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Geopolitical Proximity and the Use of Global Currencies

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ABSTRACT: After decades of increasing global economic integration, the world is facing a growing risk of geoeconomic fragmentation, with potentially far-reaching implications for the global economy and the international monetary system. Against this background, this paper studies how geopolitical proximity, along with other economic factors, affects the usage of five SDR currencies in cross-border transactions. Since World War II, the global currency landscape has remained relatively stable, with the U.S. dollar serving as the dominant currency. Using country-level SWIFT transaction data, our analysis confirms the importance of inertia, trade and financial linkages in shaping the currency landscape, consistent with existing studies. On geopolitical proximity, we find that closer proximity can boost the use of the euro and renminbi, notably among emerging market and developing economies, although the impact is rather muted in the full sample. The effect on RMB usage in the full sample is more pronounced during periods of heightened trade policy uncertainty. These findings suggest that in a more geoeconomically fragmented world, alternative currencies could play a greater role.

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WORKING PAPERS

Geopolitical Proximity and the Use of Global Currencies

Prepared by Jakree Koosakul, Longmei Zhang, and Maryam Zia[1]

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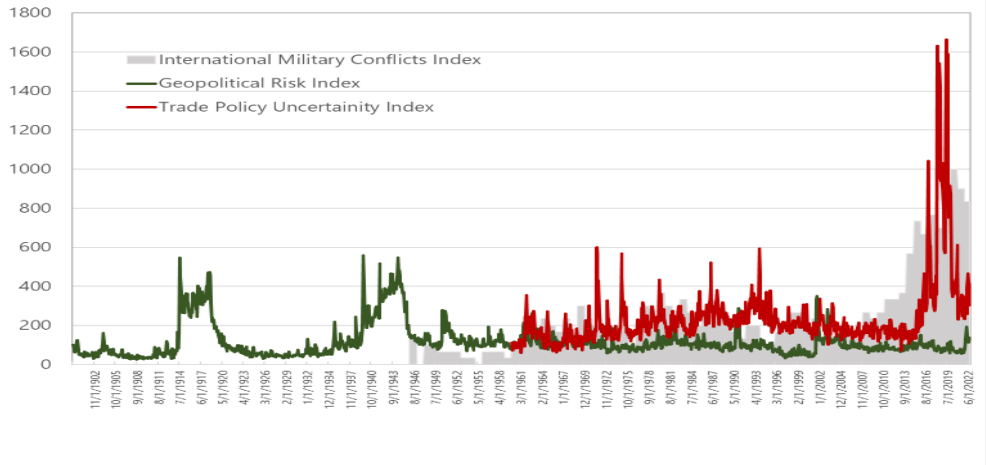
I. Introduction

Following decades of increasing economic integration, the world is now facing a growing risk of geoeconomic fragmentation (Aiyar et al., 2023). Russia's war against Ukraine, heightened U.S.-China trade tensions, and a growing number of military conflicts, have all elevated global geopolitical risks. The Geopolitical Risk Index (Caldara and Iacoviello, 2022), an aggregate index that measures the number of adverse geopolitical events, has doubled in recent years. Amid growing geopolitical tensions, restrictions on cross-border trade and foreign investment have surged, pushing the global Trade Policy Uncertainty Index (Caldara et al., 2020) to a historic high (Figure 1).

Figure 1. Geopolitical Risks, Trade Policy Uncertainty, and International Military Conflicts *(1900–2022, where 1960=100)*



Sources: Geopolitical Risk Index (Data downloaded from https://www.matteoiacoviello.com/gpr.htm); Trade Policy Uncertainty Index (Caldara, Dario, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo (2020), "The Economic Effects of Trade Policy Uncertainty," *Journal of Monetary Economics*, 109, pp.38–59); International Military Conflicts Index (The Uppsala Conflict Program (UCDP)); and IMF Staff Calculations.

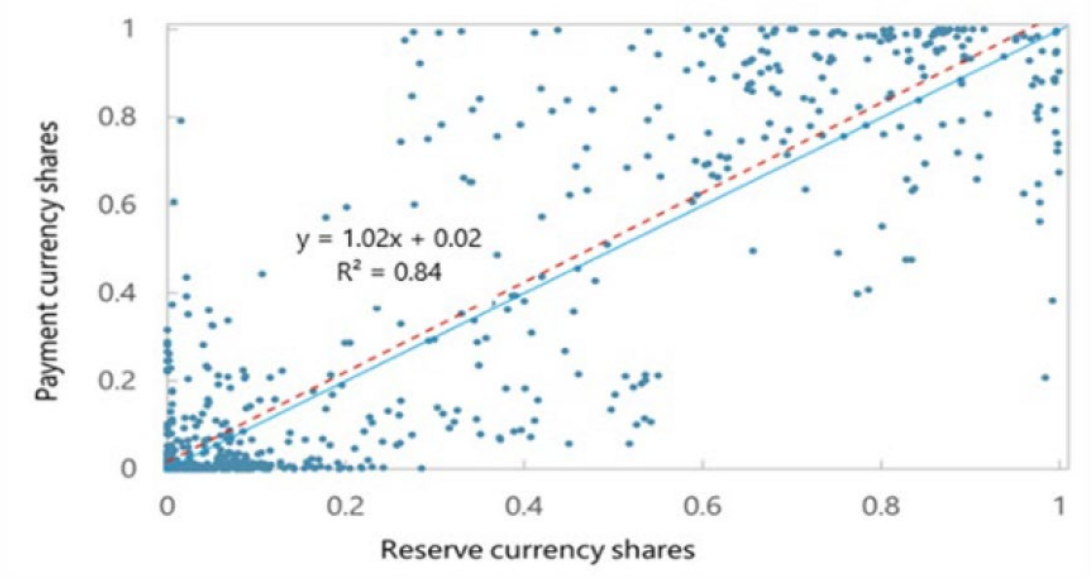
Geoeconomic fragmentation can have far-reaching implications for the global economy. It can act via several channels—including trade, labor, capital, technology, and the provision of global public goods—which interact within and across national borders as well as geographic blocs (Aiyar et al., 2023). Bolhuis et al. (2023) find that trade fragmentation could reduce global output by 0.2–7 percent, depending on the degree of fragmentation. IMF (2023a, 2023b) finds that geopolitical distance, defined as correlation in UN General Assembly voting outcomes, plays an important role in driving FDI, portfolio, and banking flows. Accordingly, persistent geopolitical tensions could significantly reshape cross-border capital flows and influence countries' currency preferences vis-à-vis foreign exchange reserves, international payments, and trade invoicing.

Against this backdrop, this paper examines the effect of geopolitical proximity on the use of global currencies in cross-border transactions. Since the end of World War II, the U.S. dollar has been the dominant currency for international transactions, accounting for more than 60 percent of the total, followed by the euro and a few other currencies. However, increasing geopolitical tensions may impact decisions on currency usage and the payment network underlying it. This paper aims to shed light on the extent to which geopolitical factors affect

currency usage, along with traditional economic factors, such as trade, financial linkages, and geographical distance.

