



# Geopolitics of Central Bank Foreign Exchange Swap Line Networks

MARCELL HORVÁTH

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Author(s):

Marcell Horváth

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Marcell Horváth, Senior Research, HIIA

## GEOPOLITICS OF CENTRAL BANK FOREIGN EXCHANGE SWAP LINE NETWORKS

Central bank foreign exchange swap lines have moved beyond purely technical crisis management tools and become key components of the global financial safety net (GFSN). In a globalized financial system, access to liquidity is increasingly a strategic resource, and the institutional channeling of that access is more often interpreted in geo-economic and geopolitical terms. This paper examines these dynamics through the competing swap network approaches of the United States Federal Reserve (Fed) and China's People's Bank of China (PBoC).

The Fed's network—built around a stable core of advanced-economy partners and selectively extended during periods of stress—functions as a safety net for the dollar-centered order, with access patterns closely linked to economic interdependence, including trade and financial exposures. The PBoC's expanding bilateral framework, in contrast, supports RMB internationalization and the gradual building of alternative channels of monetary and financial connectivity. By 2025, it spanned over 40 partner jurisdictions and exceeded 4.5 trillion RMB in aggregate commitments.

The paper argues that swap lines sit at the intersection of financial stability and great power competition. In an era of sanctions and emerging parallel infrastructures, deliberate diversification of liquidity backstops becomes a core policy task.

### 1. INTRODUCTION

One of the most strongly and most deeply affected fields of globalization has become the world of finance. In recent decades, cross-border financial flows, such as capital inflows, portfolio investments, bank lending, and derivatives transactions, have expanded even faster than trade, creating a dense network of international financial linkages in which liquidity and financing can reach countries within a very short time.<sup>1</sup> However, deep financial interconnectedness

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1 Jeffrey Sachs, "International Economics: Unlocking the Mysteries of Globalization," *Foreign Policy*, Spring 1998, no. 110 (1998): 97–111, <https://doi.org/10.2307/1149279>.

brings not only efficiency and growth benefits. As channels of liquidity shocks, funding stress, and loss of confidence have also globalized, crises can spread across borders through the very same networks that enable financial integration. By the twenty-first century, international financial connectivity has thus become a central source of both stability and vulnerability for the global economy.

In this environment, central banks—as the “guardians” of the financial system—have become key actors in the global financial safety net. The institutional and cooperative instruments that can provide liquidity in crises, calm panic, and dampen contagion have, therefore, become more significant. Central bank stabilization, of course, does not replace the domestic foundations of resilience. Sound macroeconomic and prudential frameworks remain essential.

External stability providers include multilateral institutions, such as the International Monetary Fund (IMF), which, as a forum for international monetary cooperation, offers crisis financing, surveillance, and policy frameworks, among other functions.<sup>2</sup> Another key actor is the Bank for International Settlements (BIS), which serves as a major platform for central bank cooperation and related research. Beyond global organizations, regional cooperation frameworks (for example, the European Central Bank and broader European architectures, as well as the ASEAN+3 format in Asia) have also become part of crisis prevention and crisis management.

Over the past two decades, however, the global financial safety net has come to rely ever more on bilateral central bank foreign exchange swap lines. During crisis periods, central banks, through swap line agreements, can channel liquidity in a targeted and rapid way to a counterpart which can then intermediate and distribute it further within its own financial system. After the 2008–2009 global financial crisis, the importance of swap lines strengthened. It became clear that international funding disruptions (above all, the tightening of U.S. dollar funding) can turn into systemic stress within a very short time in globally integrated banking systems.<sup>3</sup>

The aim of this paper is to show how swap line networks gain geo-economic and geopolitical significance in an evolving world order. The central claim is that access to swap lines has become a strategic resource in a globalized financial system. Therefore, central bank cooperation is not simply a technical

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2 Emily Pool, “The IMF’s ‘Surveillance’: How Has It Changed since the Global Financial Crisis?,” Reserve Bank of Australia Bulletin, March 19, 2015, <https://www.rba.gov.au/publications/bulletin/2015/mar/9.html>.

3 Michael Perks et al., “Evolution of Bilateral Swap Lines,” *IMF Working Paper* no. 210 (2010), <https://www.imf.org/en/publications/wp/issues/2021/08/06/evolution-of-bilateral-swap-lines-463358>.

crisis management tool, but part of the “structural infrastructure” of the financial order through which influence and dependence are also organized. Consequently, in the design and operation of swap lines, financial stability considerations interact with economic interdependence (trade, banking exposures, financial linkages) and geopolitical relationships (alliances, strategic partnerships, security considerations).<sup>4</sup>

The focus is on two competing logics of network-building, the swap line approaches of the United States and China. In the U.S. case, swap lines strengthen the crisis resilience of the dollar-centered financial order, protecting the stability benefits arising from the dollar’s global role. Moreover indirectly, the vulnerability of the U.S. financial system transmitted through external channels. In China’s case, the People’s Bank of China (PBoC) swap network primarily serves the internationalization of the renminbi (RMB) and the diversification of financial linkages, while in the long run it may also function as an instrument for building an alternative liquidity and financial connectivity network.

The paper is based on secondary literature, official documents, and a descriptive comparison of swap networks. It does not aim to provide an original econometric analysis. Rather, it organizes key findings of the relevant international literature within a geo-economic interpretive framework. The argument proceeds from a brief overview of global financial connectivity and the dollar hierarchy to the conceptual and historical interpretation of swap lines and then to a comparison of U.S. and Chinese approaches to network-building.

