
The Stealth Erosion of Dollar Dominance

Barry Eichengreen

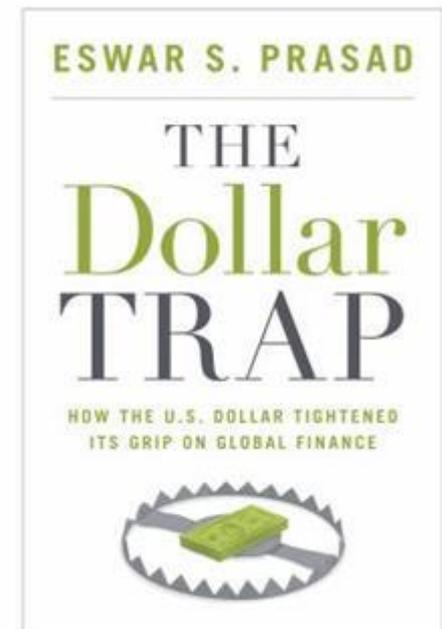
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A large literature is concerned with dollar dominance

- This emphasizes the outsized role of the U.S. currency in global markets. The dollar's share in global trade invoicing, international debt, and cross-border non-bank borrowing far outstrips the share of the United States in trade, international bond issuance, and cross-border borrowing and lending.
- The currency's dominance has been resilient in the face of a declining U.S. share of global GDP. Dollar dominance survived the collapse of Bretton Woods (Gourinchas, 2021).
- Indeed, its shares of international debt and non-bank borrowing rose still further following the global financial crisis (Eren and Malamud, 2021).



- Influential contributions argue that the dollar has been and will remain the dominant international currency by default.
 - The absence of alternatives has allowed it to dominate international funding markets, trade invoicing and settlement, and foreign exchange reserves.
 - Other currencies suffer from an inadequate supply of investment-grade government securities for investors to hold as safe assets and for central banks to accumulate as reserves (Capolongo, Eichengreen and Gros, 2020).
 - Or their liquidity and availability are limited by regulation, including capital controls (Prasad and Ye, 2013; and Sullivan, 2020).
 - They do not benefit from the large installed base of transactions denominated in dollars.
 - They therefore lack the complementarities and synergies of different cross-border uses benefiting the dollar (Gopinath and Stein, 2021).



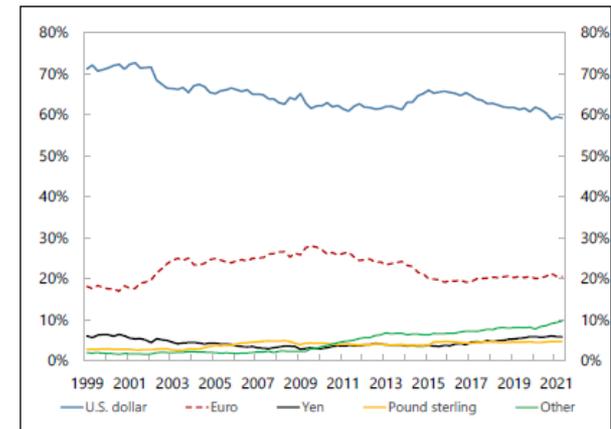
But dominance is not necessarily forever

- With the rise of the euro and the renminbi, this narrative continues, the situation may be poised to change.
- Starting in 2012, with Mario Draghi's "do whatever it takes" pledge, the European Central Bank asserted its readiness to act as liquidity provider of last resort to markets in euro-denominated assets (European Commission, 2018).
- In 2020, with the creation of the €850 billion European Recovery Fund, there arose the prospect of a growing stock of safe and liquid AAA-rated government securities to be held as reserves by central banks (Hudecz, Cheng, Moshammer and Raabe, 2021).
- China, meanwhile, has embarked on a process of currency internationalization, aided by growing imports and exports, Belt and Road investments, a global network of renminbi currency swaps and official clearing banks, and inclusion of the renminbi in the Special Drawing Rights (SDR) basket (Subacchi, 2016; Greene, 2021).
- The capstone on this evolution, it is said, is now issuance by China of a central bank digital currency, the e-CNY (Jia, 2021).

I will focus mainly on the currency composition of international reserves

- On this dimension, the dollar has not become more dominant. It has not even maintained the dominance of prior years.
- Figure 1 here shows the currency composition of foreign exchange reserves according to the IMF's Currency Composition of Official Foreign Exchange Reserves (COFER) survey.
- According to this source, the share of reserves held in U.S. dollars by central banks has dropped by 12 percentage points since the turn of the century, from 71 percent in 1999 to 59 percent in 2021.

