Commentary "Central bank balance sheets, spillovers and global liquidity"

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Central bank balance sheets, spillovers and global liquidity

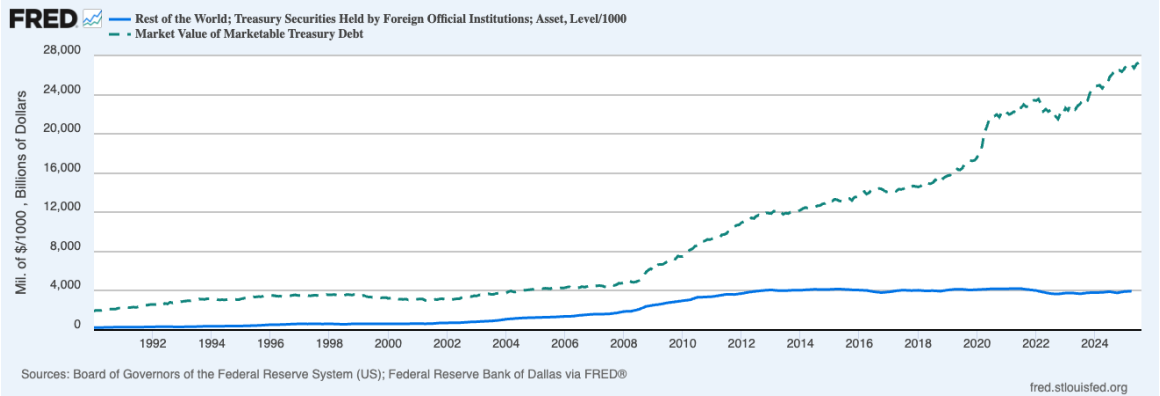
1. **Macro-financial implications of the surging global demand and supply of international reserves** by Mendoza and Quadrini
   - A macro-finance model to analyze the GE effects of FX reserves holdings and rise of public debt.
2. **Central bank equity and foreign exchange reserves: Evidence from the sterling crisis** by Flandreau and Avaro
   - A historical account on the impact of the 1931 sterling crisis on central bank balance sheet
3. **Global portfolio investments and FX derivatives** by Nenova, Schrimpf and Shin
   - Stylized facts and empirical drivers of global FX swap activity

Paper #1 by Mendoza and Quadrini

- Main elements of the model:
  - EME FX reserves increase demand for AE public debt $\rightarrow$ private sector holds more private debt, more leverage $\rightarrow$ higher macroeconomic instability.
  - An increase in the AE public debt supply $\rightarrow$ private sector holds more private debt, lower leverage $\rightarrow$ lower macroeconomic instability.
- Key assumption: AE public debt is risk-free.

U.S. Treasury Market

Figure 1: Total Treasury Outstanding and Foreign Official Sector Holding



U.S. Treasury Market

Figure 2: Share of Foreign Official Holding in Total Treasury Outstanding

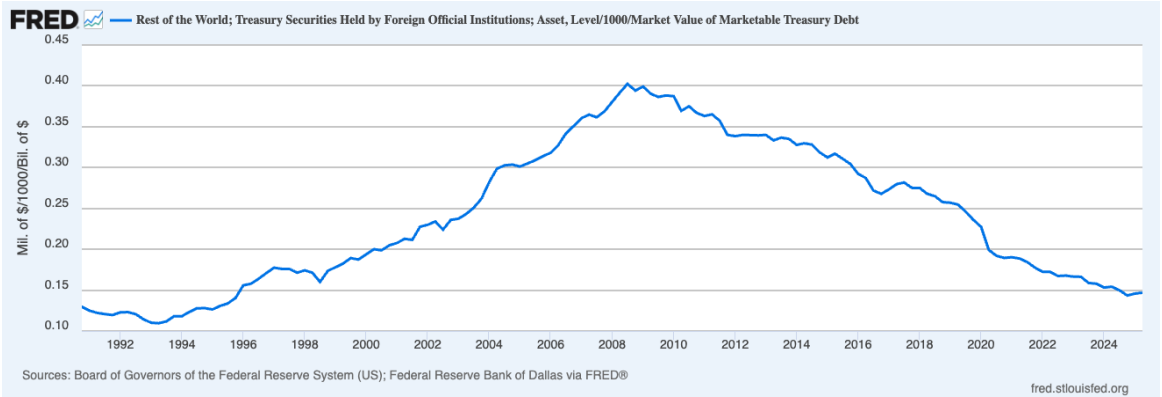
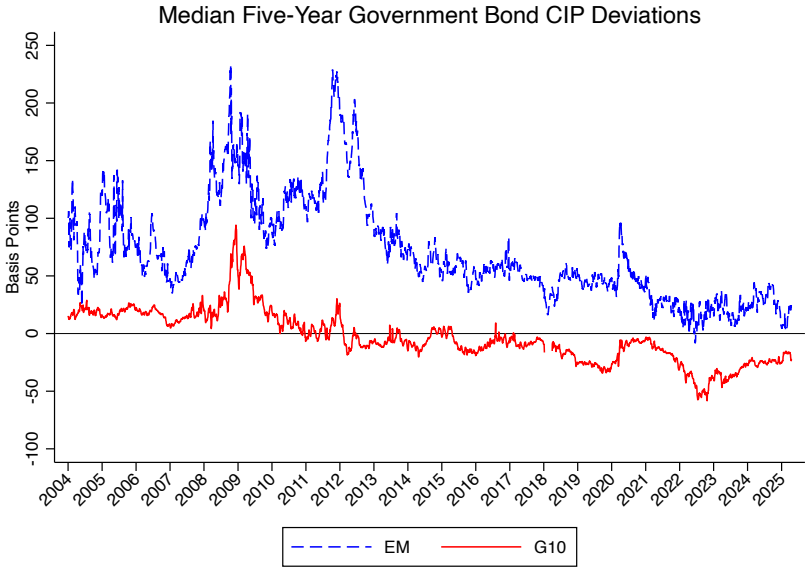