Our paper contributes to the vast body of scholarship on global currency configurations. Previous research has mostly concentrated on the currency composition of *foreign exchange reserves*. Eichengreen and Frankel (1996), Chinn and Frankel (2007), and Arslanalp et al. (2022) analyze the determinants of currency shares in foreign exchange reserves using data on global aggregates, while Dooley et al. (1989), Iancu et al. (2023), Ito and McCauley (2020), and Arslanalp et al. (2022) use country-level reserve data to conduct similar analyses. The focus of recent literature has also expanded to global currency configuration in *trade invoicing* (Gopinath 2015, Boz et al. 2022) and *cross-border payments* (Perez-Saiz et al., 2023, and Perez-Saiz and Zhang, 2023). Empirical evidence suggests very strong correlation between reserve currency and payment currency configurations (Figure 2), supported by the strong complementarity of the different functions of money (Gopinath and Stein 2021).

Figure 2. Reserve Currency Shares vs. Payment Currency Shares



Source: IMF (2024)

There is also a large literature on how currency configurations impact global trade, financial, and capital flow cycles and have implications for macroeconomic management (Gourinchas 2021, Gopinath et al. 2010, among others). Reflecting the U.S. dollar's dominant role in global trade invoicing, Gopinath et al. (2020) finds that the higher the share of U.S. dollar invoicing, the more sensitive a country's trade is to the U.S. dollar valuation. With the U.S. dollar as the vehicle currency in global banking, U.S. monetary policy also dominates global financial cycles and capital flow movements (Miranda-Agrippino and Rey 2020). Consequently, potential changes in currency configurations could have a far-reaching impact on the formation of global trade, financial, and capital flows.

The paper is also related to the broad discussion on the prospect of the international monetary system (IMS). Krugman (1980) argues that the IMS will always be dominated by a single currency reflecting increasing network returns. Eichengreen (2011, 2012) envisages a different view of a multi-polar monetary system in which the U.S. dollar, the euro, and the renminbi (RMB) play the role of international currencies. Gourinchas et

al. (2011, 2019) highlights structural flaws in the existing U.S. dollar-based system, which gives rise to the "New Triffin's Dilemma," whereby the U.S.'s fiscal capacity to provide global safe assets will be constrained by its share in the world economy.

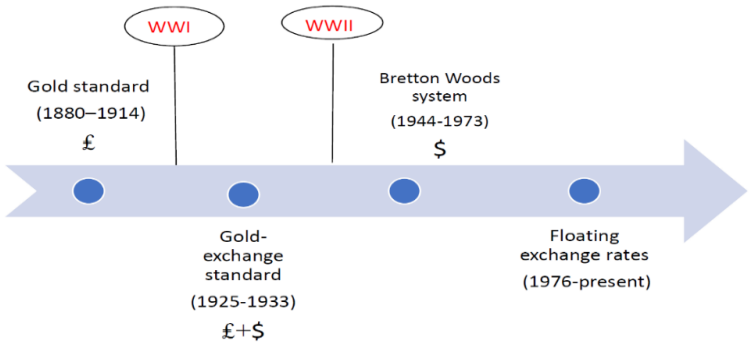
The paper fills the gap in the literature by examining the role of geopolitics in shaping currency usage in cross-border payments and how this impact varies during periods of heightened global geopolitical tensions. To explain currency usage patterns, previous research has predominantly focused on the role of trade and financial linkages, the size of the economy, and the level of financial development. A recent study by Iancu et al. (2020), for example, shows that financial ties are more important than trade linkages in explaining reserve currency configurations. Until recently, however, few studies have directly explored the impact of geopolitics on currency usage, partly reflecting data limitations. Eichengreen et. al. (2017) highlights the role of military alliance in shaping reserve currency share during the pre-World War I era. Most recent studies by Chinn et al. (2024) and Goldberg and Hannaoui (2023) have shown that geopolitical distance, as captured by the UN voting correlations, influences countries' choices of reserve currencies in the recent decade. On payment currency configuration, using SWIFT data, Perez-Saiz et al. (2023) analyzes the role of geopolitical proximity between transacting parties but does not study the impact of their political proximity with the major currency issuers. Perez-Saiz and Zhang (2023) looks at the role of political proximity, with a narrow focus on the use of RMB in countries' cross-border transactions with China. In contrast, this paper provides a comprehensive analysis of how geopolitical proximity affects the use of the five SDR currencies, namely the U.S. dollar, euro, Chinese RMB, Japanese yen, and British pound (also henceforth referred to as the "major currencies"), and how this effect varies with the overall level of global geopolitical tensions.

The rest of the paper is structured as follows: Section II provides a historical perspective of the IMS, including its turbulent transition during the inter-war years. Section III provides stylized facts on global payment currencies and the geopolitical landscape. Section IV presents the empirical analysis. Section V concludes.

II. A Short Historical Perspective of the IMS

Over the past two centuries, the IMS has witnessed significant transformations (Figure 3). Prior to World War I, the IMS was underpinned by the gold standard, where the main currencies were backed by gold and the pound sterling dominated international trade. Over time, due to the limited availability of gold, the proportion of fiat money in FX reserves increased, and the IMS transitioned to the gold exchange standard, with the U.S. dollar and pound sterling sharing the role of reserve currency. After World War II, the U.S. dollar's dominance was established and institutionalized under Bretton Woods, in which the U.S. dollar was pegged to gold at 35 dollars per ounce, and other currencies were pegged to the U.S. dollar. The Bretton Woods arrangement served the post-war recovery well but began to experience strains in the 1960s, reflecting persistent U.S. current account deficits and insufficient supply of global safe assets. In 1969, the IMF introduced Special Drawing Rights (SDRs) as a supplement to the supply of reserve assets. In 1971, after President Nixon suspended the gold window, G10 countries signed the Smithsonian Agreement to devalue the U.S. dollar and help address the U.S. current account deficit. However, despite these collective efforts, the Bretton Woods system eventually collapsed in 1973, with the U.S. dollar decoupling from gold and the world entering the era of floating exchange rates and increasing capital account liberalization.

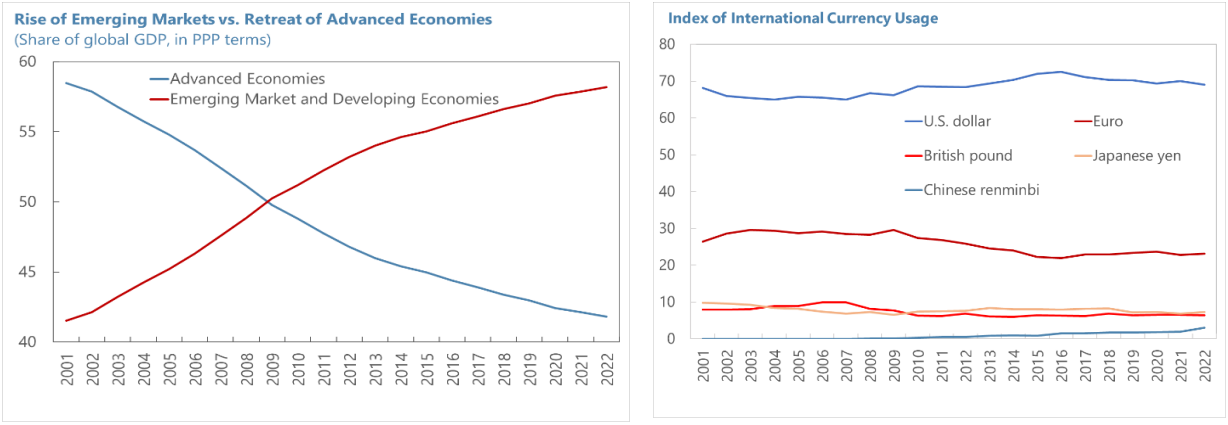
Figure 3. Historical Evolution of the International Monetary System



Source: IMF Staff

In the post-Bretton Woods period, despite the significant shift in the global economic landscape, the international monetary architecture remains little changed. The rise of large emerging markets and the emergence of frontier economies have pivoted the world economy away from the traditional dominance of advanced countries. As a group, emerging countries and developing economies (EMDEs) now account for close to 60 percent of global GDP (in PPP terms), up from less than 40 percent in the early 1990s. During the same period, their share in nominal global GDP also rose from 20 percent to more than 40 percent. Notwithstanding such tectonic shifts in the world economy, the global currency configuration remains largely unchanged. The aggregate index on international currency usage shows that the U.S. dollar continues to serve as the dominant currency, accounting for more than 60 percent of global usage, with euro being a distant second, with a share of around 20 percent (Figure 4).