## 2. GLOBALIZATION AS FINANCIAL CONNECTIVITY

The global financial system can be seen as a large living organism, a complex set of institutions, markets, rules, and procedures that shape how international payments, capital flows, and exchange rate regimes function. The international financial order provides a legal and institutional frame for this network so that capital can move across borders without becoming fully unpredictable, but also without being stopped. A key feature of this system is connectivity. Namely, bank balance sheets, money markets, and international investors’ portfolios are linked in network-like ways. One consequence is that a tightening of funding conditions, a drop in risk appetite, or a sudden liquidity squeeze can spill over rapidly into other countries’ financial systems, often regardless of local fundamentals. For this reason, modern crisis transmission works not only through real economic

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4 Jakree Koosakul and Alexei Miksjuk, “Central Banks Casting a Global Financial Safety Net: What Drives the Supply of Bilateral Swaps?,” *IMF Working Paper* no. 88 (2024), <https://www.imf.org/-/media/files/publications/wp/2024/english/wpiea2024088-print-pdf.pdf>.

ties, but above all through financial intermediation and funding markets.

One of the main organizing principles of the international financial order is the central role of the U.S. dollar. The dollar is not only a currency for invoicing and reserves, but it is also the dominant denomination of global finance. It plays a key role in international bank funding, in a large share of corporate and sovereign debt, and across a wide range of financial contracts. This creates a particular hierarchy with the U.S. situated at the top since in periods of stress, access to dollars becomes critical because global risk-off dynamics typically come with higher dollar funding costs and tighter dollar liquidity.

In historical perspective, the institutionalization of the dollar's role is closely linked to the post-World War II monetary order, its later transformation, and successive waves of capital market liberalization, which together produced a global financial system organized around the dollar.<sup>5</sup> The Bretton Woods structure was designed to support post-war stabilization and international monetary coordination. It was a moment when policymakers recognized that economic stability is a precondition for international peace. The 1944 agreement laid the foundations of today's global financial hierarchy. Under the fixed exchange rate system, currencies were linked directly or indirectly to the dollar, while the dollar was pegged to gold at \$35 per ounce. In this structure, the dollar became the anchor currency around which the international payments and reserve system was organized.<sup>6</sup> Bretton Woods also created a supporting institutional architecture, the IMF, and the World Bank, often described as a constitutional layer of the post-war financial order. Over time, although the system was formally gold-based, it functioned as a gold-dollar system. By the late 1960s and early 1970s, it evolved in practice into a dollar standard.

Even after the breakdown of Bretton Woods and the shift toward more flexible exchange rate arrangements, the dollar's central role not only survived but took new forms as global financial markets deepened. In 1971, President Nixon suspended the dollar's gold convertibility and then closed the "gold window," ending the fixed rate system. Yet, in practice, the dollar's reserve currency status remained because trade and reserve holdings had already become dollar-dependent. The energy shocks of the 1970s and the spread of dollar-based pricing in energy trade further strengthened global demand for dollars. After the 1973 oil shock, arrangements between the United States and Saudi Arabia helped consolidate the practice of oil being invoiced in dollars,

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5 Barry Eichengreen, *Globalizing Capital: A History of the International Monetary System* (Princeton University Press, 2008).

6 Barry Eichengreen, *Exorbitant Privilege: The Rise and Fall of the Dollar* (Oxford University Press, 2012).

with surplus “petrodollars” recycled into U.S. assets.<sup>7</sup> This method maintained global dollar demand, helped finance U.S. deficits, and reinforced what is often called the dollar’s incredibly convenient “exorbitant privilege.”<sup>8</sup> At the same time, the financial deregulation and innovation of the 1980s greatly expanded dollar-based funding markets, especially offshore dollar and interbank markets. These developments deepened financial interdependence and strengthened the dollar hierarchy, as the dollar increasingly operated as “outside money” in global payments and reserves.<sup>9</sup>

Connectivity, however, produced a two-sided vulnerability. On the one hand, global banks and institutional investors can diversify and access deeper pools of financing. On the other hand, in crisis periods the sudden contraction of funding channels can quickly become systemic, as actors heavily dependent on dollar funding (banks, firms, and sometimes states) can face acute liquidity stress. This can trigger fire sales, exchange rate pressure, credit tightening, and ultimately real economic downturns.

This is where swap lines become particularly relevant. A typical crisis mechanism in the global financial system is the sudden intensification of liquidity shortages and rollover risk. In such situations, traditional central bank tools (interest rate policy and domestic liquidity provision) may be limited if the shock emerges not in the local currency, but in key-currency funding markets, above all in dollars. International central bank cooperation that provides foreign-currency liquidity, therefore, gains importance. Swap lines allow key currency liquidity to reach the local financial system quickly through the partner central bank.

Within this structure, the Federal Reserve’s swap network is more than a technical crisis management tool; it functions as a safety net for the dollar-centered financial order.<sup>10</sup> Although the Fed’s mandate is formally focused on domestic stability, global dollar funding disruptions typically feed back into the U.S. financial system through market turbulence, banking exposures, real economy channels, and, critically, the trade balance. Prolonged dollar shortages abroad weaken partner currencies, curbing U.S. imports while boosting U.S. exports, a direct improvement to the trade deficit. A partner-country recession would mean even fewer imports from America (as their goods are relatively

7 Edward Fishman, *Chokepoints: How the Global Economy Became a Weapon of War* (Elliott & Thompson Limited, 2025).

8 Pierre-Olivier Gourinchas et al., “Exorbitant Privilege and Exorbitant Duty,” Helene Rey, October 25, 2017, [http://heleneroy.eu/content/documents/duty\\_23\\_10\\_2017.pdf](http://heleneroy.eu/content/documents/duty_23_10_2017.pdf).

9 Sahil Jai Dutta, “Sovereign Debt Management and the Globalization of Finance: Recasting the City of London’s ‘Big Bang,’” *Competition & Change* 22, no. 1 (2019): 3–22, <https://doi.org/10.1177/1024529417734524>.

