

Federal Reserve Swap Lines as an International Lender of Last Resort: Mechanism, Dealer-Sector Scaling, and the Hormuz Stress Test

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1. Introduction

In March 2020, foreign investors sold roughly \$150 billion of U.S. Treasuries in a single month and another \$70 billion in April (Choi et al., 2021). Yields on long-dated Treasuries rose during what was, by every other indicator, a flight-to-safety event. The Federal Reserve resolved the dislocation not primarily by buying bonds itself, but by lending dollars to other central banks and by creating a new repo facility (FIMA repo) that let foreign central banks pledge their Treasury holdings for cash without selling them.

This paper argues that Fed central bank liquidity swap lines and the FIMA repo facility together extend the hierarchy of money internationally: they make foreign central bank liabilities convertible into dollars at par, in the same way that deposit insurance and the discount window make domestic bank liabilities convertible into central bank money at par. The framework rests on three theoretical frameworks. First, the Bagehot–Fischer lender-of-last-resort logic, generalised to a foreign-currency setting where the local central bank cannot create the unit of liability under stress. Second, the Treynor dealer model, applied at scales where dealer layoff capacity becomes binding and the price-stabilising intermediary turns price-amplifying. Third, the covered interest parity condition, reframed as a price for offshore dollar funding that the swap line caps in the same way the standing lending facility rate caps the policy corridor domestically. The paper closes with the Mehrling elasticity-versus-discipline view of the global swap network, applied to the current institutional moment.

2. Mechanism and the Hierarchy of Money

A central bank liquidity swap is a pair of reciprocal foreign-exchange transactions. At initiation, the Fed delivers dollars to the foreign central bank against an equivalent amount of foreign currency at the prevailing spot rate. The foreign central bank on-lends those dollars to its commercial banks, typically through a repo against local-currency collateral. At maturity, the two legs unwind at the original spot rate, and the foreign central bank pays the Fed interest at OIS plus a spread (currently 25 basis points on the standing lines). The spot leg and the forward leg are at the same rate, so the Fed bears no foreign exchange risk; credit risk on the underlying commercial bank borrowers is borne by the foreign central bank, not the Fed (Choi et al., 2021).

The standing swap network (the Fed, ECB, Bank of Japan, Bank of England, Swiss National Bank, and Bank of Canada) has been in place since October 2013, having been converted from the temporary lines opened during the Global Financial Crisis. Temporary lines were extended in March 2020 to nine additional central banks, all of which had received them during the GFC. The standing network has no quantitative cap; the temporary lines were capped at \$30–60 billion per counterparty.

The hierarchy framing makes this mechanism legible in course terms. A euro held by a German bank is a claim on the ECB; a dollar held by a U.S. depositor is a claim on the Fed. Without a swap

line, those two claims are not interchangeable in a crisis, because the ECB cannot manufacture dollars and the German bank's dollar liabilities cannot be settled in euros. The swap line is the institutional device that makes them par-convertible: the ECB transforms its own liabilities into dollar liabilities by drawing on the Fed, in exactly the way a U.S. bank transforms its deposit liabilities into central bank money at the discount window. The FIMA repo facility, introduced in March 2020 and made standing in July 2021, plays the same role for the broader set of central banks with custody accounts at the New York Fed: rather than pledging foreign currency, they pledge their existing Treasury holdings overnight and receive dollars at IORB plus 25 basis points (Choi et al., 2021). The hierarchy has three tiers: standing swaps for the major reserve-currency central banks, temporary swaps activated under stress, and FIMA repo for everyone with a custody account.

3. The CIP Basis as the Price of Offshore Dollars

The cross-currency basis is the wedge between the synthetic dollar interest rate (constructed by borrowing in another currency and converting via FX swap) and the direct dollar OIS rate. Under no-arbitrage it should be approximately zero. In stress, it widens: a positive basis means foreign borrowers are paying a premium above unsecured dollar rates to obtain dollars synthetically, because the offshore dollar funding market is rationed. The basis is a price, not just a parity condition. It is the price of dollar liquidity for foreign holders of dollar liabilities.