Figure 4. Rapid Changes in the Global Economy vs. the Strong Inertia of the IMS

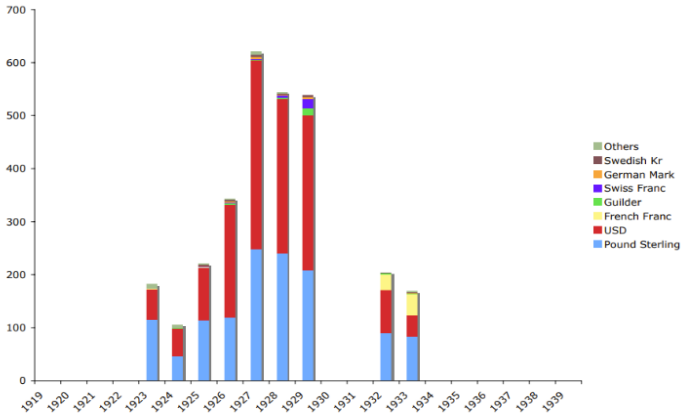


Sources: IMF World Economic Outlook Database (LHS panel) and Federal Reserve (RHS panel).
Note for RHS panel: The Index is a weighted average of each currency's share of globally disclosed FX reserves (25 percent weight), FX transaction volume (25 percent), foreign currency debt issuance (25 percent), foreign currency and international banking claims (12.5 percent), and international banking liabilities (12.5 percent).

While the IMS has displayed a high degree of inertia in most periods, history has also shown that volatile transitions could take place during periods of geopolitical tensions. For instance, the inter-war period was marked by increased trade protectionism and rapid shifts in the reserve currencies, which resulted in economic instability. Following the stability led by pound sterling in the pre-WWI era, the share of U.S. dollar surged between 1926–1930 but then plummeted in 1932–1934, and the pound sterling regained its preeminence. By 1932, the IMS splinted into three blocs: the residual gold-standard countries, led by the U.S.; the sterling area

(Britain and countries that pegged to the pound sterling), and the Central and Eastern European countries, led by Germany. A few other countries, such as Canada and Japan, adhered to no groups (Eichengreen, 2008, 2019). Consequently, it is critical to understand how geopolitical factors may influence the IMS, especially given current geoeconomic tensions.

Figure 5: Currency Composition of G10 Reserves
(In millions of USD)



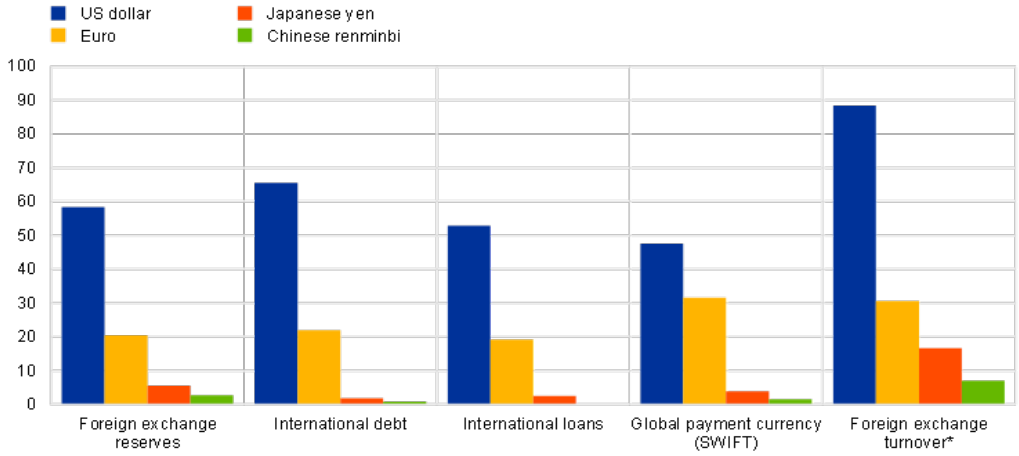
Source: Eichengreen and Flandreau (2008)
Note: G10 countries include Czechoslovakia, Denmark, Finland, Italy, Japan, Netherlands, Norway, Portugal, Spain, Switzerland.

III. Global Currency Configuration

Money performs three distinct functions: i) unit of account, ii) medium of exchange, and iii) store of value. Based on these functions, the global currency configuration has multiple dimensions. The unit of account function manifests itself primarily via trade invoicing, the issuance of international debt, and foreign exchange turnover. The global payment currency reflects the medium of exchange function, whereas foreign exchange reserve currency is rooted in the store of value function. These functions of money are closely related and often complement one another (Gopinath and Stein, 2021)—e.g., only currencies with stable value will be widely accepted as a means of payment or a unit of account. This explains the consistent pattern of the current global currency configuration along multiple dimensions in FX reserves, financial securities pricing, and cross-border payments (Figure 6). While there are more than 150 currencies in the world that are deemed legal tender, only a small number of them are international currencies, which have been used extensively in the global setting.

Figure 6. Snapshot of the International Monetary System

(Currency share in percent of total)



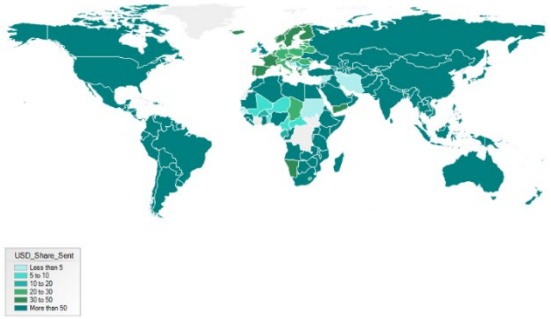
Sources: ECB (2023).
Notes: The latest data for foreign exchange reserves, international debt and international loans are for the fourth quarter of 2022. SWIFT data are for December 2022. Foreign exchange turnover data are as of April 2022.
*Since transactions in foreign exchange markets always involve two currencies, shares add up to 200%.

The global currency shares nevertheless mask significant regional variations. Figure 7 shows the use of the five SDR currencies in cross-border payments across regions. While the U.S. dollar has broad dominance, accounting for more than half of payments in most regions, the euro plays an eminent role in most of Europe and parts of Africa. The RMB has gained traction in parts of Asia, such as Mongolia and Laos.[1] Interestingly, the U.S. dollar has a larger presence in China for cross-border payments than the RMB itself. Outside of Japan, the Japanese yen is mainly present in Thailand's cross-border transactions. The British pound is frequently used in Europe and parts of Africa.

