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## The Impact of Geopolitics on International Finance:

## **Evidence and Implications\***

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## Executive Summary

To be added.

## Chapter 1. External portfolio structure

#### Introduction

To understand the potential consequences of increased financial fragmentation driven by geopolitical factors, we start our analysis by characterizing the structure of international financial linkages. Specifically, we look at the "external balance sheets" of major countries – their creditor and debtor positions vis-à-vis other countries and regions – and how these balance sheets have evolved during the past few years as geopolitical tensions rose. Our starting point is around 2017, when the impact of geopolitical tensions in the economic sphere increased (including US tariffs on China as well as financial sanctions on technology transfers). But an earlier episode is also very instructive: the change in Russia's financial linkages after its occupation of Crimea in 2014, which was followed by the imposition of trade and financial sanctions by the United States and its allies. We discuss this case in Box 1. <sup>1</sup>

There is a rapidly expanding academic literature that discusses evidence on global financial fragmentation. This literature has focused mostly on bilateral financial flows (FDI, portfolio flows, and banking flows), and has sought to determine whether their changes in recent years are correlated with various measures of "geopolitical distance" between countries, after taking into account other gravity-type determinants of such flows.<sup>2</sup> We discuss the insights from this literature in the next section. Related literature has focused on foreign exchange reserves and their composition and is discussed in detail in Chapter 2 of this report.

The approach adopted in this chapter, which focuses on cross-border creditor and debtor positions, provides evidence on the magnitude of existing linkages and their shifts, which makes it easier to investigate their potential macroeconomic repercussions, even though it cannot separate effectively the impact of geopolitical tensions from the consequences of other variables affecting countries' external portfolios. The analysis follows the "traditional" notion of geopolitical blocks, which sees as block comprising the United States and its allies (including "Western" economies) and a block including China, Russia, and some other emerging market and developing economies (with other economies not necessarily associated one of the blocks). The dramatic developments of early 2025 have made these patterns much less certain. Still, the focus on the size of bilateral financial linkages across countries and regions (and not just across geopolitical blocks) makes the approach a useful tool to study the potential consequences of a more fractured world financial system across different geopolitical lines.

#### Geopolitical tensions and financial flows: literature review

Interest in the relation between geopolitical tensions and financial flows has increased sharply in recent years, in particular since the Russian occupation of Crimea in 2014, the rise in tensions between the U.S. and China from 2017 onwards, and the Russian invasion of Ukraine in 2022. This has stimulated a growing literature studying the impact of rising geopolitical tensions on cross-border capital flows by asset class: portfolio debt, portfolio equity, cross-border bank flows and FDI. This literature examines how geopolitical risk events—proxied by increases in geopolitical risk indices—affect financial flows

<sup>&</sup>lt;sup>1</sup> There are other episodes of severe financial sanctions such as those imposed on Iran and Venezuela. For Iran, the very limited extent of financial integration with the global economy and the lack of basic data prevents an analysis similar to the one conducted for Russia. For Venezuela, we face similar constraints, since no external statistics have been published for the past 7-8 years. See Fishman (2025) for a fascinating discussion of sanctions on Iran during the past 15 years. The case of Venezuela is discussed in McDowell (2023), who examines how countries subject to US sanctions try to reduce their dependence on the dollar.

<sup>&</sup>lt;sup>2</sup> The measure of geopolitical distance most often used is the ideal point distance, constructed based on the pattern of voting at the United Nations. See, for instance, Signorino and Ritter 1999 and Häge 2011.

across countries and over time. An early example is a chapter in the 2023 Global Financial Stability Report (IMF, 2023a) which examines the impact of geopolitical tensions on aggregate cross-border capital flows. These are broken down into inflows and outflows, and examined separately for advanced and emerging economies using impulse response functions to capture the reaction of capital flows over time following a geopolitical shock. Overall, the authors find evidence that geopolitical tensions systematically discourage cross-border capital allocation, particularly for more liquid and risk-sensitive instruments. The findings suggest that geopolitical risk is an increasingly important factor in global financial stability, influencing investor behavior in nuanced ways depending on the asset class.

A key finding from that chapter on the impact of geopolitics on financial fragmentation is that capital inflows decline significantly when geopolitical tensions rise, especially for emerging markets.<sup>3</sup> Emerging markets typically see sharper and more prolonged reductions in aggregate capital inflows, reflecting their higher sensitivity to global risk sentiment and geopolitical instability. Advanced economies also experience a decline, but the magnitude of the effect thus far is smaller and appears to dissipate more quickly. On the outflow side, there is evidence of a moderate increase following geopolitical shocks, particularly from emerging markets, suggesting a potential "flight to safety" behavior where investors reallocate funds to safer jurisdictions, often in advanced economies. Overall, the evidence points to an asymmetrical impact of geopolitical risk on capital movements—disrupting financial inflows more severely than triggering outflows—and highlights the greater vulnerability of emerging markets.

#### Portfolio Investment Flows

Rising geopolitical distance between the United States and China since 2016, measured by divergent UNGA voting behavior (Signorino and Ritter 1999; Häge 2011) is correlated with a decline in bilateral cross-border allocation of portfolio investment and bank claims of about 15 percent, with portfolio investment equity and bond funds retrenching by amounts exceeding 20 percent (IMF 2023a, Figure 3.7). Similarly, Catalan et al. (2024) find evidence that a one-standard-deviation increase in geopolitical distance reduces equity investment flows by about 40% and bond investment flows by 60%. The study also documents an investment diversion effect such that rising geopolitical tensions between countries lead to a reallocation of cross-border flows toward alternative markets, with the scale of diversion influenced by the institutional quality and absorptive capacity of the recipient countries.

Portfolio equity flows experience the strongest and most immediate decline in response to elevated geopolitical tensions (IMF, 2023a). These effects tend to manifest quickly, with significant outflows observable within the first quarter after a shock and often persist for several quarters likely due to the inherently volatile and sentiment-driven nature of equity investments, which are more sensitive to political uncertainty and risk aversion (Chari, Dilts-Stedman and Lundblad, 2020, 2022).

Portfolio debt flows also decline, though the response is more muted and delayed compared to equity. Fixed-income investors may have longer horizons or stronger ties to macroeconomic fundamentals, making them somewhat less responsive in the short term to geopolitical noise.

<sup>&</sup>lt;sup>3</sup> In a separate study on the intertwining of geopolitics and international capital flows, Mohr and Trebesch (2025) examine how governments can direct capital flows to achieve geopolitical aims. This can involve state-owned enterprises, sovereign wealth funds, and policy banks extending credit or making investments that align with the state's strategic interests. Such practices can strengthen political alliances, secure access to critical resources, or expand a nation's influence in key regions. The authors note that while these capital flows can promote development and economic integration, they may also lead to dependencies that can be leveraged for geopolitical advantage. Additionally, the strategic deployment of capital can reshape global financial networks, potentially challenging existing power structures and leading to shifts in the international balance of power.

#### **Cross-border Banking Flows**

Cross-border bank flows also show a significant reduction when geopolitical tensions rise, though the magnitude is generally between that of portfolio debt and equity (IMF, 2023a). The response reflects a combination of heightened risk perception and the institutional rigidity of bank lending, which may slow down the reallocation of capital even amid geopolitical instability. However, there is evidence to suggest that rising geopolitical tensions lead to a reallocation of cross-border capital, increasing funding costs for banks and reducing lending (Catalan and Tsuruga, 2024). Using bilateral cross-border bank claims by nationality, Pradhan et al. (2025) show that a rise in geopolitical tensions between countries — disagreements in UN voting, broad sanctions, or sentiment captured by geopolitical risk indices — significantly dampens cross-border bank lending.

Consolidated banking statistics data from the BIS show that foreign banks' exposures to counterparties in Russia were scaled down following the annexation of Crimea of 2014 and the invasion of Ukraine in 2022, with reduced lending, credit lines and guarantees (see also Box 1). There is also evidence that geoeconomic fragmentation has influenced Chinese banks to adjust their lending strategies, focusing more on FDI-related opportunities and engaging with higher-risk EMDE borrowers (Casanova at al 2024). Beyond Russia and China, more broadly, geopolitical differences impact the growth rate of cross-border claims (von Peter, 2024). However, the activity within countries that do not report data to the BIS is unobserved, the activity of NBFIs not captured directly by the BIS data (only to the extent they interact with BIS-reporting banks), and questions remain about how to define and measure geopolitical factors.

#### Foreign Direct Investment Flows

While still in the early stages, Alfaro and Chor, 2023 argue that the world is experiencing a "Great Reallocation" with US outward FDI and supply chains shifting toward geopolitical allies. The US and other major economies are focusing on protecting industries such as semiconductors, electric vehicles, and pharmaceuticals, reflecting a shift toward national security-driven industrial policies (Aiyar et al, 2023).

The IMF's April 2023 World Economic Outlook (WEO) chapter "Geoeconomic Fragmentation and Foreign Direct Investment" (IMF, 2023b) explores how geopolitical tensions are reshaping global FDI flows, using data from the Financial Times' fDi Markets database, which tracks around 300,000 greenfield FDI projects from 2003 to 2022. The chapter identifies growing signs of FDI fragmentation, with investment increasingly concentrated within geopolitically aligned countries, especially in strategic sectors like semiconductors.

To measure countries' vulnerability to FDI relocation, the study constructs a multidimensional index based on geopolitical distance between countries, host nations' market power in key industries, and the share of strategic sectors in their FDI portfolios. EMDEs are particularly at risk due to their reliance on investments from geopolitically distant partners. The primary FDI measure used in the study is the number of new greenfield investments, rather than the value of flows. This approach is taken because investment values in fDi Markets are often estimated, making the number of projects a more reliable metric. Strategic sector FDI is identified at the three-digit industry level to assess which sectors are most vulnerable to fragmentation and excludes mergers and acquisitions (M&As) due to data limitations. The analysis reveals that a decline in greenfield FDI—especially in strategic industries—is a leading indicator of economic fragmentation.

Key findings highlight the divergence of FDI flows, the economic costs of fragmentation, and the countries that are most vulnerable to investment shifts. FDI is increasingly concentrated within

geopolitical blocks, particularly in strategic sectors such as semiconductors. Since 2018, following rising US-China trade tensions, firms have shifted investments toward politically aligned countries, reducing FDI flows to unaligned or geopolitically distant nations. Countries engaging in "friend-shoring" and "reshoring" have seen a reconfiguration of FDI patterns, particularly in advanced economies like the US and the EU.

The geopolitical distance between countries now has a stronger influence on FDI than geographic proximity, with over 50% of global FDI now occurring between geopolitically aligned nations. China has seen its greenfield FDI fall by over 30%, while investment in the US and Europe—especially in high-tech sectors—has increased, signaling a reconfiguration of global investment patterns.

Along similar lines, Setser (2023b) suggests that countries with similar foreign policy stances tend to engage in stronger financial ties, while geopolitical rivals experience diminished financial integration. In particular, cross-border investment realignments suggest that foreign direct investment (FDI) patterns are changing, with more capital flows directed toward geopolitically aligned nations. Greenfield FDI projects have declined since the Global Financial Crisis (2007-2009), with a notable shift in U.S. FDI toward "friendly" nations such as Canada, Costa Rica, and South Korea, while investment in China and Hong Kong has declined. This shift is driven by concerns over economic security, political stability, and strategic supply chain resilience. Emerging markets and developing economies (EMDEs) face greater economic risks due to their dependence on global capital markets. Reduced foreign investment flows into EMDEs could lead to slower growth, increased capital costs, and a higher risk of financial crises.

Gopinath et al. (2025) draw comparisons between current developments and the early years of the Cold War. They use granular bilateral data to examine the shift toward economic fragmentation along geopolitical lines and show a significant decline in economic interactions between countries in opposing geopolitical blocs with the onset of the Russia-Ukraine war in early 2022. In particular, the study documents a sharp decline in FDI flows (approximately 20 percent) since the start of the conflict. The evidence from the recent period is consistent with earlier work that used the gravity model of bilateral cross-border financial relationships to show that countries tend to allocate significantly less capital to countries with whom they are less aligned on foreign policy issues (Portes and Rey 2005).

#### The structure of external portfolios: advanced economies vs emerging markets

The literature on international financial integration has highlighted how advanced economies dominate cross-border claims and liabilities in financial instruments, to a much larger extent than in trade in goods and services. Here we follow the country classification in Lane and Milesi-Ferretti (2018), which divide economies into three groups: financial centers, defined as economies whose primary role in international financial flows is one of intermediation; advanced economies excluding financial centers; and emerging markets and developing economies excluding financial centers. Table A1 in the Appendix contains the list of countries in the various categories, which follows the current IMF classification for identifying advanced economies from emerging and developing ones. Financial centers include the United Kingdom, the Netherlands, Switzerland, Luxembourg, Ireland, as well as small offshore centers such as Bermuda and the Cayman Islands.

The role of emerging and developing economies in global economic activity has been increasing over time. Figure 1 documents this trend, showing the shares of global nominal GDP at market prices accounted for by the three country groups. But while in 2023 EMDEs accounted for about 40 percent of global GDP at market prices (and a share closer to 60 percent of GDP at PPP) their weight in global external assets and liabilities, while increasing over time, was much smaller, at around 14 percent for

global assets and 13 percent for global financial liabilities (Figure 2). In comparison, their share of global trade in goods and services was around 38 percent in 2023.

The following figures show the relative importance of financial claims and liabilities of emerging market and developing economies in various financial instruments. Figure 3 shows how on the asset side EMDEs account for the majority of global foreign exchange reserves, but a much smaller share for other financial assets (first panel). The second panel in Figure 3 re-allocates holdings of reserves to the financial instruments that these reserves are held into—primarily debt securities but also bank deposits (included in other investment). With this correction, EMDEs account for a larger share of global holdings of portfolio debt securities and other investment instruments than for equity-type instruments such as FDI and portfolio equity. In contrast, on the liability side of the EMDE balance sheet the largest category is FDI, while portfolio instruments play a more modest role (Figure 4).

Since China accounts for a significant share of aggregate GDP of emerging and developing economies, it is useful to decompose financial assets and liabilities into those held by China and the rest of the EMDE group. The results are shown in Figure 5. China's share of EMDE GDP was about 40 percent in 2023. Their share of FX reserves within the group was similar, but shares in other categories were smaller. Overall, the evidence shows that emerging markets and developing economies play a much smaller role in global portfolio holdings than they do in global production and global trade. It also shows that within the emerging market group the role of China is smaller compared to its share of EMDE economic activity or trade.

#### The structure of external portfolios: geopolitical factors and geographical distance<sup>4</sup>

International financial integration—measured as the global sum of external assets and liabilities scaled by global GDP—has broadly stabilized since the global financial crisis of 2007-09 (see Figure 6A). Looking at data at this very broad level of aggregation it is hard to detect clear signs of global financial fragmentation along geopolitical lines. For instance, the plateauing of international financial integration coincided with the onset of the global financial crisis and there are no visible structural breaks from either Russia's occupation of Crimea since 2014 or its invasion of Ukraine in 2022. Evidence of fragmentation—and more generally of shifts in global portfolios—is more clearly visible in data on financial flows for the past few years (as highlighted in the literature reviewed earlier in this chapter) as well as in the examination of external portfolio data for specific countries closely involved in rising geopolitical tensions. Indeed, Box 1 shows clear shifts in the structure of Russia's external portfolio, both in the aftermath of its occupation of Crimea and after the invasion of the Ukraine.

Figure 6A shows how the US and the countries geopolitically close to it therefore still dominate global finance, accounting roughly for 65% of global external assets and liabilities.<sup>5</sup> The share of China and countries geopolitically close to China in total gross assets and liabilities has increased in recent years, from about 2% to 3%, hence remaining comparatively low. This stands in contrast with China's much larger footprint in global GDP (15%) and global trade (13%).

<sup>&</sup>lt;sup>4</sup> We are grateful to Martin Schmitz and .... for work on this section.

<sup>&</sup>lt;sup>5</sup> The US-aligned countries account for more than 45 percentage points of this share, of which euro area countries (28pp) and the UK (7pp) are the major contributors.

As Figure 6B shows, geopolitical distance and geographical distance play distinctive roles. Countries geographically close to China account for a sizeable share of global asset and liability holdings.<sup>6</sup> This reflects the importance of US-aligned countries in Asia, such as Japan and Korea, that account for almost 45% of external assets and liabilities. The sizeable role of countries that are not geographically close to the US or China reflects the importance of European Union members as well as the UK – with the City of London being one of the world's main global financial hubs. Therefore, while geographical distance is traditionally thought of as a key pecuniary determinant of patterns in international financial flows in standard gravity models, for instance as a proxy for iceberg transportation costs, geopolitical distance also plays a role and may segment global finance in a distinctive way.

These conclusions are robust to the exclusion of financial centers from the US and China geopolitical blocs.<sup>7, 8</sup> The financial centers in question play a sizeable role in the global financial system. They make up to one-third of global assets and liabilities, as shown by the significant rise in the share of the rest of the world when financial centers are included in that category instead (Figures 6C and 6D).

Examining net rather than gross positions, the US's outsized negative net international investment position (NIIP) (equivalent to close to 15% of global GDP in 2023) is mirrored by the positive NIIPs of US allies, with some exceptions such as the UK, and from the rest of the world (Figure 7). China and countries geopolitically close to China have a large positive NIIP but smaller than the combined position of US allies and the rest of the world.

#### Evidence from bilateral data

The evidence presented so far has provided some useful stylized facts based on the aggregate external balance sheet of countries but an understanding of financial linkages within and across blocks requires data on bilateral positions across countries and regions. In this section we turn to an examination of bilateral data on external assets and liabilities, so as to establish the pattern of direct financial linkages between the main world economies and their financial trading partners. We focus in this draft on the main economies in each geopolitical block—China and the United States—as well as on the euro area, which has the largest external balance sheet across all economies. The discussion relies on broader background notes presenting the evidence for these countries and regions.

#### China

In the past two decades, the role of China in global finance has increased very sharply. In the first decade of the 21<sup>st</sup> century, its foreign exchange reserves rose by \$3 trillion, the largest in the world by a wide margin, and it attracted \$1.8 trillion of foreign direct investment. Its large current account surpluses led to a buildup in its net external creditor position, which at \$1.5 trillion became the second largest after Japan. In the second decade of the 21<sup>st</sup> century, China gradually opened its capital market to foreign portfolio investment, its currency has entered the SDR basket and has become a reserve currency, and with continuing current account surpluses it has roughly doubled the U.S. dollar value of its net creditor position. Today, China's foreign reserves exceed \$3 trillion (about ¼ of the world

<sup>&</sup>lt;sup>6</sup> The country classification as geographically close to the US or China reflects the most proximate quartile based on the distance between the capital cities from the CEPII database (Mayer and Zignago 2011). See Annex B for the full list of countries classified as geographically close in each bloc.

<sup>&</sup>lt;sup>7</sup> See Appendix for charts displaying financial centers separately. The classification of financial centers follows Lane and Milesi-Ferretti (2018). These include Andorra, Belgium, Ireland, Luxembourg, Malta, the Netherlands, San Marino and the United Kingdom for the US bloc, and Bahrain only for China's one.

<sup>&</sup>lt;sup>8</sup> Financial centres are dropped from the US and China blocs and reclassified as part of the rest of the world bloc.

total) and China has also become one of the world's largest foreign direct investors, with claims reaching \$2.9 trillion at the end of 2023. <sup>9</sup> China's net international investment position (NIIP)—the difference between the financial assets its residents own abroad and their financial liabilities to nonresidents—was \$2.9 trillion at the end of 2023 (about \$1 trillion higher than at a decade before), with Hong Kong accounting for another \$1.8 trillion.

The construction of bilateral external position data for China is difficult, given the paucity of bilateral data on other investment and foreign exchange reserves, important components of total Chinese external claims. It is even harder to ascertain the pattern of ultimate exposures, given the importance of offshore entities in Hong Kong, the Cayman Islands, and the British Virgin Islands in intermediating Chinese investment abroad and foreign investment in China. Indeed, given the strength of financial linkages between mainland China and Hong Kong, an aggregate perspective would help to better understand China's investment patterns. Unfortunately, data limitations prevent this exercise.

Bilateral estimates of mainland China's external assets and liabilities are shown in Figure 8. They show a sizable net creditor position vis-à-vis the United States, reflecting in particular large holdings of US dollar assets in China's foreign exchange reserves, as well as (to a smaller extent) a net creditor position vis-à-vis the euro area.<sup>10</sup> Two more stylized facts emerge from Figure 8. The first is the very large volume of assets and liabilities vis-à-vis Hong Kong, the Cayman Islands, and the British Virgin Islands, which obscure the underlying linkages between China and its ultimate financial trading partners. The second is the substantial net creditor position vis-à-vis unidentified partners, particularly in financial instruments such as loans and deposits (other investment) but also in foreign exchange reserves.

The share of China's claims that are vis-à-vis the US has dropped sharply during the past decade, reflecting broadly stable foreign exchange reserves in nominal terms. Work by Liu (2023) and Setser (2023a, 2024) discusses how China has diversified its overseas investment pattern after the global financial crisis of 2007-09 to reduce its exposure to the United States. At that time, foreign exchange reserves accounted for about 70 percent of total external assets and were held predominantly in US Treasury and agency bonds. The Chinese Investment Corporation (CIC, a sovereign wealth fund) was established with foreign exchange reserves transferred by the central bank in 2007. In the following years, the State Administration for Foreign Exchange (SAFE) started to provide "entrusted loans" (foreign exchange loans) to facilitate expansions/acquisitions overseas by Chinese companies. These were channeled through policy banks (such as the China Development Bank) as well as commercial banks, which expanded their external footprint, including by providing funding for the Chinese Belt and Road initiative. The overall result was a large increase in lending to and foreign direct investment in emerging markets and developing economies.

Figure 9 shows the change in China's net claims on other countries and regions between 2017 and 2023. Net claims on the U.S. increased only marginally, while those on emerging market economies and especially unidentified claims and claims routed through the British Virgin Islands and the Cayman Islands rose sharply. The increase in claims vis-à-vis other emerging and developing economies (EMDEs) is understated in the data presented in Figures 8 and 9 for two reasons. The first is that the

<sup>&</sup>lt;sup>9</sup> Only the US, the financial centers Netherlands and Luxembourg, Germany, and Canada had larger FDI assets at the end of 2023.