Figure 3: 10-Year Swap-Treasury Spread

Secular Decline in the U.S. Treasury "Convenience"



Paper #2 by Flandreau and Avaro

- In September 1931, Britain abandoned the gold standard and the pound sterling depreciated 20% in a single day against gold-linked currencies.
- Several central banks suffered large losses in the FX reserves, many of them was not well capitalized to deal with the large loss.
- The main motive for FX accumulation was not to economize gold according to principals from the 1922 Genoa meeting, but rather to seek higher interest rates in Britain and the US
  - a hypothesis that still needs to be tested empirically

FX Reserve Managers as Carry Traders?

Figure 4: Short-term interest rates for the US and UK (1924-1932) - Jordà-Schularick-Taylor

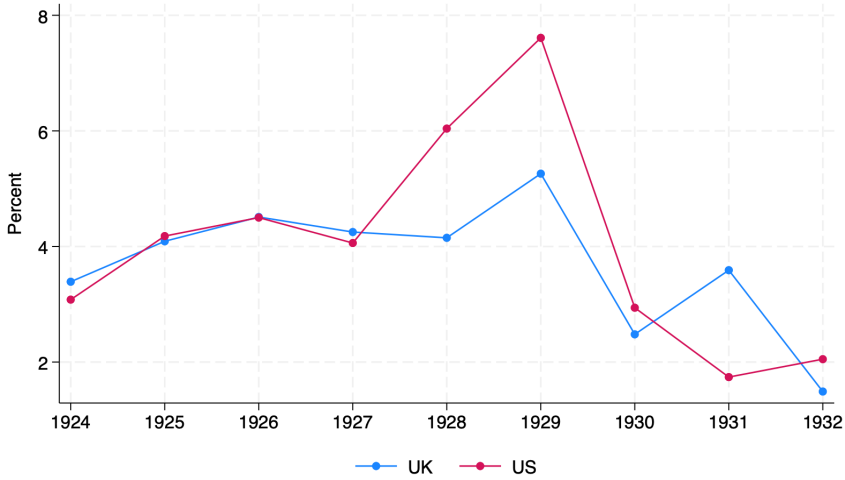


Figure 5: Short-term interest rates in 1930 (Jordà-Schularick-Taylor) – Ranked lowest to highest

Rank	Country	Interest Rate
1	Netherlands	2.08
2	France	2.35
3	UK	2.48
4	Switzerland	2.5
5	Ireland	2.56
6	USA	2.94
7	Belgium	2.95
8	Sweden	3.71
9	Norway	4.5

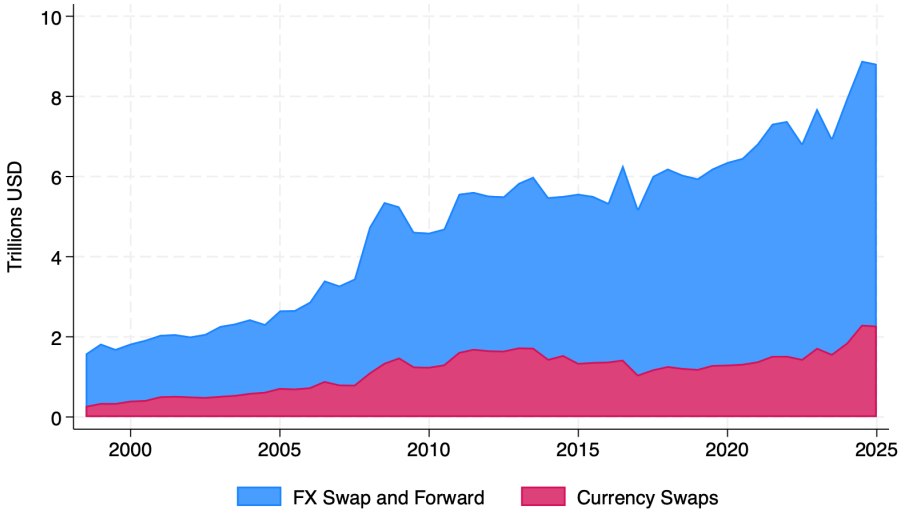
Rank	Country	Interest Rate
10	Denmark	4.73
11	Australia	5.22
12	Germany	5.66
13	Spain	5.73
14	Finland	6
15	Italy	6
16	Japan	6.83
17	Portugal	7.5