Figure 1. Currency Composition of Global Foreign Exchange Reserves 1999–2021 (in percent)

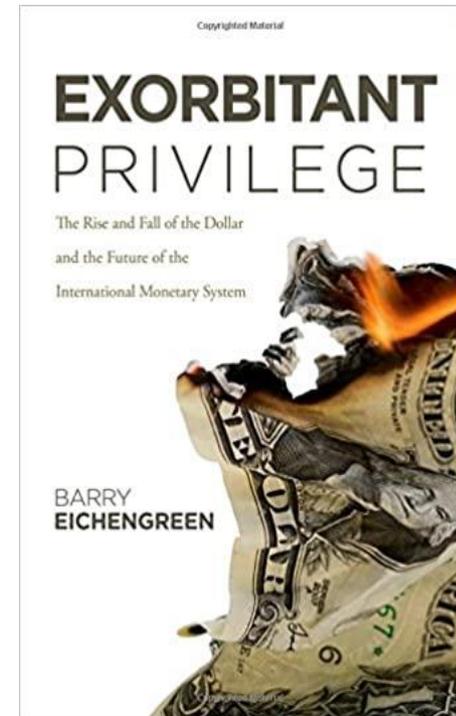


Sources: IMF Currency Composition of Official Foreign Exchange Reserves (COFER).

Note: The "other" category contains the Australian dollar, the Canadian dollar, the Chinese renminbi, the Swiss franc and other currencies not separately identified in the COFER survey. China became a COFER reporter between 2015 and 2018.

This is the trend I predicted in my book “Exorbitant Privilege” (10 years ago...)

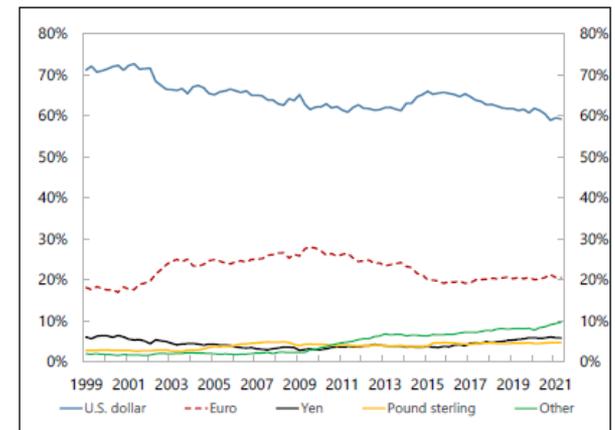
- That we would move to a more diverse, better diversified international monetary and financial system that better matched our more diverse, better diversified global economy.
- I predicted movement toward the euro and the RMB.
- But that is *not*, in the main, what we have seen.



This is not, in fact, a shift toward other traditional reserve currencies

- Defined here as long-standing members of the SDR basket (euro, yen, pound)
- Instead, the share of “nontraditional reserve currencies” has risen from essentially zero at the turn of the century to 10% today.
- This is only $\frac{1}{4}$ a shift into RMB and $\frac{3}{4}$ a shift into other currencies (Canadian dollar, Aussie dollar, Swedish krona etc.)
- The shift is broad-based: we identify 46 “active diversifiers” now with a share of reserves in nontraditional currencies of at least 5%.
- These patterns are all documented using publicly available information not previously assembled in one place.

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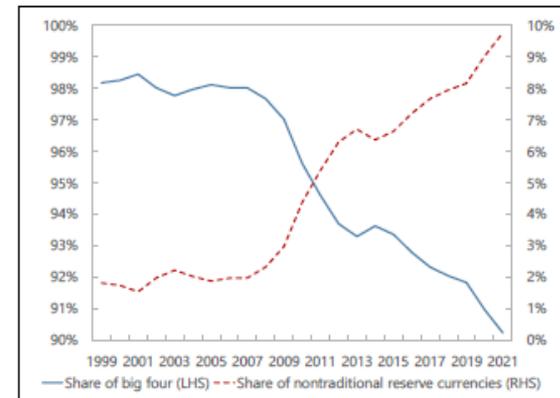


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One can see the shift toward the RMB and toward “subsidiary reserve currencies” more clearly here

- Beware the two axes.
- (I’ll talk more later about where these data come from and how we constructed our estimates.)

Figure 9. Official Reserve Shares of “Big Four” Currencies vs. Nontraditional Currencies



Source: IMF Currency Composition of Official Foreign Exchange Reserves (COFER).
Note: The “big four” currencies are the US dollar, the euro, the Japanese yen, and the British pound.