<sup>&</sup>lt;sup>10</sup> Estimates of China's holdings of claims on the US in its foreign exchange reserves makes use of TIC data, complemented with data on the share of foreign exchange reserves held in US dollars published in the annual report of China's State Administration of Foreign Exchange (SAFE). On this issue see the useful discussion in Setser (2023a, 2024). Estimates for the euro area are obtained from euro area data on its bilateral portfolio liabilities vis-à-vis China, after subtracting China's reported portfolio claims on the euro area (which do not include securities held as reserves).

vast majority of FDI claims (80 percent in 2023) as well as bank lending abroad are routed through Hong Kong and the British Virgin Islands, rather than reaching directly their ultimate destination.<sup>11</sup> The second is the already-mentioned paucity of available bilateral data on other investment (which includes loans, deposits, trade credits etc.) originating from entities resident in China. The bilateral data underpinning the estimates in Figures 8 and 9 rely on counterparty data on Chinese bank lending reported to the BIS. Only a small fraction of emerging and developing economies report such data, and lending by nonbank entities is not included. In sum, holdings in EMDEs by Chinese entities resident in China are understated, and claims on EMDEs through Chinese entities offshore are not included in the data.

We therefore turn to additional evidence which identifies claims by Chinese entities abroad on a nationality basis, even if booked through affiliates outside China. One source is confidential data on Chinese bank lending on a nationality basis from the Bank of International Settlements, that identifies claims by Chinese banks on other economies even if booked through affiliates located outside China.<sup>12</sup> This data, discussed in Cerutti, Koch, and Pradhan (2018, 2023) and Casanova, Cerutti, and Kumar (2024) shows that Chinese banks undertake a substantial amount of lending to EMDEs from their offices located in major advanced economies or offshore centers. Casanova et al. (2024) note that for China "about 40 percent of their cross-border claims to EMDEs are extended from their home country, while 12 percent are extended from offices in host AEs, and about 43 percent are extended from host offshore centers and the rest from offices in other host EMDEs as of end-2022." Hence banking data on a residence basis (which is included in the NIIP estimates) understates the extent of China's creditor position vis-à-vis these countries, while overstating its creditor position vis-à-vis advanced economies and financial centers.<sup>13</sup> The funding for these bank loans comes in part from the parent bank in China, but affiliates of Chinese banks also issue international debt securities offshore (over \$200 billion outstanding as of the end of 2023, according to the BIS), which—as discussed above—are held at least in part by international investors from advanced economies.

Different sources provide additional evidence on the importance of Chinese lending to emerging and developing economies. These include the contract-and loan-level data painstakingly assembled by AidData (see for instance Parks et al, 2023 and Parks, 2024) which shows how China has become the largest official lender to emerging market economies and developing economies, and which documents the evolution in the pattern of such investment and associated clauses.

A nationality perspective also alters the pattern and volume of exposures for China's external liabilities. Research by Bertaut, Bressler, and Curcuru (2019), Coppola et al. (2021), Clayton et al. (2022, 2023), and Beck et al. (2024) provides estimates of U.S. and euro area holdings of portfolio instruments (both equity and debt) issued by Chinese entities though their offshore affiliates. These estimates are obtained from security-level information on portfolio holdings by US and euro area investors, as well as information on the portfolio holdings of a large share of investment funds. These partner-country

<sup>&</sup>lt;sup>11</sup> Liu (2023) provides examples of international investment operations by CIC and SAFE channeled through Hong Kong-based funds established for the purpose.

<sup>&</sup>lt;sup>12</sup> Offshore lending by Chinese bank affiliates is captured as long as it takes place from affiliates based in economies that report locational banking data to the BIS.

<sup>&</sup>lt;sup>13</sup> For mid-2018, the creditor position of Chinese banks towards EMDEs on a nationality basis was \$919 billion, compared to \$312 billion on a residence basis (Cerutti et al, 2018). In turn, these claims on a residence basis vastly exceed China's other investment claims on EMDEs that we can identify for that period based on publicly available BIS data (the same data that is reported for 2023 in Figure 8).

estimates of claims on Chinese entities identify much larger portfolio investment liabilities on a nationality basis. <sup>14</sup>

Conceptually the issuance of securities offshore by affiliates of domestic companies should be reflected in a country's IIP liabilities, to the extent that the funds being raised offshore are subsequently channeled to the parent company onshore, for instance through "reverse FDI" (a loan by the affiliate to the parent). For bonds, at a consolidated company level the liabilities will be matched by the assets acquired with the proceeds of the bond sale, which could be FDI abroad or domestic investment. For portfolio equity, the market value of entities incorporated abroad should in principle reflect their claims on the profits of the mainland company they are associated with and as such be reflected in FDI claims on China. In practice, as discussed below, this is unlikely to be the case for the equity securities issued offshore by Chinese entities.

The affiliates of Chinese companies issue a large amount of bonds offshore (some \$800 bn as of end-2023), which are held by international investors (and possibly Chinese residents as well). If those securities are included in the bond exposures to China (in addition to those bonds issued by entities resident in China) the overall holdings by US and euro area investors rise considerably. For instance, Bertaut et al. (2019) estimate US holdings of Chinese bonds on a nationality basis to be about \$27 billion in 2022, while holdings on a residence basis are below \$3.5 billion, while Beck et al. (2024) estimate that holdings of Chinese bonds by euro area investors totaled some \$190 billion in 2020, with a similar amount held by non-euro area investors through Irish and Luxembourg investment funds.

In the case of China offshore issuance is not limited to bonds. Foreign residents hold large equity positions vis-à-vis Chinese entities called "Variable Interest Entities" incorporated in the Cayman Islands as well as Hong Kong and listed on stock markets such as the New York Stock Exchange and the Hong Kong stock exchange. As discussed in Whitehill (2017) and Coppola et al. (2022) these entities have a complex structure designed to ensure that they have control over the profits of the onshore company. The structures are designed to skirt official Chinese restrictions on onshore foreign equity investment in telecommunication and other "strategic" companies. Large Chinese firms such as Alibaba and Tencent are prominent examples of these structures. The market value of these positions should be reflected in FDI statistics, to the extent that the listed VIE exercises control on the profits of the onshore company. However, as documented by Coppola et al. (2022) there is a clear disconnect between the stock price of such entities and Chinese FDI liabilities, which suggests that their inclusion in Chinese FDI liabilities statistics is partial at best.

Including equity holdings in offshore-incorporated Chinese VIEs raises substantially the equity exposure of US and European investors to Chinese entities and correspondingly reduce China's net creditor position vis-à-vis the U.S. and the euro area—as we discuss in the next two sections as well. For example, calculations based on Bertaut et al. (2019) suggest that US holdings of offshore-issued Chinese equities amount to around \$420 billion at the end of 2023, against some \$200 billion of holdings of equity claims on entities resident in China. Estimates by Beck et al. (2024) for holdings of offshore-issued Chinese equity at the end of 2020 by euro area investors as well as rest of the world investors holding shares of Irish and Luxembourg funds were both around \$90 billion, vis-à-vis some \$50 billion for each group in holdings of Chinese equities issued onshore. Coppola et al. (2022) argue that outstanding equity from VIEs held by international investors would reduce China's net creditor

<sup>&</sup>lt;sup>14</sup> It would be useful to conduct a similar exercise to help determine the ultimate counterparts of Chinese investment routed through financial centers, but the paucity of reporting by both China and the financial centers such as Hong Kong, Bermuda, the Cayman Islands, and the British Virgin Islands which intermediate a large share of China's financial investment precludes its undertaking.

position by over \$1.1 trillion as of end-2018, an amount which could well be larger for subsequent years given the dynamics of equity prices for these entities.

In sum, a broader perspective that takes into account claims routed through offshore Chinese entities show a much larger creditor position of China vis-à-vis other EMDEs (even though that expansion has slowed in the past 5 years). Accounting for portfolio instruments issued by Chinese entities in offshore centers and held by investors from the main advanced economies reduces the net liabilities of the US and the euro area vis-à-vis China compared to residence-based statistics, especially in light of the market value of shares in VIEs.

#### United States

Highlighting the bilateral patterns of financial trade between the U.S. and the rest of the world is a particularly important endeavor given the centrality of the U.S. in the world financial system, the role of the U.S. dollar as the pre-eminent world reserve currency and key currency of denomination in international trade and finance, the ensuing ability of the U.S. to use financial sanctions against its geopolitical foes.

The United States has become a net external debtor since the end of the 1980s, as a result of persistent current account deficits. Its negative net international investment position (NIIP) has remained modest in relation to GDP during the first decade of the new century, as large net borrowing from the rest of the world was offset by favorable valuation effects, triggered by dollar weakness and stock prices under-performing those in the rest of the world.<sup>15</sup> However, since then the US NIIP has deteriorated sharply, reaching 90 percent of GDP at the end of 2024. A number of papers (Atkeson et al, 2022; Milesi-Ferretti, 2024a) have documented how this deterioration was primarily driven by valuation effects, as the market value of US stocks has soared, and the dollar has appreciated (Figure 10). Figure 11 shows that for many years the U.S. was a net creditor in equity instruments (portfolio equity and FDI) but because of the spectacular increase in the valuation of US equities over the past decade the US net position has turned negative in those categories as well.<sup>16</sup>

The ease of identifying the geographical sources and destinations of US investment differs across asset classes, with more information on portfolio investment (especially on the asset side, where the identification of the counterpart is straightforward) and less information on other investment liabilities as well as FDI. Figure 12 shows the consistency between the bilateral data and the "headline" IIP data. The bilateral data "shortfall" is concentrated in FDI and on the liabilities side also in other investment. The very large gap for FDI is due to the fact that the U.S. estimates bilateral FDI positions only at "historical cost", while the headline estimate for aggregate FDI is calculated at market value.<sup>17</sup> For other investment liabilities we lack an official bilateral breakdown of holdings abroad of US currency, which are estimated to be around \$1.5 trillion (Judson, 2025).

Figure 13 shows a bilateral decomposition of US claims and liabilities at the end of 2023 on the basis of a set of country groups (whose composition is in this chapter's Appendix).

<sup>&</sup>lt;sup>15</sup> For the US, dollar weakness raises the US dollar value of those external assets denominated in foreign currency relative to its external liabilities which are denominated in US dollars.

<sup>&</sup>lt;sup>16</sup> While measurement of the portfolio equity position is more straightforward, it is much more challenging to estimate FDI at market value. As discussed in Milesi-Ferretti (2024a) the methodology adopted by the BEA likely overstates the market value of US FDI liabilities and understates the value of its assets. Alternative measures (including both current cost and historical cost estimates) show the US as a net creditor in FDI instruments.

<sup>&</sup>lt;sup>17</sup> The difference in valuations relative to market value estimates are extreme: the historical cost estimate for 2023 was \$5.4 trillion (directional basis) while the market value was estimated at \$14.8 trillion (asset-liability basis) and the current cost estimate at \$8.1 trillion.

- Claims (first panel) are concentrated in portfolio instruments (especially equity) and are overwhelmingly vis-à-vis other advanced economies, especially the euro area and "Commonwealth" countries, which include in particular Canada and the United Kingdom. The US also reports large claims vis-à-vis Caribbean countries and advanced Asia (which includes Japan, Korea, Singapore, and Taiwan). Claims on emerging markets and developing economies are substantially smaller.
- Liabilities (second panel) are concentrated in portfolio instruments. Debt securities play a much larger role than they do on the asset side, given that US bonds, especially those issued by the U.S. Treasury, are the lynchpin of global reserves and also held widely by private sector investors. Portfolio equity liabilities are also very large given the runup in US stock prices during the past 15 years. As on the asset side the most important financial counterparts are advanced economies of the euro area and Commonwealth, followed by advanced Asia, whose holdings are more concentrated in bonds. Greater China holds substantial portfolio debt claims vis-à-vis the U.S., but its holdings of equity instruments (both portfolio and FDI) is very modest.

In Figure 14 we depict the net position by region, and we compare it to the one outstanding in 2017. The comparison shows that greater China was the largest U.S. net creditor in 2017, but now all four groups of advanced economies (euro area, advanced Asia, Commonwealth, and other advanced Europe) are larger creditors. This reflects three factors. The first is the already-documented shift in the pattern of foreign investment by China. Despite running large bilateral current account surpluses visà-vis the United States, China has invested abroad in other destinations—and is also holding more U.S. financial instruments through foreign custodians, and those do not feature as liabilities to China in U.S. statistics (Setser, 2023a, 2024). A second factor is the composition of investment: countries that were holding equity instruments benefited from very large capital gains on their U.S. holdings, while holders of debt securities experienced capital losses because of higher long-term interest rates. And a third factor has been net investment flows during this period.

These data have some known shortcomings. Two are particularly salient. The first is that it is difficult for U.S. statisticians to infer the ultimate holder of U.S. financial instruments held in custody outside the United States. The second is that residence-based statistics can fail to properly capture bilateral exposures: for instance, if a U.S. resident buys a bond issued in the Netherlands by the Brazilian oil company Petrobras U.S. statistics will record a claim on the Netherlands, rather than on Brazil.

In the remainder of this section, we try to address these shortcomings, albeit in a partial way (with work on the subject still ongoing). Appendix 2 contains a more comprehensive discussion of the data adjustments implemented so far. In short:

1. For portfolio investment assets (equity and debt) we make use of data by Bertaut, Curcuru, and Bressler (2019) which provide a re-allocation of US investment based on the nationality of the entity issuing the security held by the US investor, as opposed to the residence captured in balance of payments statistics. The most substantial changes involve an almost complete re-allocation of the massive US holdings in the Caribbean (\$2.6 trillion) to domestic holdings (for instance US-held shares of US-based hedge funds domiciled in the Cayman Islands and investing in the US) or to claims on China (reflecting the value of VIEs based in the Caribbean discussed in the previous section). It also involves a notable reduction in US claims on the euro area (Irish and Luxembourg funds with holdings outside the euro area as well as US companies incorporated in Ireland following tax inversions).

- 2. For portfolio investment liabilities (equity and debt), we use a combination of partner-country CPIS data (adjusted in some cases to account for foreign exchange reserves held in US securities) and US-reported data to correct for the above-mentioned "custodial bias", which tends to inflate liability positions vis-à-vis financial centers hosting custodians (such as Belgium, Luxembourg, and the United Kingdom). In ongoing work, we are also aiming to provide a re-allocation of U.S. portfolio liabilities vis-à-vis Cayman Islands investment funds, which are likely to be in good part liabilities to U.S. funds domiciled there, and hence ultimately domestic liabilities.
- 3. For FDI liabilities we use U.S. published data on the source of direct investment in the United States from an ultimate beneficial owner (UBO) basis. Changes are less dramatic than those for portfolio instruments and involve primarily a reduction in liabilities to euro area countries and Caribbean economies, with some of these re-allocated to domestic investors and other to investors from Canada, Japan, and emerging market economies.

There are some notable changes in the data. In particular, the liability position vis-à-vis Caribbean financial centers (primarily the Cayman Islands) balloons. This occurs primarily because US portfolio claims on the Caribbean are reassigned to the economy in which the funds are invested (oftentimes the United States, and also China for portfolio equity, as discussed above) while this "re-allocation" was not completed yet for US portfolio liabilities vis-à-vis the Caribbean. It is very likely that many of the Caribbean-based investment funds are U.S. funds with U.S. investors, which in turn hold large U.S. claims.<sup>18</sup> Hence a sizable share of the US portfolio liabilities to the Caribbean measured by the bars would be re-classified as domestic liabilities. A smaller share would be allocated to foreign investors. This could be based on the reported pattern of investment in equity instruments in the Cayman Islands (which sees Japan as the second largest investor after the United States) but given the importance of positions by investment funds the holdings attributed to "other" foreign investors (whose nationality cannot be ascertained) would rise further.

In sum: the US financial linkages are predominantly vis-à-vis advanced economies, notwithstanding the sizable amount of foreign exchange reserves by emerging markets held in U.S. securities. Other advanced economies are the largest U.S. net creditors, with European and Asian advanced economies playing a particularly prominent role. These creditor positions have been boosted by the rising value of U.S. equities.

#### TO BE COMPLETED

#### Euro Area

The structure of the external balance sheet of the euro area is more complex to interpret than the one of the United States, given the importance of financial centers such as Ireland, Luxembourg, and the Netherlands. Investment funds in Ireland and Luxembourg and pass-through entities in the Netherlands such as Special Purpose Entities contribute to euro area external assets and liabilities even when, for instance, an Irish fund whose shares are held by non-euro area residents invests outside the euro area.

<sup>&</sup>lt;sup>18</sup> The data depicted in the bottom panel of Figure 13 also incorporate the massive upward revision to holdings of US securities reported by the Cayman Islands in 2023: for equities their CPIS-reported holdings exceed USreported liabilities by around \$230 billion, while the difference for debt securities exceeds \$1 trillion. This is likely to entail a future restatement of U.S. portfolio liabilities vis-à-vis the Cayman Islands to better capture Cayman hedge funds holdings of U.S. Treasury securities for the so-called "basis trade."

Figure 16 shows the net international investment position (NIIP) of the euro area by financial instrument, in percent of GDP. The position has been improving over time, thanks to sizable current account surpluses. Because of the size of the investment fund industry, whose liabilities are almost entirely equity but whose assets are a combination of equity securities, debt securities, and other investment, the euro area has a negative net position in portfolio equity instruments, offset by a positive position in portfolio debt and in recent years FDI, in addition to hefty foreign reserves (including \$900 bn in gold holdings at the end of 2024).

Figure 17 provides a bilateral breakdown of the NIIP for 2023, with the exception of foreign exchange reserves.<sup>19</sup> It shows that the euro area is a large net creditor vis-à-vis the US, as we have already showed in the previous section. Including estimates of claims on the US in the form of foreign exchange reserves would further boost the total. It is also a net creditor vis-à-vis Commonwealth countries, emerging Europe, and other large emerging market economies excluding China.<sup>20</sup> It is instead a net debtor vis-à-vis "other advanced Europe"<sup>21</sup>. But the largest "debtor" bar is driven by lack of information on the residence of investors in euro area portfolio equity instruments, notably shares in investment funds from Ireland and Luxembourg. As discussed in Milesi-Ferretti (2024b) most of those fund shares are sold in the United Kingdom, and while UK holdings of euro area shares are likely underreported the lion's share is likely to be held by international investors.

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### Financial Fragmentation: Macroeconomic Repercussions

The analysis conducted so far has highlighted the structure of external portfolios for the main countries in each geopolitical block, as well as the relative weight of different parts of the world economy in cross-border asset holdings. In our view, these are essential inputs to think about the potential ramifications of external portfolios becoming more fragmented along geopolitical lines, as well as the implications of the changes witnessed so far.

The literature on cost and benefits of international financial integration is the logical starting point for thinking about the potential repercussions of financial fragmentation. The welfare gains and costs of international financial integration have been extensively debated. On the one hand, financial openness can enhance welfare by enabling more efficient capital allocation, facilitating risk sharing, and promoting financial development and growth (Fischer 1997, 2003; Henry 2007; Obstfeld 1994, 1998; Rogoff 1999; Summers 2000; Kose et al., 2006). Capital flows into capital-scarce countries reduce their cost of capital and increase real investment, and the resulting growth permanently raises living standards (Bekaert et al. 2005; Chari and Henry 2004, 2008; Chari et al. 2021b, 2022c). For example, access to international capital markets allows countries to smooth consumption and invest in productive opportunities that might otherwise be constrained by domestic savings. However, empirical studies also highlight potential costs, including increased vulnerability to external shocks, capital flow volatility, and the risk of financial crises (Bhagwati, 1998; Rodrik, 1998; Edison et al. 2002, Eichengreen 2001, Gourinchas and Jeanne 2006, Kose and Prasad 2012, Kose et al. 2009). These concerns are particularly salient for emerging markets with underdeveloped financial institutions or weak macroeconomic frameworks, exposing them to shocks that originate outside their domestic

Mexico, India, Indonesia, and South Africa. As we saw in Box 1 the euro area is a net debtor vis-à-vis Russia, but the Figure shows that it is a large net creditor vis-à-vis other countries in emerging Europe.

<sup>21</sup> Czechia, Denmark, Norway, Sweden, and Switzerland.

<sup>&</sup>lt;sup>19</sup> The choices for country group counterparts are also dictated by data availability: the European Central Bank provides bilateral IIP data by instrument for 26 countries as well as for a few groups such as offshore centers.
<sup>20</sup> Those identified in euro area bilateral data and hence included in that aggregate are Argentina, Brazil,

economies. Sudden stops and capital flight present pressing challenges for policy makers and investors (Forbes & Warnock 2012, 2021; Miranda-Agrippino and Rey 2020b; Rey 2013).

Regardless of where we land on the debate about the welfare effects of financial integration, trade and financial integration are inextricably intertwined. Indeed, there is a rich literature exploring the interconnectedness and co-evolution of trade and financial integration emphasizing how the two forms of globalization often reinforce each other (Rajan and Zingales 2003; Kose et al. 2009; Claessens and Laeven 2003; Beck 2002; Kisling et al. 2022, and many others). The fragmenting landscape of international trade will have important repercussions for international finance. Reshaping the international trading system cannot take place without fundamentally reshaping the international monetary system--the notion that trade relations can be disrupted without affecting capital flows is profoundly unrealistic. The dramatic financial market response in the days following the April 2 tariff announcement by the U.S. administration bears clear testimony to this fact.

How can the macroeconomic implications of increased financial fragmentation be quantified? Largescale global economy models have a structure better suited to quantify repercussions occurring through trade fragmentation than those occurring through financial fragmentation. This occurs because the modeling of trade linkages is generally much more detailed than the modeling of financial linkages—and models with a more articulated portfolio structure typically have a simplified version of the underlying macroeconomic factors. Consistent with these factors, most estimates of the macroeconomic implications of global fragmentation have focused so far on trade. However, there are many channels through which financial fragmentation can impact macroeconomic performance both at the country level and globally, and these are discussed throughout this report. In this chapter we focus on risks associated with changes in the portfolio structure of countries.

If we rely on the traditional notion of geopolitical blocks, the evidence provided in this chapter makes it clear that the U.S.-centered block has a much more dominant position in global finance than in global trade. One logical implication is that it is more difficult for a China-centered block to meaningfully reduce its financial linkages from the West, while conversely the loss of "diversification benefits" of increased fragmentation of global portfolios for the Western block would arguably be less severe compared to the impact of much-reduced trade linkages. Nevertheless, a Box in IMF (2023a) suggests that the costs associated with reduced portfolio diversification could be tangible even for G-7 economies, particularly in scenarios when fragmentation becomes more extreme. Of course, the costs would be larger for the other block, given the dominance of the U.S.-centered block. For countries that are not formal part of blocks, there could still be negative implications related to potentially higher volatility and the risk that global action would be more difficult to coordinate to respond to global shocks, as we discuss in Chapter 4.

