notable exception among the major pillars of financial repression has been the use of capital controls,
- **Even if the policy goals of central banks and regulators did not include providing cheap finance for the government, it nonetheless did.**

Regulatory changes were not confined to banks, in 2016 the US SEC adopted Money Market Fund Reform Rules,
https://www.sec.gov/News/PressRelease/Detail/PressRelease/1370542347679,
which went in the same direction.



Some observations about the domestic financial sector claims on General Government and the potential for a doom loop.
(next table)

- The claims on government of Greek domestic financial institutions are about 35% of GDP, close to the average for AEs. How can this be possible with a debt/GDP ratio of about 159% in 2024? The answer is that Greek public debt is primarily held by foreign official institutions led by the European Stability Mechanism. The other official creditors include the European Financial Stability Facility and the ECB. The IMF loans were repaid in 2022. Greece's total foreign held debt is about 111% of GDP (more of this to follow).
- Financial sector exposure to the government would be higher, particularly in "periphery" European countries, absent ECB purchases of this debt.
- In most of the countries shown, central bank purchases of government debt (also shown) have kept private financial sector holdings lower than they would have otherwise been.
- The table also highlights the elevated level of private sector debt in many AEs.

Claims of the (mostly) domestic financial sector on General Government and the private non-financial sector: 2024

	Private non-financial sector credit from all sources	General Government		
		credit from the private domestic financial sector	credit from the Central Bank	credit from domestic finacial sector
	(1)	(2)	(3)	(2) + (3)
Austria	133.6	11.7	16.6	28.3
Australia	171.2	26.3	8.4	34.6
Belgium	178.4	21.3	17.4	38.6
Canada	217.9	58.8	7.7	66.5
Denmark	216.6	25.1	0.0	25.1
Finland	180.9	14.1	17.4	31.5
France	214.4	29.1	20.7	49.8
Germany	142.8	14.7	14.7	29.5
Greece	91.6	34.6	14.4	49.0
Ireland	159.0	7.5	9.8	17.3
Italy	94.9	65.0	29.3	94.3
Japan	180.5	87.2	95.6	182.7
Korea	201.9	35.8	0.2	36.0
Netherlands	267.5	11.3	10.2	21.4
Norway	231.5	5.2	0.0	5.2
Portugal	132.0	31.8	22.8	54.7
Spain	121.8	35.8	24.1	59.9
Sweden	250.3	28.3	0.2	28.4
Switzerland	266.7	23.8	0.2	23.9
UK	138.9	35.6	23.0	58.5
US	145.2	67.3	14.8	82.1
Average	178.0	31.9	16.5	48.5

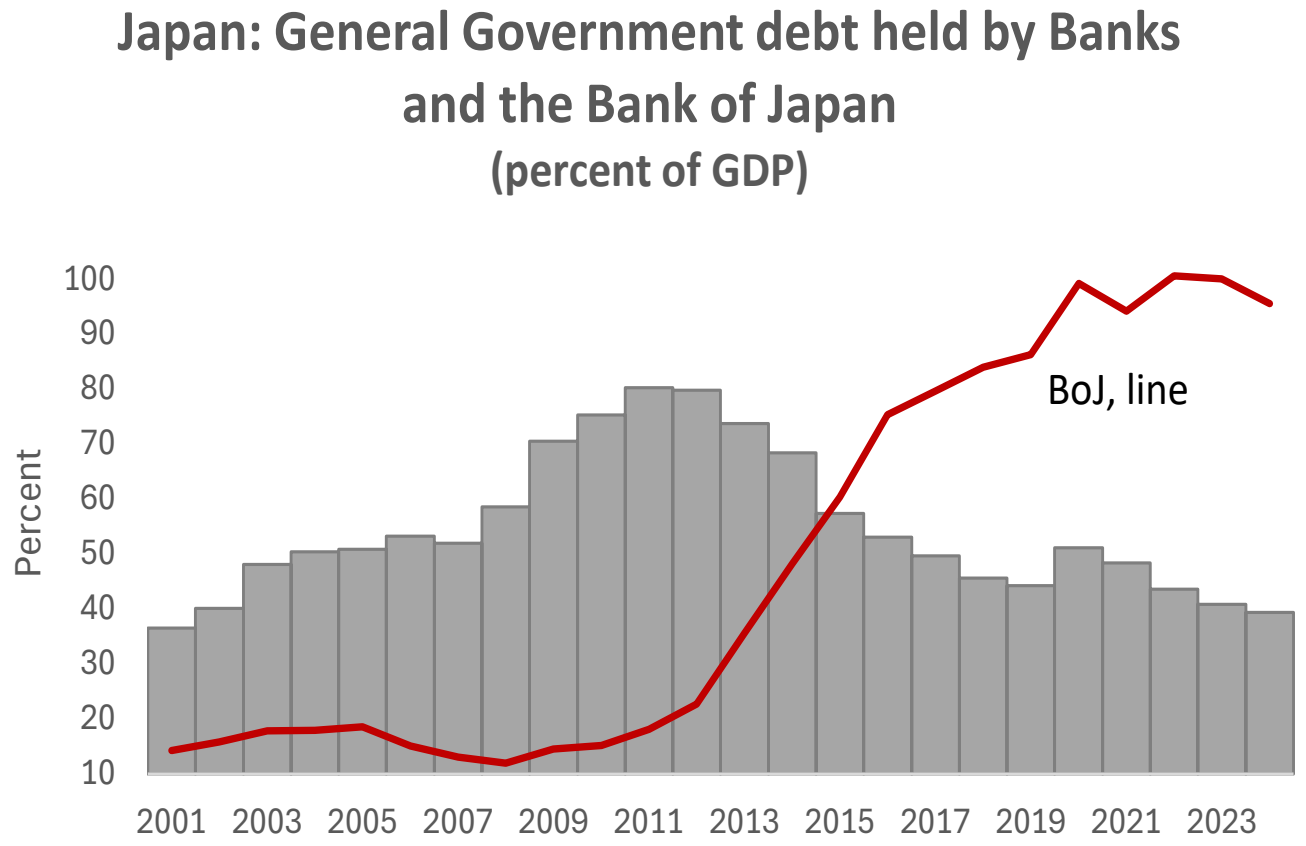
Sources: Bank of International Settlements, Arslanalp and Tsuda (2014), May 2, 2025 database update, IMF World Economic Outlook, April 2025, and authors' calculations.