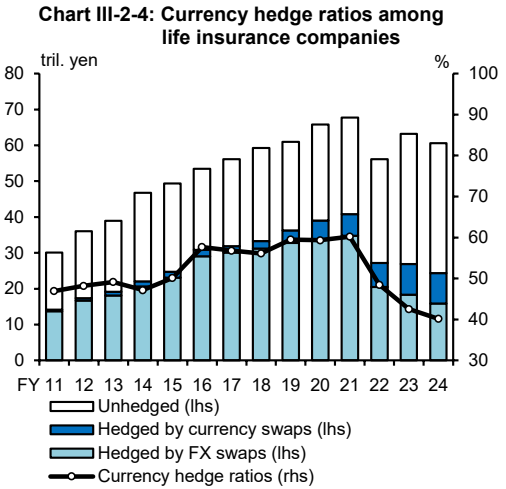
Paper #3 by Nenova, Schrimpf and Shin

- Significant rise in global FX swap activities, especially for NBFIs.
- From the perspective of non-U.S. investors, a steeper U.S. yield cure increases hedging demand, a steeper local yield curve reduces hedging demand. Both conjectures are well supported in the data
- Additional hedging cost (cross-currency basis) rises together with hedging demand.

JPY-Linked FX Derivatives

Figure 6: JPY-linked Forwards, FX Swaps, Currency Swaps Notional Outstanding

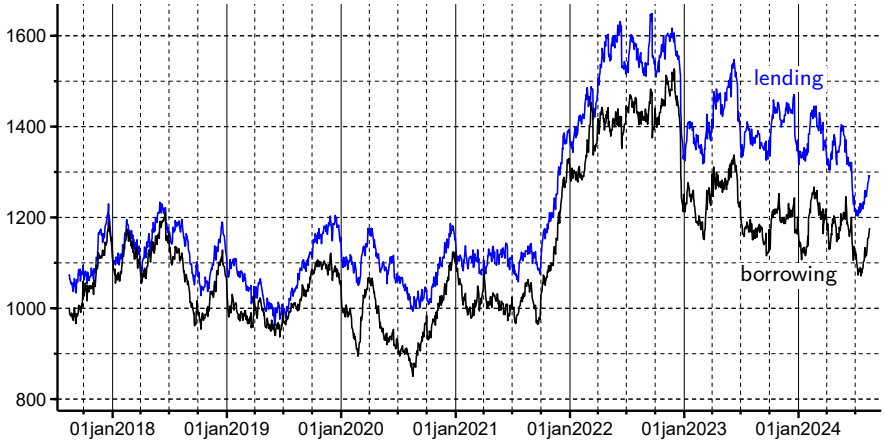




- BOJ Financial Stability Report: JPY hedge by largest insurers in 2024: around $200 billion.
- BIS OTC Derivatives: JPY FX derivatives outstanding in 2024: $9 trillion.
- Recent decline insurers' hedging demand despite steady growth in the overall activity.
- More granular data are needed to reconcile the data gaps.

Gross vs. Net FX Swap Position for Large Euro-Area Banks

Gross USD FX swap lending and borrowing position (bn euro, MMSR banks)



Source: Du, Strasser, and Verdelhan 2025

Banks' USD Fundings Gaps Appear Small

Figure 7: USD Hedging by Non-U.S. Investors in 2019, USD billions (Du and Huber, 2024)

Currency Area	Active Sectors Holdings	Active Sectors Hedging	USD Hedge Ratio	Bank Hedging	Total Hedging
Australia	368	114	31%	-183	-68.88
Canada	670	65	10%	143	207.75
Switzerland	197	60	30%	31	90.48
Chile	38	11	30%	-5	6.37
Denmark	157	90	57%	-20	69.31
Euro Zone	2734	911	33%	-147	764.36
United Kingdom	979	241	25%	-166	74.88
Israel	97	35	36%	–	35.14
Japan	724	172	24%	305	477.49
Norway	35	9	24%	-19	-10.36
Sweden	217	85	39%	32	116.75
Taiwan	539	178	33%	-60	118.57
United States	–	–	–	-244	-243.60
Total	6755	1971	29%	-333	1638.25