The category of cross-border holdings likely to entail more important macroeconomic consequences is arguably foreign direct investment. FDI plays a pivotal role in the global allocation of production, technological spillovers across countries, and the control of key natural resources, and has closer ties to trade than portfolio investment or other investment.<sup>22</sup> Indeed, a sizable share of global trade occurs through multinational corporations, between the parent company and its foreign affiliates, or within such affiliates. Model-based estimates of the impact of increased fragmentation in FDI do not generally rely on direct modeling of the linkages being affected but rather assume that the weakening of such linkages has consequences such as reduced productivity and imports of investment goods. These

<sup>&</sup>lt;sup>22</sup> Unfortunately, given the importance of FDI, international statistics on bilateral linkages across countries are difficult to interpret given the complex internal structure of multinational corporations that often route investment through several foreign affiliates before the investment reaches their ultimate destination.

assumptions underpin the estimates of the output costs caused by FDI fragmentation reported in IMF (2023b). The costs are generally larger for the China block, which is primarily composed of emerging markets, given their loss of access to investment from advanced economies, and meaningful for the global economy as well, with long-term global output lower by up to 2 percent compared to a baseline no fragmentation scenario. In reality finance and trade are closely interlinked, as already noted above, and rising fragmentation is likely to materialize along both dimensions and hence entail larger output costs.

More detailed data-based analysis of these issues is hampered by the nature of FDI data, already noted earlier in the chapter. International statistics on bilateral linkages across countries, which are based on the immediate destination of FDI for assets, are difficult to interpret given the complex internal structure of multinational corporations that often route investment through several foreign affiliates before the investment reaches their ultimate destination. Furthermore, the balance of payments data on FDI, including at the bilateral level, is not limited to greenfield investment or mergers and acquisitions, but also involves purely financial operations driven by tax reasons, often conducted through special purpose entities, with no macroeconomic repercussions.

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## Box 1. Russia's external portfolio: increasing fragmentation

At the end of 2013, the Russian economy was getting increasingly integrated with global financial markets. Benefiting from high oil prices, it was running substantial current account surpluses, which made it a net creditor vis-à-vis the rest of the world, despite an undercount of asset accumulation by residents abroad due to historically large capital flight. The Russian economy was also receiving significant financial inflows, especially in the form of FDI as well as other investment (loans and deposits).

The pattern changed sharply starting in 2014. Following the invasion and annexation of Crimea the Russian economy was subject to sanctions, and during the year oil prices declined, further denting macroeconomic prospects. As a consequence, financial inflows and outflows turned sharply negative during 2014-15, with particularly heavy losses of foreign exchange reserves in the last quarter of 2014 (Figure B1).

As discussed in Milesi-Ferretti (2022), foreign financial inflows remained very modest even in subsequent years, as Russian policymakers sought to increase financial autarky, including by repaying a sizable portion of external debt (which declined by over \$200 bn between 2013 and 2015). In subsequent years inflows remained very low—total external liabilities at the end of 2020 were some \$300 bn below those at the end of 2013. Financial claims increased with a rapid build-up of foreign exchange reserves, which exceeded \$600 bn by the end of 2021. During this period their composition changed sharply, with the share of the euro and the dollar falling sharply, and the share of gold and RMB rising (Figure B3).

After the invasion of Ukraine in early 2022, financial sanctions froze a sizable share of Russia's foreign exchange reserves, primarily in euros, held in custody at Euroclear in Belgium, foreign investors reduced their portfolio and FDI claims on Russia, and Russia also scaled back its FDI and portfolio holdings overseas. With high oil and gas prices Russia ran a very large current account surplus, which resulted in a rapid accumulation of other investment assets abroad (Figures B1 and B2).

By late 2022 Russia's financial ties with Western economies were substantially reduced and their imports from Russia were scaled back. Russia continued to run a large current account surplus, redirecting its oil exports to countries such as China and India, and accumulated additional net assets overseas, again the form of other investment assets, while the scaling down of FDI and portfolio ties continued.

But the extent and geographical pattern of integration changed substantially. By the end of 2024, external liabilities had almost halved in dollar terms compared to 2019, as a result of exchange rate depreciation (most liabilities are denominated in domestic currency) and reduced valuations.<sup>23</sup> On the asset side, Russian claims on BIS-reporting banks fell substantially, after adjusting for the increase in central bank holdings resulting from the maturing of frozen foreign exchange reserves held as securities.<sup>24</sup>

<sup>&</sup>lt;sup>23</sup> Net inflows were close to zero over the 2020-24 period, on account of strong inflows during 2021.

<sup>&</sup>lt;sup>24</sup> The principal from those matured securities is classified as a claim by the Russian central bank on Belgian banks.

Figure B5 documents the decline in the role of the euro area and the United States as Russia's financial counterparts over the past few years.<sup>25</sup> As discussed in Milesi-Ferretti (2024) it is now much more difficult to track the allocation of Russian assets abroad: Russia has stopped reporting data on their bank claims and liabilities to the BIS and has stopped participating in the IMF's FDI and portfolio investment surveys (CDIS and CPIS, respectively). Because of sanctions many Russian financial transactions are routed outside the "Western" financial system. Aggregate IIP data indicates a rapid build-up in trade credits (included in in other investment under "other accounts receivable", which reached \$180 billion at the end of 2024. As argued by Milesi-Ferretti (2024) and Cocozza and Savini Zangrandi (2025) these could reflect a build-up of trade credits vis-à-vis countries against which Russia is running large trade surpluses. Partner-country trade data (Figure B6) shows that over 2023-24 Russia's trade surplus has been primarily vis-à-vis emerging and developing economies, with the surplus vis-à-vis India growing particularly rapidly. Financial linkages with China are also likely to have increased, but the absence of bilateral data on other investment makes it difficult to provide comprehensive estimates.

<sup>&</sup>lt;sup>25</sup> Figure B5 exaggerates the role of the euro area as a financial counterpart to Russia because of the role of Cyprus in intermediating Russia's foreign direct investment. Russia's FDI claims and liabilities vis-à-vis Special Purpose Entities incorporated in Cyprus were around \$150 billion in 2021 (some 9 percent of assets and 13% of total liabilities). These claims capture mostly round-tripping.

## Appendix A1. Country Groups

#### Geopolitically close countries, based on UN General Assembly voting

**US:** Israel, *United Kingdom*, Micronesia, France, Czech Republic, Hungary, Ukraine, Canada, Lithuania, Australia, Croatia, Germany, Romania, Slovakia, Italy, Poland, Latvia, Denmark, Estonia, Bulgaria, Sweden, Monaco, Albania, Finland, *Netherlands, Luxembourg*, Montenegro, Spain, *Belgium*, Portugal, Slovenia, Greece, Macedonia, Iceland, Austria, Korea, Georgia, Marshall Islands, Norway, Bosnia and Herzegovina, Moldova, *Andorra*, New Zealand, *San Marino, Malta, Ireland*, Liechtenstein, Japan

**China:** *Bahrain*, Iraq, Libya, Sri Lanka, Mauritania, Indonesia, Turkmenistan, Nigeria, Lao People's Dem. Rep, Saudi Arabia, Uzbekistan, São Tomé and Príncipe, Brunei Darussalam, Equatorial Guinea, Lebanon, Belarus, Jordan, Somalia, Kuwait, Malaysia, Uganda, Djibouti, Niger, Guinea-Bissau, Bolivia, United Arab Emirates, Tajikistan, Qatar, Oman, Namibia, Comoros, Vietnam, Egypt, Tunisia, Azerbaijan, Algeria, Senegal, Lesotho, Bangladesh, Mongolia, Burkina Faso, Maldives, Congo, Angola, Mali, South Africa, Cambodia, Russia

**Note:** Italic font indicates countries classified as "financial centers" by Lane & Milesi-Ferretti (2018), as further described in Annex C.

## Geographically close countries geographically close, quartiles of countries based on distance between capital cities

**US:** Antigua and Barbuda, Bahamas, Belize, Barbados, Canada, Colombia, Costa Rica, Cabo Verde, Cuba, Dominican Republic, Ecuador, Gambia, United Kingdom, Granada, Guatemala, Guyana, Honduras, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, Morocco, Mexico, Mauritania, Nicaragua, Panama, Peru, Senegal, El Salvador, Suriname, Trinidad and Tobago, Venezuela, St. Vincent and the Grenadines

**China:** Afghanistan, United Arab Emirates, Armenia, Azerbaijan, Bangladesh, Bahrain, Brunei Darussalam, Micronesia, Georgia, Indonesia, India, Iran, Iraq, Japan, Kazakhstan, Kyrgyzstan, Cambodia, Korea, Kuwait, Laos, Sri Lanka, Maldives, Myanmar, Mongolia, Malaysia, Nepal, Oman, Pakistan, Philippines, Palau, Qatar, Russia, Singapore, Thailand, Tajikistan, Turkmenistan, Uzbekistan, Vietnam

**Note:** The country classification as geographically close to the US or China is based on the distance between the capital cities from the CEPII database (Mayer and Zignago (2011).

#### **Financial Centers**

The classification of financial centers follows the one by Lane and Milesi-Ferretti (2018). Economies are selected on the basis of their ratios of external assets and liabilities to GDP. For advanced economies these include Belgium, Hong Kong, Ireland, Luxembourg, Netherlands, Singapore, Switzerland, UK.

Other emerging market economies with similar features and small financial centers include Bahrain, Cyprus, Macao, Malta, Andorra, Bahamas, Barbados, Bermuda, British Virgin Islands, Cayman Islands, Curacao, Gibraltar, Guernsey, Isle of Man, Jersey, Mauritius, Netherlands Antilles, Panama, San Marino, Turks and Caicos.

#### Country groups for bilateral analysis of US position

Euro Area: Austria, Belgium, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovak Republic, Slovenia, Spain.

Advanced Asia: Japan, Korea, Singapore, Taiwan

Commonwealth: Australia, Canada, New Zealand, United Kingdom (plus Isle of Man, Guernsey, and Jersey)

Other advanced economies: Czech Republic, Denmark, Iceland, Israel, Norway, Sweden, Switzerland

Greater China: Mainland China, Hong Kong, Macau.

The remaining groups (Caribbean, emerging Asia, Middle East, Latin America) are regional.

## Appendix A2. U.S. data on a partial nationality basis

The discussion of statistics which allocate US holdings as well as US liabilities to the country of the ultimate investor or issuer of the relevant financial instrument is limited to portfolio investment on the asset side and FDI on the liabilities side, because of data availability constraints.

For portfolio assets, Bertaut, Curcuru, and Bressler (2019) provide a re-allocation of US investment

based on the nationality of the entity issuing the security held by the US investor, as opposed to the residence captured in balance of payments statistics. For **portfolio equity** (see figure), the most substantial changes involve an almost complete reallocation of the massive US holdings in the Caribbean (\$2.6 trillion) to domestic holdings (for instance USheld shares of US-based hedge funds domiciled in the Cayman Islands and investing in the US) or to claims on China (reflecting the value of VIEs



based in the Caribbean). It also involves a notable reduction in US claims on the euro area (Irish and Luxembourg funds with holdings outside the euro area as well as US companies incorporated in Ireland following tax inversions). Overall, holdings in the euro area decline from \$2.9 trillion to \$2.1 trillion, holdings that become domestic amount to \$2.5 trillion, and claims on China rise from \$300 billion to \$756 billion.

For **portfolio debt** (see figure) the most notable change is once again the reclassification of portfolio debt claims on Caribbean countries as domestic claims, together with a relatively modest increase in portfolio debt claims on China as well as other emerging market economies, reflecting US holdings of bonds issued offshore by corporate entities in these countries (see Coppola et al, 2021).

The other corrections compared to the statistics depicted in Figures 12 and 13 are for portfolio liabilities and FDI in



the U.S. For **portfolio liabilities**, we make use of partner country data on their holdings of portfolio instruments in the U.S., coupled with estimates of their reserve holdings in U.S. bonds<sup>26</sup>, to correct some of the "custodial bias" inflating U.S. liabilities vis-à-vis countries such as Belgium, Luxembourg, and the United Kingdom. In ongoing work, we are also constructing estimates of U.S. portfolio liabilities

<sup>&</sup>lt;sup>26</sup> See Ito and McCauley (2020) and Arslanalp et al. (2022).

vis-à-vis the Cayman Islands which exclude claims by U.S. entities based in that economy. An important share of holdings of U.S. securities by Cayman Islands funds are likely to be domestic US holdings on an ultimate investor basis, consistent with the reallocation of claims on Cayman entities to domestic claims on the portfolio asset side. <sup>27</sup> Another important correction is for holdings by Luxembourg entities (mostly investment funds) which amounted to around \$1.8 trillion in 2023. The analysis in Beck et al. (2024), which makes use of fund-level data as well as of the euro area SHSS database, suggests that an important fraction of those claims is on behalf of non-euro area residents, but the data do not allow a more precise geographical allocation. A similar argument can be applied to some of the US-reported claims from the United Kingdom—US-reported bilateral portfolio liabilities exceed UK-reported bilateral portfolio assets by \$1.5 trillion. As a result of these corrections, some U.S. portfolio liabilities are re-classified as domestic, while others are attributed to non-identified countries.

As mentioned in the section on residence-based statistics, the US also publishes bilateral data on its

FDI liabilities on an ultimate beneficial owner (UBO) basis, which takes into account the nationality of the ultimate parent company when there is a chain of control for US affiliates. The table below compares the holdings according to this measure with those based on the residence of the immediate investor. The UBO statistics show a 15% reduction in claims by euro area countries (with a large scaling down of creditor positions in Luxembourg and the Netherlands), as well as lower claims by Caribbean economies and other advanced economies in Europe (reflecting reduced claims by Switzerland). We see instead claims by US firms as well as larger claims by Commonwealth countries (Canada), advanced Asian economies (Japan in particular), and emerging market economies.

# FDI in the US, 2023 billions US\$, historical cost basis

	Immediate	Ultimate
	investor	beneficial owner
Euro Area	2,234	1,911
Commonwealth	1,416	1,505
Other adv. EUR	545	457
Adv. Asia	818	941
Caribbean	152	77
Greater China	46	62
Middle East	50	73
Latin America	62	122
Emg Asia	14	23
United States	0	163
Other	57	60

<sup>&</sup>lt;sup>27</sup> For 2023 Cayman Islands investment funds reported holdings of US equity and bonds amounting to \$3.86 trillion.

As mentioned in the section on residence-based statistics, the US also publishes bilateral data on its

FDI liabilities on an ultimate beneficial owner (UBO) basis, which takes into account the nationality of the ultimate parent company when there is a chain of control for US affiliates. The table below compares the holdings according to this measure with those based on the residence of the immediate investor. The UBO statistics show a 15% reduction in claims by euro area countries (with a large scaling down of creditor positions in Luxembourg and the Netherlands), as well as lower claims by Caribbean economies and other advanced economies in Europe (reflecting reduced claims by Switzerland). We see instead claims by US firms as well as larger claims by Commonwealth countries (Canada), advanced Asian economies (Japan in particular), and emerging market economies.

## FDI in the US, 2023

billions US\$, historical cost basis

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	investor	beneficial owner
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Emg Asia	14	23
United States	0	163
Other	57	60

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Source: authors' calculations based on Milesi-Ferretti, 2025, The External Wealth of Nations Database.



Figure 3. Shares of outstanding global external assets by different country groups





Figure 4. Shares of outstanding global external assets by different country groups



Figure 5. External assets and liabilities of emerging economies: the role of China

Emerging markets: external liabilities (billions US\$, 2023)





Figure 6c: International Financial Integration by countries geopolitically close to the US and China, excluding offshore financial centres (percent of world GDP) Figure 6d: International Financial Integration by countries geographically close to the US and China, excluding offshore financial centres

(percent of world GDP)



Source: External Wealth of Nations and ECB staff calculations.

Notes: International financial integration ratio is the sum of stock of total gross external financial assets and liabilities. Latest observation: 2023



Source: External Wealth of Nations and ECB staff calculations.

Notes: International financial integration ratio is the sum of stock of total gross external financial assets and liabilities. Latest observation: 2023

Geographically close to China
Figure 7A: Net International Investment Position (NIIP) by countries geopolitically close to the US and China (percent of world GDP)



Source: External Wealth of Nations and ECB staff calculations.

Notes: Net International Investment Position (IIP) is obtained taking the difference between global external financial assets and liabilities. NIIP does not sum to zero due to statistical discrepancies and omissions.

Latest observation: 2023

Figure 7B: Net International Investment Position (NIIP) by countries geographically close to the US and China (percent of world GDP)



Source: External Wealth of Nations and ECB staff calculations.

Notes: Net International Investment Position (IIP) is obtained taking the difference between global external financial assets and liabilities. NIIP does not sum to zero due to statistical discrepancies and omissions.

Latest observation: 2023



Figure 8. China's bilateral claims and liabilities, 2023



Source: authors' calculations based on BIS, locational banking statistics; IMF, Coordinated Direct Investment Survey; IMF, Coordinated Portfolio Investment Survey; Treasury International Capital data.



Figure 9. China: change in net external position, 2017-23 (by counterpart on a residence basis)

Source: authors' calculations based on BIS, locational banking statistics; IMF, Coordinated Direct Investment Survey; IMF, Coordinated Portfolio Investment Survey; Treasury International Capital data.



Figure 10. The US Net External Position and Cumulative Borrowing

(percent of US GDP)

Sources: authors' calculation based on international transactions and international investment position data from the Bureau of Economic Analysis.



Figure 11. US Net International Investment Position by Financial Instrument

(percent of GDP)

Source: authors' calculations based on data from the US Bureau of Economic Analysis.





Source: authors' calculations based on BIS, locational banking statistics; IMF, Coordinated Direct Investment Survey; IMF, Coordinated Portfolio Investment Survey; Treasury International Capital data.



Figure 13. U.S. external assets and liabilities: geographical patterns

A. U.S. claims







Figure 14. US net external position by region: 2017 vs 2023

Source: authors' calculations based on BIS, locational banking statistics; IMF, Coordinated Direct Investment Survey; IMF, Coordinated Portfolio Investment Survey; Treasury International Capital data.



Figure 15. Alternative estimates of U.S. net external position by region

#### B. Partial nationality correction



Source: authors' calculations based on BEA data, CPIS, CDIS, TIC data, Bertaut et al. (2019) and Beck et al. (2024) (see Appendix 2).

#### Figure 16. Euro Area: Net International Investment Position, 2013-24

Percent of GDP





Figure 17. Euro Area: Net Creditor and Debtor Positions, 2023

Source: authors' calculations based on bilateral IIP data from the European Central Bank.









Figure B2. Russia's net international investment position, 2010-2024 (billion US\$)





Source: authors' calculations based on data from the Central Bank of Russia.





(billions of US\$)

Note: the brown area represents claims on BIS-reporting countries that disclose their bilateral liabilities vis-à-vis Russia, while the blue area represents countries (such as China and India) that report data to the BIS but do not disclose bilateral positions.

Source: authors' calculation based on BIS, locational banking statistics.



Figure B5. Russia: financial counterparts



Source: authors' calculation based on data from the European Central Bank, US Treasury, Central Bank of Russia, CPIS, CDIS, and BIS.

Figure B6. Russia: trade balance in goods, 2019-24



Source: IMF, Direction of Trade Statistics.

## **Chapter II: The Changing Role of International Currencies**

April 22, 2025

#### PRELIMINARY AND INCOMPLETE; DO NOT CITE

This chapter examines the role of international currencies in four areas of the international financial system: cross-border lending, holdings of official foreign exchange reserves, foreign exchange (FX) markets, and trade invoicing. Recent events, particularly the simultaneous rise in yields on U.S. government bonds and depreciation of the U.S. dollar against other major international currencies, have led some to question whether the status of the U.S. dollar as the dominant global currency may be ending.<sup>1</sup> Were it to occur, such a shift would involve major changes across all four areas of the international financial system. This chapter thus provides a framework for assessing the significance of recent events as well as context that puts recent events in perspective.

Across the four areas analyzed in this chapter, the U.S. dollar remains the preeminent international currency. Although the international role of the euro has remained flat in recent years, the international use of several other currencies, notably the RMB, has increased. A key question about the increasing use of currencies other than the historically dominant ones is therefore whether that shift is driven by geopolitical fragmentation or economic factors like financial market development, demand for diversification, and structural change in the global economy. Drawing on a wide range of recent academic research, this chapter finds that the shifts

<sup>&</sup>lt;sup>1</sup> Market participants, the financial press, and academic researchers (e.g. <u>Jiang et al 2025</u>) have all hypothesized that recent events may signal a shift in the international role of the dollar. See for example, "<u>Is the world losing faith in the almighty US dollar?</u>" Financial Times, 17 April 2025.

underway in the use of international currencies do appear to reflect economic rather than geopolitical forces, with one exception: changes in patterns of trade invoicing.

The various roles played by international currencies are mutually reinforcing. But that complementarity also implies that fragmentation in one area of the international financial system that erodes the position of international currencies can undermine their function in other parts of the international financial system.<sup>2</sup> As a result, the signs of fragmentation that this chapter identifies in patterns of currency invoicing bear watching closely. Additionally, this chapter's analysis of offshore dollar funding markets and holdings of U.S. dollar assets highlights the ways in which elevated geopolitical tension between the U.S. and countries with which it has historically been closely aligned would rapidly expand the possible scope for financial fragmentation.

## **Cross Border Lending**

This section examines the role of international currencies in cross-border lending, first looking at cross-border issuance of debt securities and then discussing offshore dollar funding markets.

Nearly 50 percent of international debt securities are denominated in dollars, far higher than the 25 share of global GDP accounted for by the U.S. economy.<sup>3</sup> This asymmetry is plotted in Figure 1, where the U.S. appears well above the 45 degree line, highlighting the U.S. dollar's preeminent role as an international currency well beyond what its share of global output would imply. As Figure 1 makes clear, the euro and the pound also play an outsized role in international finance, although their footprint in international bond issuance is smaller in absolute terms. As will be discussed in detail later in this chapter, the international role of the Chinese renminbi (RMB) has increased significantly over the last decade, but remains small not only in absolute terms, but also relative to China's share of world output.

<sup>&</sup>lt;sup>2</sup> A range of models generate the interdependence of currency dominance across areas of the international financial system, including those developed in He et al (2016); Coppola et al (2024); Gopinath et al (2020); Gopinath and Stein (2021).

<sup>&</sup>lt;sup>3</sup> This discussion focuses on gross cross-border debt liabilities, but statistics on the currency composition of total gross cross border portfolio debt positions (that is, the summed combined assets and liabilities for FDI, portfolio, and other assets) from Allen and Juvenal (2024) gives broadly similar shares.

#### Figure 1



The preeminent role of the dollar in international financial markets in part reflects the preferences of major international investors, who are "uniquely willing" to hold U.S. dollar assets (Maggiori et al 2020).<sup>4</sup> However, that preference for dollar assets is not immutable. Rather, it is an equilibrium that depends on a range of factors, including the currency's use in other areas of international finance (Gopinath and Stein 2021). Financial fragmentation, for example due to policy actions motivated by geopolitical concerns, could spark a transition to a new equilibrium with new international currencies joining or supplanting the current ones.