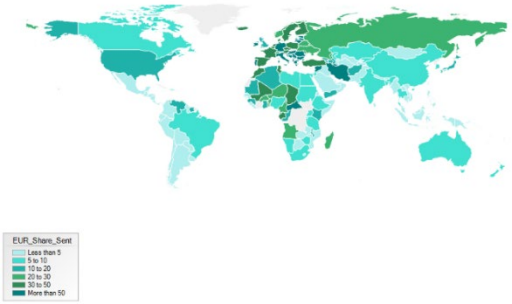
[1] Perez-Saiz and Zhang (2023) show that the regional variation is more pronounced when looking at RMB transactions with China only.

Figure 7. Distribution of Swift Payments by Currency
(Currency share in total Swift payments in 2022)

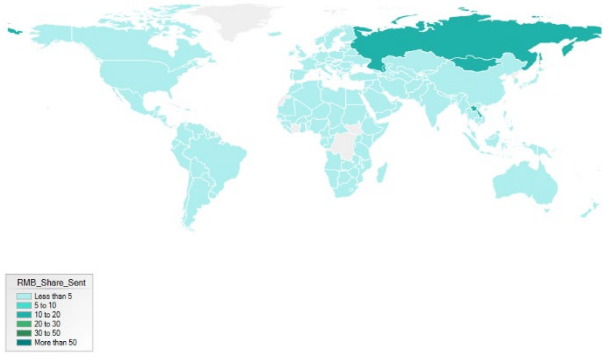
USD



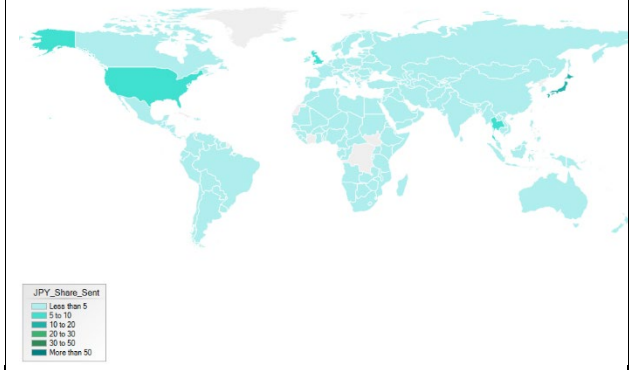
EUR



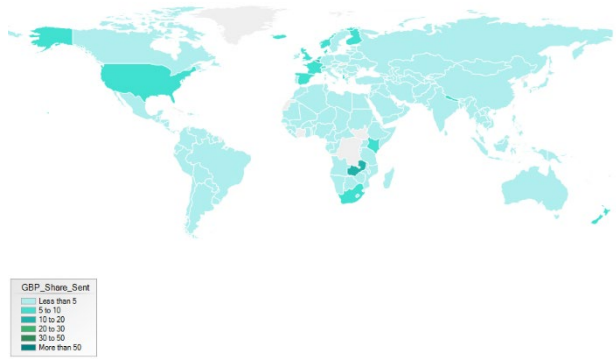
RMB



JPY



GBP



Source: SWIFT and IMF staff estimates.

IV. Geopolitical Proximity and Currency Configuration

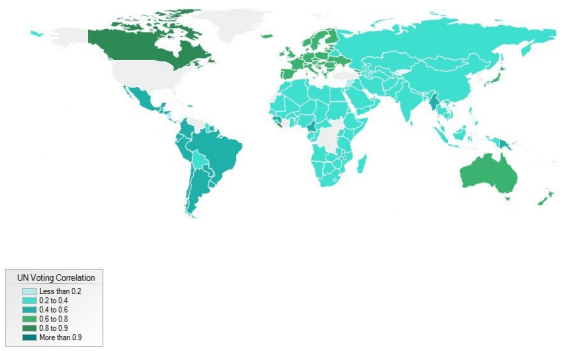
This section discusses how geopolitical proximity can affect the global currency configuration. It first presents a well-established measure of geopolitical proximity, which is then used to analyze the impact of geopolitical proximity on currency configurations in cross-border payments.

Global Geopolitical Landscape

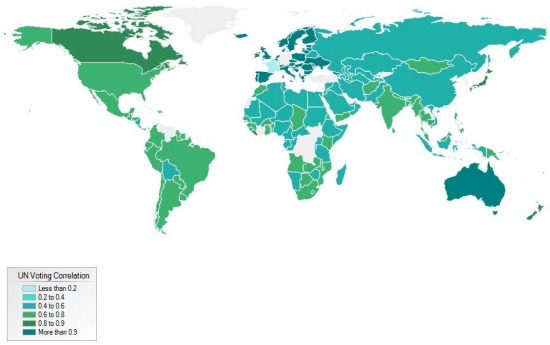
In the literature, the correlation between countries' votes at the United Nations General Assembly is a standard metric for measuring geopolitical proximity (Appendix II), with a high correlation indicating closer political proximity and a low correlation indicating wider geopolitical distance. Figure 8 depicts the political proximity of nations to the issuers of reserve currencies constituting the SDR: the U.S., Eurozone, China, Japan, and the U.K., according to the UN votes in 2022. The darker color represents a stronger correlation and, consequently, closer political ties. The data show that the U.S. is closely aligned with Australia, Canada, the U.K., and continental Europe. European countries have a broader base of geopolitical alignment, ranging from parts of Asia to the Middle East, Latin America, North America, Australia, and New Zealand. China has close geopolitical proximity with most developing countries, including Asian, African, and Latin American countries. Political proximity between countries could change over time, and the following section will explore whether its variation across time and country could affect currency choice in cross-border payments.

Figure 8. Political Proximity to Reserve Currency Issuers *(2022)*

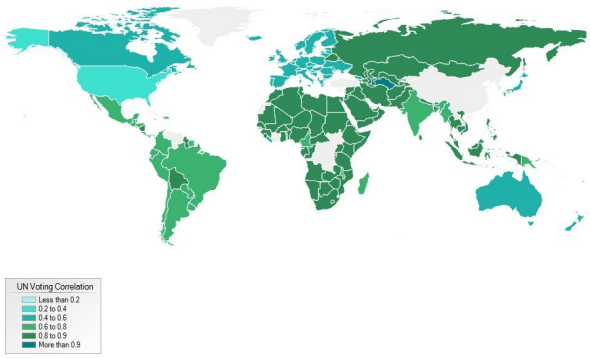
USA



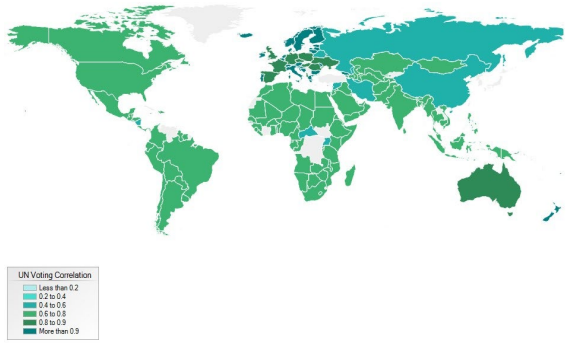
EU



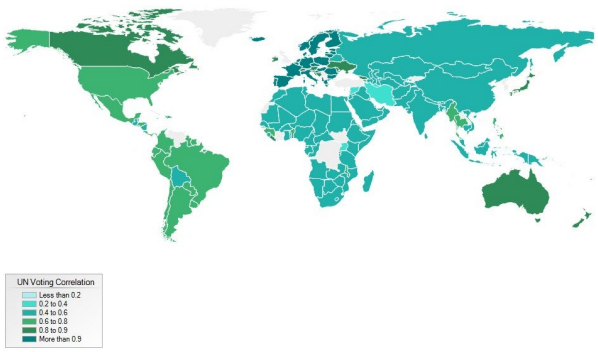
CHN



JPN



GBR



Source: SWIFT and IMF staff estimates

4.2 Impact of Geopolitical Proximity

The analysis in this paper builds on the work of Perez-Saiz et al. (2023), where country-pair transactions are used to identify drivers of cross-border currency usage. However, while their paper focuses on the linkages *between two transacting countries*, such as trade, financial, and geopolitical alignments, this paper explores the geopolitical proximity between the *transacting countries and the reserve currency issuing country* as a potential driver of the currency choice. In other words, the question here focuses on whether a closer geopolitical alignment with reserve currency issuers boosts the usage of their currencies in cross-border transactions. We also investigate the non-linear effect of geopolitical ties by testing whether the impact is more pronounced when global geopolitical and trade risks are more elevated.