Notes: The BIS credit data, which includes all creditors, was adjusted in column (3) to exclude foreign creditors and the central bank, which is shown separately.

Financial fragility and high government debt: The parallels between *Fear of Floating* and *Fear of Hiking*

- The causes of ***Fear of Floating*** in some central banks that Calvo and Reinhart (2003) discussed are:
  - High passthrough from exchange depreciation to inflation and the overshooting of inflation targets.
  - Evidence of adverse consequences for trade of exchange rate volatility (the evidence we presented was far more conclusive for EMDEs than AEs).
  - Loss of confidence, potentially leading to a capital flow reversal (*Sudden Stop*).
  - Fear of the effects a sustained appreciation on competitiveness (see also Levy Yeyati and Sturzenegger, 2013). Switzerland case.
  - But the dominant concern we stressed was the **adverse balance sheet effects** for the public and private sectors that have hard currency liabilities and for banks with currency mismatches.
- ***Fear of Hiking*** (recently most evident in the BoJ's gradualism) is also importantly driven by **balance sheet** worries—for good reason.

During the European Debt Crisis, the BoJ dealt with potential financial fragility by transferring sovereign risk from banks to its balance sheet. Even so, Japan's financial institutions have the largest exposure to government debt among AEs (almost twice the average for the group). Hence, its *Fear of Hiking* is not just about the government's interest expenses but banks' potential capital losses.



Sources: Arslanalp and Tsuda (2014), May 2, 2025 database update, IMF World Economic Outlook, April 2025, and authors' calculations.