I would point to three factors contributing to this shift

- First, improvements in technology (electronic trading platforms, automated market making, automated liquidity management) making for more forex market liquidity in nontraditional currencies and facilitating direct trades.
 - Example of Mexican peso/Canadian dollar pair.
- Second, central bank reserve managers with larger portfolios more actively managing and chasing returns.
 - Liquidity tranche vs. investment tranche.
- Third, low yields and low Sharpe ratios of traditional reserve currencies.
 - Literature emphasizes policy initiatives of govts and central banks to internationalize their currencies. Our analysis suggests that market forces, structures and incentives are at least as important.

So where are CB reserve managers going?

- COFER now tells us about holdings of Aussie dollar, Canadian dollar, RMB and Swiss franc (which constitute 71% of nontraditional currency total at end 2020).
- We can estimate the composition of the remaining 29% using the IMF's Coordinated Portfolio Investment Survey (CPIS), which tells us the residency of the issuer of debt securities held as reserve assets by central banks. So we can use these proportions to decompose the "other currencies group" in the COFER data.

Table 5. Nontraditional Currencies in Global Foreign Exchange Reserves, end-2020

| | in bil US\$ | as % of Total |
|--------------------|-------------|---------------|
| Total | 1070 | 100% |
| Australian dollar | 217 | 20% |
| Canadian dollar | 247 | 23% |
| Chinese renminbi | 272 | 25% |
| Swiss franc | 21 | 2% |
| Other | 315 | 29% |
| Korean won | 81 | 8% |
| Swedish krona | 63 | 6% |
| Singapore dollar | 51 | 5% |
| Norwegian krone | 49 | 5% |
| Danish krone | 47 | 4% |
| New Zealand dollar | 12 | 1% |
| Hong Kong dollar | 11 | 1% |

Sources: IMF, COFER and CPIS.
Note: The size of "other" currencies is estimated based on Arslanalp and Tsuda (2014).

And IMF Data Template can tell us which CBs are “actively diversifying”

- Defined as holding at least 5% of reserves in nontraditional currencies.
- Eclectic group. Some African countries pegging to the rand and trading with SA.
- Estonia, which is close to and trades with Finland and Sweden.
- Russia is fairly high up on the list.
- And some surprises.

Table 6. Foreign Exchange Reserves in Nontraditional Currencies, end-2020

| | Foreign Exchange Reserves in Nontraditional Currencies, end-2020 | | | | Share of reserves in nontraditional currencies |
|-----------------|--|--------------|------------------|--------------------|--|
| | Foreign exchange reserves (bil US\$) | Total | Chinese renminbi | non-SDR currencies | |
| Total | 8271.1 | 770.1 | 117.7 | 650.8 | 9% |
| Lesotho | 0.9 | 0.6 | 0.0 | 0.6 | 69% |
| Namibia | 2.2 | 1.2 | ... | 1.2 | 53% |
| Malta | 0.7 | 0.3 | 0.0 | 0.3 | 41% |
| Estonia | 1.9 | 0.6 | 0.0 | 0.6 | 34% |
| Ireland | 5.0 | 1.7 | 0.3 | 1.4 | 34% |
| Turkey | 48.5 | 15.9 | ... | 15.9 | 33% |
| Chile | 37.8 | 10.6 | 3.1 | 7.6 | 28% |
| Kyrgyz Republic | 1.6 | 0.4 | 0.1 | 0.3 | 25% |
| Russia | 444.5 | 94.7 | 75.3 | 19.5 | 21% |
| Latvia | 4.7 | 1.0 | 0.5 | 0.5 | 21% |
| Malaysia | 102.6 | 20.7 | ... | 20.7 | 20% |
| Botswana | 4.8 | 1.0 | ... | 1.0 | 20% |
| Lithuania | 4.2 | 0.8 | 0.0 | 0.8 | 20% |
| New Zealand | 12.0 | 2.1 | ... | 2.1 | 17% |
| Tanzania | 5.1 | 0.9 | 0.8 | 0.1 | 17% |
| Australia | 32.6 | 5.2 | 1.7 | 3.5 | 16% |
| Kenya | 9.9 | 1.6 | ... | ... | 16% |
| Indonesia | 128.4 | 19.3 | ... | 19.3 | 15% |
| Poland | 138.5 | 20.8 | 0.0 | 20.8 | 15% |
| Spain | 57.3 | 8.5 | 0.6 | 7.9 | 15% |
| Czech Republic | 164.1 | 24.1 | 0.5 | 23.6 | 15% |
| South Africa | 44.3 | 6.2 | 3.9 | 2.4 | 14% |
| Colombia | 56.6 | 7.8 | ... | 7.8 | 14% |
| Sweden | 45.9 | 6.1 | 0.3 | 5.7 | 13% |
| Singapore | 359.3 | 45.2 | ... | 45.2 | 13% |
| France | 57.1 | 7.0 | 0.0 | 7.0 | 12% |
| United Kingdom | 182.6 | 19.8 | 0.5 | 19.3 | 11% |
| Romania | 44.4 | 4.8 | 1.1 | 3.7 | 11% |
| Italy | 47.5 | 5.1 | 0.4 | 4.7 | 11% |
| Germany | 38.9 | 3.6 | 0.3 | 3.3 | 10% |
| Switzerland | 1013.2 | 97.5 | 10.2 | 87.4 | 10% |
| India | 485.8 | 44.8 | ... | 44.8 | 10% |
| Georgia | 3.7 | 0.3 | 0.0 | 0.3 | 9% |
| Thailand | 246.0 | 20.8 | ... | 20.8 | 8% |
| Norway | 71.8 | 5.4 | 0.3 | 5.1 | 7% |
| Korea | 431.3 | 28.3 | ... | 28.3 | 7% |
| Kazakhstan | 11.3 | 0.7 | 0.4 | 0.3 | 6% |
| China | 3216.0 | 198.4 | 0.0 | 198.4 | 6% |
| Zambia | 1.0 | 0.1 | ... | ... | 6% |
| Hungary | 39.0 | 2.2 | ... | 2.2 | 6% |
| Mexico | 184.2 | 9.2 | 3.3 | 5.9 | 5% |
| Brazil | 336.9 | 16.8 | 10.8 | 5.9 | 5% |
| Philippines | 84.4 | 4.2 | 1.7 | 2.4 | 5% |
| Costa Rica | 7.0 | 0.3 | 0.0 | 0.3 | 5% |
| Mauritius | 6.4 | 0.3 | 0.1 | 0.2 | 5% |
| Peru | 71.4 | 3.3 | 1.6 | 1.7 | 5% |