The panel regression is set up as follows:

$$Share^{c}_{s,r,t} = \beta_1 Share^{c}_{s,r,t-1} + \beta_2 \overline{Geopolitical\_proximity}^{c}{}_{s,r,t} + \beta_3 \overline{Trade\_share}^{c}_{s,r,t} + \beta_4 \overline{FDI\_share}^{c}_{s,r,t} + \beta_5 \overline{Portfolio\_share}^{c}_{s,r,t} + \beta_6 \overline{Geograpic\_distance}^{c}_{s,r} + \beta_7 LegalTender^{c}_{s,r} + \boldsymbol{\alpha}\overline{\boldsymbol{Xt}}_{s,r} + \delta_t + \epsilon^{c}_{s,r,t} \quad (1)$$

where the dependent variable is the share of SWIFT flows (sum of flows sent and received) in reserve currency c over total flows (sent and received) across all currencies between country s and country r in year t. A lagged dependent variable is included to reflect the high degree of inertia in currency usage, consistent with the treatment in the literature. Our variable of interest is the degree of geopolitical proximity, which is measured by the correlation of UN voting outcomes of country r and s with the global currency issuer c.[2] Beside geopolitical proximity, our set of controls includes trade and financial linkages (measured by bilateral shares in trade, FDI and portfolio flows) with the reserve currency issuer, geographical distance from the reserve currency issuer, the legal tender status of each reserve currency vis-à-vis the transacting countries. To reduce the number of regressors, we construct trade, financial, and geopolitical linkage variables by averaging the values for the sender and receiver in each transaction pair. That is, $\bar{Z}^{c}{}_{s,r,t} \equiv \frac{(Z^{c}{}_{s,t} + Z^{c}_{r,t})}{2}$.[3] The legal tender variable is a dummy variable which equals 1 if currency c is a legal tender in either the sender or receiver country or in both (for more details see the data appendix). We also control for other country-level variables $\overline{\boldsymbol{Xt}}_{s,r}$ for transacting countries s and r (average values across the two transacting countries in terms of GDP, GDP per capita, financial development index, and a measure of governance) and year fixed effects.[4] For RMB, we also include two additional dummy variables, namely i) a dummy variable which equals 1 if either a sender or receiver

[2] When $c = euro$, we use the average value for France and Germany to construct geopolitical proximity and geographical distance. For trade and financial linkages, we use the sum of all Euro Area countries vis-à-vis the transacting countries. Bilateral observations between countries within the Euro Area are excluded from the regressions given the use of euro within the area.

[3] In addition to the unweighted average, we tried an alternative construction of the geopolitical proximity variable, by weighting by the relative size of the sender and receiver countries in terms of GDP. We found the baseline results to be robust to this alternative construction.

[4] We do not include country fixed effects as geopolitical proximity does not have much time variation, with the main source of variation coming from the cross-sectional dimension. In the current lagged dependent variable setup (which is standard in the currency configuration literature), including country fixed effects could introduce bias in the estimation results (Nickell, 1981).

country has a bilateral swap arrangement with China, and ii) a dummy variable which equals 1 if either a sender or receiver country has an offshore RMB clearing bank.

In addition, to explore the potential non-linearity in the effects of geopolitical proximity, we extend the baseline specification by introducing an interaction term between geopolitical proximity and a measure of global geopolitical tensions through the following specification:

$$\begin{aligned} Share^{c}_{s,r,t} = {} & \alpha_1 Share^{c}_{s,r,t-1} + \alpha_2 \overline{Geopolitical\_proximity}^{c}{}_{s,r,t} + \alpha_3 \overline{Geopolitical\_proximity}^{c}{}_{s,r,t} * georisk\_index_t \\ & + \alpha_4 \overline{Trade\_share}^{c}{}_{s,r,t} + \alpha_5 \overline{FDI\_share}^{c}_{s,r,t} + \alpha_6 \overline{Portfolio\_share}^{c}_{s,r,t} + \alpha_7 \overline{Geograp_{distance}}^{c}_{s,r} \\ & + \alpha_8 LegalTender^{c}_{s,r} + \boldsymbol{\lambda \overline{Xt}}_{s,r} + \delta_t + \epsilon^{c}_{s,r,t} \end{aligned} \quad (2)$$

We measure global geopolitical tensions with two alternative indicators.[5] The first is the index of international military conflicts, with a higher value indicating more military confrontations. The second is the trade policy uncertainty index, which is constructed by counting the frequency of mentions of trade policy and uncertainty terms in major newspapers.

The sample covers 125 economies, with annual data spanning from 2013 to 2021. In terms of currency coverage, we focus on SDR basket currencies—the U.S. dollar, euro, Japanese yen, British pound, and Chinese renminbi. These five currencies together account for more than 85 percent of global cross-border transactions via SWIFT. Finally, as our study focuses on the effects of geopolitical proximity on currency configuration that are potentially long-term in nature, we compute the long-term effects through the following formula $\beta_2^{LL} = \frac{\beta_2}{(1-\beta_1)}$, where β_2 is the coefficient on geopolitical proximity and β_2^{LL} the computed long-run effect. The long-run effects of other variables are computed in the same manner.

Tables 1 and 2 present the regression results for the full (advanced economies and EMDEs) and EMDE samples, respectively. The results suggest that geopolitical proximity can boost the use of alternative reserve currencies, i.e., euro and RMB, especially in EMDEs. For the full sample (Table 1), the coefficient on geopolitical proximity is positive and statistically significant for RMB.[6] Interestingly, the coefficient for U.S. dollar is negative and statistically significant. Recent literature (Chinn et al., 2024 and Goldberg and Hannaoui, 2023) finds similar surprising results for the U.S. dollar share in reserve assets - that being less aligned with the U.S. seems to result in higher dollar holdings. There are several potential explanations behind this seemingly "counterintuitive" finding. First, the negative coefficient could reflect the fact that most U.S. allies are advanced economies with strong domestic currencies that can themselves be used for international transactions, such as Australia dollar and Canadian dollar (Figure 7). In contrast, geopolitically more distant countries are often EMDEs that lack credible domestic currencies (except for a few large EMs) and hence are more likely to use a global vehicle currency for international payments, and the U.S. dollar enjoys large network advantage. As

[5] The geopolitical risk (GPR) index plotted in Figure 1, despite being a natural candidate for a measure of geopolitical tensions, has limited variation during the sample period relative to the other two indicators. Its values between 2017 and 2021 also seem "counterintuitive", as they showeasing global tensions despite rising trade uncertainty and increasing military conflicts. The divergence likely reflects that the GPR index captures conventional militarized conflicts based on selected newspapers, and so does not capture well trade wars and conflicts in other regions. Potentially reflecting these issues, separate regressions using the GPR index show no significant non-linear impact of geopolitical proximity.