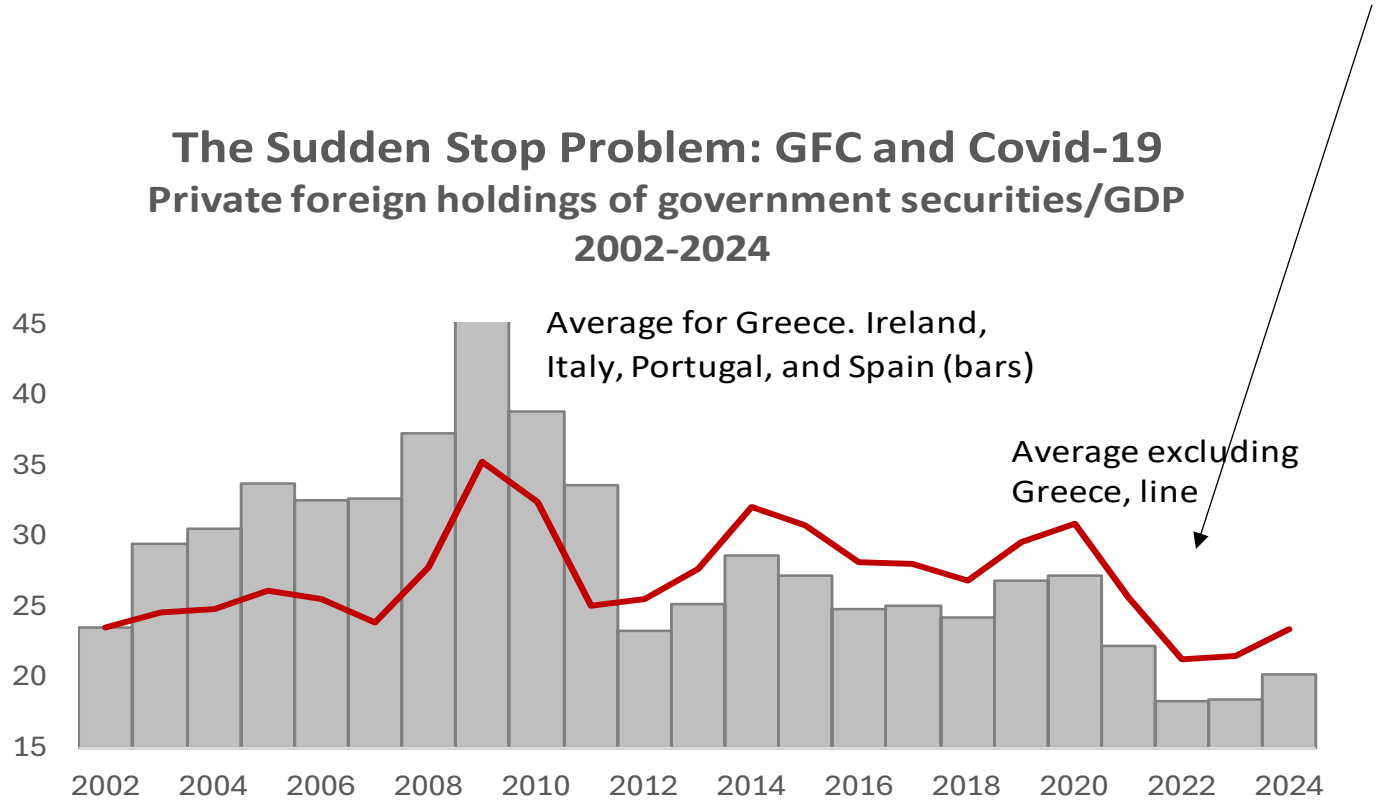
Fear of Hiking is neither new or unique to Japan's current predicament.

- When the **balance sheets of domestic financial institutions** are overweighted in long-term government securities, the capital losses of a rate hike (whether acknowledged or not) are large and immediate. In Japan's case, affecting private financial institutions and the central bank.
- After a draconian shift in policy that brought US real interest rates to their highest levels since the 1930s, Chairman Paul Volker brought the rate hike to an abrupt end in August 1982, after Mexico's default (and prospects of other EM defaults) threatened the health of the money-center US banks.
- The UK's Soros moment, when the Bank of England abandoned the interest rate defense of the exchange rate during the Exchange Rate Mechanism crisis of 1992, highlighted concerns about the impact of the rate hike on (variable rate) mortgages.
- While the speed of the impact of rate hikes on public (and private) debt service expenses depends on the structure of the domestic debt and its size, this is another driver of *Fear of Hiking.*
- A more vulnerable banking sector reduces the appetite for rate hikes (Kaminsky and Reinhart, 1999), as do the prospects of facing higher sovereign credit risk.

Concerns about a Sudden Stop (Calvo, 1998) have historically been far more prevalent among EMDE policymakers.

- Abrupt and large capital flow reversals (*Sudden Stops*) are typically accompanied by currency crashes and economic contractions. At worst, banking crises and sovereign default may result.
- Yet, as the GFC unfolded in "periphery Europe," it became evident that AEs were not immune to *Sudden Stops*. In 2007, the current account deficits of Greece, Ireland, Portugal, and Spain were, 14%, 6.5%, 9.6%, and 9.4% of GDP, respectively, and were being financed by borrowing from abroad.
- As a provider of the global "safe asset," US policymakers have seldom (if ever) been concerned in recent decades about the prospects of a *Sudden Stop.* Perhaps, this is a good time to start.
- Creditor countries are typically less concerned about *Sudden Stops.* Yet some recent examples highlight they are not impervious to the problem.
- China's mini-devaluation in August 2015 triggered large outflows and significant reserve losses as they sought to defend the renminbi. The response in September was a significant tightening of capital controls. The BoJ intervened in the foreign exchange market multiple times in 2022 and in 2024 to stem the depreciation of the yen.