Sources: IMF Reserve Data Template, Bangko Sentral ng Pilipinas, Bank of Botswana, Bank of England, Bank of Italy, Bank of Russia, Bank of Spain, Bank of Tanzania, Bank of Zambia, Central Bank of Kenya, Central Bank of Lesotho, Czech National Bank, National Bank of Romania, National Bank of Kazakhstan, and Reserve Bank of South Africa.

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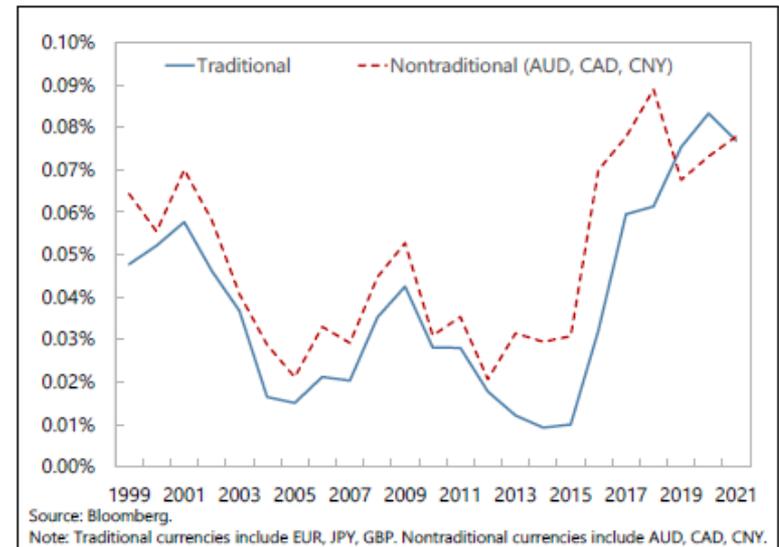
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Missing figures are indicated as "...".

I think this diversification is driven in part by market liquidity & returns

- Market liquidity as reflected by bid-ask spreads, which are no longer uniformly lower for traditional reserve currencies.
- Reflecting market making activities of CBs (to encourage direct trading).
- Reflecting improved financial infrastructure in nontraditional markets (including AMM and ALP technologies).
- Notice also the blowout after the GFC (when, as is well known, CIP no longer held as financial institutions making markets became more constrained). Market making became harder.