10 Linda S. Goldberg et al., “Central Bank Dollar Swap Lines and Overseas Dollar Funding Costs,” *Federal Reserve Bank of New York Staff Reports* no. 429 (2010), [https://www.newyorkfed.org/medialibrary/media/research/staff\\_reports/sr429.pdf](https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr429.pdf).

cheaper) and more demand for U.S. products, enhancing competitiveness. This self-interest rationale explains why swap lines have become a stabilizing element of the dollar hierarchy in practice. So, while the Federal Reserve is de jure the lender of last resort for the U.S. system, in periods of global dollar shortage, such as 2008 or 2012, it can act as a de facto international lender of last resort through its swap network.<sup>11</sup>

At the same time, alongside the dollar-centered order, an alternative logic of network-building has emerged over the past two decades. China has become an active actor in financial connectivity, and the PBoC's bilateral swap agreements not only encourage RMB use, but also serve to expand financial linkages and diversify liquidity options. These developments suggest that access to liquidity and crisis insurance in the international financial order may gradually be organized through competing infrastructures, reinforcing the financial dimension of geopolitical bloc formation.

### 3. WHAT IS A CENTRAL BANK FOREIGN EXCHANGE SWAP LINE?

The global financial safety net (GFSN) is multilayered, combining multilateral institutions such as the IMF, regional financing arrangements, and bilateral central bank swap lines to form a structural framework of crisis management. The IMF has documented in detail that bilateral swap lines expanded visibly after the global financial crisis and are described as the “fourth leg” of the GFSN above all because they are fast, targeted, and can respond directly to tensions in funding markets during crises.

A central bank foreign exchange swap line is an immediate, but reversible, liquidity channel. In practice, it is a pre-agreed construction between two central banks that allows one of them, in crisis or stressed market conditions, to provide foreign currency liquidity (typically in a key currency, especially U.S. dollars) to the other. Technically, the process is a two-step foreign exchange (FX) transaction. First, the two central banks exchange currencies in a spot transaction. Second, they later reverse the exchange through a pre-set forward transaction. This structure ensures that the liquidity provision is temporary and that the terms of reversal are known in advance. In practical terms, in a dollar shortage, for example, the partner central bank can obtain dollars through the swap line and make them available to its domestic banking system, typically through auctions or repo-type operations. In practice, swap lines can also serve as alliance signals alongside their role as financial-stability tools and “access channels” within the

<sup>11</sup> Fabian Pape, “Governing Global Liquidity: Federal Reserve Swap Lines and the International Dimension of US Monetary Policy,” *New Political Economy* 27, no. 3 (2021): 455–472, <https://doi.org/10.1080/13563467.2021.1967912>.

international monetary hierarchy.<sup>12</sup> Official Federal Reserve descriptions also underline that swap lines aim to address disruptions in global funding markets, since bank funding markets are international and can periodically malfunction.<sup>13</sup>

For these reasons, swap lines have become an important component of the GFSN. They are flexible: central banks can activate them quickly to deal with a sudden tightening in key currency funding, while also providing a signal of credible funding in crisis periods. IMF assessments suggest that the role of bilateral swap lines continued to grow after the 2008–2009 crisis and again during the COVID period. Early BIS crisis reviews likewise highlighted the contribution of inter-central bank swap lines to easing foreign currency funding shortages.<sup>14</sup>

Swap lines, therefore, serve several functions in crisis management. First, they provide liquidity to the banking system. Second, they send a market signal that a safety net is available if needed, which can calm panic even before large-scale use. Third, they can reduce contagion channels and systemic risk. Some academic literature has also found empirical support for these effects. Studies examining the use of the Fed’s swap facilities in 2008–2009 and their relationship to offshore dollar funding costs point to a stabilizing role for swap lines.<sup>15</sup>

At the same time, swap lines are not available as a universal entitlement. Access is selective, and research suggests that the supply side (i.e., the central banks that provide swap lines) is not motivated solely by financial stability considerations. IMF work, for instance, links the provision of swap lines to issues such as financial development, trade openness, and functional characteristics. This selectivity means that swap lines can increase resilience, but they can also create uneven protection across countries. Some actors enjoy a stable financial support within an “inner circle,” while for others access is uncertain or does not exist.

The geopolitical relevance of swap lines follows from the fact that, in a globalized financial system, access to liquidity in crisis periods is a form of critical infrastructure. Therefore, a swap line, beyond its crisis management “function,” is an official relationship that signals the degree to which a partner is included in

12 “Central Bank Liquidity Swaps,” U.S. Federal Reserve, accessed December 19, 2025, [https://www.federalreserve.gov/monetarypolicy/bst\\_liquidityswaps.htm](https://www.federalreserve.gov/monetarypolicy/bst_liquidityswaps.htm).

13 “Central Bank Swap Arrangements,” Federal Reserve Bank of New York, accessed December 19, 2025, <https://www.newyorkfed.org/markets/international-market-operations/central-bank-swap-arrangements>.

14 Corrinne Ho and François-Louis Michaud, “Central Bank Measures to Alleviate Foreign Currency Funding Shortages,” *BIS Quarterly Review* (December 2008), [https://www.bis.org/publ/qtrpdf/r\\_qt0812a.pdf](https://www.bis.org/publ/qtrpdf/r_qt0812a.pdf).

15 Richhild Moessner and William A. Allen, “Central Bank Swap Line Effectiveness during the Euro Area Sovereign Debt Crisis,” *Journal of International Money and Finance* 35 (2013): 167–178, <https://doi.org/10.1016/j.jimonfin.2013.03.003>.

the stabilization core of a given monetary-financial order.