Beyond the GFC, the withdrawal from risk taking at the height of COVID-19 highlighted the perils of reliance on foreign capital in most EMDEs and some AEs. As noted in the caveats, the figure below does not begin to capture the breadth of the *Sudden Stop* problem, as private sector borrowers also lose access to foreign private credit.



Sources: Arslanalp and Tsuda (2014), May 2, 2025 database update, IMF World Economic Outlook, April 2025, and authors' calculations.

Sudden Stops and monetary policy trade-offs

- A common central bank policy to deal with a *Sudden Stop* are interest rate hikes intended to make domestic currency assets more attractive. If there are high levels of public and/or private debt, this may not be a feasible or desirable option.
- For AEs and many EMDEs, capital controls are not an option. But, then again, neither were 19th century tariffs until recently. Most countries do not have the reserve levels to engage in persistent intervention. In the battle between raising interest rates and letting the exchange rate depreciate, the latter has usually won the day.
- In countries where public debt levels are already high and a meaningful portion of the debt is in a foreign currency (usually dollars), that outcome can pose serious problems for debt sustainability.
- If public debt is high but there is no foreign currency debt, a *Sudden Stop* is still a problem. Debt previously held by foreigners has to be "absorbed" by the domestic private financial sector and/or the central bank. Importantly, if the private sector is also highly leveraged and relies on foreign creditors (most troubling case is banks), the odds of a financial crisis is amplified. The outcome, which depends on the exposure to foreign creditors, is likely to involve higher interest rates, re-enforce the domestic sovereign-bank nexus, and may involve a banking crisis.

Highlights from the tables on foreign ownership

- The common focus on domestic and foreign ownership as a share of debt outstanding can be misleading in assessing exposure to a *Sudden Stop.* Foreign holdings/GDP is more informative on that front. Japan is at the bottom of the AE list by the first measure but rises to the middle of the group when scaled by GDP. Norway's foreign exposure is overstated by the share of total debt, given its comparatively low level of debt.
- Total foreign holdings have risen since 2007, but this largely owes to increased official holdings in many AEs. Private holdings (as a percent of GDP) are slightly lower in 2024 than in 2007.
- Notwithstanding the decline in the share of debt held by foreigners, foreign as a percent of GDP rose for the US, given the surge in debt in recent years.
- One might expect that private foreign debt holdings are more volatile than official holdings (if thinking of the ECB) and therefore provide a better indication of vulnerability to a sudden stop. However, the cross-country pattern on volatility (not shown in the tables) is mixed, with private holdings being less volatile than official in 7 of the 23 countries (Greece is excluded). The 7 includes the US. A reasonable explanation lies in the fact that central banks across the globe increase their FOREX holdings in good times and often lose them abruptly when adverse shock emerge.

Foreign Ownership of Advanced Economy Government Debt

(percent of outstanding)

Rank	Country	2007Q4	2024Q4
1	Greece	72.0	73.0
2	Belgium	57.0	69.0
3	Norway	71.0	68.0
4	Austria	78.0	61.0
5	Finland	75.0	56.0
6	Ireland	63.0	55.0
7	France	46.0	52.0
8	Slovenia	38.0	52.0
9	Germany	53.0	48.0
10	New Zealand	48.0	47.0
11	Portugal	71.0	45.0
12	Netherlands	63.0	44.0
13	Spain	48.0	42.0
14	United Kingdom	26.0	32.0
15	Australia	40.0	32.0
16	Italy	39.0	31.0
17	Canada	16.0	28.0
18	Denmark	39.0	25.0
19	United States	29.0	22.0
20	Korea	15.0	21.0
21	Sweden	26.0	17.0
22	Iceland	26.0	15.0
23	Switzerland	24.0	14.0
24	Japan	9.0	13.0
	Average	12.5	40.1

(percent of GDP)

Rank	Country	2007Q4	2024Q4
1	Greece	75.3	111.4
2	Belgium	50.0	61.8
3	France	30.4	58.8
4	Austria	51.4	50.3
5	Finland	27.1	45.6
6	Spain	17.0	42.5
7	Portugal	51.5	42.4
8	Italy	40.5	42.1
9	Norway	35.1	37.2
10	Slovenia	8.7	35.0
11	United Kingdom	11.1	32.0
12	Germany	33.8	30.0
13	Japan	12.6	28.0
14	Canada	9.3	27.0
15	United States	16.8	25.3
16	New Zealand	8.2	24.3
17	Ireland	15.1	22.4
18	Netherlands	27.1	19.0
19	Australia	3.6	16.5
20	Korea	3.0	9.3
21	Iceland	17.6	8.7
22	Denmark	11.4	7.7
23	Sweden	10.0	5.6
24	Switzerland	8.3	3.5
	Average	24.0	32.8

Sources: Arslanalp and Tsuda (2014), May 2, 2025 database update, IMF World Economic Outlook, April 2025, and authors' calculations.