[6] For the RMB regression, we also conducted a robustness analysis excluding countries' transactions with Hong Kong SAR, Macau SAR, and Taiwan POC. The results are quantitatively similar.

discussed below, this intuition is supported by our results based on the EMDE sample. Second, Goldberg and Hannaoui (2023) also argues that countries that vote at odds with the U.S. in the UN Assembly tend to have low reserves and cannot afford to diversify out of the dollar, which is the most liquid reserve currency. Finally, for commodity exporters, the pricing in U.S. dollars could also play an important role in explaining the wider use of the U.S. dollar in cross-border payments.

Table 1: Baseline Panel Regression Results by Currency (Full Sample)

	EUR	GBR	JPY	RMB	USD
Currency Share (-1)	**0.806*** **	**0.700*** **	**0.765*** **	**0.873*** **	**0.823*** **
UN Voting Proximity	0.015	0.003	0.001	**0.009***	**-0.134*** **
Trade Share	**0.077****	0.018	-0.009	**0.022****	**0.096*** **
FDI Share	0.002	**0.023***	0.003	**0.020****	-0.012
Portfolio Flow s Share	**0.036****	**-0.005***	**0.003*** **	**0.089****	**0.053*** **
GDP (log)	**0.314*** **	**-0.064*** **	-0.013	**-0.068***	-0.183
GDP per Capita (log)	0.111	**0.061****	0.038	**0.181*** **	-0.544
Financial Development Index	**-9.694*** **	0.036	0.185	**0.515****	**-5.094****
Geographical Distance (log)	**-1.089*** **	-0.033	-0.090	**0.328***	**1.174****
Legal Tender	**4.510*** **	**7.052*** **	**16.96*** **	**6.096*** **	**7.254*** **
AML	-0.083	0.019	**0.049****	0.027	0.024
Chinese BSL Dummy				0.040	
Offshore RMB Bank Dummy				**0.075***	
Constant	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observation Number	79010	83838	72499	80099	83667
R-squared	0.74	0.57	0.90	0.77	0.74

Note: ***,**, and * indicate statistical significance at 1%, 5% and 10%, respectively, where the standard errors are clustered at the year level.
Bolded numbers indicate statistical significance at 10% level or lower.

Table 2. Baseline Panel Regression Results by Currency (EMDE Sample)

	EUR	GBR	JPY	RMB	USD
Currency Share (-1)	**0.720*** **	**0.556*** **	0.167	**0.842*** **	**0.816*** **
UN Voting Proximity	**0.187*** **	**0.008***	-0.001	**0.019*** **	-0.059
Trade Share	**0.252*** **	-0.009	**0.020****	0.009	**0.136****
FDI Share	0.001	**0.024***	-0.002	0.002	0.044
Portfolio Flow s Share	0.005	-0.001	**-0.003****	-0.006	**0.039****
GDP (log)	**-0.293***	**-0.031***	**-0.023***	0.003	-0.052
GDP per Capita (log)	0.019	**0.297*** **	-0.021	0.087	**-1.760*** **
Financial Development Index	-0.845	-0.527	0.260	**-0.807*** **	-1.967
Geographical Distance (log)	**-1.932*** **	0.160	-0.050	0.069	1.836
Legal Tender				**8.558*** **	**3.988*** **
AML	-0.154	0.003	**0.049****	-0.043	0.368
Chinese BSL Dummy				0.143	
Offshore RMB Bank Dummy				0.013	
Constant	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observation Number	20951	21304	15813	19463	21293
R-squared	0.66	0.27	0.03	0.79	0.69

Note: ***, **, and * indicate statistical significance at 1%, 5% and 10%, respectively, where the standard errors are clustered at the year level.
Bolded numbers indicate statistical significance at 10% level or lower.

In contrast to the limited impact observed in the full sample, geopolitical proximity has a more substantial impact on currency choice in EMDEs, as shown in Table 2. The coefficient for euro indicates that a one-percentage point (ppt) increase in voting correlations with the Euro Area is likely to raise the euro share in cross-border payments by 0.19 ppt. This is comparable in magnitude to the effect of trade linkages, whereby a one-ppt increase in trade share is found to boost euro usage by 0.25 ppt. For RMB, the impact is also

statistically significant but smaller in economic magnitude compared to that of the euro, with a coefficient of 0.02. In the long run, a one-ppt increase in voting correlations appears to boost the use of euro and RMB by $\frac{0.19}{1-0.72} = 0.7$ ppt and $\frac{0.02}{1-0.84} = 0.13$ ppt, respectively. These findings imply that there could be substantial changes in currency share in the long run when a country shifts from a neutral partner to an ally. For instance, transitioning from a voting correlation of 0.5 (50 ppt) to almost 1 (100 ppt) could boost the share of the euro and the RMB by 35 ppt and 8.5 ppt, respectively. For the British pound, the coefficient is also positive and significant, although the quantitative impact is much smaller at 0.008. Meanwhile, the impact for Japanese yen and the U.S. dollar is statistically insignificant. Interestingly, after excluding advanced economies from the sample, the coefficient for the U.S. dollar becomes close to zero and no longer statistically significant, indicating that the "counter-intuitive" results in the full sample are likely driven by use of local currencies in advanced economies.

The impact of geopolitical proximity displays some non-linearity, rising during periods of increasing international military conflicts and trade policy uncertainty. For example, in the period of 2018-2020, trade policy uncertainty spiked reflecting increasing China-U.S. trade tensions. By interacting geopolitical proximity with the measures of geopolitical tensions, the regression results show that the impact of geopolitical proximity on the euro usage increases from 0.17 ppt to 0.23 ppt, or by almost 40 percent, following a one-standard-deviation increase in international military conflicts (Table B2). For the RMB, the impact of geopolitical ties is less sensitive to military conflicts, but closely depends on the degree of trade policy uncertainty, with the impact increasing from 0.008 ppt to 0.013 ppt, or by 64 percent in the full sample following a one-standard-deviation increase in trade policy uncertainty (Table A1). This likely reflects that when global tensions increase, countries could attempt to diversify away from the global dominant currencies to ensure the security and resilience of cross-border transactions. For British pound, Japanese yen, and U.S. dollar, the non-linear impact is not statistically significant.

In addition to geopolitical proximity, we find that both trade and financial linkages also play an important role in driving the use of major currencies.[7,8] In terms of trade linkages, a one-ppt increase in trade share is found to boost the usage of euro and U.S. dollar by 0.08 and 0.1 ppt, respectively, in the full sample, with the impact much larger in EMDEs, at 0.25 and 0.14, respectively. These magnitudes are similar to levels reported in Chinn et al. (2024). For the RMB, the effect of trade linkages is much weaker, at 0.02, reflecting the limited use of RMB as an invoicing currency in global trade. Hence, China's trade integration had a limited impact in boosting RMB internationalization during the sample period. In contrast, trade with Euro Area or the U.S. is often invoiced in euro or U.S. dollar, resulting in a more significant impact on the currency share.