Accordingly, the literature examines to what extent geopolitical factors influence the allocation and maintenance of swap lines. Analyses focusing on “geopolitical determinants” suggest that political alignment with the United States may have been associated with access to Fed swap lines in crisis episodes, even if official criteria are not expressed in geopolitical language.<sup>16</sup> It is important to stress, however, that this does not imply that financial channels are irrelevant. On the contrary, the most convincing interpretations view swap lines as operating through a multifactor logic, where financial stability motivations and geopolitical relationships often overlap.

#### 4. THE FED’S SWAP NETWORK

The Federal Reserve’s swap lines have become one of the most important stability infrastructures in the global financial system. Because dollar funding dominates global finance, a “dollar shortage” can quickly turn into systemic stress not only in the United States, but also in non-U.S. banking systems. The Fed’s swap network is, therefore, more than a technical liquidity tool; it functions as a structural safety net for the dollar-centered order. When international money markets dislocate, central banks deploy swap lines to try to blunt dollar-funding shocks in a targeted way and thereby reduce the turbulence that would otherwise feed back into the U.S. financial system.

##### ***Historical Background: 1962–1990***

The Fed’s swap line instrument has a long history, but its purposes and functions have changed from crisis to crisis. Its first modern form emerged in 1962, when under the Bretton Woods system the Fed created the network of Reciprocal Currency Arrangements, aiming to ease pressure on U.S. gold reserves and to serve as a first line of defense for the dollar. The first agreement was signed with France, and by 1971 (the end of Bretton Woods) the Fed had signed swap arrangements with 14 countries, amounting to roughly \$11.7 billion. Already at that time, the Fed acted selectively and rejected requests from Ireland and Venezuela, arguing that there was limited financial and trade significance with regards to the former, and the latter had not complied with IMF conditions.<sup>17</sup>

After the end of the gold standard, the original purpose of these

16 John Michael Cassetta, “The Geopolitics of Swap Lines,” *M-RCBG Associate Working Papers* no. 181 (2022), [https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/files/181\\_AWP\\_final.pdf](https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/files/181_AWP_final.pdf).

17 Michael D. Bordo et al., “The Evolution of the Federal Reserve Swap Lines since 1962,” *IMF Economic Review* 63, no. 2 (2015): 353–372, <https://doi.org/10.1057/imfer.2015.11>.

arrangements largely disappeared. A key turning point was the Mexican crisis in the mid-1990s. Mexico's political and financial turmoil, together with significant U.S. trade and financial exposure (through NAFTA), led to a decision to raise the existing swap limit. At the same time, policymakers worried that Congress might interpret the swap line as a foreign policy support measure, with potential implications for perceptions of Fed independence.<sup>18</sup>

### ***2007–2009: The Fed as Global Lender of Last Resort***

Two episodes define the Fed's twenty-first-century swap system, the 2008–2009 global financial crisis and the 2020 pandemic shock. During the global financial crisis, the drying up of international dollar funding markets and the collapse of interbank trust produced severe dollar shortages on foreign banks' balance sheets. Before the crisis, foreign banks had accumulated large dollar-denominated assets, while relying heavily on short-term market funding. Once credit risk intensified, this structure turned into a liquidity crisis by late 2007. The shortage was visible in a sharp widening of the FX basis in FX swap markets.

In December 2007, the Fed opened temporary inter-central-bank dollar liquidity swap lines, first for the European Central Bank (ECB) and the Swiss National Bank (SNB) and later extended them to other major advanced-economy central banks. The aim was to reduce foreign banks' dollar funding costs and to prevent external dollar stress from causing severe disruptions in U.S. financial markets. Empirical work mostly confirms lower dollar funding costs and contributed to easing money market tensions, the three-month FX basis narrowed significantly after the announcement and subsequent expansion of the program.<sup>19</sup>

After the failure of Lehman Brothers, dollar funding problems intensified further, and the Fed expanded its swap network in an unprecedented way. It strengthened arrangements with five major advanced-economy central banks, namely the ECB, the Bank of England (BoE), the Bank of Japan (BoJ), the SNB, and the Bank of Canada (BoC)—often described together with the Fed as the “C6” core. Over time, the Fed raised maximum amounts toward effectively unlimited levels to meet their dollar needs. Several studies frame this mainly as self-interest. By stabilizing offshore dollar markets, the Fed reduced the risk that foreign dollar stress would spill back into U.S. markets and threaten domestic financial stability.<sup>20</sup>

18 Bordo et al., “The Evolution of the Federal Reserve Swap Lines.”

19 Goldberg et al., “Central Bank Dollar Swap Lines.”

20 William Allena, et al., “Central Bank Swap Lines and CIP Deviations,” *DNB Working Paper* no. 566 (2017), [https://www.dnb.nl/media/1m514oey/working-paper-no-566\\_tcm47-362175.pdf](https://www.dnb.nl/media/1m514oey/working-paper-no-566_tcm47-362175.pdf).

In October 2008, the Fed also extended temporary swap lines to five additional central banks with significant systemic relevance (Brazil, South Korea, Mexico, New Zealand, and Singapore) focusing on economies large enough for their crises to generate meaningful spillovers and where U.S. banking exposures were substantial. Other emerging market countries also requested swap lines, but widening access would have increased credit risk toward foreign central banks and amplified political and reputational concerns.<sup>21</sup>

Overall, though, this narrative overlooks how swap lines usually reduce average market funding costs and, in practice, provide an international lender-of-last-resort function for dollar liquidity. From this point of view, the Fed acted effectively as a global safety net, while formally continuing to justify its actions through a domestic mandate.<sup>22</sup>

In May 2010, as part of coordinated action among major central banks, the Fed re-established temporary swap lines with key partners (ECB, BoE, BoJ, BoC, and SNB) to provide dollar liquidity and help manage international funding tensions triggered by the euro area sovereign debt crisis.