### Rising local currency issuance by EM sovereigns

While the U.S. dollar retains its dominant status as a currency of issuance, emerging market (EM) sovereigns, which are an important subset of international issuers, have in fact shifted away from issuing debt in dollars towards issuance in local currency, as shown in panel (a) of Figure 2 (Onen et al 2025). As late as 2005, local currency debt made up only around six percent of EMs' total debt outstanding, but the share now stands at over 20 percent, not far off that of developed markets (Allen and Juvenal 2024).

<sup>&</sup>lt;sup>4</sup> Clayton et al (2024) propose a novel quantitative measure of international currencies' respective reputation as international safe assets; the resulting ranking resembles the rankings derived from other dimensions of international currencies.

Importantly, this shift towards local currency issuance does not signal financial fragmentation, however, as it has coincided with increased holdings of EM local currency debt by foreign investors (panel b of Figure 2). Rather, greater issuance in EM local currency debt reflects greater macroeconomic and economic policy stability in the EMs, advances in the development of domestic financial markets in EMs, and a desire for diversification on the part of international investors. The rise of local currency debt issuance by EMs highlights the importance of distinguishing between shifts in the role of international currencies that reflect the evolution of the international financial system and changes that constitute evidence of geopolitically driven financial fragmentation.



Panel (a)





[Figures from <u>Onen et al (2022</u>)]

## International dollar funding markets

The above examination of cross-border issuance of debt securities, the dollar's role was quantitatively greater than that of other international currencies; however, there is one area in which the dollar plays a *qualitatively* different role than other currencies: offshore dollar funding markets, in which non-U.S. firms and financial institutions obtain financing in U.S. dollars from

non-U.S. lenders. In other words, offshore dollar funding markets involve cross border lending denominated in U.S. dollars despite the fact that neither party is from the U.S., a configuration that sets the dollar apart from other international currencies. Offshore dollar funding flows are large, with dollar liabilities of non-U.S. banks exceeding \$12 trillion. Not only is this large in absolute terms, but it is also large relative to the total liabilities of U.S. banks (around \$25 trillion). The sheer size of offshore U.S. dollar funding markets, along with the fact that there is no real analogue even for other major international currencies, highlights the centrality of the U.S. dollar in the international financial system.

At that same time, offshore dollar funding markets are, in an important way, particularly vulnerable to geopolitical fragmentation. The smooth functioning of these markets crucially depends on the willingness of the Federal Reserve to provide liquidity in times of stress via swap lines extended to major non-U.S. central banks (Choi et al 2021). These dollar swap lines are discussed in detail in Chapter IV of this report. If the swap lines were no longer made available due to geopolitical divisions between the U.S. and swap line recipients, or if market participants attached significant probability to their termination, the risk of participating in offshore dollar funding market would rise substantially. In turn, participation would likely fall, significantly eroding the dominance of the U.S. dollar in cross-border lending. This risk scenario thus is one way that geopolitical fragmentation might impinge on the role of international currencies.

## **Official Foreign Exchange Reserves**

A key feature of international currencies is their presence in the official foreign exchange reserve portfolios. The share of reserves allocated to U.S. dollar assets, and more generally to major international currencies, has declined over the past two decades. At least so far, however, this shift appears driven by financial market development and diversification rather than financial fragmentation.

The dollar remains by far the preeminent currency in which official foreign exchange reserves are held, accounting for 58 percent of total reserves at the end of 2024 (Figure 3). Euro denominated assets are a distant second, at 20 percent, while the yen and pound account for six

and five percent, respectively. At the same time, the decline in the dollar's share of world FX reserves, from 70 percent 25 years ago, has been notable. Does the falling dollar share represent an early sign of financial fragmentation? This section considers whether the fall in the dollar share of official foreign exchange reserves reflects an endogenous response to changes in the global economy or geopolitically driven fragmentation.





A key insight into the factors behind the falling dollar share comes straightforwardly from an examination of which currencies' shares have increased the most. Analyzing data through 2020, Arslanalp et al (2022) present a range of evidence that the fall in the share of reserves allocated to major international currencies owes to what they call "the rise of nontraditional reserve currencies." In addition to the Chinese RMB, the group of nontraditional currencies they identify includes the Swedish Krona, Norwegian Krone, Danish Krone, Korean Won, Singapore Dollar, New Zealand Dollar, and Hong Kong Dollar. The pattern identified by Arslanalp et al (2022) has continued during the last four years, as shown in Figure 4. The declines in the shares allocated to the U.S. dollar and the euro (1.5 and 1.5 percentage points, respectively) are more than accounted for by increases in the Australia and Canadian dollars the various other currencies included in the residual other category. By contrast, the allocation to the RMB is little changed

on net since 2020, as its share peaked in 2022 after rising for several years and has since declined.





While a reallocation of reserves towards nontraditional currencies may at first appear to be evidence of fragmentation, analysis of the factors behind that reallocation does not support this view. Put simply, available evidence indicates that governments have boosted holdings of nontraditional currencies because they have become generally more attractive to investors. Not only did the liquidity and trading volume of these currencies increase dramatically over the past decade, but the risk-adjusted returns they offer have been far more favorable than those of traditional reserve currencies (Arslanalp et al 2022). Thus the reallocation away from major international currencies appears to reflect the fact that reserve managers, like private sector investors, seek out assets with higher returns, taking into account the riskiness of the assets as well as their liquidity.<sup>5</sup> As a result, the shift in reserve allocations towards nontraditional currencies does not appear to be a harbinger of financial fragmentation; indeed, it reflects greater financial market development and integration.

<sup>&</sup>lt;sup>5</sup> Goldberg and Hannaoui (2022) draw a distinction between the liquidity tranche and investment tranche of reserves, which is discussed in more detail below. The return seeking behavior discussed here is more pronounced for the investment tranche.

The relative size of countries' reserve stockpiles is also an important driver of the changes in aggregate allocation plotted in Figure 4, which is not directly related to financial fragmentation. In a world in which reserve allocations vary across countries but remain completely static over time, the aggregate allocation to U.S. dollar assets will rise if countries with lower U.S. dollar shares accumulate reserves faster than those with lower dollar shares. Of course, individual countries' allocations do change over time, and <u>Goldberg and Hannaoui (2024)</u> quantify how the effects of those changes compare to those of changes due to relative speed of reserve accumulation. They find that half of the decline in the dollar share between 2015 and 2020 is due to more rapid reserve accumulation by countries with low dollar shares, in particular Russia and Switzerland. That such shifts, as opposed to a change in individual countries dollar allocations, are a major force behind the declining share of the U.S. dollar in official foreign exchange reserves further indicates that the decline does not reflect geopolitical fragmentation.

While there are clear signs that factors other than financial fragmentation have driven changes in the allocation of reserves to the set of traditional international currencies, evidence that fragmentation is driven by geopolitical tension or conflict is limited. Indeed, regression analysis generally fails to find that geopolitical alignment is significantly associated with lower dollar shares (Goldberg and Hannaoui 2024; Chinn et al 2024).

In considering the outlook for fragmentation in official reserve holdings, the core function of reserves as insurance against external shocks places limits on the degree of fragmentation that could result from elevated geopolitical tension or conflict. Recent work analyzing changes in the reserve allocation across international currencies emphasized the importance of distinguishing between the so-called liquidity tranche of reserves, which is the level of reserves needed to self-insure against external shocks, and the investment tranche, or reserves held in excess of short-term liquidity needs. Geopolitical alignment affects the U.S. dollar share only for the investment tranche, and even then, the effect is substantial only when the investment tranche is large relative to the liquidity tranche (Goldberg and Hannaoui 2024). This finding implies that even a significant shift in geopolitical alignment would have a limited impact on total reserve allocations, as it would leave the allocation of the liquidity tranche unaffected. Of course, an important caveat to this logic relates to the role of international currencies in other areas of

8

international finance: a shift in the currency denomination of, for example, short-term debt issuance or trade invoicing, away from the dollar would imply a lower dollar share in the liquidity tranche.

A detailed examination of the set of countries holding U.S. safe assets as official foreign exchange reserves provides further insights into the likely limits on the effects of geopolitical fragmentation on reserve holdings. Nearly three quarters of dollar denominated FX reserves are held by countries with a formal alliance with the U.S. or some other significant form of military cooperation (Weiss 2022). Assuming such countries would be unlikely to reallocate their reserves away from U.S. dollar assets, even a major shift by a broad set of EMs would materially affect the aggregate share of reserves only if China and Hong Kong were among the reallocators. And even then, such a move would push the aggregate share of reserves allocated to U.S. dollar assets only slightly below 50 percent (Weiss 2022). At the same time, this exercise draws attention to the fact that the potential size of a shift away from U.S. dollar assets would be much larger if new geopolitical tensions prompted current U.S. allies to reduce their holdings.

## Box: Geopolitical Fragmentation and Central Bank Gold Reserves

Over the last 15 years, central banks have accumulated gold at a steady pace. This marks a departure from the earlier persistent downward trend in official holdings of gold. Moreover, central bank gold purchases have accelerated by some measures over the last two years. Most notably, the People's Bank of China resumed gold purchases in late 2022 after a three year hiatus. [further discussion details to be added]

- Key statistics on central bank gold reserves:
  - Portfolio shares
  - Relative contribution of purchases (changes in quantities) and valuation effects in driving changes in portfolio shares
- Discussion of possible link to geopolitical fragmentation.
- Key references:
  - Arslanalp et al (2023)

## **Trade Invoicing**

While the dollar and the euro remain by far the dominant currencies in trave invoicing, this is perhaps the area of international finance that shows the greatest evidence of not only diversification but also fragmentation. The major shift in the currency denomination of international trade has been an increase in the use of the Chinese RMB. A substantial share of this increase is accounted for by bilateral trade between China and non-U.S. trading partners increasingly being invoiced in RMB and thus driven by structural changes in the global economy rather than fragmentation. However, there has also been a causal effect of sanctions on the use of RMB in trade between sanctioned countries and not only China, but also third countries. Sanctions have also sparked greater producer currency invoicing by firms exporting to sanctioned countries. These latter developments unambiguously demonstrate the effects of geopolitical fragmentation on the use of international currencies in global trade.

The dollar and the euro each account for around 40 percent of global trade invoicing (Figure 5), and this share has been stable over time or, in the case of the euro, increasing. However, these aggregate shares conceal notable shifts occurring at the country level. In fact, more countries have reduced the share of their exports invoiced in dollars than have increased the dollar share (Boz et al 2022).<sup>6</sup> At the same time, more countries have seen an increase the share of trade invoiced in euros than have seen a decline.

<sup>&</sup>lt;sup>6</sup> This country-level reallocation away from dollar invoicing, along with the stable aggregate dollar invoicing share, suggests the countries shifting away from the dollar trade less than those moving towards the dollar.

#### Figure 5



[From Boz et al (2022); to be redone with their data and/or updated]

The invoicing of international trade is one area in which the Chinese RMB has made significant progress towards internationalization. The share of China's own trade transacted in Chinese RMB has increased from less than 15 percent prior to the pandemic to nearly 30 percent in 2023 (von Beschwitz 2024) as trade between China and its non-U.S. .trading partners, which had formerly been transacted in U.S. dollars, is increasingly settled in RMB. This rise in the use of the use of the RMB is a step towards the currency's assuming a more significant international role, but is far from a sufficient condition for such a shift (Eichengreen et al 2024).

The adoption of the RMB as a vehicle currency for trade between other countries has been much more limited, with one notable exception. The RMB has become a favored currency for transactions between heavily sanctioned countries like Russia and Iran and countries other than China, for example, India and Pakistan (ECB 2024). Prior to the imposition of sanctions, less than one percent of Russian trade with third countries was invoiced in RMB, but that share rose to nearly five percent by the middle of 2023 (Chupilkin et al 2024).

There is also evidence that sanctions have contributed to a shift away from U.S. dollar invoicing and towards producer currency pricing in economies exporting to sanctioned countries. For example, Turkish firms have significantly increased the share of their exports to Russia that are invoiced in Turkish lira (<u>Corsetti et al 2024</u>).

# **Foreign Exchange Markets**

As in other areas of the international financial system, transaction volume in foreign exchange markets is heavily skewed towards the major international currencies, in particular the U.S. dollar, but here again, there have been some changes that raise questions about incipient fragmentation. While the U.S. dollar's share has eroded somewhat, a significant portion of that shift is accounted for by a rise in transactions in EM currencies other than the Chinese RMB. These changes thus appear to reflect the financial development underway in these economies, rather than geopolitical fragmentation.

The dollar is one leg of almost 90 percent of foreign exchange transactions (Figure 6, panel a), while the euro accounts for a further 40 percent.<sup>7</sup> In part, the dollar's dominance in FX markets is corollary of its dominance in other areas of the international economy discussed in the other sections of this chapter. Non-U.S. firms buying goods invoiced in dollars and non-U.S. investors buying financial instruments denominated in dollars create demand for FX transactions when the parties involved convert funds to or from their home currencies. However, the dollar's share of global FX transactions is also boosted by its role as a vehicle currency. As much as a quarter of FX transactions that involve the dollar use it as a vehicle currency, meaning market participants transact between two non-U.S. dollar currencies by converting to dollars as an intermediate step (Somogyi 2022).

<sup>&</sup>lt;sup>7</sup> The shares of transactions involving for by each currency sum to 200 percent, because each transaction involves two currencies.



Figure 6

[Note: working on more granular breakdown of "other" into EM vs AE]

While the U.S. dollar remains by far the most traded currency in FX markets, the share of major international currencies, including the dollar, has fallen over the past 25 years, as shown in panel b of Figure 6. Here again, though, the evidence suggests this erosion is not in fact a manifestation of financial fragmentation, but rather an effect of financial development in emerging markets. The share of FX transactions accounted for by the dollar has fallen by two percentage points while the shares of the yen and the pound have declined by a more notable seven percentage points. A substantial share of this shift is accounted for by the rise of the Chinese RMB, but also reflects a rise in transactions involving other EM currencies. The share of FX transactions involving other EM currencies. The share of FX transactions involving an RMB leg rose from around two percent in 2013 to seven percent in 2022 (von Beschwitz 2024). However, the rise in the aggregate share of non-China EM currencies has been nearly as large (Caballero et al 2022). This latter fact is particularly supportive of the view that shifts in the composition of global FX transactions reflect changes in the structure of the global economy rather than geopolitical fragmentation. While use of the RMB has been a component of China's geopolitical agenda, it seems far less likely that geopolitics is behind greater transaction volume in, say, Brazilian reals or Indonesian rupiah.

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# Financial fragmentation in global payments<sup>\*</sup>

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This chapter explores recent advancements in global payment systems and their potential impact on the fragmentation of the international financial landscape. It is organized in five sections. The first section highlights the growing prominence of payments in international economic policy debates. The second section assesses why fragmentation in payment systems matters from a economic and financial perspective. The third section examines recent evidence on the risks of fragmentation in global cross-border payment systems, while the fourth section investigates the potential implications of more profound changes. The chapter concludes with policy recommendations to mitigate the risks of further fragmentation.

# 1 Global payments' leap from the shadows to the spotlight

Payments are an essential component of our economy and financial system.<sup>1</sup> They constitute a crucial network, often likened to the plumbing of a house that typically goes unnoticed until something goes wrong (Kahn and Roberds (2009)). Internationally, crossborder payments have witnessed a remarkable surge in recent decades, fueled by the globalization of trade, capital and migration flows. Looking ahead, the expanding influence of digital platforms and e-commerce is anticipated to further accelerate this growth, with the volume of cross-border payments projected to increase from USD 190 trillion in 2023—approximately twice the value of global GDP—to an estimated USD 290 trillion by 2030 (Panetta (2023)). The US dollar and euro hold prominent positions in crossborder payment transactions, as evidenced by their outsized combined share of over 80% of global export invoicing (Boz et al. (2022)).

The bulk of cross-border payment flows occurs through the around 90,000 banks that operate a vast global network of correspondent banking relationships (Rice et al. (2020)).

<sup>\*</sup>Comments and inputs by Massimo Ferrari Minesso, Olga Triay Bagur and Gianluigi Lopardo are gratefully acknowledged.

<sup>&</sup>lt;sup>1</sup>Payments can be categorized into retail and wholesale types. Retail payments generally involve small transactions conducted by individuals or small businesses. Wholesale payments pertain to larger-scale transactions (typically over \$10k-\$100k) between banks, corporations, or financial institutions.

Correspondent banking is an arrangement whereby one bank (correspondent) provides payments and other services on behalf of another banks (respondents) typically in a different country.<sup>2</sup> The roots of correspondent banking can be traced back to medieval Italy. With the expansion of international trade during the first wave of globalization in the late 19th century, banks across various countries began formalizing relationships, leading to the emergence of an international network of correspondent banking. This network experienced substantial growth during the second wave of globalization in the the late 20th century (Schenk (2024)). The network of correspondent banks became indispensable for processing international payments and settlements, acting as the crucial pipes and conduits that enable cross-border transactions. They rely predominantly on Western-based infrastructure, technologies and services to send, clear and settle international payments.

One such key infrastructure is the Society for Worldwide Interbank Financial Telecommunication (Swift). Established in 1973 in Belgium to supersede the telex, SWIFT provides secure financial messaging services on a global scale. As a member-owned cooperative, it connects over 11,000 banks, financial institutions, and corporations across more than 200 countries and territories. The equivalent of the world's GDP moves via the Swift network roughly every three days, or approximately USD 117 trillion.<sup>3</sup>

The backbone supporting global cross-border trade in US dollars is the Clearing House Interbank Payments System (CHIPS), a US private clearing house for large-value wire transfer transactions, with just 41 member banks.<sup>4</sup> As of late 2024, CHIPS settled around 500,000 payments daily, amounting to a total of USD 1.8 trillion. Alongside the Federal Reserve Banks' Fedwire Funds Service— a real-time gross settlement system enabling over 5,000 institutions to transfer funds in central bank money— CHIPS constitutes the "primary network for transferring and settling payments in US dollars" worldwide (Eichengreen (2022)), with a market share of around 96%. Both CHIPS and Fedwire are subject to US law.

Another key infrastructure is the New York-based Continuous Linked Settlement (CLS) system, established in 2002. CLS is a global central multicurrency cash settlement system designed to mitigate settlement risk for 18 of the world's most actively traded currencies in the foreign exchange market.<sup>5</sup>

The global dominance of major US card networks in retail payments is also notewor-

<sup>&</sup>lt;sup>2</sup>The relationship enables the respondent bank's clients to access international financial services, such as cross-border payments, foreign exchange, and trade finance, without the need for the respondent bank to have a physical presence. Correspondent banks maintain accounts for each other, known as nostro and vostro accounts, to facilitate these transactions and settlements.

<sup>&</sup>lt;sup>3</sup>See Swift, Spotlight on speed — Where to focus for faster international payments, October 2024. In annual terms, this is equivalent to almost USD 10 quadrillion.

<sup>&</sup>lt;sup>4</sup>Approximately 40% of these banks are US entities, while 30% are based in Europe and 25% in Asia. <sup>5</sup>The foreign exchange market is decentralized, lacking a central exchange or clearing facility. Firms using CLS can mitigate settlement risk, also known as Herstatt risk, named after the German bank that failed in 1974. This risk arises when one counterparty fails to deliver a security or its cash value after the other party has already delivered the security or cash value. The CLS system reduces settlement risk using a payment versus payment settlement service directly connected to the real-time gross settlement systems of participating jurisdictions through accounts at each of their respective central banks.

thy.<sup>6</sup>

Throughout most of the post-war period, Western payment technologies and services remained agnostic to geopolitical developments (Klein (2024)). Until recently, governments did not impose significant restrictions on access to key global cross-border payment infrastructure, in line with the view that such infrastructure should remain geopolitically neutral<sup>7</sup> For example, even though the assets of the Central Bank of Iran were immobilized in 1979 following the Iranian revolution and Iran was designated as a sponsor of terrorism by the US in 1984, Iranian banks continued to have access to the SWIFT network until 2012. Similarly, several Cuban banks remain connected to the SWIFT network despite the US economic embargo on Cuba that is in place since 1962.

The turning point came in 2010, when the US passed legislation allowing for the imposition of secondary sanctions on foreign banks facilitating financial transactions with sanctioned entities. These financial institutions faced the risk of exclusion from the US payment system —with US banks being forced to close their correspondent or payable-through accounts— if found engaging in illicit activities.<sup>8</sup>

A further pivotal shift occurred when Russian financial institutions were excluded from the SWIFT network in response to Russia's invasion of Ukraine in March 2022. Although similar actions had been taken against Iranian banks in 2012 and North Korean banks in 2017, imposing such measures on banks of this size and level of global interconnectedness was unprecedented.

The direct use of the financial system for foreign policy purposes has already had ripple effects on the global payment system. Concerns over secondary sanctions have led to a retrenchment of cross-border banking relations. With 90,000 active correspondents and 9,000 corridors, correspondent banking relations were in 2022 about 20-30% smaller than in 2011 (see Figure 1). Although several factors have contributed to this decline<sup>9</sup>, the active de-risking of payment activities amid escalating geopolitical tensions has been a significant factor, particularly after 2014, when BNP Paribas faced a record USD 8.9 billion fine from U.S. authorities for violating sanctions against Sudan, Cuba, and Iran the largest such fine in history.<sup>10</sup> Growing concerns among large international banks about regulatory compliance with anti-money laundering and customer due diligence requirements prompted some financial institutions to sever correspondent banking ties

<sup>8</sup>In practice this means losing access to CHIPS.

<sup>&</sup>lt;sup>6</sup>For instance, Visa and Mastercard account for nearly two-thirds (69%) of all electronically initiated card transactions in the euro area, with 13 out of the 20 countries relying entirely on them. In addition, mobile payments, which are growing rapidly (9% of all daily transactions today compared to 1% in 2019), are dominated by private non-bank solutions, such as PayPal and Apple Pay.

<sup>&</sup>lt;sup>7</sup>This stands in contrast to the extensive history of financial sanctions targeting individuals and government's assets (see e.g. Eichengreen et al. (2024), Krahnke et al. (2024)).

<sup>&</sup>lt;sup>9</sup>Following the Global financial crisis of 2007-09, global banks reassessed their business strategies against the backdrop of lower bank profitability, dampened risk appetite and tighter regulation and supervision (Rice et al. (2020)).

 $<sup>^{10}{\</sup>rm The}$  financial institution was also prevented from clearing certain transactions in US dollars for one year.

with smaller banks, particularly in emerging markets deemed "high-risk" (Miller (2022)). This practice, known as "de-risking", has been largely driven by rising compliance costs and uncertainty over the necessary level of due diligence to avoid regulatory sanctions. A 2017 survey found that 22% of correspondent banks terminated active relationships due to compliance and reputational concerns (Financial Stability Board (2017)). The imposition of financial sanctions on Russia in 2014, followed by the "deswifting" of Russian banks in 2022, may have further exacerbated these concerns. All in all, some emerging market economies are finding it increasingly difficult to execute international payments due to the retrenchment of the global correspondent banking network.