Swap-line pricing caps that price. Once private offshore dollar funding becomes more expensive than drawing dollars from the swap line at OIS plus 25 basis points, foreign banks substitute the swap-line draw for the private trade, and the basis cannot widen further. This is the global mirror of the domestic corridor system: in the domestic corridor, the standing lending facility rate caps the federal funds rate from above, because banks borrow at the SLF rather than pay more in the market; in the global dollar corridor, the swap-line rate caps the cross-currency basis for the same reason. The empirical evidence is direct. Choi et al. (2021) document that following the March 15, 2020 announcement reducing swap-line pricing to OIS+25bp and adding daily 7-day operations, three-month FX swap basis spreads narrowed materially for the standing-swap-line currencies relative to all others, with the actual settlement of dollars (rather than just the announcement) producing the largest improvements. Reis (2019) estimates that during the 2011 euro-area crisis the swap lines reduced offshore dollar borrowing rates by roughly 50 basis points, with a corresponding rebuilding of European bank holdings of U.S. Treasuries.

4. The Dealer-Sector Scaling Problem

The Treynor dealer model treats the price impact of a trade as a function of the dealer's inventory carrying cost and layoff capacity. Under normal conditions, foreign Treasury selling of a few billion dollars is absorbed by primary dealers who lay off the inventory into deep secondary markets within hours. Prices barely move. The mechanism functions as the textbook describes.

The March 2020 episode is the proof of concept that the same framework breaks at scale. Foreign official holdings of Treasuries fell by approximately \$150 billion in March and \$70 billion in April; foreign repo pool balances spiked by nearly \$70 billion in March to a near-record \$300 billion as foreign officials accumulated precautionary cash (Choi et al., 2021). At these scales, primary dealer balance-sheet capacity, which is already constrained by post-crisis leverage and supplementary leverage ratio rules,

could not absorb the inventory. The dealer sector, modelled in class as a price-stabilising intermediary, became a price-amplifying one: bid-ask spreads widened, depth fell, and Treasury yields rose during a flight-to-safety. The “layoff” could not happen because there was no marginal buyer.

Swap lines and FIMA repo work on the dealer problem from the supply side: they reduce the inventory X that the dealer sector must absorb. Swap-line drawings peaked at \$449 billion in late May 2020, with the ECB and Bank of Japan accounting for approximately 82% of the total (Choi et al., 2021). Each dollar drawn through the swap line is a dollar of foreign-bank funding need that did not have to be met by Treasury liquidation. FIMA repo addresses the same problem more directly: a foreign central bank holding Treasuries can exchange them for cash at the Fed overnight, retaining the Treasury but obtaining the dollar liquidity. The Treasury never enters the dealer market. The Hormuz scenario, examined next, is essentially a question of whether X in a future shock can exceed even the March 2020 magnitude and whether the institutional infrastructure that contained X in 2020 will be available.

5. The Hormuz Stress Test

The closure of the Strait of Hormuz repriced the current-account positions of every major Treasury-holding economy simultaneously. On conservative estimates and at sustained Brent prices around \$120 per barrel, China’s goods surplus compresses from approximately \$135 billion towards zero or slightly negative; the euro area’s annualised \$130 billion surplus moves to the \$0–30 billion range, with a further move to outright deficit at \$150 oil. Japan and Korea, both running narrow surpluses pre-shock, flip to deficit through the same channel. On the export side, the picture is asymmetric: Qatar’s gains from higher LNG prices are offset by Hormuz-linked flow disruption, Saudi Arabia is near fiscal break-even, and the GCC aggregate sees compression rather than expansion of its surplus. The mechanical implication is that yesterday’s Treasury-accumulating surplus economies stop adding to reserves, and the subset that flips to deficit becomes a net seller.