### ***2020: Pandemic Shock, Faster Response, Broader Toolkit***

During the pandemic shock of March 2020, the Fed complemented the standing “core” with additional temporary, capped swap lines for a wider set of central banks, including those in Australia, Brazil, Denmark, South Korea, Mexico, Norway, New Zealand, Singapore, and Sweden. Because of the 2008 experience and the already existing institutional framework, the response was faster and larger in scale. Alongside swap lines, the Fed also introduced the FIMA repo facility, offering foreign official holders an alternative channel to obtain dollars against U.S. Treasury collateral. Evidence from the 2020 episode suggests that swap lines and the FIMA facility together contributed to narrowing the FX basis, easing global dollar funding stress, and stabilizing the U.S. Treasury market.<sup>23</sup>

The pattern is clear: the circle can be expanded, but not in a universal way. Even in a crisis, swap access does not “belong to everyone,” which turns swap lines into a form of access policy. The Fed differentiates implicitly among partners, prioritizing those with deep U.S. financial and trade ties, political

21 Joshua Aizenman and Gurnain Kaur Pasricha, “Selective Swap Arrangements and the Global Financial Crisis: Analysis and Interpretation,” *International Review of Economics & Finance* 19, no. 3 (2010): 353–365, <https://doi.org/10.1016/j.iref.2009.10.009>.

22 Saleem Bahaj and Ricardo Reis, “Central Bank Swap Lines,” *CESifo Working Paper* no. 7124 (2018), [https://www.ifo.de/DocDL/cesifo1\\_wp7124.pdf](https://www.ifo.de/DocDL/cesifo1_wp7124.pdf).

23 Linda S. Goldberg and Fabiola Ravazzolo, “The FED’s International Dollar Liquidity Facilities: New Evidence on Effects,” *NBER Working Paper* no. 29982 (2022), [https://www.nber.org/system/files/working\\_papers/w29982/w29982.pdf](https://www.nber.org/system/files/working_papers/w29982/w29982.pdf).

alignment, and systemic importance, while excluding many others. This creates uneven coverage within the global financial safety net, where geopolitics and reciprocity shape the network's boundaries.

While swap lines effectively calm acute dollar shortages and stabilize markets, they cannot prevent underlying vulnerabilities or provide universal coverage. Excluded economies (e.g., Chile and Turkey in 2008 and many emerging market economies during the COVID pandemic) face stigmatization, slower IMF relief, or bilateral alternatives, highlighting finite capacity, geopolitical selectivity, and dependency on Fed discretion.

Swap lines primarily operate as a liquidity backstop and a confidence-enhancing signal. They can reduce ex post funding risk and support more resilient behavior ex ante by putting a ceiling on dollar funding stress. Yet they are not a cure for weak fundamentals. When underlying balance sheet or macroeconomic vulnerabilities are severe, dollar liquidity cannot substitute for solvency, and crises may still unfold. Moreover, their stabilizing effect is inherently asymmetric. If the shock originates in the core provider itself—as in a systemic U.S.-centered disruption—swap lines cannot prevent the initial turmoil, but they can still play a role in the later containment phase by backstopping dollar funding and limiting fire sale dynamics abroad.

### ***Selectivity, Self-Interest, and the Geopolitical Dimension***

The Fed's swap network is often described as a technocratic instrument for sustaining dollar hegemony. Stabilizing the dollar-centered system is in itself a U.S. interest because global panic and dollar funding stress can quickly feed back into U.S. markets through exchange rate, yield, and liquidity channels, as well as through global banking linkages. The dollar's global dominance provides the United States with tangible economic advantages, often discussed in terms of seigniorage, persistently lower borrowing costs, and the ability to finance deficits on favorable terms. Critics counter that this “exorbitant privilege” also fuels chronic trade deficits and deindustrialization, as high foreign demand for dollar assets appreciates the currency, hurting U.S. exporters and manufacturing competitiveness. Yet, empirically, these downsides coexist with net benefits, and swap lines targeted at liquidity crises help mitigate rather than exacerbate such imbalances by stabilizing global demand while also translating into geopolitical leverage through the centrality of dollar-based markets and infrastructures.<sup>24</sup> In

24 György Szapáry and Dániel János Plósz, “Geopolitikai irányváltások a kialakulóban lévő új világréndbe” [Geopolitical Shifts in the Emerging New World Order], *Financial and Economic Review* 18, no. 4. (2019): 116–121, <https://doi.org/10.25201/HSZ.18.4.112129>.

practice, this means that swap provision is most attractive where external dollar stress is likely to generate significant spillbacks to the U.S. economy and financial system. Accordingly, this stability logic typically overlaps with two additional factors that are also relevant in geopolitical terms: the depth of trade ties and the scale of U.S. banking exposures and financial interdependence.<sup>25</sup> Access to Fed swap lines is often associated with the weight of trade and financial linkages.<sup>26</sup>

At the same time, these decisions are politically sensitive and inherently discretionary. The C6 core and selectively opened temporary lines institutionalize the global monetary hierarchy because for the “inner circle” access is quasi-automatic, while for the “outer circle” access remains subject to case-by-case judgment.<sup>27</sup> We can also find statistical links between swap access and political alignment with the United States (for example, based on UN voting patterns or security cooperation), even if this is not an explicit criterion in the Fed’s official communication. The Fed’s public narrative consistently uses financial stability language, framing swap lines as technical instruments to manage disruptions in global dollar funding.<sup>28</sup>

Interpreting the geopolitical dimension requires caution. The point is not that the Fed distributes liquidity on the basis of foreign policy preferences, but that crisis swap lines are high-stakes decisions with reputational and domestic political consequences. In such an environment, perceptions of partner “reliability” and the stability of strategic relationships can matter and financial and geopolitical considerations can overlap.