Figure 1: Evolution of the number of correspondent banks and corridors since the global financial crisis

#### Source: BIS and Swift.

*Notes*: The figure shows the evolution of the number of active correspondents (banks that have sent or received at least one cross-border payment message in a given year) and the number of active corridors (jurisdiction pairs that processed at least one cross-border payment message in a given year) since 2010. Corridors are unidirectional (e.g. Germany to India is one corridor and India to Germany is another corridor). The data are aggregated, hence it is not possible to identify the entire payment chain.

Moreover, the strategic use of the financial system for foreign policy objectives has raised concerns among non-Western jurisdictions about facing similar repercussions. It has encouraged them to explore and develop alternatives to traditional cross-border payment infrastructures. They see such alternatives as a way to reduce their dependence on Western currencies, correspondent banks, clearing and payment infrastructures.<sup>11</sup> A notable example is the summit of BRICS nations held by Russia in Kazan in October 2024, where Leaders from Brazil, Russia, India, China, South Africa, and other nations welcomed the increased use of local currencies in global financial transactions and discussed the establishment of a new cross-border settlement and depositary infrastructure, BRICS Clear (more details in section 3).<sup>12</sup>

<sup>&</sup>lt;sup>11</sup>See e.g. Economist (2024) and Farrell and Newman (2023).

<sup>&</sup>lt;sup>12</sup>In November 2024, President-elect Trump threatened 100 percent tariffs on BRICS members sup-
The development of alternative systems for cross-border payments are being facilitated by technological innovations, including the emergence of mobile payments, digital wallets and potential uses of blockchains and central bank digital currencies.<sup>13</sup> For instance, Fintechs—innovative technologies and solutions that improve, automate, or revolutionize financial services—and decentralized instruments, including crypto-assets may play a larger role in international settlements in the future (Carstens (2022)). Crypto-assets were in fact initially conceived to address some of the challenges the current cross-border payment infrastructure raise, such as their slow speed, high costs and lack of inclusiveness.

However, to date, crypto=assets have faced a number of limitations, including significant price volatility, which makes them not well-suited to serve as reliable stores of value or units of account (working group on stablecoins (2019)). Stablecoins aim to stabilize the price of the digital token (or "coin") issued by linking its value to that of a pool of assets.<sup>14</sup> Therefore, stablecoins may already be better suited to serve as means of payment. However, despite their potential benefits, they can also lead to increased use of less regulated, more opaque and not interoperable technical solutions, thereby resulting in a potentially more fragmented global payment system

## 2 Does the architecture of the global payment system matter?

From a macroeconomic standpoint, there are compelling reasons to favor an integrated, concentrated payment system over a fragmented one. Payment systems are characterized by strong economies of scale —due the high entry and set-up costs, but low marginal costs— and strong first mover advantages— reflecting the importance of technical knowledge—. Economies of scope may exist among various payment services supplied on a large-value payment network (see Bolt and Humphrey (2005)).<sup>15</sup> Furthermore, payment systems exhibit strong network externalities: the value of the service to a user increases as more users adopt it. Economic agents tend in turn to gravitate towards a unified financial infrastructure for clearing and settlement, as duplicating fixed costs is not socially desirable.<sup>16</sup> In a globally fragmented cross-border payment landscape, inter-

porting alternative currencies.

<sup>&</sup>lt;sup>13</sup>Blockchains in payments refer to the use of decentralized digital ledgers enabling secure, transparent, and tamper-proof payment transactions. By leveraging the decentralized and transparent nature of blockchain, payments can be processed more efficiently compared to traditional methods. Central Bank Digital Currencies (CBDCs) are digital forms of a country's sovereign currency issued and regulated by the central bank. Such CBDCs can, but do not necessarily, use on blockchain technology.

<sup>&</sup>lt;sup>14</sup>A stablecoin is a crypto-asset pegged to a stable asset, like fiat currency, to reduce price volatility. As of end-January 2025, the total market capitalization of stablecoins was approximately USD 220 billion.

<sup>&</sup>lt;sup>15</sup>For instance the joint costs of providing government-related and banking industry services are lower than the stand-alone costs of providing these services separately.

<sup>&</sup>lt;sup>16</sup>However, natural monopolies also present well-known risks. For example, during the initial stages of establishing a network, institutions may coordinate around what eventually proves to be a less efficient technology or suboptimal standards. Once a large installed base is established, upgrading to never

national financial transaction costs are likely to be considerably higher, and processing speeds much lower, compared to an integrated system.

The fact that cross-border payment infrastructures lend themselves to monopolistic structures means that they can potentially serve as a source of geoeconomic power. Recent theoretical models, such as Clayton et al. (2023), suggest that the dollar-based financial infrastructure for payment and clearing is a strategic asset that can be leveraged to fulfill geopolitical objectives. The infrastructure is strategic because it provides widely used inputs with high added value for targets of economic sanctions, while offering limited available substitutes. These characteristics contribute to the effectiveness of sanctions that limit access to the global payment system, while also fueling criticisms regarding its "weaponization".

Payment systems also play a crucial role for the stability and integrity of the financial system. Standardized, interoperable systems for messaging, settling, and clearing ensure that the multitude of cross-border transactions conducted daily between financial institutions worldwide are cost-efficient, secure, and meet integrity standards. It has long been recognized that the large volume and value of transactions processed by the global payment infrastructure are vital to the stability and integrity of the international financial system (see, e.g. White (1998)). Fragmentation of payment platforms or a shift towards platforms controlled by jurisdictions that do no prioritise the security and efficiency of the system could not only jeopardize financial stability but also hinder efforts to combat money laundering and terrorism financing. Furthermore, this could increase the risk of cyber-attacks that could disrupt payment chains.

### 3 Evidence so far?

While discussions about the impact of geopolitical fragmentation on cross-border transactions have recently gained prominence, how much of a role has geo-economics played to-date?

#### The role of geopolitics in the payments landscape is not new...

Ferrari Minesso et al. (2025) find that geopolitics is already a source of friction that segments cross border payments. In their study, they analyze the role of economic, technical, and geopolitical factors in interlinking of fast payment systems across 117 countries, using data from 2016 to 2023. Fast payment links enable (near-) real-time transfer of funds between end-users across borders. As depicted in Figure 2, the landscape of cross-border fast payment connections in 2024 reveals distinct clusters. Notably, one

technology can be difficult and costly. Additionally, a dominant network provider might have incentives to supply incompatible services to strengthen its market position. In these instances, allocative and dynamic efficiency would be reduced. This is a key challenge in payments infrastructures. One important solution is the development of standards that allow various players to enter the market, avoid lock-in and foster innovation.

cluster is centered around Europe's regional platform, TIPS, which launched in 2018; another is focused on Africa's regional platforms like PAPSS, established in 2022; a third cluster is organized around BUNA, the Arab Monetary Fund platform, operational since 2023; additional clusters include bilateral links in Asia and Latin America. While the connections within these clusters are often dense, a striking observation is the lack of connectivity between clusters.



Figure 2: Cross-border connections of fast payment systems worldwide Notes: The figure shows cross-border fast payment connections in 2024. The figure shows bilateral connections, split between unidirectional and bidirectional (depending on the originating currencies enabled). Moreover, the figure shows multilateral connections, represented as dyads and colored by regional platforms.

The global fast payment landscape looks therefore fragmented: whether this is for economic, technical or geopolitical is the question that the study examines empirically. They test whether links are governed by standard variables influencing international trade patterns (such as economic size and geographical distance), technical features or by instead—or in addition—geopolitical factors. While they found support for the role of economic factors and technical features, the most striking finding is the strength of geopolitical effects. This is illustrated in Figure 3, which presents the marginal effects on the log-odds of observing a fast payment link between two countries in response to one-standard-deviation increases in geopolitical and geographical distances, respectively, based on their estimates.

The reduction in the probability of payment links between geopolitically distant countries is as much as twice stronger than for geographically distant ones. Geopolitics might



Figure 3: Marginal effect of geopolitical and geographical distance *Source*: Ferrari Minesso et al. (2025).

*Notes*: The figure shows the marginal effects on the log-odds of observing a fast payment link between two countries in response to one-standard-deviation increases in geopolitical and geographical distances, respectively. Changes are computed using logit estimates of the log odds of interlinking fast payment systems within a pair of countries in a sample of 117 countries, using data on fast payment links from 2016 to 2023. The marginal effects are computed for different initial levels, i.e. from the sample average (0) up to 3 standard-deviations above it. All the other variables are kept at their respective sample means. Black whiskers show 95% confidence intervals.

influence payment links through two channels. One channel involves the alignment of preferences between countries on sensitive matters in contractual agreements related to interlinking, such as governance.<sup>17</sup> The other channel suggests that geopolitically aligned countries are incentivized to establish payment links to increase the opportunity cost of conflict, as severing these links would lead to a loss of trade benefits— a concept emphasized in recent theoretical models of international trade agreements, such as Martin et al. (2008), Martin et al. (2012) and Thoenig (2023). Regardless of the channel, these findings indicate that geopolitics has the potential to shape the global payment landscape, possibly leading to its segmentation into distinct blocs.

 $<sup>^{17}</sup>$ Participants must agree on dispute resolution mechanisms, privacy standards, cybersecurity, antimoney-laundering rules, set criteria for the inclusion of central banks over time, and ownership and voting shares (Eichengreen (2024)).

#### ... and is increasing

In addition to the established findings in fast payments, there is also evidence more recently that suggests nations are increasingly striving to challenge the established in-frastructure and the advantages held by incumbent countries in global payment systems. This shift reflects a growing desire among countries to assert greater control and reduce their dependence on traditional payment networks, potentially reshaping the landscape of international financial transactions.<sup>18</sup>

Figure 4 shows the evolution of an index measuring initiatives in cross-border payment systems discussed in official communiqués by G7 and BRICS leaders from 2008 to 2014. This index is derived from a Large Language Model (LLM), specifically GPT-40, and aims to systematically detect and quantify the extent to which payment system initiatives are addressed in these official statements. Each communiqué is broken down into paragraphs, which are then scored by the LLM on a scale from 0 (no mention of initiatives) to 10 (mention of immediate actions).<sup>19</sup> The model also considers specific terminology and priorities to identify initiatives more accurately.<sup>20</sup> The index is calculated as the weighted average of all paragraph scores for a given year, with weights determined by the relative length of each paragraph, measured by the number of sentences.<sup>21</sup> Notably, the Figure reveals an increasing focus on payment systems by both BRICS and G7 leaders but that BRICS leaders focussed on the matter earlier on. BRICS members' interest surged following Russia's invasion of Ukraine, aligning with the view that this event marked a turning point in their ambitions to explore and develop alternatives to traditional cross-border payment infrastructures.

#### The actual impact of recent initiatives remains limited

Expressing a desire to reduce reliance on Western-based payment systems and the dollar is one thing; implementing it is another. Thus far, the outcomes have been mixed.

In terms of infrastructure, Iran, Russia, and China have each already operationalized alternatives to existing systems. Iran and Russia have implemented their own payment messaging services, while China has established a comprehensive system that includes messaging, clearing, and settlement capabilities. Specifically, Iran introduced the System

 $<sup>^{18}\</sup>mathrm{See}$ e.g. Bryanski, G. "At BRICS summit, Russia to push to end dollar dominance", Reuters, 16 October 2024.

<sup>&</sup>lt;sup>19</sup>The model is trained to recognize active language cues like "implement," "commit to," and "agree to" as indicators of active initiatives, whereas terms such as "might," "may," "acknowledge," and "note" are classified as passive references. To prevent biasing the results with mere acknowledgments of existing work (e.g., the G20 Roadmap on Cross-border Payments), the LLM scores these mentions as passive allusions.

<sup>&</sup>lt;sup>20</sup>For instance, BRICS leaders often emphasize themes such as promoting local currency use or ensuring non-discriminatory access to global payment systems, while G7 leaders focus on reducing market fragmentation risks and supporting emerging markets and developing economies in payment system development.

<sup>&</sup>lt;sup>21</sup>This method assigns greater importance to longer resolutions, assuming they indicate a higher relevance of the topic in the meeting's discussions.



Figure 4: Text analysis of initiatives on cross-border payment systems in the communiqués of G7 and BRICS leaders

Source: ECB staff calculations.

*Notes*: The index is derived from a Large Language Model (LLM), specifically GPT-40, and aims to systematically detect and quantify the extent to which payment system initiatives are addressed in these official statements. Each communiqué is broken down into paragraphs, which are then scored by the LLM on a scale from 0 (no mention of initiatives) to 10 (mention of immediate actions). The index is calculated as the weighted average of all paragraph scores for a given year, with weights determined by the relative length of each paragraph, measured by the number of sentences.

for Electronic Payments Messaging (SEPAM) in 2013, following the exclusion of Iranian banks from SWIFT.<sup>22</sup> SEPAM now connects Iran with Russia and is also utilized by a network of central banks in Asia. Russia launched its System for Transfer of Financial Messages (SPFS) after the annexation of Crimea in 2014. According to Russian media, 557 banks and companies, including 159 non-residents from 20 countries, have joined SPFS (see Pravda (2024), "Russia's analogue of Swift system shows constant growth of traffic," 16 January). Although both messaging systems have achieved some level of adoption, their overall scope remains limited.

The most successful initiative to date has been the Cross-Border Interbank Payment System (CIPS), a messaging, clearing, and settlement system launched in 2015 and backed by the People's Bank of China (PBoC). CIPS operates in renminbi rather than US dollars, aiming to increase the global use of China's national currency. As of December 2024, nearly 1,500 financial institutions were utilizing CIPS, including 1,000 located outside mainland China. Although this represents only 13% of SWIFT's 11,500 members, the number has more than doubled since 2018. The system now connects over 160 countries, including a majority of BRICS members. In the third quarter of 2024, CIPS activity reached approximately USD 6.5 trillion, marking a sixfold increase compared to 2018 (see Figure 5). Concurrently, the share of the renminbi in the settlement of China's

 $<sup>^{22}\</sup>mathrm{The}$  decision was based on EU sanctions related to concerns about Iran's nuclear program



Figure 5: Activity in China's Cross-border Interbank Payment System Source: People's Bank of China and authors' calculations.

*Notes*: The figure shows the evolution of activity in CIPS including the number of transactions in millions and the value of the transactions in question in USD trillions.



Figure 6: Use of the renminbi for settlement of China's external trade *Source*: People's Bank of China and authors' calculations.

*Notes*: The figure shows the evolution in the use of the renminbi for settlement of China's external transactions in goods and services, respectively as percentage shares of settlements in all currencies.

external transactions doubled between 2018 and 2024, reaching nearly 40% for goods and 50% for services (see Figure 6).

Several initiatives are currently under discussion but have yet to come to fruition (see for an overview Table 1). As these discussions advance, they hold the potential to establish new infrastructures that could reshape the landscape of international financial transactions. For instance, BRICS members are exploring initiatives to interconnect domestic payment systems (BRICS Pay), to develop an alternative securities depository and settlement system to Western entities (BRICS Clear), and to leverage Distributed Ledger Technology (DLT) for wholesale currency transactions, potentially using multicentral bank digital currencies as back-end infrastructure (BRICS Bridge).<sup>23</sup> In some instances, countries are adopting financial infrastructure and technology from the nations closest to the technological frontier. For instance, India is offering its digital payment technologies and platforms for free to foreign nations.<sup>24</sup> If these developments increase complexity and interoperability costs to users globally, they could impact the flow of capital and efficiency of the global financial system.

Russia serves as the clearest example of how geopolitical tensions and the resulting risks of fragmentation may affect cross-border payment patterns. Since the annexation of Crimea, Russia has tried to de-dollarize and de-euroize to mitigate the impact of G7 sanctions. Russia has encouraged the use of national currencies in bilateral trade with other BRICS economies and with countries in Asia and the Middle East to bypass the US dollar and the euro—particularly in international trade involving oil and other commodities where Russia is a major exporter.<sup>25</sup> Russian sources report that 20 countries have joined SPFS. The portion of Russia's external trade invoiced in non-sanctioned currencies—primarily the rouble, renminbi, and to a lesser extent, the Indian rupee—rose from virtually zero to approximately 30-40% between the invasion and mid-2024 (see Figure 7).<sup>26</sup> There is also evidence of a shift in Russia's trade towards China, which now accounts for around 50% of Russian imports and 30% of Russian exports, supporting the invoicing of transactions in non-sanctioned currencies.<sup>27</sup> Four Chinese banks operating in Russia are direct participants of CIPS.<sup>28</sup>

Other BRICS members have been less successful at severing links with the dollar and Western-based payment systems (Atlantic Council (2025)). For instance, Brazil is bolstering infrastructure to enhance the renminbi's role in its economy. The Banco Central do Brasil (BCB) has announced the creation of a renminbi clearing house in Brazil, aimed at facilitating trade in local currencies with China. However, the dollar remains entrenched in Brazil's export settlements. India has opted to expand bilateral currency agreements that support trade in rupees—unsuccessfully in some cases.<sup>29</sup> These

 $<sup>^{23}</sup>$ See Atlantic Council (2025) for details.

 $<sup>^{24}</sup>$ For instance, Unified Payments Interface—the Indian instant payment system—operates as an open source application programming interface.

<sup>&</sup>lt;sup>25</sup>For example, as of March 2023, 80% of bilateral trade between Iran and Russia was settled in national currencies, according to Russia's Deputy Prime Minister.

 $<sup>^{26}{\</sup>rm The}$  renminbi replaced the US dollar as Russia's most traded currency in 2023, while renminbi and gold have become Russia's main foreign reserve assets.

 $<sup>^{27}</sup>$ The use of the remninbi as a vehicle currency in Russian trade with countries other than China remains more limited (Chupilkin et al. (2023)).

<sup>&</sup>lt;sup>28</sup>They include Industrial and Commercial Bank of China Russia RMB Clearing Bank, Bank of China Russia, China Construction Bank (Russia) LLC and Agricultural Bank of China (Moscow) LLC.

<sup>&</sup>lt;sup>29</sup>Bilateral trade between Russia and India provides an example. Initially, India attempted to promote the use of the Indian rupee for settling trade transactions with Russia. However, by mid-2023, major Indian refineries began using the Chinese renminbit to pay for imports of Russian crude oil.

Date	News and statement	Source
04/03/2025	Hong Kong Exchanges and Clearing announces plans to create	Financial
	an Asian international settlement house is envisioned to become	Times
	an international securities house that could handle cross-border	
	payments and multiple currencies	
27/12/2024	Finance minister Siluanov confirms that Russia is using Bitcoin and other digital currencies for trade payments as part of its efforts to avoid Western sanctions	Regtechtimes
23/10/2024	BRICS members welcome the use of local currencies in financial	Kazan
, ,	transactions between BRICS countries and their trading part-	Declara-
	ners[and] agree to discuss and study the feasibility of estab-	tion
	lishment of an independent cross-border settlement and deposi-	
	tary infrastructure, BRICS Clear.	
05/03/2024	BRICS countries are working on the creation of a payment sys-	TASS
	tem based on blockchain technology and digital currencies.	
27/02/2024	BRICS members meet in Brazil to discuss the BRICS Bridge	Ledger In-
	payment platform.	sights
27/12/2023	Russia and Iran sign an agreement to trade using their national	Reuters
00/00/0000	currencies, also promoting use of non-Swift interbank systems.	
23/08/2023	Brazil's Prime Minister Lula proposes a BRICS common cur- rency for trade and investment transactions to reduce BRICS countries' vulnerabilities.	Reuters
13/04/2023	Brazil's president Luiz Inácio Lula da Silva called on BRICS	Financial
, ,	countries to work towards replacing the US dollar with their own currencies in international trade.	Times
04/02/2023	Indian refiners start purchasing Russian oil from Dubai-based	Reuters
1 1	traders using United Arab Emirates dirhams instead of US dol-	
	lars.	
16/09/2022	Leaders at the Shanghai Cooperation Organisation (SCO) sum-	Reuters
	mit in Uzbekistan adopt a roadmap to increase the use of na-	
	tional currencies in mutual settlements.	
06/09/2022	Gazprom and China National Petroleum Corporation (CNPC)	Bloomberg
	sign agreements to start paying for gas supplies to China in Rus-	L.P.
	sian roubles and Chinese yuan, instead of US dollars and euro,	
	reflecting increased efforts to move trade out of "unfriendly" cur-	
	rencies.	

Table 1: Selected recent statements on global payments

*Notes:* The table reports selected news and statements in emerging markets relevant to global payments since Russia's invasion of February 2022 in Ukraine.

efforts have focused on major trading partners, including the United Arab Emirates, Russia, and regional allies, as well as leveraging existing multilateral frameworks such as the Asian Clearing Union.

#### The future role of stablecoins: too early to say

Evidence on whether cross-border payments are moving to crypto-assets is harder to come by. Soaring market capitalization of crypto-assets fuels speculation that they could grow



Figure 7: Russia's trade with China and invoicing in non-sanctioned currencies *Source*: CEIC, IMF Direction of Trade Statistics and authors' calculations.

*Notes*: The figure shows the evolution of Russia's trade with China and invoicing in non-sanctioned currencies in percentages. The list of currencies of countries sanctioning Russia includes major currencies like the euro, US dollar, British pound, Swiss franc, Japanese yen, Canadian dollar and Australian dollar.

as a medium of international payment.<sup>30</sup> One of their most notable features is that they cut out the middleman, being transferrable from wallets to wallets without the need for a bank or other third-party intermediary.<sup>31</sup>

Currently, stablecoins valued at \$170 billion are circulating worldwide, with 99 percent pegged to the US dollar. As illustrated by Figure 8, approximately 80% of the transactions involving US dollar-backed stablecoins occur outside the United States.<sup>32</sup> Being backed by US dollars, growing use of stablecoins could ultimately strengthen the greenback's global role.<sup>33</sup>

In this regard, a central focus of President Trump's administration has been to bol-

<sup>&</sup>lt;sup>30</sup>Crypto-asset market capitalisation increased to almost USD 4 trillion by the end of 2024 with the approval of spot crypto Exchange Traded Products (ETPs) and anticipation of a new crypto-friendly US administration. Bitcoin, the largest crypto-asset by capitalization, surpassed the symbolic USD 100k threshold, before correcting significantly in the wake of President Trump's announcements on imposition of tariffs on the US's trading partners.

<sup>&</sup>lt;sup>31</sup>For instance, in the case of remittances, this includes not only the money transfer operators (like Western Union, MoneyGram etc.) facilitating (and profiting from) payments, but also the software providers through which they operate.