Turning to financial linkages, FDI flows are found to have a small positive impact on RMB and British pound usage, with a one-ppt increase in the FDI share with China and the U.K. boosting the use of the respective currency by 0.02, while such an impact is not statistically significant for other currencies. In contrast, portfolio flows have a statistically significant impact on the use of almost all major currencies, with the coefficient of

[7] Our finding on the significance of trade linkages in driving the usage in payments for some major currencies differs from that in Perez-Saiz et al. (2023), which finds no significant impact. This likely reflects the different definitions of linkages in the two papers—ours focuses on the linkages vis-à-vis the issuers of the major currencies, theirs on the relationships between the two countries directly involved in the transactions.

[8] The finding on the significance of financial ties for some major currencies is in line with the result in Iancu et al. (2020), which shows that financial ties have become an increasingly important driver of reserve currency configurations since the global financial crisis.

0.05 for U.S. dollar, 0.04 for euro, and 0.09 for RMB. The stronger impact of portfolio flows on RMB usage likely reflects the opening up of China's local currency bond market in recent years, which was followed by significant foreign inflows. The statistically insignificant impact of portfolio flows for the British pound may reflect the role of the U.K. as a global financial center— its financial linkages with the rest of the world often reflect transactions between non-residents as an offshore funding market for the U.S. dollar, and not necessarily for British pound. Finally, the introduction of offshore RMB clearing, as captured by the offshore RMB bank dummy, also has a statistically and economically significant impact on promoting the use of RMB for cross-border payments, in line with the findings of Perez-Saiz and Zhang (2023).

For all five SDR currencies, their usage displays a high degree of inertia, as evident in the coefficients on the lagged dependent variable, suggesting that past usage patterns strongly influence current currency preferences in cross-border transactions. Legal tender also plays a key role in explaining the cross-country variations in currency usage, consistent with findings by Perez-Saiz et al (2023). The coefficients are in the range of 4–17 (Table 1), which suggests, in terms of the long-run effects, that the share of the respective major currency used in the transactions between two countries would increase by 22–72 percentage points if the major currency is a legal tender in one or both of the countries involved. Geographical distance tends to dampen the currency usage for the euro, though the impact differs for other SDR currencies. Financially more developed economies (as measured by the financial development index) also tend to have lower share of transactions in euro and U.S. dollar, likely reflecting that advanced economies could use their local currencies, such as Australia dollar, Swiss Franc, etc., for international payments instead of fully relying on global vehicle currencies.

Overall, these findings highlight the complex interplay of geopolitical, economic, legal, and geographical factors in influencing the usage of major currencies in international transactions.

V. Conclusion

After decades of increasing global economic integration, the world is facing a growing risk of geoeconomic fragmentation, with potentially far-reaching implications for the global economy and the IMS. Against this background, this paper studies how geopolitical proximity, along with other economic factors, affects the usage of the five SDR currencies in cross-border transactions. Using country-level SWIFT transaction data, this paper finds that closer geopolitical proximity can boost the use of the euro and renminbi, notably among EMDEs, although the impact is rather muted in the full sample. The effect on RMB usage in the full sample is more pronounced during periods of heightened trade policy uncertainty.

Furthermore, the analysis shows that trade and financial ties with currency issuers are important drivers of currency usage in cross-border transactions. Trade linkages have a strong impact on the use of the euro and the U.S. dollar, while less so for the RMB, likely due to its limited role as an invoicing currency in global trade. Portfolio flows are also found to be another important driver, with the impact particularly strong for the RMB. For all five SDR currencies, their share in cross-border payments displays a high degree of inertia, suggesting that past transaction patterns strongly influence current preferences. Moreover, legal tender status significantly enhances currency usage in transactions. Given the strong correlation between payment currency and reserve currency configuration, the impact of geopolitical proximity on the payment front may eventually be reflected in reserve currency configuration, though such transmission may be lagged given the market liquidity constraint in alternative currencies relative to the U.S. dollar.

Our findings suggest that in a more geoeconomically fragmented world, alternative currencies could play a greater role in cross-border transactions. While the speed of transition to such a reconfiguration is uncertain, the transition could be accompanied by financial volatility, making international coordination more important to help prevent and mitigate any potential adverse effects on the IMS and protect global economic stability.

Annex I. Additional Regression Results

A. Regression Results on Interaction with Global Geopolitical Tensions (Full Sample)

Table A1. Regression on Results on Interaction with Trade Policy Uncertainty

	EUR	GBR	JPY	RMB	USD
Currency Share (-1)	**0.806*** **	**0.700*** **	**0.765*** **	**0.873*** **	**0.823*** **
UN Voting Proximity	0.013	0.003	0.001	**0.008***	**-0.134*** **
UN Voting Proximity * TPI	**0.013****	-0.0003	**-0.002*** **	**0.005****	0.002
Trade Share	**0.076****	0.018	-0.009	**0.022****	**0.096*** **
FDI Share	0.002	**0.023***	0.003	**0.020****	-0.012
Portfolio Flow s Share	**0.036****	**-0.005***	**0.003*** **	**0.089****	**0.053*** **
GDP (log)	**0.318*** **	**-0.064*** **	-0.013	**-0.068***	-0.183
GDP per Capita (log)	0.106	**0.061****	0.039	**0.182*** **	-0.545
Financial Development Index	**-9.693*** **	0.036	0.185	**0.516****	**-5.092****
Geographical Distance (log)	**-1.089*** **	-0.033	-0.090	**0.327***	**1.173****
Legal Tender	**4.511*** **	**7.052*** **	**16.96*** **	**6.096*** **	**7.254*** **
AML	-0.090	0.019	**0.049****	0.028	0.025
Chinese BSL Dummy				0.041	
Offshore RMB Bank Dummy				**0.070***	
Constant	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observation Number	79010	83838	72499	80099	83667
R-squared	0.74	0.57	0.90	0.77	0.74

Note: ***, **, and * indicate statistical significance at 1%, 5% and 10%, respectively, where the standard errors are clustered at the year level. Bolded numbers are numbers that are statistically significant at 10% level or lower.

Table A2. Regression on Results on Interaction with International Military Conflicts

	EUR	GBR	JPY	RMB	USD
Currency Share (-1)	**0.806*** **	**0.700*** **	**0.765*** **	**0.873*** **	**0.823*** **
UN Voting Proximity	0.009	0.002	0.001	0.009	**-0.129*** **
UN Voting Proximity * IMC	0.018	**0.006****	0.001	-0.001	-0.018
Trade Share	**0.077****	0.019	-0.009	**0.022****	**0.095*** **
FDI Share	0.002	**0.022***	0.003	**0.020****	-0.012
Portfolio Flow s Share	**0.036****	**-0.005***	**0.003*** **	**0.088****	**0.053*** **
GDP (log)	**0.314*** **	**-0.063*** **	-0.013	**-0.068***	-0.183
GDP per Capita (log)	0.105	**0.058****	0.038	**0.181*** **	-0.540
Financial Development Index	**-9.642*** **	0.048	0.186	**0.516****	**-5.146****
Geographical Distance (log)	**-1.089*** **	-0.033	-0.090	**0.328***	**1.181****
Legal Tender	**4.509*** **	**7.052*** **	**16.96*** **	**6.097*** **	**7.260*** **
AML	-0.087	0.018	**0.048****	0.027	0.022
Intra-Euro Area Dummy	0.000				
Chinese BSL Dummy				0.040	
Offshore RMB Bank Dummy				**0.076***	
Constant	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observation Number	79010	83838	72499	80099	83667
R-squared	0.74	0.57	0.90	0.77	0.74

Note: ***, **, and * indicate statistical significance at 1%, 5% and 10%, respectively, where the standard errors are clustered at the year level. Bolded numbers are numbers that are statistically significant at 10% level or lower.