Taken together, swap lines are the most visible elements of the Fed’s international crisis-management role, but the 2020 episode also showed a broader toolkit for managing global dollar shortages. The Fed’s swap network is simultaneously (i) a stabilizing infrastructure for the dollar-centered order, (ii) a firewall against risks arising from trade and financial interdependence, and (iii) a selectively extendable instrument.<sup>29</sup> For these reasons, the access character of swap lines inevitably creates space for geopolitical interpretation.

25 Jakree Koosakul and Alexei Miksjuk, “Central Banks Casting a Global Financial Safety Net: What Drives the Supply of Bilateral Swaps?” *IMF Working Paper* 24, no. 88 (2024), <https://www.imf.org/-/media/files/publications/wp/2024/english/wpiea2024088-print-pdf.pdf>.

26 Joshua Aizenman, “The Fed’s Swap Lines: Narrow Circle, Broad Effect?,” (2022): 1–12, <http://dx.doi.org/10.2139/ssrn.4253443>.

27 Steffen Murau, Fabian Pape, and Tobias Pforr, “International Monetary Hierarchy through Emergency US-Dollar Liquidity: A Key Currency Approach,” *Competition & Change* 27, no. 3–4, (2023): 495–515, <https://doi.org/10.1177/102452942211186>.

28 Cassetta, “The Geopolitics of Swap Lines.”

29 J. Lawrence Broz, “The Politics of Rescuing the World’s Financial System: The Federal Reserve as a Global Lender of Last Resort,” *Korean Journal of International Studies* 13, no. 2 (2015): 323–351, <http://dx.doi.org/10.2139/ssrn.2531108>.

## 5. THE PBOC'S SWAP NETWORK – RMB INTERNATIONALIZATION AND AN ALTERNATIVE INFRASTRUCTURE OF FINANCIAL CONNECTIVITY

The bilateral FX swap network built by the People's Bank of China (PBoC) developed along a different historical trajectory and partly different strategic logic than the Fed's system. While swap lines can serve financial stability purposes in crisis periods here as well, in practice, PBoC swap agreements have often been linked to the internationalization of the renminbi (RMB), the development of offshore RMB markets, and the diversification of China's external financial linkages.

China's rising weight in global trade and investment, together with the gradual global expansion of its financial sector, created the conditions for the PBoC to "build connections" through bilateral financial instruments. Turning to swap agreements, these are both a form of monetary cooperation and an official channel that strengthens the use of China's currency and the financial linkages between China and its partners. More broadly, this fits China's ambition to shape parallel and alternative networks of cooperation in the evolving international order.

### *Historical Background*

In the early 2000s, drawing lessons from the 1997-98 Asian financial crisis, China built a dual defense strategy against external financial shocks. First, it accumulated foreign exchange reserves at an unprecedented pace as a classic tool of "self-insurance" and a first line of defense against current and capital account vulnerabilities. Second, at the regional level together with the ASEAN+3 countries, it helped create the Chiang Mai Initiative's bilateral swap network, designed to address short-term liquidity difficulties and reduce dependence on the IMF in the aftermath of the Asian crisis. Building on this regional cooperation and its reserve buffer, the PBoC gradually expanded its own RMB-based bilateral swap lines. Thus, reserves and swap lines played complementary roles rather than substituting for each other.<sup>30</sup>

### *2008 as a New Beginning*

In the PBoC's official narrative, an FX swap is a trust-based and collateralized financing tool and an important form of central bank cooperation. This framing aligns with the broader strategy through which China has pursued RMB internationalization not in "one leap" but step by step by building concrete

<sup>30</sup> Joshua Aizenman et al., "International Reserves and Swap Lines: Substitutes or Complements?," *International Review of Economics & Finance* 20, no. 1 (2011): 5–18, <https://doi.org/10.1016/j.iref.2010.07.002>.

structural channels (settlement, liquidity provision, and offshore hubs). In this view, swap lines can support trade settlement, decrease exchange rate risk, and strengthen the global financial safety net.

From December 2008, the PBoC launched its own RMB-based bilateral swap network. The first agreement was concluded with South Korea, with a 180 billion RMB framework, aiming to lower dollar dependence, support trade settlement, and promote currency internationalization. Since 2009, the PBoC has become one of the leading providers of central bank swap agreements. By June 2025, China had signed bilateral swap agreements with central banks in 42 countries or regions, of which 32 were active, with a total value exceeding 4.5 trillion RMB (around \$620 billion).<sup>31</sup> In stark contrast, as noted earlier, the Fed maintains standing swap lines with just five core central banks, expandable to 14–20 during crises, amounting to \$585 billion (2008) and \$450 billion (2020) during historical peaks, although currently near zero outside stress periods. While PBoC swaps emphasize breadth and RMB internationalization, Fed lines prioritize elite access and crisis firepower, underscoring divergent geopolitical strategies.

The network has broad geographic reach. It is not limited to the Global South but also includes major economic actors and advanced financial centers, signaling the regional-to-global ambition of RMB internationalization. Rather than listing partners exhaustively, the key point is that the network spans emerging and advanced economies alike, covering Asia, Latin America, the Middle East, Africa, and parts of the Western financial system.