<sup>&</sup>lt;sup>32</sup>This trend is largely fueled by adoption in Europe—particularly led by Russia—as well as in India and Southeast Asian countries like Vietnam, Singapore, and Indonesia, where stablecoins are used for remittance payments and as a means to access dollars

<sup>&</sup>lt;sup>33</sup>For instance, as of September 2024, Tether's holdings of US Treasury bills soared to \$84.5 billion, positioning the firm among the top holders of US Treasury securities. In comparison, Tether's holdings are approaching those of notable foreign holders like Mexico (\$95 billion) and Germany (\$101 billion). This growth highlights the stablecoin issuer's rising significance in the US Treasury market, which has traditionally been dominated by more conventional financial entities.

ster US leadership in digital assets and financial technology by ensuring open access to blockchain networks for citizens and businesses and promoting the sovereignty of the US dollar through legitimate dollar-backed stablecoins. On January 23, 2025, on his third day in office, President Trump signed an Executive Order aimed at "promoting the development of dollar-backed stablecoins worldwide", which has the potential to further stimulate growth in this sector.<sup>34</sup> The order includes several provisions. Domestically, it prioritizes supporting the growth and use of digital assets to maintain US technological leadership by fostering innovation in digital payment technologies and ensuring the right to develop new forms of money. Internationally, the order aims to safeguard the dominance of the US dollar by promoting the use of dollar-backed stablecoins in global markets.

#### [PLACEHOLDER FOR AN UPDATE OF THE TEXT BASED ON US LEGISLA-TIVE DEVELOPMENTS]

However, despite a plethora of initiatives, crypto-assets encounter several challenges in becoming viable alternatives to traditional payment systems. Blockchain networks, especially open and permission-less ones, are considerably slower than existing payment infrastructures. For instance, Bitcoin, which operates on such a blockchain, can process only seven transactions per second. In contrast, traditional payment networks like Mastercard and Visa can handle 5,000 and 24,000 transactions per second, respectively (Rodrigues (2022)).

Stablecoins intended to be backed by U.S. dollar cash and Treasury bills are vulnerable to runs—similar to money-market mutual funds—if doubts arise about the sufficiency of their reserve coverage (Reichlin (2025)).<sup>35</sup> If history is any guide, the risks are significant. During the pre-Civil War Free Banking Era (1834-1863), some US states permitted free banking, allowing easy entry into banking, but required banks to back their banknotes with state bonds, with requirements differing across states (Gorton et al. (2022)).<sup>36</sup> In contrast, banks in other states issued banknotes backed by loan portfolios. Banknotes circulating within the issuer's city were accepted as money without question, while those from distant cities traded at a greater discount due to the uncertainties involved. Redeeming banknotes from distant banks was both time-consuming and costly. However, as technology such as railroads and telegraphs became more widespread, the discounts

 $<sup>^{34}{\</sup>rm The}$  White House (2025), "Strengthening American Leadership in Digital Financial Technology," 23 January 2025.

 $<sup>^{35}</sup>$ Tether, for example, claims on its website that its stablecoins are pegged 1:1 with fiat currency and fully backed by Tether's reserves. However, Tether's reserve report from October 2024 reveals that cash and cash equivalents comprised only about 84% of its reserves. The remainder included precious metals (approximately 4%), Bitcoins (3.8%), secured loans (5.3%), corporate bonds (0.01%), and other investments. Tether lost its peg in 2022, dropping to 95 cents after TerraUSD, another stablecoin, fell below 30 cents, which sent shockwaves through the crypto markets.

<sup>&</sup>lt;sup>36</sup>Before the U.S. Civil War, banks issued non-interest-bearing debt in the form of banknotes. By the mid-1840s, approximately 1,500 distinct banknotes were in circulation. Depositors could redeem these banknotes for specie at par value on demand, but only at the specific bank that issued them. Consequently, different banknotes often traded at varying discounts from par.

on these banknotes gradually decreased.

Stronger use of stablecoins could also expose cross-border payment systems to other risks, especially if they facilitate illicit transactions.<sup>37</sup> Some nations also consider crypto as a viable way to by-pass Western-based payment infrastructure and the US dollar to avoid financial sanctions.<sup>38</sup> More broadly, there is evidence that crypto-assets may serve as a conduit for capital flight (see e.g. von Luckner et al. (2024)).



#### Figure 8: Geography of stablecoin flows

Source: Cambridge Digital Money Dashboard.

*Notes*: The map visualises proxy-based estimates of the stablecoin flow geography. These estimates leverage 1) data on the stablecoin transfer activity of the identified wallets belonging to service entities (platforms and smart contracts) with a web presence and 2) the analysis of web traffic to the websites of these service entities.

<sup>&</sup>lt;sup>37</sup>Illicit cryptocurrency addresses received a total of USD 40.9 billion in 2024, with stablecoins now accounting for the majority (63%) of all illicit transactions, including stolen funds, darknet markets, ransomware, and sanctions evasion, among others (Chainanalysis (2025)). Stablecoin issuers often freeze funds when they become aware of their use by illicit actors. For example, Tether has frozen addresses of concern linked to scams, terrorist financing, and sanctions evasion, which can make stablecoins a less effective tool for the transfer of value by illicit actors.

 $<sup>^{38}</sup>$ In December 2024, Finance minister Siluanov confirmed that Russia was using Bitcoin and other digital currencies for trade payments as part of its efforts to avoid Western sanctions (see Table 1).

### 4 Possible implications of deeper changes

Taken together, the evidence suggests that the global cross-border payments landscape remains heavily reliant on traditional infrastructures, resulting in a high level of integration and concentration in the West. However, cracks have begun to emerge in this facade. Could these fissures become more pronounced and potentially pose risks to the stability of the international monetary system?

As noted in Section 2, payment systems naturally lend themselves to being concentrated and integrated due to their inherent characteristics, which make such structures welfare-optimal. An integrated system minimizes duplication of resources and enhances efficiency, providing faster and more reliable services. By acting as the enforcer of a secure and efficient payment systems, the US and EU currently provide what can be considered a "global public good". Traditionally, G7 nations have prioritized the resilience of payment systems, ensuring they are both efficient— keeping settlement costs low to facilitate market clearing— and robust against risks, preventing them from causing or worsening financial crises (White (1998)). A more fragmented global payment landscape across geopolitical lines could therefore have significant ramifications. Resilience may not be prioritized as highly by other countries, increasing the risk of technical flaws and cyberattacks. These vulnerabilities could threaten international financial stability by causing sudden liquidity shortages in key markets or disrupting transaction settlements.

Further fragmentation of the cross-border payment landscape may increase the opacity and complexity of transactions, potentially causing delays. This could, in turn, affect liquidity dynamics, especially during times of stress. Increased opacity and complexity may also facilitate money laundering, terrorism financing, and the evasion of sanctions. The inability to use sanctions as a credible threat in the face of heightened geopolitical risks could undermine the rules-based global order and the inclusive values endorsed and defended by the United Nations. If sanctions lose their effectiveness as a deterrent, it could lead to increased belligerence. Recent events have demonstrated that geopolitical threats can impact the financial system and financial stability, through ripple effects on globally important markets —including energy and financial markets— as well as through global financial market infrastructures and institutions.

Finally, a more fragmented global payment landscape may be a harbinger for more profound changes in the international monetary system. Recent theoretical work highlights trade invoicing as central to a currency's international status (Gopinath and Stein (2021)). Trade invoicing serves as the foundational element for a currency's international role because it precedes and facilitates other aspects of international currency status, such as its use in reserves or financial markets, and it reflects real economic activity (trade) rather than purely financial or speculative factors. When a currency is widely used for trade invoicing, global demand for it increases, even among countries not directly linked to its economy. This generates network effects, where widespread adoption lowers transaction costs and encourages others to use the currency. Over time, dominance in trade invoicing extends into financial markets, as firms borrow, lend, and hold reserves in the same currency to minimize exchange rate risks. Thus, trade invoicing acts as the primary driver, promoting broader adoption and reinforcing the currency's role in global finance.

Skeptics would argue that the international role of a currency depends more on other factors, such as stable domestic macroeconomic conditions and policies, a sizable domestic economy and, perhaps most importantly, the size, depth and openness of the financial markets (Coppola et al. (2023)). Efficient, innovative, and resilient payment system infrastructure can significantly impact financial market depth and liquidity, especially if innovations allow the three key functions of asset trading—negotiation, settlement, and custody—to occur on the same platform (Cipollone (2024)). Consequently, payment systems could still influence the prospects of major international currencies.

### 5 Way forward

The significant potential risks and costs associated with financial fragmentation highlight the necessity of establishing safeguards to protect the global financial system. To achieve this, six sets of policies related to the global payment infrastructure can be particularly beneficial.<sup>39</sup>

*First*, efforts should be stepped up to improve the functioning of the current crossborder payment infrastructures. While operating at the highest standards, cross-border payments remain riddled with challenges that make them slow, expensive, opaque and difficult to access. Transaction costs and delays remain significant due to lack of interoperability between national payment systems, different time zones and clearing house operating hours, multiple intermediaries, regulatory compliance, and currency conversion challenges.<sup>40</sup> As a result, fees for international payments average 1.5% for corporations and can reach as high as 6.3% for remittances, with processing times often extending to several days before reaching recipients (Panetta (2023)).

Such efforts are part of the *Roadmap for Enhancing Cross-border Payments* agreed in 2020 by the G20, which sets quantitative targets to lower costs, increase speed, accessibility and transparency of international payments by the end of 2027. It includes initiatives such as interlinking real-time payment systems, the adoption of blockchain technology, and standardization efforts like ISO 20022 (a global standard for structured

<sup>&</sup>lt;sup>39</sup>See also (World Economic Forum (2025)).

<sup>&</sup>lt;sup>40</sup>Cross-border payments often pass through multiple correspondent banks due to the lack of direct relationships between the sender's and receiver's banks. Variations in payment systems and formats across countries create compatibility challenges. Compliance with anti-money laundering (AML), counterterrorism financing (CTF), and know-your-customer (KYC) regulations frequently requires banks to manually review and verify transactions, leading to longer processing times, particularly for high-risk regions or large amounts. Time zone differences and limited operational hours of banks further delay payments requiring coordination. Transactions involving multiple currencies add complexity, as they may require manual intervention for currency conversion or liquidity management.

financial messaging enabling data exchange across payment systems worldwide).

While the G20 proposes a list of important measures, widespread adoption remains challenging. One G20 priority area where work has been proceeding is the interlinking of domestic retail fast payment systems. For instance, in October 2024, the Governing Council of the European Central Bank decided to continue efforts to link its TARGET Instant Payment Settlement service (TIPS) with other fast payment systems globally, explicitly aiming to reduce fragmentation risks. This will involve exploring the benefits of joining the multilateral network of instant payment systems, Project Nexus, led by the Bank for International Settlements (BIS), and establishing a bilateral link with India's Unified Payments Interface (UPI).<sup>41</sup>

Second, while domestic payments are increasingly instant and digital, cross-border transactions have yet to fully leverage the potential of digital technologies. One initiative aimed at creating the next-generation cross-border wholesale payments infrastructure is Project Agorá, led by the BIS in collaboration with seven central banks and numerous private sector companies. This public-private partnership aims to assess the potential of a multi-currency unified ledger to enhance the correspondent banking model. The project could establish a new regulated financial market infrastructure, utilizing tokenization and smart contracts to reduce transaction times and costs, improve payment transparency, and mitigate risks. Additionally, new technologies could be harnessed to combat money laundering through a data-driven approach, employing artificial intelligence, machine learning, privacy-enhancing technologies, and network analysis, as demonstrated in the BIS Innovation Hub's Project Aurora.

Third, in parallel, work should strive to ensure interoperability among financial market infrastructures to reduce transaction costs and prevent the formation of distinct financial blocs operating on separate payment rails. New systems should be compatible with both existing and emerging platforms. One way to avoid bloc fragmentation in the payments landscape is the development and adoption of standardized protocols, such as the ISO 20022 global messaging standard, and harmonize Application Programming Interfaces (APIs), which enable different payment software applications to interact. Additionally, using the Legal Entity Identifier (LEI)—a unique alphanumeric code used to identify legally distinct entities involved in financial transactions—in cross-border payments would enhance data standardization and facilitate know-your-customer processes and sanctions screening. The G20's *Roadmap* is a key policy effort supporting this interoperability.

*Fourth*, it is key to sustain collaboration in areas where there is geo-economic consensus, for instance in the fight against financial crime and terrorism financing. Intergov-

<sup>&</sup>lt;sup>41</sup>Nexus, a project from the BIS Innovation Hub's centre in Singapore, will initially connect the fast payment systems of Bank Negara Malaysia, Bangko Sentral ng Pilipinas, the Monetary Authority of Singapore, the Bank of Thailand and the Reserve Bank of India. UPI is an instant payments system developed by the National Payments Corporation of India and regulated by the Reserve Bank of India. UPI has the largest instant payment transaction volumes in the world, with almost 400 million transactions per day, and India is among the top ten recipients of euro area remittances.

ernmental organizations like the Financial Action Task Force (FATF) are instrumental in facilitating this cooperation by setting international standards and conducting assessments of countries' compliance. These institutions must continue to operate with integrity and independence, regardless of geopolitical influences.

Such collaboration and cooperation are also essential to address the technological, legal, regulatory, and supervisory challenges that crypto-assets pose. For instance, the EU has implemented a stringent regulatory framework through the Market in Crypto-Assets Regulation (MiCAR) to mitigate the aforementioned risks in Section 3). However, at the global level, the implementation of international crypto-asset standards remains, unfortunately, fragmented. This fragmentation raises the risk that regulatory arbitrage and cross-border contagion could undermine effective risk mitigation efforts even in jurisdictions that have established regulatory frameworks. Implementing the G20's crypto-asset roadmap could help mitigate these risks. This would include the Financial Stability Board's recommendations for regulating crypto-asset markets and activities, as well as the Basel standards for banks' exposures to crypto-assets.

Lastly, it is important to weigh both the opportunities and risks associated with statecraft measures within the financial system. Policymakers should have the authority to regulate and oversee activities on payment networks, including the imposition of sanctions when necessary. However, it is vital to be aware of the potential unintended consequences of such actions. For example, policy measures that disrupt payment networks could unintentionally impede efforts to lower cross-border payment costs, as outlined in the G20's *Roadmap*.

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#### Chapter IV: The Future of the International Financial Architecture in a Geopolitically Fragmented World

#### Introduction

This chapter will take stock of the existing international financial architecture and discuss the potential repercussions of geopolitical fragmentation for its evolution and future. The chapter will be organized around four broad themes about the implications of geopolitical fragmentation for: (i) the evolution of the global financial safety net (GFSN), (ii) multilateral financial institutions, (iii) sovereign debt restructuring, and (iv) international financial regulation and coordination. Below, we present a preliminary discussion of the first three themes. The section on international financial regulation will benefit from our discussants' comments and will be completed after the conference.

# Section 1. The Global Financial Safety Net: Central Bank Swap Lines, FX Reserves, and the Role of the IMF

This section begins by taking stock of the Global Financial Safety Net (GFSN) in its current form and then discusses the implications of a changing geopolitical landscape for its various components.

GFSN is a collective set of mechanisms designed to mitigate financial instability risks in a highly interconnected global financial system. It is a multi-layered system designed to prevent and respond to financial crises (Aiyer & Ilyina, 2022). The GFSN provides emergency liquidity support to countries facing short-term balance of payments difficulties, currency crises, or systemic financial instability.

To date, the GFSN comprises four main components: foreign exchange reserves, bilateral central bank swap lines, regional financing arrangements, and global coverage under the International Monetary Fund (IMF) (Aiyer and Ilyina (2022). While foreign exchange reserves act as the first line of defense, bilateral swap lines and the IMF offer broader, more structured liquidity support during crises. This section takes stock of the current structure, function, and significance of the key components of the GFSN, beginning with central bank swap lines.

#### **Central Bank Swap Lines**

Central bank swap lines provide dollar liquidity to foreign financial institutions facing short-term funding shortages, particularly during economic distress when access to dollar funding becomes constrained. The agreements extended between central banks are typically bilateral and temporary, and swap lines are activated to stabilize currency markets and provide short-term liquidity to mitigate market disruptions (Borio, 2021; McCauley & Schenk, 2020). <sup>1</sup> Swap lines

<sup>&</sup>lt;sup>1</sup> Central bank swap line arrangements typically involve two steps. Step 1: A foreign central bank receives U.S. dollars in exchange for an equivalent amount of its domestic currency based on the prevailing exchange rate.

offer liquidity support and stabilize exchange rates. By signaling the willingness of counterparty central banks to provide support during crises, BSLs may also increase market and investor confidence, stabilizing global financial markets.

The U.S. dollar is the world's primary reserve currency, accounting for a significant share of global trade, investment, and debt. Offshore dollar funding markets are one element of the extensive global use of the U.S. dollar in international trade and financial transactions (Goldberg & Lerman, 2019). The Federal Reserve's swap lines ensure that financial institutions worldwide can access dollars when markets become stressed, preventing systemic liquidity shortages. The use of swap lines dates back to the 1960s when the Federal Reserve introduced them to support the Bretton Woods system by stabilizing exchange rates and countering speculative attacks on the U.S. dollar.<sup>2</sup> Swap lines grew in importance, notably during the Global Financial Crisis (GFC) and the COVID-19 pandemic (Fleming & Klagge, 2021). The Federal Reserve's swap lines play an essential role in the global financial system, allowing foreign central banks to access U.S. dollar liquidity during periods of financial stress and helping to prevent disruptions in global funding markets.

During the GFC, as dollar liquidity dried up and liquidity froze in global financial markets, the Federal Reserve established extensive swap agreements with major central banks, including the European Central Bank (ECB), the Bank of Japan (BoJ), the Bank of England (BoE), the Swiss National Bank (SNB) and Bank of Canada (BoC). The swap lines helped address the U.S. dollar funding shortages faced by foreign financial institutions (Allen & Moessner, 2019). Evidence suggests that these swap lines were crucial in reducing dollar funding pressures abroad and stabilizing international money markets (Goldberg, Kennedy, and Miu, 2011). Swap line facilities helped alleviate severe dollar shortages in the global financial system, preventing further financial contagion.

With the onset of the COVID-19 pandemic in March 2020, the Federal Reserve quickly reactivated and expanded its swap lines to ensure dollar liquidity in global markets. The facilities underscore the Fed's role in maintaining global financial stability by addressing funding stress in offshore dollar markets (Federal Reserve, 2020). In addition to permanent swap lines with key central banks, the Fed introduced temporary swap agreements with more countries, including South Korea, Mexico, Brazil, and Singapore.<sup>3</sup>

Similarly, the Eurosystem's provision of access to euro liquidity via swap and repo facilities to non-euro area central banks ensures the availability of euro funding beyond the euro area. In doing so, the facilities enhance the European Central Bank's role in mitigating financial stability

<sup>3</sup> The Federal Reserve's swap lines are of two types:

Step 2: At the end of the agreed term, the transaction is reversed, with the original exchange rate ensuring no foreign exchange risk for either party.

<sup>&</sup>lt;sup>2</sup> The early swap network, managed by the Federal Reserve Bank of New York, was primarily used to provide liquidity to European central banks.

<sup>1.</sup> Permanent Swap Lines: Established with the ECB, BoE, BoJ, SNB, and BoC, these lines are always available and serve as a standing arrangement for dollar liquidity provision.

<sup>2.</sup> Temporary Swap Lines: Introduced during crisis periods, these lines provide emergency liquidity to a broader set of central banks for a limited period.

risks and promoting the euro's global use in financial and commercial transactions. During the COVID-19 crisis, the Eurosystem expanded these arrangements—including the integration of all repo lines into a single, permanent facility—EUREP—to streamline the system and, allow for quicker response to market disruptions and provide additional liquidity support. Currently, the ECB maintains eight swap lines with systemically important countries and seven repo lines under EUREP. The rationale for the expanded facilities was to reduce funding pressures, curb fire sales, and contain financial contagion, even when they are not actively used, as they are intended as precautionary backstops and a signaling device rather than replacements for private funding markets. A further rationale is that the mere existence of liquidity lines can stabilize markets.

The updated approach offers standing or renewable access to liquidity lines for countries with close economic and financial ties to the euro area while allowing broader access during crises, such as during the COVID-19 pandemic, or geopolitical shocks like the war in Ukraine. The Eurosystem facilities have an additional goal of counteracting market fragmentation across the euro area, where stresses in currency funding can unevenly impact national bond markets. By extending liquidity lines, the ECB is designed with policy cohesion in mind and to strengthen the euro's appeal globally, reinforcing its status as a stable and reliable international currency.<sup>4</sup>

While swap lines offer several benefits, they also have limitations. These include selective access for a subset of central banks, their temporary nature, and political considerations that govern the granting of access.<sup>5</sup> Central bank swap lines are primarily available to major developed economies, excluding many emerging and developing countries from direct access to dollar liquidity (Obstfeld, 2021). Goldberg et al. (2011) note that economic and geopolitical factors influence the selection of countries that receive swap lines, raising concerns about unequal access to liquidity support. The thought that central banks can act in political rather than purely technical ways is echoed by Tooze (2020), in so much as the decisions to grant swap lines often reflect geopolitical considerations rather than purely economic criteria.

#### The FIMA Repo Facility

The Federal Reserve introduced the Foreign and International Monetary Authorities (FIMA) Repo Facility in March 2020 as an additional liquidity tool for foreign central banks and monetary authorities. Unlike swap lines, which are limited to select central banks, the FIMA repo facility is open to a broader range of countries. It allows access to U.S. dollar liquidity by liquefying U.S. Treasury securities holdings as collateral.

By widening dollar liquidity access, the FIMA Repo facility allows foreign central banks without swap line agreements to access U.S. dollars, enhancing financial stability in emerging markets (Acharya et al., 2021). The facility further reduces Treasury market disruptions by temporarily

<sup>&</sup>lt;sup>4</sup> <u>https://www.ecb.europa.eu/press/blog/date/2020/html/ecb.blog200819~0d1d04504a.en.html</u>

https://www.ecb.europa.eu/press/blog/date/2024/html/ecb.blog20240129~cc10e6c0b4.en.html

<sup>&</sup>lt;sup>5</sup> Moral hazard concerns arise if the availability of swap lines encourages excessive risk-taking by financial institutions under the expectation that the Fed will provide support during crises.

allowing foreign central banks to exchange their U.S. Treasury holdings for dollars and preventing the destabilizing effects of forced sales of Treasury assets. The FIMA Repo facility complements the Fed's BSLs with the added advantage that a broader set of countries can access emergency dollar liquidity during crises.

#### The Role of the International Monetary Fund (IMF)

The IMF is indispensable in the GFSN by providing emergency financial assistance through various instruments during crises. These instruments span stand-by arrangements offering short-term financial assistance to countries with balance of payments difficulties, extended fund facilities that provide longer-term assistance aimed at addressing structural economic weaknesses, rapid financing instruments, and rapid credit facilities that comprise emergency lending mechanisms for countries facing urgent financial needs, such as natural disasters or pandemics. In addition, flexible credit lines and precautionary and liquidity lines are preemptive tools for countries with strong economic fundamentals when faced with external shocks (IMF, 2021).