Foreign Private Ownership of Advanced Economy Government Debt

(percent of outstanding)

Rank	Country	2007Q4	2024Q4
1	Norway	66.9	48.5
2	Belgium	44.3	47.2
3	Austria	67.0	45.9
4	France	33.5	33.2
5	Spain	34.3	31.9
6	New Zealand	42.7	31.3
7	Slovenia	35.3	31.1
8	Finland	42.7	30.1
9	Italy	36.8	25.5
10	Ireland	13.2	24.3
11	Netherlands	38.9	22.6
12	Germany	18.2	20.7
13	Portugal	57.8	17.6
14	United Kingdom	7.5	16.0
15	Canada	13.9	14.7
16	Iceland	25.7	14.7
17	United States	9.5	10.9
18	Australia	14.2	7.5
19	Korea	12.3	7.5
20	Switzerland	19.8	6.6
21	Japan	6.3	6.0
22	Greece	64.8	4.8
23	Denmark	28.1	3.9
24	Sweden	16.3	3.6
	Average	31.2	21.1

(percent of GDP)

Rank	Country	2007Q4	2024Q4
1	Belgium	38.7	49.4
2	Austria	44.1	37.5
3	France	21.9	37.5
4	Italy	38.1	34.5
5	Spain	12.3	32.5
6	Norway	33.0	26.7
7	Finland	15.4	24.7
8	Slovenia	8.1	20.9
9	Portugal	42.0	16.7
10	New Zealand	7.2	16.4
11	United Kingdom	3.2	16.2
12	Canada	7.8	14.2
13	Germany	11.6	12.9
14	Japan	9.0	12.9
15	United States	5.4	12.4
16	Ireland	3.2	9.9
17	Netherlands	16.6	9.8
18	Iceland	17.6	8.7
19	Greece	67.9	7.3
20	Australia	1.3	3.8
21	Korea	2.5	3.3
22	Switzerland	6.8	1.7
23	Denmark	8.3	1.2
24	Sweden	6.4	1.2
	Average	17.8	17.2

High debt and limits to monetary policy space

- High public debt levels limit fiscal space; it also ultimately limits monetary policy space in an asymmetric way. It can lead to ***Fear of Hiking.***
  - The government is less tolerant to higher interest rates, as the effects of a rate hike on interest outlays are amplified.
  - At high levels of debt, sovereign credit risk may be more sensitive to increases in interest rates.
  - The impact on the private financial sector are also amplified through their larger exposure to government securities.
- This setting tilts the bias toward financial repression.
  - Not examined here, but McKinnon and Shaw's seminal work importantly highlighted the asset allocation distortions created by financial repression.
- It can also set the stage for asymmetries in a central bank's responses to shocks. More aggressive easing in response to adverse shocks than in unwinding of the balance sheet and raising interest rates in good times, when the economy at or near potential output.
  - That asymmetry can create an upward "ratchet effect" on central bank balance sheets, as previous "easings" are not fully unwound.

- On *Sudden Stops*: A common central bank response to currency pressures is to raise interest rates to stem the slide. If this option is off the table, the alternative is to intervene in the FOREX market and incur reserve losses. Historically, at least, the effects of intervention are short-lived; the reserve losses may not be.
- It cannot be said that the Federal Reserve and many other central banks (AE and EMDE) showed any evidence of *Fear of Hiking* since 2022. But the policy pivot came in response to an inflation spike not seen in five decades.
- *Fear of Hiking,* however, was evident in the ultra gradualist approach to normalization after the GFC. On the eve of COVID, 13 years after the onset of the GFC, the ECB had negative policy rates, despite positive inflation rates across its members. In the US, the real Federal Funds rate remained negative while unemployment rate stayed below 4 percent.
- On fiscal dominance and financial repression: A lesson from the post-GFC era is that, even if the policy goals of central banks and regulators did not include providing cheap finance for the government, it nonetheless did. If coupled (as it was) with politicians who show no concern over the path of debt (the US) or other governments who are unable or unwilling to deliver fiscal adjustment (longer list), negative real interest rates have been enabling the build-up of public and private debt.