### ***The Logic of Network-Building***

In practice, swap lines can support RMB use in cross-border trade settlement, provide offshore RMB liquidity in financial hubs, and offer a safety net for RMB market disruptions. Thus, bilateral swap agreements are part of a deliberate strategy to expand the renminbi's international role and to build the structural foundations of an RMB ecosystem linking settlement, liquidity provision, and offshore market development into a more resilient cooperation structure.<sup>32</sup> At the same time, beyond the standard internationalization narrative, recent research suggests that PBoC swap lines have also been used, in some cases, as a financing channel during times of crisis. In such cases, swap drawdowns and repeated renewals (“rollovers”) can provide temporary foreign currency

31 The People's Bank of China, *PBoC RMB Internationalization Report* (2025), <https://www.pbc.gov.cn/en/3688241/3688636/3828468/5624529/index.html>

32 Steven Liao and Daniel McDowell, “Redback Rising: China’s Bilateral Swap Agreements and Renminbi Internationalization,” *International Studies Quarterly* 59, no. 3 (2015): 411–422, <https://doi.org/10.1111/isqu.12161>.

liquidity to partners facing acute external stress, easing short-term rollover pressures particularly in low-reserve, high-distress situations. Over \$170 billion in liquidity support extended to distressed countries between 2000 and 2021. These interventions, concentrated in low-reserve, high-distress sovereigns (e.g., Argentina, Pakistan, and Mongolia), and sometimes complemented by additional balance of payments bridge lending by Chinese state banks. In this reading, the network-building logic is therefore dual. Swap lines are not only instruments of trade facilitation and offshore market deepening, but also important links that can widen partners' crisis management options and by doing so deepen China-centered financial connectivity.<sup>33</sup>

Here, geopolitics is not necessarily “exclusive” in the same way as the Fed’s inner-circle/outer-circle logic. It often works as complementary swap lines allow the PBoC to open a financial channel with selected partners that can be linked to broader trade, investment, and financial cooperation. The practical significance of this approach is also visible in the fact that China maintains large swap arrangements with advanced financial centers. For example, in 2025, the ECB and the PBoC extended their swap agreement, originally launched in 2013, by a further three years to 2028, explicitly referring to its backstop function in the event of RMB liquidity disruptions.

Partner selection in the PBoC network is multifactor. Research often finds that trade ties and the partner’s economic weight are strong determinants, while the geopolitical dimension is more visible in the longer-term construction of “connectivity infrastructure.” In this logic, gravity-type factors tend to matter, so larger country size and closer distance can increase the likelihood of an agreement, and trade relationships play a key role, while institutional quality appears less decisive. This supports the official narrative of trade facilitation, while also highlighting a regional-to-global route of expansion.<sup>34</sup>

At the same time, the PBoC’s swap network points to a broader system-level implication. In a world where financial interdependence can be mobilized for geopolitical purposes, swap lines may function as the building blocks of alternative infrastructures of financial connectivity. This does not necessarily imply a full “decoupling” from the dollar order; rather, it resembles a portfolio-style diversification of liquidity options and settlement channels. Moreover, the closer geopolitical alignment with China can increase the likelihood of

33 Sebastian Horn et al., “China as an International Lender of Last Resort,” *World Bank Policy Research Working Paper* no. 10380, 2023, <https://openknowledge.worldbank.org/entities/publication/5212dbe8-aae3-4bf6-869c-23f312e03435>.

34 Alicia Garcia-Herrero and Le Xia, “RMB Bilateral Swap Agreements: How China Chooses Its Partners?,” *Asia-Pacific Journal of Accounting & Economics* 22, no. 4 (2015): 368–383, <https://doi.org/10.1080/16081625.2014.960059>.

being selected as a swap partner, raise the chances that existing swap lines are expanded, and reduce the risk of termination. Additionally, partner-country economic strength can amplify the benefits of close political ties and mitigate the risks associated with weaker relationships.<sup>35</sup> This logic is particularly visible in the development of offshore RMB hubs. Hong Kong, for instance, announced measures in 2025 to support RMB-based trade finance and access to RMB liquidity, partly through arrangements connected to swap-type mechanisms. Such steps deepen the RMB financial ecosystem and signal that PBoC swap lines are designed as durable instruments of financial linkages.

Over the past decade and a half, China's central bank has built one of the world's largest swap networks. It can be interpreted as a crisis management mechanism, but its significance lies in widening channels of access to liquidity in an evolving world order, potentially strengthening a financial infrastructure of bloc formation.

Research on China's RMB swap network suggests that partner selection is strongly associated with economic interdependence, especially trade intensity and market size, while swap usage has also intersected with China's broader overseas financial engagement, including liquidity support in times of crisis in countries with significant exposure to Chinese finance. At the same time, a growing strand of work finds that geopolitical proximity to China is linked to the likelihood of being selected, the expansion of existing lines, and their durability over time. Taken together, these patterns support interpreting the PBoC network as a tool of economic statecraft that can widen non-dollar liquidity options and gradually ease aspects of dollar dependence, thereby building an alternative network. Notably absent from both networks is a bilateral U.S.–China swap line. Despite economic interdependence, geopolitical rivalry exacerbated by trade wars, tech decoupling, and strategic competition precludes mutual trust for such arrangements, underscoring how statecraft prioritizes alignment over mere trade volume.

## 6. CONCLUSION

The role of central bank FX swap lines goes beyond the technical dimension of crisis management. In a globalized financial system, access to liquidity is increasingly a strategic resource, and the way it is allocated and channeled is

35 Sachintha Pilapitiya, "Swap Worthy? The Geopolitical Determinants of Chinese Currency Swaps," *Journal of International Economy and Global Governance* 2, no. 4 (2025): 23–48, <https://doi.org/10.12414/jiegg.250608>.

increasingly interpreted through a geopolitical lens. Swap line networks can therefore be understood both as a safety net for financial stability and as an institutionalization of access hierarchies in the international financial order. The parallel networks built by the United States and China signal not only growing inequalities within the global safety net, but also its emerging geopolitical fragmentation, pointing toward liquidity infrastructures that may align with blocs. In such an environment, the conscious diversification of financial and central bank relationships, and of a country's liquidity "backing," becomes a strategic task not only in crisis management, but also in foreign and security policy.