Despite its importance, the IMF faces several challenges. The stigma of IMF assistance makes some countries reluctant to seek IMF help, given concerns about policy conditionality and sovereignty (Eichengreen, 2019). The IMF also faces governance and representational issues, with critics arguing that IMF decision-making favors advanced economies, particularly the United States and Europe (Gallagher et al., 2021).

#### **International Reserves as Self-Insurance**

International reserves are a critical component of the GFSN that allows countries to self-insure against financial instability. Reserves, typically in the form of foreign exchange, gold, and special drawing rights (SDRs), buffer countries against adverse external shocks, stabilize their currencies and maintain investor confidence. While other GFSN mechanisms, such as central bank swap lines and the International Monetary Fund (IMF), provide external support, international reserves remain the primary line of domestic defense against liquidity shortages and speculative attacks (Obstfeld et al., 2010).

International reserves provide a self-insurance mechanism that allows countries to respond to adverse shocks while reducing reliance on external financial support. The primary functions of reserves include currency volatility mitigation, liquidity provision during crises, and enhanced market confidence.<sup>6</sup>

<sup>&</sup>lt;sup>6</sup> Holding substantial reserves allows central banks to intervene in foreign exchange markets, smoothing fluctuations and preventing excessive depreciation or appreciation of domestic currencies (Aizenman & Sun, 2012). In times of economic distress, reserves act as an immediate source of liquidity, ensuring that governments can meet external debt obligations and finance imports without resorting to costly emergency borrowing (Dominguez et al., 2012). Large reserve holdings signal economic strength to international investors, reducing the likelihood of capital flight and speculative attacks (Obstfeld, 2013). By maintaining adequate reserves, countries reduce their reliance on IMF lending programs and other external mechanisms, which may come with policy conditionality and reputational costs (Jeanne & Rancière, 2011).

While reserves provide financial stability, accumulating and maintaining them entails costs such as the opportunity costs of investing in low-yield assets (Rodrik, 2006), the sterilization costs associated with reserve accumulation (Ghosh et al., 2016), and the inflationary pressures that could arise with excess reserve accumulation that in inadequately sterilized (Calvo et al., 2012).

#### Geopolitics and the GFSN

The Federal Reserve's swap lines have historically intertwined economic imperatives with geopolitical considerations. Over time, the scope of these swap lines expanded, reflecting the evolving dynamics of international finance and U.S. foreign policy priorities.<sup>7</sup>

During the 2007-2008 Global Financial Crisis, the Federal Reserve extended swap lines predominantly to advanced economies, including the European Central Bank and the Swiss National Bank, to alleviate global dollar funding pressures. However, as the crisis deepened, emerging markets like Mexico faced severe financial strains. In October 2008, Guillermo Ortiz, then Governor of the Bank of Mexico, requested a dollar-liquidity swap line from the Fed to bolster confidence and stabilize Mexico's financial system. This request prompted U.S. policymakers to deliberate the implications of extending such facilities to emerging markets, balancing the Federal Reserve's domestic mandate against its role in global financial stability.<sup>8</sup>

The decision-making process involved high-level consultations, including input from Condoleezza Rice, who was the U.S. Secretary of State at the time. Rice's involvement underscored the geopolitical dimension of the swap lines, as extending financial support to certain countries could reinforce strategic alliances and promote U.S. foreign policy objectives. Ultimately, the Fed approved swap lines for Mexico, Brazil, South Korea, and Singapore, reflecting a nuanced approach that considered both economic stability and geopolitical relationships.

This episode illustrates how the Federal Reserve's swap lines serve not only as tools for monetary policy and global financial stability but also as instruments of geopolitical strategy, influencing and reflecting the United States' international relationships and priorities.

Turning to the strategic considerations behind the U.S. Federal Reserve's allocation of dollar liquidity swap lines to foreign central banks, while economic factors like market size and financial stability are important, evidence suggests that geopolitical alignment with the United States significantly influences the Fed's decisions on swap line distribution.<sup>9</sup> Countries that share

<sup>&</sup>lt;sup>7</sup> <u>https://www.brookings.edu/wp-content/uploads/2018/08/14-B-International-Swaps-Prelim-Disc-Draft-2018.09.11.pdf</u>

https://www.federalreserve.gov/monetarypolicy/bst.htm

https://www.nber.org/papers/w20755

https://www.clevelandfed.org/publications/working-paper/2014/wp-1414-the-evolution-of-the-federalreserve-swap-lines-since-1962

<sup>&</sup>lt;sup>8</sup> <u>https://som.yale.edu/story/2023/central-bank-swap-lines-primer</u> <u>https://www.bis.org/publ/work851.htm</u>

<sup>&</sup>lt;sup>9</sup> https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/files/181\_AWP\_final.pdf

closer political ties with the U.S. are more likely to receive these facilities. The strategy reflects the nexus between global liquidity support mechanisms with broader U.S. foreign policy objectives, highlighting the role of financial statecraft in international relations and with implications for the Global Financial Safety Net.

The selective provision of swap lines contributes to a hierarchical structure within the GFSN, where certain nations have privileged access to emergency dollar liquidity. This arrangement can influence international financial stability and the effectiveness of crisis response measures. It also underscores the strategic use of financial tools to advance geopolitical interests, reinforcing alliances and promoting the U.S. dollar's global prominence.

Relatedly and in contrast, China has been developing its own network of swap lines to promote the internationalization of the renminbi (RMB). By offering alternative liquidity options, China aims to enhance its economic influence and provide countries with financial support mechanisms outside the traditional Western-dominated frameworks. This development introduces new dynamics into the global financial system, potentially challenging the existing dominance of the U.S. dollar.

China's establishment of bilateral currency swap agreements also appears to serve as a strategic instrument to advance its geopolitical and economic objectives. Initiated by the People's Bank of China (PBoC), these agreements allow partner countries to access Renminbi (RMB) liquidity in exchange for their local currencies, thereby facilitating trade and investment while promoting the internationalization of the RMB. The selection and continuation of these swap lines are significantly influenced by the geopolitical alignment between China and potential partner nations. Countries maintaining close political and strategic ties with China are more likely to be granted and retain these agreements. The pattern underscores China's use of financial tools to reinforce diplomatic relationships and expand its influence on the global stage.

Evidence suggests that economic factors also play a crucial role in the negotiation and sustainability of these agreements.<sup>10</sup> Smaller economies may find the swap lines attractive as they provide access to RMB liquidity, which can be beneficial during periods of financial instability or for foreign exchange reserve diversification. For China, extending swap lines to these countries not only fosters economic ties but also enhances its geopolitical leverage by creating dependencies that can influence recipient country policies, potentially constraining their autonomy. Moreover, the effectiveness of these agreements in promoting the RMB's internationalization is contingent on the status of the Chinese currency within the global financial system.

China's bilateral currency swap agreements are emblematic of its financial statecraft, intertwining economic incentives with geopolitical strategies. By carefully selecting and managing these agreements, China aims to bolster its global influence, promote the RMB's

<sup>&</sup>lt;sup>10</sup> <u>https://www.researchgate.net/profile/Sachintha-Pilapitiya-</u>

<sup>2/</sup>publication/385091604\_Swap\_Worthy\_The\_Geopolitical\_Determinants\_of\_Chinese\_Currency\_Swaps/links/6715 ceb424a01038d0f9bd5d/Swap-Worthy-The-Geopolitical-Determinants-of-Chinese-Currency-Swaps.pdf

international standing, and create a network of countries with interests in maintaining strong ties with Beijing.

The allocation of bilateral swap agreements thus appears influenced by a combination of economic and geopolitical factors. The strategy of selective liquidity provision not only addresses immediate financial stability concerns but also serves as a tool of financial statecraft, shaping international alliances and reinforcing the hierarchical nature of the GFSN. The emergence of China's RMB-based initiatives further changes the international financial landscape, signaling a shift towards a more multipolar financial order.

Geopolitics also plays a role in IMF lending decisions. For example, as the IMF's largest shareholder, the U.S. holds significant sway over lending decisions, allowing it to shape outcomes that align with its foreign policy and economic priorities.<sup>11</sup> IMF lending often supports countries that are strategically aligned with the U.S., especially during periods of international tension or military engagement. Beyond geopolitical alignment, U.S. commercial banking interests appear to play a crucial role in influencing IMF loan decisions. Given their heavy loan exposures to emerging markets and developing countries, IMF bailouts during times of financial distress effectively protect American financial institutions from potential losses. Thus, IMF operations—while seemingly neutral and technocratic—often reflect American interests, serving as a vehicle for American financial diplomacy. Geoeconomic fragmentation could have significant implications for the role that geopolitics plays in IMF lending decisions.

Finally, take the role of the US dollar as the world's reserve currency. In 2023, the dollar accounted for about 60 percent of global foreign exchange reserves (Atlantic Council 2024; IMF 2024). More than half of international trade is invoiced in dollars, and about two-thirds of all international loans and international debt securities are denominated in dollars. Evidence suggests that the dollar's role is reinforced by US military power and that its military allies are more likely to hold dollar reserves. The Fed is, therefore, more willing to act as a lender of last resort for the global economy.<sup>12</sup> Given that geopolitics matter for the GFSN, a key question that arises is what further geoeconomic fragmentation would mean for the GFSN.

#### What does the future entail for the GFSN?

Central bank swap lines, international reserves, and the IMF comprise multi-layered features of the Global Financial Safety Net. For example, the Federal Reserve's swap lines are a vital component of the global financial safety net, providing essential liquidity support to foreign central banks during times of crisis. While they have proven effective in stabilizing global markets, ensuring equitable access and addressing potential moral hazard problems remain ongoing challenges. As financial markets evolve, the Federal Reserve's swap line network will likely remain crucial for maintaining global financial stability.

While swap lines offer rapid and flexible support, their limited access underscores the continued importance of the IMF in addressing broader financial crises. Strengthening both mechanisms

<sup>&</sup>lt;sup>11</sup> https://link.springer.com/article/10.1057/palgrave.ip.8800085

<sup>&</sup>lt;sup>12</sup> <u>https://www.economist.com/finance-and-economics/2025/03/06/it-is-not-the-economic-impact-of-tariffs-that-is-most-worrying</u>

and fostering greater international cooperation will mitigate future financial shocks and ensure a more resilient global economy. Finally, optimal reserve accumulation involves balancing a trade-off between financial stability and economic efficiency and remains a key policy challenge for many countries.

Further fragmentation may raise additional questions for the other layers of the GFSN. Countries may rely more on self-insurance, building up their reserves as a line of defense. However, self-insurance is unlikely to be optimal globally as it does not comprise cooperation or risk-sharing at a supranational level. There is a possibility that other players, such as China, could step in to fill the void should the United States no longer be the epicenter of the international monetary system. Thus far, while there has been an uptick in Remimbi usage, convertibility, and capital controls, concerns suggest that the Remimbi is unlikely to unseat dollar dominance in the near future. However, continued policy uncertainty in the United States could create space for the Euro, Swiss Franc, and other currencies to increase their share in the market for reserve assets, increasing their significance as global safe assets. An additional pillar of the GFSN in the form of regional financial arrangements could gain traction, but such arrangements remain in nascent stages and are essentially in uncharted waters. Several arrangements also use the US dollar as the currency of choice.

Finally, this brings us to the future role of IMF lending as a pivotal piece of the GFSN. If the US pulled out, would this seriously impact the Fund? Withdrawing the United States from the International Monetary Fund (IMF) would significantly undermine U.S. influence over global financial regulation and strategic interests.<sup>13</sup> The Fund-Bank complex of institutions serves as vital tools for the U.S. to support allies and exert economic pressure on adversaries. Exiting these organizations would forfeit critical instruments of economic and diplomatic power, weakening U.S. leadership in international financial matters. However, the withdrawal of the United States from the International Monetary Fund (IMF) could significantly affect the institution's survival and functionality. As the largest shareholder, the U.S. plays an outsized role in shaping IMF policies and decisions. Its departure would not only diminish the IMF's financial resources but could also weaken its credibility and influence in global economic governance. The absence of U.S. leadership could also lead to reduced confidence among member countries, potentially prompting other countries to reconsider their commitments. The potential decrease in funding and support would undermine the IMF's ability to provide financial assistance and maintain global financial stability.

<sup>&</sup>lt;sup>13</sup> <u>https://www.project-syndicate.org/commentary/trump-withdrawal-from-imf-and-world-bank-would-primarily-hurt-us-interests-by-ngaire-woods-2025-02</u>

#### Section 2. Implications of geopolitical fragmentation for multilateral financial institutions

Geopolitical tensions threaten to undermine the multilateral financial institutions that have played central roles in the governance of the international financial system since the Second World War, such as the International Monetary Fund, the World Bank, the G7, and the G20. The multilateral financial institutions in question have served the international financial system well, striving to adapt to changing realities. However, fragmentation along geopolitical lines and an increasingly transactional global economy are now testing their resilience to the limit. These developments encourage the emergence of alternative multilateral fora and financial mechanisms. To make multilateralism effective within the evolving realities of the international financial system, a pragmatic approach is now essential. This includes forging coalitions of the willing to continue addressing global financial challenges topic by topic, seriously consider calls for adapting the governance of multilateral financial institutions to reflect the new realities of the 21st century, and nations committed to multilateral institutions to step up their financial commitments to offset any shortfalls and take the lead in upholding international rules, law and commitments.

# 1. Geopolitical tensions threaten to undermine the multilateral institutions that have played central roles in the governance of the international financial system since the Second World War.

The Bretton Woods Agreement, signed on 22 July 1944, established the framework for the post-World War II international financial system – the "most important institution-building episode of the twentieth century" (Nye, 2025). It aimed to prevent another economic and financial collapse like the Great Depression, which could potentially lead to global conflict, creating two major multilateral institutions that are still central in international finance today. One is the International Monetary Fund (IMF), designed to promote global monetary cooperation, assist countries facing balance-of-payments crises, and stabilize exchange rates. The other is the World Bank, originally established to help rebuild war-torn Europe and later refocused on global economic development. The Bretton Woods sisters were complemented two decades later with the Group of Seven (G7) industrial nations accounting for two-thirds of global GDP, which met for the first time in Rambouillet on 15-17 November 1975 and were driven by "shared beliefs" about open, democratic societies and "shared responsibilities." Following the worst global economic and financial crisis since the Great Depression, the Group of Twenty (G20) of major advanced and emerging economies replaced the G7 as the premier forum for international economic cooperation at the Pittsburgh Summit of 24-25 September 2009.<sup>14</sup>

<sup>&</sup>lt;sup>14</sup> At that time, the G20 accounted for approximately 85% of global output.

# 2. The multilateral financial institutions in question have served the international financial system well, striving to adapt to changing realities.

In the past two decades, G7 finance ministers and governors have played a vital role in preserving global economic and financial stability, managing crises, and setting global economic norms. The G7 coordinated policy actions during the 2008 financial crisis, established the Financial Stability Board in 2009, and provided economic support during the COVID-19 pandemic. It has stabilized exchange markets through coordinated foreign exchange interventions and official statements.<sup>15</sup> It has initiated sustainable finance measures to address climate risks. It imposed economic sanctions on Russia after the invasion of Crimea in 2014, providing financial assistance for Ukraine after the full-scale invasion of 2022.

The G20, for its part, exceeded expectations by committing US\$1.1 trillion to address the impacts of the global financial crisis at the Leaders' Summit in London on 2 April 2009.<sup>16</sup> Momentum has admittedly waned since then, diminishing the G20's ability to address new crises effectively. For instance, its role during the COVID-19 pandemic was modest. But another visible achievement of the G20 was the granting of permanent membership to the African Union in 2023, a step towards enhancing global representation.

Meanwhile, the IMF has continued to play a crucial role in anticipating and managing financial crises over the past two decades. It was essential in stabilizing the global economy during and after the 2008 financial crisis.<sup>17</sup> During the COVID-19 pandemic, the IMF again provided rapid financial assistance through emergency financing tools and increased its Special Drawing Rights (SDR) allocation by \$650 billion to boost global liquidity after the \$250 billion increase decided at the London Summit of G20 Leaders in April 2009.<sup>18</sup> The IMF has strengthened its surveillance activities, expanded its capacity development efforts, and increasingly focused on issues such as inclusive growth, income inequality, and climate change. It has participated in various debt relief initiatives.<sup>19</sup>

<sup>&</sup>lt;sup>15</sup> For instance, G7 members intervened jointly in foreign markets to weaken the yen following the Fukushima disaster in 2011 and avoided "currency wars" in 2017 by committing not to target exchange rates for competitive purposes and refraining from competitive devaluation.

<sup>&</sup>lt;sup>16</sup> The package included a \$500 billion increase in resources pledged by IMF members to the New Arrangements to Borrow, an IMF facility for lending to struggling economies; \$250 billion in pledges to enhance trade finance; a \$250 billion allocation of special drawing rights (SDR), allowing IMF members access to foreign currency during crises; and \$100 billion in commitments for multilateral development banks to lend to poor countries.

<sup>&</sup>lt;sup>17</sup> It provided financial assistance to member countries, expanded its lending capacity, and introduced flexible lending instruments such as the Flexible Credit Line (FCL) and the Precautionary and Liquidity Line (PLL) to support countries with strong economic fundamentals.

<sup>&</sup>lt;sup>18</sup> The emergency financing tools in question included the Rapid Financing Instrument (RFI) and the Rapid Credit Facility (RCF).

<sup>&</sup>lt;sup>19</sup> One such initiatives is the Heavily Indebted Poor Countries (HIPC) Initiative.

# **3.** However, fragmentation along geopolitical lines and an increasingly transactional global economy are now testing the resilience of multilateral institutions to the limit.

Heightened geopolitical tensions after the first US-China trade disputes of 2018 and Russia's invasion of 2022 have hindered consensus-building on key issues required to enhance the effectiveness and representativeness of the Bretton Woods sisters and the G7/20. For instance, one long-standing issue is reforming the governance of the IMF and the World Bank to reflect better the global economic and financial shifts of the past few decades. Almost 60% of voting shares in the IMF are held by countries representing less than 14% of the world's population, while the combined share of India and China is 9%.<sup>20</sup> Geopolitical tensions have polarized discussions, making it challenging to reach agreements on reforms that require broad international cooperation and compromise.

More recently, a concerning development is that the role of the US in multilateral institutions and forums is being questioned by the new administration. G20 Finance Ministers and Governors failed to agree on a joint communique at their meeting in Cape Town on 26-27 February, after clashes on US tariffs and climate finance, according to press reports, intensifying questions over the group's relevance in an era of waning US support for multilateral forums (Rose, 2025). Moreover, on 4 February 2025, President Trump ordered a 180-day review of all international organizations to which the US belongs and supports, as well as "all conventions and treaties to which the United States is a party" (Woods, 2025). A change in the US's position—the very nation that fostered multilateralism after World War II—could have profound implications for the global financial system. Such a shift could transform the world order from one based on shared values to one driven more by unilateralism and, perhaps, coercion. In line with this, data from Google Books Ngram Viewer, a tool that shows how often specific words or phrases have appeared in a large corpus of books published as far back as the 1500s, shows that the term "multilateral institutions" has lost prominence since the global financial crisis, while the term "geopolitical tensions" has become more frequent (see **Chart 1**)

<sup>&</sup>lt;sup>20</sup> Moreover, the US has always appointed the World Bank's president, approved Europe's choice to lead the IMF, and selected the Fund's deputy managing director. The Pittsburgh summit of G20 Leaders of 24-25 September 2009 resulted in a shift of at least 5% of IMF quota shares from over-represented advanced economies, mainly in Europe, to under-represented emerging markets such as China, India, and Brazil and was followed by an additional 6% shift at the G20 Seoul Summit of 2010.



Chart 1: Frequency of the terms "multilateral institutions" and "geopolitical tensions" in printed sources published since 1945

Source: Google Books Ngram Viewer, accessed on 6 March 2025.

#### 4. These developments encourage the emergence of alternative multilateral fora and financial mechanisms.

One such forum is the BRICS. BRIC was originally a term coined by a Goldman Sachs economist in 2001 to designate a group of large emerging markets. The first summit in 2009 included Brazil, Russia, India, and China, establishing an informal platform for annual meetings to discuss common interests. South Africa joined in September 2010, prompting the renaming to BRICS. Earlier this year, BRICS expanded to include Egypt, Ethiopia, Iran, and the United Arab Emirates, bringing the total to nine countries. Nearly three dozen more countries have applied to join.<sup>21</sup> The expanded BRICS+ holds significant global influence, surpassing the G7 both demographically, with almost 46% of the world's population compared to the G7's 9%, and economically, contributing 35% of global GDP versus the G7's 30%.<sup>22</sup> These economies are expected to be key drivers of future global growth. Additionally, with new members Iran and the United Arab Emirates joining fellow oil producers Brazil and Russia, BRICS+ now accounts for about 40% of crude oil production and exports.

The BRICS have been active in building institutions that some observers regard as competitors to the World Bank and the IMF. It established the New Development Bank (NDB) in 2015, headquartered in China. The NDB is the first multilateral development bank created and led by emerging economies, with founding members as equal shareholders of the initial \$100 billion capital. Unlike the IMF and the World Bank, where the US holds veto power, the NDB ensures that no member has veto authority, maintaining equal voice among its members, even as more

<sup>&</sup>lt;sup>21</sup> Applicants include Indonesia, Mexico, Thailand, and Turkey. Argentina initially accepted an invitation but reversed its decision after Javier Milei's election as president in 2023, while Saudi Arabia has yet to decide on its participation. <sup>22</sup> The group is dominated by China, which has the largest share of the group's GDP, with about 70%.

countries join.<sup>23</sup> In 2015, the BRICS also established the Contingent Reserve Arrangement (CRA), a network of central bank swap lines with \$100 billion in committed resources. This mechanism provides members with access to liquidity support to address short-term balance of payments pressures, in the spirit of what the IMF does.

However, the BRICS group faces significant challenges, particularly in achieving cohesion and a shared purpose (O'Neill, 2024). The founding members have differing objectives. It has been argued that China and Russia aim to challenge the U.S.-led world order, while Brazil and India prefer reforms of existing international institutions and are wary of an anti-Western stance. Moreover, converting shared interests into a unified action plan was challenging, even with five members. With nine members now, and potentially more, establishing a common identity and agenda will demand sustained effort.

# 5. To make multilateralism effective within the evolving realities of the international financial system, a pragmatic approach is essential.

A silver lining is that many countries remain committed to openness to trade and finance, multilateralism, and the maintenance of a rules-based international order. When the US withdrew from the Trans-Pacific Partnership (TPP) – a trade agreement between 12 Pacific Rim economies and the US – in January 2017, the remaining countries negotiated a new trade agreement, which incorporated most of the provisions of the TPP and entered into force in December 2018.<sup>24</sup> The EU and four Mercosur countries (Argentina, Brazil, Paraguay, and Uruguay) reached a political agreement in December 2024 for a partnership agreement to increase bilateral trade and investment, create more stable related standards and rules, and fight climate change. All BRICS members continue to participate actively in major multilateral institutions, maintaining their influence on the global agenda from within.