B. Regression Results on Interaction with Global Geopolitical Tensions (EMDE Sample)

Table B1. Regression Results on Interaction with Trade Policy Uncertainty

	EUR	GBR	JPY	RMB	USD
Currency Share (-1)	**0.719*** **	**0.556*** **	0.167	**0.842*** **	**0.816*** **
UN Voting Proximity	**0.184*** **	**0.008***	-0.001	**0.019*** **	-0.057
UN Voting Proximity * TPI	0.029	0.003	0.0003	0.00005	-0.010
Trade Share	**0.251*** **	-0.009	**0.020** **	0.009	**0.136** **
FDI Share	0.001	**0.023***	-0.002	0.002	0.044
Portfolio Flows Share	0.005	-0.001	**-0.003** **	-0.006	**0.039** **
GDP (log)	**-0.290***	**-0.030***	**-0.023***	0.003	-0.053
GDP per Capita (log)	-0.003	**0.295*** **	-0.021	0.087	**-1.752*** **
Financial Development Index	-0.827	-0.526	0.260	**-0.807*** **	-1.979
Geographical Distance (log)	**-1.938*** **	0.161	-0.050	0.069	1.837
Legal Tender				**8.558*** **	**3.991*** **
AML	-0.178	0.0003	**0.050** **	-0.043	0.376
Chinese BSL Dummy				0.143	
Offshore RMB Bank Dummy				0.013	
Constant	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observation Number	20951	21304	15813	19463	21293
R-squared	0.66	0.27	0.03	0.79	0.69

Note: ***, **, and * indicate statistical significance at 1%, 5% and 10%, respectively, where the standard errors are clustered at the year level. Bolded numbers are numbers that are statistically significant at 10% level or lower.

Table B2. Regression Results on Interaction with International Military Conflicts

	EUR	GBR	JPY	RMB	USD
Currency Share (-1)	**0.719*** **	**0.556*** **	0.167	**0.842*** **	**0.816*** **
UN Voting Proximity	**0.167*** **	**0.008***	-0.001	**0.019*** **	-0.043
UN Voting Proximity * IMC	**0.066***	-0.0004	0.001	0.001	-0.051
Trade Share	**0.252*** **	-0.009	**0.020** **	0.009	**0.136** **
FDI Share	0.002	**0.024***	-0.002	0.002	0.045
Portfolio Flows Share	0.006	-0.001	**-0.003** **	-0.006	**0.040** **
GDP (log)	**-0.293***	**-0.031***	**-0.023***	0.003	-0.053
GDP per Capita (log)	-0.032	**0.297*** **	-0.022	0.087	**-1.714*** **
Financial Development Index	-0.720	-0.527	0.262	**-0.806*** **	-2.054
Geographical Distance (log)	**-1.929*** **	0.160	-0.051	0.070	1.855
Legal Tender				**8.558*** **	**3.997*** **
AML	-0.220	0.003	**0.049** **	-0.042	0.417
Chinese BSL Dummy				0.143	
Offshore RMB Bank Dummy				0.013	
Constant	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observation Number	20951	21304	15813	19463	21293
R-squared	0.66	0.27	0.03	0.79	0.69

Note: ***, **, and * indicate statistical significance at 1%, 5% and 10%, respectively, where the standard errors are clustered at the year level. Bolded numbers are numbers that are statistically significant at 10% level or lower.

Annex II. Data Appendix

Data Sources

SWIFT Data

We use the SWIFT dataset to construct our dependent variable, which is the share of currency usage between country pairs for the five SDR basket currencies. The dataset contains information on the dollar amount of transactions received and sent between country pairs by currency, which we use in our baseline regression analysis in the paper.

The data used for the panel regressions are at the yearly frequency from 2013 to 2021. The transfer data consists of single customer credit transfers (SWIFT message type MT 103[1]) and general financial institutions transfers (SWIFT message type MT 202 and MT 202C). A panel dataset is created for five SDR currency shares, namely the USD, RMB, EUR, JPY, and GBP. The currency shares are calculated based on SWIFT net amount sent and received in USD, and shares are aggregated across countries, such that each observation corresponds to a unique sender country, receiver country, currency, and year.

Geopolitical Proximity

Our main variable of interest, the measure of geopolitical proximity, is based on United Nations General Assembly voting data from Harvard Dataverse (Voeten et al., 2009), which contains information on the degree of similarity between the voting behavior of United Nations member countries.[2] Arend Lijphart's Voting Similarity Index is used as a proxy for geopolitical proximity. It is calculated as:

$$\frac{(f - \frac{1}{2}g)}{t} \times 100$$

where f is the number of votes when both countries agree (that is, when both countries both vote "yes", "no" or "abstain"), g is the number of votes when one country abstains and the other country votes "yes" or "no", t is the total number of votes. The index takes a value between zero and one. A value of one means that two countries vote the same on all issues in the U.N General Assembly. A value closer to zero indicates that the two countries vote differently on the majority of issues in U.N.

Measures of Geopolitical Tensions

The **International Military Conflict Index** is obtained from the Uppsala Conflict Data Program.[3] The index represents the number of total interstate and internationalized intrastate conflicts in a year. An interstate conflict is a conflict between two or more governments. An internationalized conflict is an armed conflict between a

[1] Including MT103, MT103+, MT103R.
[2] United Nations General Assembly Voting Data - Erik Voeten Dataverse (harvard.edu)
[3] https://ucdp.uu.se/

government and a non-government party where any one side of the conflict or both parties of conflict receive troop support from other governments that actively participate in the conflict.

The **Trade Policy Uncertainty Index** is constructed by counting the frequency of joint occurrences of trade policy and uncertainty terms across major newspapers.

Country-pair Macro Variables

- Bilateral trade data (sum of exports and imports) are obtained from IMF Directions of Trade Statistics Database.[4]
- Bilateral portfolio investment position data are from IMF Coordinated Portfolio Investment Survey Database.[5]
- Bilateral direct investment position data are from IMF Coordinated Direct Investment Survey database.[6]
- Geographical distance data are from the GeoDist database of the Centre d'Études Prospectives et d'Informations Internationales (CEPII).[7]

Country Level Data

- Gross domestic product and per capita income are from IMF World Economic Outlook (WEO) database.
- Financial Development Index is from IMF Financial Development Index Database.[8] It measures the level of development of financial markets in terms of their depth, access, and efficiency. Higher financial development is also associated with higher transactions.
- The legal tender dummy is created based on information from IMF AREAER Database.[9]
- The Basel AML index is constructed and maintained by Basel Institute on Governance. It is used to capture the risk of money laundering and terror financing.
- Data on Chinese Bilateral Swap lines and RMB Offshore Clearing Bank are from People's Bank of China.

[4] Direction of Trade Statistics - DOTS Home - IMF Data
[5] Coordinated Portfolio Investment Survey - CPIS Home - IMF Data
[6] Coordinated Direct Investment Survey - CDIS Home - IMF Data
[7] CEPII - Notes on CEPII's distances measures: The GeoDist database
[8] Financial Development - Story - IMF Data
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