The Fed and the PBoC represent two different logics of this process. The Fed's swap lines respond to shortages of the global key currency, the U.S. dollar, and are deployed to protect the stability of an already dominant dollar system. PBoC swaps, by contrast, often help build the use and market infrastructure of the renminbi, even if financial stability goals can also matter over the longer run. From a network structure perspective, the Fed relies on a strong, institutionalized core (the standing C6 arrangement), while the PBoC operates a broad, multi-partner network in which trade and regional logics are more visible. In geopolitical terms, the Fed's selectivity through the delineation of an "inner circle" implies that geopolitical alignment is not framed as a primary criterion, but political relations and close economic ties are often part of the background conditions. In the PBoC case, geopolitics is more visible in the gradual construction of an alternative connectivity infrastructure, where participation in wider cooperation frameworks tends to operate as a positive aspect rather than as an exclusionary filter.

Economic instruments such as sanctions, export controls, financial restrictions, and the tightening of market access are playing a growing role in geopolitical competition. In this context, financial infrastructures (payment and settlement systems, reserve assets, clearing networks, and liquidity lines) are no longer neutral background institutions. They have become "hard" elements of international order, so in times of crisis or conflict, the presence or absence of access can materially shape a country's financial resilience.

From this perspective, swap line networks may represent a deeper layer of bloc formation. If geopolitical tensions intensify in a sustained way, the global financial safety net itself may take on a more fragmented, bloc-like configuration, with backstop access being reorganized alongside alliances, strategic partnerships, and financial interdependence. This does not necessarily imply a clean "split" of global finance, but it raises the likelihood that liquidity

support in times of crisis will be asymmetric, politically sensitive, and harder to predict.

In other words, geopolitical thinking is increasingly present in twenty-first-century central banking. One illustration is the post-crisis evolution of the two major powers' swap arrangements. If trade conflicts, tariff disputes, and sanction-based policies continue and if a new form of bloc formation deepens, international finance and the management of financial networks are likely to gain even greater importance as instruments of geopolitical statecraft. The EU and U.S. financial sanctions adopted against Russia illustrate how powerful these tools can be. As Michael O'Sullivan argued in his 2019 book, in a new multipolar world financial war may even overshadow trade wars, and in such competition the strategic role of central banks becomes more important. From this perspective, the central banks of major regional powers can resemble modern "battleships" in the sea of international finance. Governments, therefore, may ever more view their central banks not only as economic institutions, but also as geostrategic resources.<sup>36</sup> But at least as Paul Tucker has also noted, only those economies can remain competitive that are able to coordinate foreign, economic, and monetary policy in a coherent way.<sup>37</sup>

The risk of financial fragmentation may be reinforced by technological change. Central bank digital currencies (CBDCs) and the cross-border settlement solutions built on them can probably lower the costs and vulnerabilities in certain transactions. Meanwhile, this innovation could also mean the emergence of new "parallel infrastructures" in geopolitical terms. Looking ahead, concepts of commodity-linked digital settlement instruments (for example, gold-linked designs) still appear largely speculative but signal that debates about the international monetary order may take new forms through technology.<sup>38</sup>

These developments will not replace swap lines in the short run. In crisis periods, a fast, large-scale, and credible liquidity facility still works most effectively through the classic instruments of central bank cooperation. Over the longer term, however, technological alternatives may reinforce the trend toward multi-channel, multi-center financial connectivity, which in a world of bloc formation could partly substitute for, or bypass, certain traditional nodes.

The main practical lesson of this study is that in a globalized but geopolitically more fragmented financial world, a key source of resilience

36 Michael O'Sullivan, *The Levelling: What's Next After Globalization* (PublicAffairs, 2019).

37 Paul Tucker, "The Geopolitics of the International Monetary and Financial System," Tacitus Lecture, Worshipful Company of World Traders, 2016, <https://world-traders.org/wp-content/uploads/2017/04/Tacitus-Lecture-2016.pdf>.

38 Boros Eszter and Horváth Marcell, "Central Bank Digital Currency: The Next Money Revolution? Central Bank Digital Currencies in the Dimension of Geopolitics," *Public Finance Quarterly* 67, no. 4 (2022): 506–521, [https://doi.org/10.35551/PFO\\_2022\\_4\\_2](https://doi.org/10.35551/PFO_2022_4_2).

is the diversification of safety nets and connectivity channels. This implies the importance of a multi-layered safety net alongside domestic stability structures (prudential supervision, macroprudential tools, and adequate reserve management). Multilateral (IMF) and regional mechanisms gain relevance. Bilateral swap lines are fast, but selective and politically sensitive. Moreover, swap lines are not only a quantitative but also a qualitative instrument, because the size of the framework, maturity, activation conditions, and actual usability all matter. For this reason, swap lines are best treated as one element in a broader resilience portfolio, not as an automatically available lender-of-last-resort guarantee.

Finally, it is worth emphasizing connectivity itself as a resource. Paradoxically, financial interconnectedness can mean both exposure and protection. More channels and partner relationships can provide more potential access points in times of crisis, while excessive concentration increases the vulnerability of key nodes. The strategic objective is therefore not the maximization of connections as such, but balanced, multi-pillar financial integration. So, swap access has emerged as a quiet currency of alliances, making the active use of financial connectivity and continuous adaptation to evolving financial and geopolitical dynamics a strategic necessity. For smaller economies such as Hungary, this requires a strategic rethink.

Since the 2008 crisis, central bank swap lines have become one of the key institutions of crisis resilience, and in an evolving world order they carry geo-economic meaning. At the intersection of financial stability and geopolitics, liquidity is not simply a technical issue. It is strategic access that requires relationships, networks, and trust. This is why the deliberate building and diversification of financial safety nets is becoming ever more important, not only because crises are cyclical, but also because financial infrastructures have become a central arena of international competition in the geopolitical era.



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