More fundamentally, the most pressing challenges remain global in nature, which serve as a catalyst for countries to work closely together. Climate change, pandemics and other health risks, the rise of artificial intelligence and disruptive new technologies, economic instability, and nuclear proliferation—remain inherently global and will not go away (Obstfeld, 2024). These issues necessitate a coordinated approach. Multilateralism, with all nations playing a constructive role, remains the most effective solution. Yet, in this new reality where major multilateral institutions may find themselves impaired in the near term, three key proposals emerge.

<sup>&</sup>lt;sup>23</sup> This is unlike the IMF, where the US has veto power and holds the largest share of the votes, with 17%.
<sup>24</sup> In terms of maintenance if a rules-based international order, it is worth noting that on 24 February 2025, three years after Russia's invasion, the United Nations General Assembly adopted a resolution proposed by Ukraine and co-sponsored by a host of European countries, calling for "the sovereignty, independence, unity and territorial integrity of Ukraine within its internationally recognised borders" and the need to ensure accountability for crimes committed under international law". More specifically, 18 countries voted against (including Russia, Belarus, North Korea and the US), 93 countries voted in favour, and 65 countries abstained (including China and Iran); see <a href="https://news.un.org/en/story/2025/02/1160456">https://news.un.org/en/story/2025/02/1160456</a>.

First, there might be a need to forge coalitions of the willing and identify flexible formats of cooperation to continue making progress topic by topic. For instance, it has been suggested that the EU, China, and other like-minded countries could partner to maintain momentum towards net-zero emissions and address climate change; that the EU, China and India could take initiatives to bring together those wanting to preserve trade multilateralism; and that the various countries that have agreed on a minimum effective tax rate on multinational corporations' profits, and ratified the agreement, could bring it to fruition (Blanchard and Pisani-Ferry, 2025; Papaconstantinou and Pisani-Ferry, 2025a, b).<sup>25</sup>

Second, it is time to seriously consider calls for adapting the governance of multilateral financial institutions to reflect the new realities of the 21st century. In the case of the IMF, this involves adjusting the distribution of quotas to enhance the representation of dynamic emerging economies that have gained significant global economic influence. Taking action also aligns with the self-interest of some of the currently overrepresented countries if they wish to prevent the proliferation of alternative systems and mechanisms.

Third, implementing such quota and voting reforms could enable the IMF and World Bank to function effectively even without US participation provided that other countries increase their financial commitments (Eichengreen, 2025).<sup>26</sup> Relatedly, Europe and other nations can seize the moment and enhance their global influence by leading the effort to uphold international rules, laws, and commitments in a context where many countries remain committed to international cooperation and the international legal order. In particular, this necessitates that Europe remain united and speak with one cohesive voice.

#### Section 3. Implications of geopolitical fragmentation for sovereign debt restructuring

Sovereign debt restructurings are notoriously complex. A divide along geopolitical lines among key creditors risks exacerbating the challenge. Meanwhile, the high debt levels and debt distress faced by a large number of low and low-middle-income countries highlight the need for swift and predictable solutions. Such challenges have already led to initiatives such as the G20 Common Framework, which aims to bring all relevant parties around the table. However, more efforts are needed to preserve the mediating and lending role of the IMF and World Bank. This may require better reflection on the increased global economic role of emerging markets in these institutions. Enhancing transparency in debt contracts and negotiations is also essential, and new principles must be established that respect the new reality of non-Paris Club lenders. Lastly, implementing

<sup>&</sup>lt;sup>25</sup> This is analogous to discussions about the future European integration, where e.g. models of concentric circles have proposed in which members can choose the level of integration that corresponds to their wishes at a certain point in time (see e.g. Demertzis et al. 2018).

<sup>&</sup>lt;sup>26</sup> As Eichengreen further observes, the US financial commitments to the World Bank are relatively modest, amounting to just \$2.8 billion in 2024. The World Bank primarily funds itself by issuing bonds, which are backed by its member countries. In contrast, U.S. financial commitments to the IMF are more significant, constituting approximately one-fifth of the Fund's resources through quotas and the New Arrangements to Borrow.

measures such as majority voting provisions in sovereign loans could prevent debtor countries from being held hostage by geopolitical tensions.

**Sovereign debt restructurings are a key recurrent feature of the international financial landscape and notoriously complex.**<sup>27</sup> The difficulty of sovereign debt restructuring lies in balancing the interests of creditors and the debtor country while ensuring a sustainable economic path forward. In the absence of an internationally accepted bankruptcy framework to address sovereign insolvencies, they are, in practice, implemented on a case-by-case basis. Throughout history, the approach has evolved as changes in international trade and capital flows and geopolitics called for adapting debt management and restructuring tools. Since the mid-1990s, a stable blueprint has emerged for restructuring sovereign debt issued under foreign law.<sup>28</sup>

The sequential process typically begins with a country seeking an emergency loan from the International Monetary Fund (IMF). The IMF then develops a comprehensive economic plan ("Program"), committing the country to a series of reforms designed to address the underlying imbalances. As part of this process, the IMF conducts a debt sustainability analysis. Should the debt be found unsustainable, the IMF's assistance is contingent upon two conditions: first, there must be credible financing assurances from bilateral official creditors to undertake a sufficiently deep debt restructuring to restore sustainability; second, a credible restructuring process with private creditors must be underway. Official bilateral creditors coordinate through the Paris Club, an informal group of official creditors are coordinated through mechanisms such as a "take it or leave it" exchange offer. Typically, the debt of multilateral official lending institutions, including multilateral development banks and the IMF, is not subject to restructuring.

Over the years, this template has been refined, drawing on practical experiences. Key milestones include the introduction of collective action clauses (CACs) and subsequently enhanced CACs in bond contracts.<sup>29</sup> Additionally, the IMF reformed its approach by implementing the lending into arrears policy. This policy was designed to empower debtor countries by allowing them to continue functioning while negotiating in good faith with private creditors.<sup>30</sup>

The effectiveness of the sovereign debt restructuring architecture was buttressed by the significant weight of and the cohesive view among the most important official foreign creditors, as brought

<sup>&</sup>lt;sup>27</sup> Reflecting this complexity, there exists a large literature on sovereign debt restructuring; see for instance Eichengreen and Portes (1995); Rogoff and Zettelmeyer (2002); Sturzenegger and Zettelmeyer (2007); Panizza et al. (2009); Buchheit et al. (2013); Buchheit et al. (2019); IMF, 2020; Meyer et al. (2022).

<sup>&</sup>lt;sup>28</sup> Many debt restructurings have followed this template or a variation of it. The exceptions included some debt restructurings undertaken outside IMF programmes, some 'post-default' restructurings that took place after a country had defaulted and fallen into arrears to private creditors, and the 1997-2006 HIPC and MDRI (for details see Zettelmeyer 2013)

<sup>&</sup>lt;sup>29</sup> Enhanced collective action clauses allow a restructuring if a supermajority of creditors across bonds agree, even if such a supermajority is not available at the level of each individual bond. See Gelpern (2014), IMF (2014) and IMF (2020).

<sup>&</sup>lt;sup>30</sup> The Lending into Arrears policy requires a country to be in "good faith negotiations" with its private creditors to receive funds. This avoids that commercial creditors have veto power of Fund financing.

together in the Paris Club. In 1996, the bilateral loans from Paris Club members accounted for almost half of the external debt of low and low-middle-income countries, and together with the multilateral institutions, they account for almost 80% of external debt (see Figures 1 and 2). Their coherence and significant share enabled the Paris Club, together with multilateral institutions, to lead and drive sovereign debt restructurings credibly.

In the 2000s, however, the Paris Club's ability to dictate terms started to erode. Its role weakened as its members wound down their bilateral lending<sup>31</sup> while governments that were traditionally at the periphery of global finance scaled up their bilateral lending. Sovereign wealth and foreign reserve funds from surplus countries – most notably from the Gulf states and China – began investing in a growing range of international assets, including sovereign debt (Gelpern, 2016). This trend accelerated after 2009, as low interest rates in the major advanced countries induced countries to search for higher-yielding assets. In the case of China, the lending boom was also part of its plan to boost its economy and geopolitical reach. In the wake of the Global Financial Crisis of 2007-2008, it was seen as a way for China to find foreign projects to deal with industrial overcapacity – and protect jobs – at home (Makoff et al., 2025).





Source: WB external debt statistics.

Figure 2: Composition of external debt: lowmiddle income countries



As a result, China has become a prominent force in bilateral lending, particularly to low-income countries. According to the World Bank's External Debt Statistics, China's official sector lending now accounts for 8% of the total external debt in low-income countries. However, the actual scale

<sup>&</sup>lt;sup>31</sup> Part of this shift was triggered by the G-7 favouring grants and concessional loans from multilateral institutions over loans in development aid.

of China's lending is believed to be far greater. First, China's private sector, such as state commercial banks, also engages in substantial overseas lending. Second, some of the lending remains hidden from official statistics, with Horn et al. (2023) finding that official data fail to capture around 50% of the total lending. More comprehensive analyses, such as those from AidData, estimate that China has extended USD 1.3 trillion in loans since 2000.

While China's involvement has facilitated much-needed development in many regions, it has also sparked discussions about debt sustainability and the geopolitical implications of its expanding influence. China's foreign lending is often regarded as complex, partly due to its growing multiplicity of lenders over time. China's lending portfolio also developed a characteristic legal complexity over the last fifteen years. First, many of its loans are secured on commodity exports. Second, China has insisted on including unconventional conditions in its sovereign loans, including confidentiality clauses, expansive cross-default clauses, preference clauses vis-à-vis other bilateral lenders, and reserve accounts (Kanyi Lui and Yunnan Chen 2021, Gelpern et al. 2021).

The sovereign debt architecture has failed to keep up with these changes, leaving important gaps.<sup>32</sup> The developments have undermined the Paris Club's role as the cornerstone of coordination, as many of the largest bilateral creditors are either not members of the Paris Club or unwilling to adhere to its principles (see Hagan and Setzer, 2024). Consequently, debt restructurings have faced longer delays and increased unpredictability, leading some to contend that the framework governing sovereign debt restructurings has been severely compromised (see Landau, 2024).

Some important steps have been taken to overcome these new challenges, such as the creation of the G20 common framework for debt treatment and the launch of the sovereign debt roundtable by the Indian Presidency. These initiatives aim to provide a better-coordinated approach by bringing together G20 and Paris Club creditors to work with borrowing countries on a case-by-case basis. They emphasize transparency and comparability of treatment and encourage debtor countries to implement economic reforms to restore debt sustainability. Nevertheless, agreements remain slow to reach, as was demonstrated in recent cases, such as those of Zambia, Sri Lanka and Ghana.

The shift in the composition of official editors highlights the increased risk that geopolitical fault lines complicate sovereign debt restructurings. As global alliances shift and political divides deepen, coordination among creditor nations becomes more challenging. Countries may

<sup>&</sup>lt;sup>32</sup> Note that also the composition of private creditors has significantly changed, with bondholders holding a much larger share of the external debt compared to the mid-1990s. This has added an additional layer of complexity to sovereign debt restructurings, which is not covered in this chapter. For more details see for instance Gelpern (2016), Zettelmeyer (2023) or Hagan and Setzer (2024).
prioritize their strategic interests over collective resolutions, leading to protracted negotiations and impasses. Fragmentation can also result in inconsistent policies and approaches to debt relief, as emerging powers and non-traditional lenders, such as China, do not necessarily adhere to established frameworks like the Paris Club. Geopolitical tensions can also exacerbate mistrust between debtor nations and their creditors, impeding constructive dialogue and delaying critical financial relief.

Geopolitical fragmentation risks also spill over to the role of multilateral institutions in sovereign debt restructurings. These risks are partially fuelled by the growing frustration among some shareholders over the insufficient recognition of their increasing global influence. Despite the growing contribution of emerging markets to the global economy, their roles and voting power within these institutions often fail to reflect their economic status. This disparity has led to calls for governance reforms to ensure a more balanced representation that aligns with the shifting dynamics of global economic power.

Fragmentation can impact the role of multilateral institutions in debt restructurings in several ways. First, divergent interests and tensions could delay decision-making processes in these institutions. Second, fragmentation could constrain their lending capacity. For example, it might jeopardize donor financing to pay for interest-rate subsidies, thereby limiting their concessional lending capacity (Mühleisen, 2023). Such concessional lending is especially crucial during times of economic distress, serving as a vital lifeline. [to be updated following discussions on IDA21]

However, multilateral institutions may also face increasing pressure from some of the bilateral creditors to participate in debt restructurings. This risk is compounded by the substantial share of external debt held by multilateral institutions in low- and middle-income countries. Multilateral institutions have long been the largest source of financing to low- and middle-income countries. However, their share has recently been steadily increasing again, standing at 40%.<sup>33</sup> This implicitly increases the risk of losses for non-multilateral institutions that cannot claim preferred creditor status. Participation in debt restructurings could, however, undermine the capacity of multilateral institutions to scale up concessional finance for all in need down the line.

In response to heightened geopolitical risks, the IMF has adjusted its framework to better align with current realities. Initially, it implemented the Lending into Official Arrears policy to address situations where one or more bilateral creditors were uncooperative (Makoff, 2025). This change

<sup>&</sup>lt;sup>33</sup> In 1996, their combined share in the external debt to low-income countries stood at 29%. It peaked in 2005 at 52% to gradually decline to 32% in 2015. It has since then been on a steady increase. The share of the IMF meanwhile is close to its historical peak, at 10.1% in 2023 (slightly below the 2009 level of 10.2%).

was prompted by geopolitical tensions following Russia's invasion of Crimea in 2014. <sup>34</sup> Additionally, last year, the IMF introduced several reforms aimed at ensuring a more agile approach to supporting countries undergoing debt restructuring.<sup>35</sup>

However, more action is needed. Addressing the challenges that geopolitical fragmentation poses to the sovereign debt restructuring framework requires a multifaceted policy approach that fosters cooperation and ensures equitable solutions. First, the role of the multilateral institutions, such as the IMF and World Bank, must be preserved. They can serve as a neutral platform to mediate between diverse creditor and debtor interests. This may necessitate better reflecting the increased global economic influence of emerging markets within these institutions and continued efforts to adapt their frameworks to the evolving context. Second, greater efforts are needed to enhance transparency in debt contracts and negotiations. Encouraging all parties, including non-traditional lenders, to disclose the terms and conditions of loans can reduce misunderstandings and align efforts towards common goals, thereby building trust among geopolitically distant parties. Third, developing flexible restructuring frameworks that accommodate the interests of both traditional and emerging creditors is crucial. This may involve integrating new principles that respect the distinct economic and political realities of non-Paris Club lenders. Lastly, further progress on majority voting provisions in sovereign loans could help avoid that debtor countries are held hostage by geopolitical fault lines (Georgieva, 2023).





*Sources*: World Bank, International Debt Statistics; and IMF staff calculations. *Note*: PRGT-eligible countries include countries that are eligible for concessional financing, see <u>here</u>.

Figure to be updated.

<sup>&</sup>lt;sup>34</sup> During this period, the IMF was challenged with ensuring that a dispute over an unpaid USD 3 billion financing between Russia and Ukraine would not hinder the approval of a new loan to Ukraine. See "The IMF Outfoxes Putin: Policy Change Means Ukraine Can Receive More Loans" (Åslund 2015).

<sup>&</sup>lt;sup>35</sup> "IMF Executive Board Endorses Reforms to Promote the IMF's Capacity to Support Countries Undertaking Debt Restructurings," April 16, 2024, https://www.imf.org/en/News/Articles/2024/04/16/pr24119-imf-exec-board-endorses-refm-imf-cap-countries-debt-restruct.

# Section 4. The implications of geopolitical fragmentation for the coordination of international financial regulation.

This section will discuss the role of international standards in the global financial architecture, the scope for progress, the risks of steps back in an increasingly fragmented world, and the likelihood that outstanding issues (such as the regulation of non-bank financial institutions (NBFI), the treatment of risks associated with climate change and agreement on disclosures, and potential financial risks associated with AI) will be addressed.

It will also refer to the potential role played by crypto-currencies (stablecoins in particular) and associated risks, including from a differential regulatory treatment across jurisdictions.

# Summary: The Implications of a Fragmented Geopolitical Landscape for the Evolution of the International Financial Infrastructure

# 1. The Evolving Role of the Global Financial Safety Net (GFSN)

The Global Financial Safety Net (GFSN) is under increasing pressure to respond effectively to an era of heightened global economic fragmentation (GEF). A key challenge lies in designing common responses to systemic shocks that transcend national borders. The COVID-19 pandemic highlighted the urgency of cross-border coordination. Yet, the multilateral mechanisms that once facilitated swift and collective responses—such as the G-20—could lose influence in a more fragmented geopolitical landscape. Achieving a level playing field among nations could prove challenging in this context. A waning of the international fora where key economic decisions are traditionally made would contribute to this challenge. These developments threaten to diminish the GFSN's ability to function as a credible backstop during global crises.

## 2. The Role of Regional Financial Arrangements and the IMF

While the IMF continues to serve as the cornerstone of the global financial safety net, its limited resources increasingly lack the firepower to meet the scale and complexity of today's crises. Regional financial arrangements (RFAs) have stepped in to fill some of the gaps and may be effective in addressing regional liquidity needs—such as those faced by small Caribbean nations—but are unlikely to function as a credible line of defense as lenders of last resort in systemic global crises. Moreover, the IMF's targeted tools, such as the Poverty Reduction and Growth Trust (PRGT) and the Resilience and Sustainability Trust (RST), face constraints in both

scope and scale, particularly regarding climate finance and support to small, low-income economies. The IMF remains an indispensable coordinator of global responses, but its effectiveness depends heavily on cooperation with RFAs and continued engagement from major shareholders—particularly the United States. If large economies withdraw or reduce support, the IMF's ability to serve as a global backstop may be fundamentally weakened.

## 3. Financial Regulation, Debt Restructuring, and International Coordination

The effectiveness of financial regulation and sovereign debt restructuring is deeply tied to the functioning of international financial institutions (IFIs) and the broader overlay of the international financial architecture (IFA)-a term coined by Larry Summers after the Mexican financial crisis to encapsulate the global financial system. This architecture includes institutions like the IMF and World Bank, coordination platforms such as the G-20 and G-7, regional financial arrangements (RFAs), debt restructuring mechanisms (e.g., the Paris Club), and international standard-setting bodies.

These bodies play a vital role in setting minimum standards to avoid a race to the bottom in terms of regulatory arbitrage. Coordinated oversight is essential to maintain a level playing field, particularly in a world where both banks and non-bank financial institutions (NBFIs) operate across jurisdictions. Institutions such as the Basel Committee on Banking Supervision, the Bank for International Settlements (BIS), the Financial Stability Board (FSB), IOSCO (for securities regulation), and CPMI (for payment systems) serve as key pillars of global financial cooperation. The FSB, in particular—established by the G-20 in the wake of the 2008 financial crisis—was a successor to the Financial Stability Forum and has played a critical role in harmonizing standards. Yet even these institutions face growing limitations in a fragmented international order.

# 4. New Approaches to Regulatory Cooperation

As traditional multilateral mechanisms lose traction, there is a growing need for "coalitions of the willing." These ad hoc groupings can focus on shared goals, extracting commonalities from broader international agendas and crafting practical, workable solutions. Such coalitions may offer a viable path toward achieving regulatory consistency and minimizing systemic risk. Charts and case studies illustrating existing cooperation frameworks can help clarify what has been achieved and why new modalities are being explored. Such exercises could offer a valuable entry point into discussions on the institutional innovation required to maintain stability in a rapidly shifting global order.

### 5. Consequences of Fragmentation for Global Economic Governance

The implications of GEF extend well beyond the loss of regulatory coherence. As geopolitical alignments shift, historical alliances can no longer be taken for granted. These shifts must be analyzed based on emerging patterns of cooperation and financial market responses. Based on the evidence we present, GEF could entail varied consequences for different blocks. GEF is, therefore, not a uniform phenomenon—it will affect different regions and economies in various ways. For instance, safe asset demand and exposure patterns suggest that smaller economies may seek diversification away from traditional sources while advanced economies in Asia and Europe remain dominant creditors. The risks of a fragmented response to global challenges are particularly acute in advanced economies. Chapter IV will explore how the breakdown in cooperation among Western economies could have dire consequences, especially if trust in U.S. economic leadership continues to decline.

### 6. Erosion of Confidence in U.S. Economic Leadership

A telltale sign in recent times is the declining faith in U.S. economic policy and leadership. The shift is not merely symbolic—it carries significant risks for the global financial system, and the ground appears to be shifting quickly. Increasing use of economic sanctions, coupled with efforts to disengage from the U.S. dollar as the world's most consequential reserve asset, signals growing discomfort with the current system. While the economic size of sanctioned states such as Iran or North Korea is relatively small, broader applications of financial statecraft—such as tariffs, capital flow restrictions, or financial sanctions against allies—could have far more serious repercussions. In particular, disruptions to global demand for U.S. Treasuries would be highly consequential, potentially eroding the U.S. dollar's status as the world's dominant reserve currency.

#### 7. The Future of IFIs and the Dollar System

If the United States withdraws from the IFIs, there is a growing risk that some countries especially those experiencing persistent balance-of-payments pressures—may begin to turn away from dollar-based institutions altogether. Since IFIs are only able to provide dollar-based funding if the United States is a member, an exitsfrom these institutions could accelerate a broader move away from the U.S. dollar and existing multilateral mechanisms. This gradual erosion of the current international financial system highlights the urgency of adapting the GFSN and IFA to a new era—one in which fragmentation, realignment, and alternative coalitions will define the architecture of global economic governance. Conclusion

To be written.

Self-insurance through foreign exchange (FX) reserve accumulation continues to dominate the global financial safety net, particularly among emerging market economies. This trend accelerated following the Asian Financial Crisis and again in the lead-up to the COVID-19 pandemic, with global reserves surpassing \$12 trillion—over half of which are held in U.S. dollars. Advanced economies tend to hold comparatively fewer reserves, while Asian countries account for more than 50% of the total, reflecting their strong preference for self-insurance. Since the Global Financial Crisis (GFC), new instruments have emerged to complement reserves, including bilateral swap lines (BSLs) and regional safety arrangements (RSAs). The relative role of the IMF has declined during this period. Bilateral swap lines expanded significantly after both the GFC and the COVID-19 crisis, with the U.S. Federal Reserve's FIMA repo facility and the European Central Bank notably increasing their global footprint since 2020. China's People's Bank of China (PBoC) now maintains over 40 swap agreements, many of them standing arrangements intended to support crisis management and cross-border banking. This expansion has been mirrored by a similar increase in regional financing arrangements, highlighting a more decentralized and multi-layered approach to global financial resilience.



Note: figures to be updated by authors.

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