This is the configuration the swap-line and FIMA-repo architecture was built for. The euro area sits at the top tier of the hierarchy: it has standing swap access and can substitute Fed dollar drawings for Treasury liquidation. The GCC has FIMA accounts and can use the FIMA repo facility to monetize Treasuries without selling, but only to the extent of its Treasury holdings, and only overnight. Beyond the FIMA capacity limit, GCC sovereigns face the binary choice between sale and dollar shortage. Most of EM, including several countries with material Treasury holdings, lacks the swap-line access that would let them substitute a dollar draw for a sale. The differential access is the binding constraint: in a sufficiently large shock, X for the dealer sector is determined not by the size of the foreign-funding gap but by the share of that gap that falls outside the swap and FIMA infrastructure.

6. Institutional Fragility: Mehrling’s Elasticity–Discipline Trade-off

Mehrling (2015) characterises the global swap network as a trade-off between elasticity, which refers to the willingness of the Fed to accommodate foreign dollar demand to prevent disorderly markets, and discipline, which refers to the requirement that foreign banks bear the consequences of taking on dollar liabilities they cannot self-insure against. Each swap drawing is an extension of Fed credit abroad, ultimately a quasi-fiscal commitment, and the network’s effectiveness depends on the Fed’s perceived willingness to provide elasticity in the next crisis as readily as it did in 2008 and 2020.

The institutional risk in the current moment is precisely this perception. Chair Powell’s term ends May 15, 2026, and the successor has not yet been confirmed. Loa and Wessel (2025) report that foreign central bankers are openly questioning whether the post-Powell Fed will maintain the operational readiness and political willingness that made the swap network credible during the GFC and COVID episodes. McCauley (2025) proposes a coalition of fourteen major central banks with substantial dollar holdings as a partial substitute: a Chiang-Mai-style pooling of dollar reserves to reduce dependence on Fed elasticity. The proposal is itself evidence that foreign central banks are pricing in regime risk; under the McCauley scheme, however, a coalition response in a crisis would still require liquidating Treasuries on a coordinated scale, returning the system to the dealer-capacity problem the swap network was designed to avoid.

7. Conclusion

The Fed’s swap-line and FIMA-repo architecture is technically robust. The mechanism design eliminates Fed FX risk, places credit risk with foreign central banks better positioned to bear it, and caps the price of offshore dollar funding through a corridor analogous to the domestic SLF rate. The empirical evidence from the GFC and COVID episodes confirms that the facilities reduce strain in dollar funding markets and contain dealer-sector amplification of foreign Treasury selling. What the architecture cannot do is substitute for institutional credibility. The Hormuz scenario illustrates the upper bound of what the system might be asked to absorb; the Powell transition illustrates how a perceived shift along the elasticity–discipline frontier can convert a latent backstop into a binding constraint. The cheapest form of crisis prevention available to the Fed at this moment is a clear public commitment that the swap network will operate in the next stress event on terms at least as accommodative as those of March 2020.

References

- Bahaj, S. and Reis, R. (2022). Central Bank Swap Lines: Evidence on the Effects of the Lender of Last Resort. *Review of Economic Studies*, 89(4), 1654–1693.
- Choi, M., Goldberg, L., Lerman, R., and Ravazzolo, F. (2021). The Fed’s Central Bank Swap Lines and FIMA Repo Facility. *Federal Reserve Bank of New York Staff Reports*, No. 983.
- Loa, T. and Wessel, D. (2025). What are Federal Reserve Swap Lines? *Brookings Hutchins Center*, August 21.
- McCauley, R. N. (2025). Avoiding Kindleberger’s Trap: A Dollar Coalition of the Willing. *CEPR VoxEU*, May.
- Mehrling, P. (2015). Elasticity and Discipline in the Global Swap Network. *Institute for New Economic Thinking Working Paper*, No. 27.
- Reis, R. (2019). Central Banks and the IMF: Working Together. *IMF Finance & Development*, June.