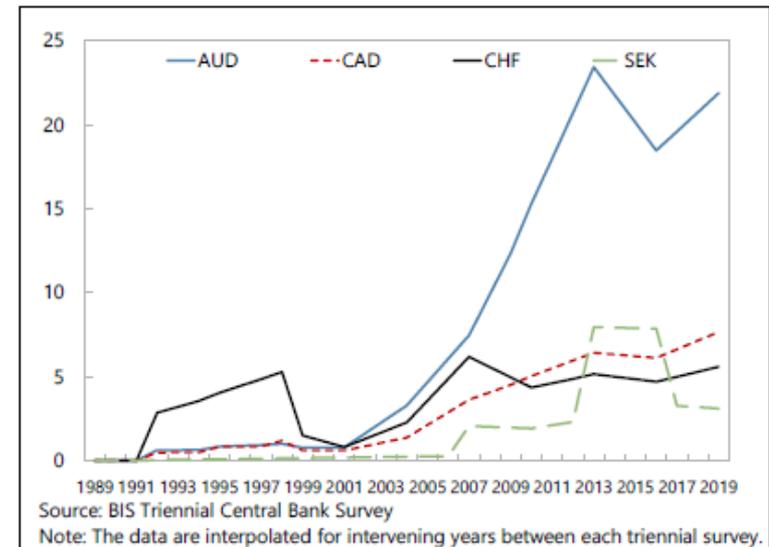
Figure 10. Bid-ask spreads of reserve currencies against USD (in percent)



Similarly, turnover in nontraditional reserve currencies has increased

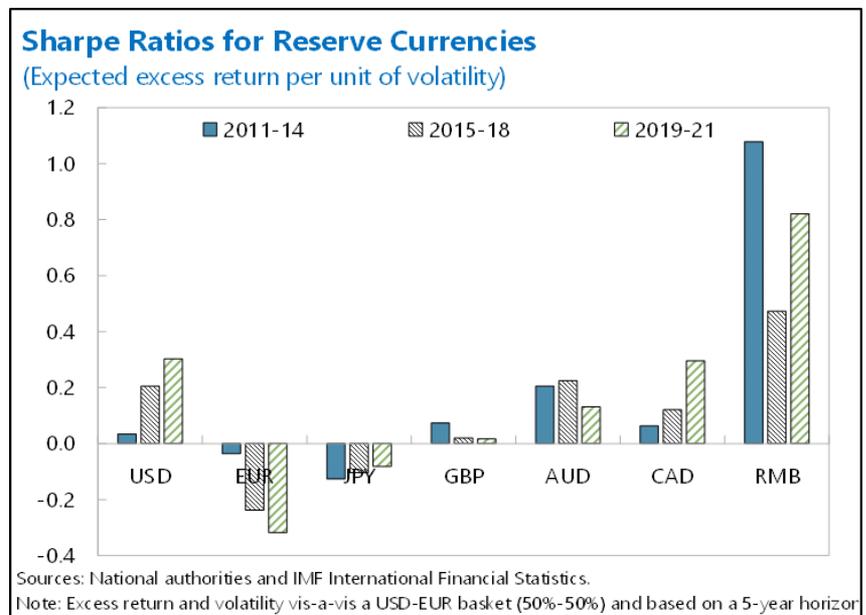
- Most notably for the Australian dollar, but also for the Canadian dollar, Swiss franc and Swedish krone.
- (Notice that this is turnover of other nontraditional currencies against these four (AUD, CAD, CHF, SEK). It is *not* their turnover vis-à-vis dollar, euro, pound & yen).

Figure 11. Total Foreign Exchange Turnover between Nontraditional Currencies (Local currency ex Big Four against AUD, CAD, CHF, SEK; in USD billions)



And volatility-adjusted returns are not unattractive

- These are excess returns and volatility vis-à-vis a 50/50 \$/€ basket.
- Dollar doesn't perform badly here.
 - Low volatility by construction.
- But AUD, CAD and RMD dominate EUR, GBP and JPY.
- Low returns on EUR, GBP and JPY reflect low interest rates.
- High returns on RMB reflect positive interest rates but also the limited volatility of a heavily managed currency.



Why not the euro?

- Shortage of AAA-rated government securities to be held as reserves by corporate treasurers and central bank reserve managers.
 - Because European finance is bank based.
 - Because only a handful of European sovereigns are AAA rated.
 - Because most of those securities are held to meet capital requirements by European banks or have been hoovered up by the ECB.
 - Although a greatly scaled up European Recovery Fund could change this, the existing ERF is peanuts.
 - Will it in fact be scaled up, or is it a one-off?

Why not the RMB (at least to a greater extent)?

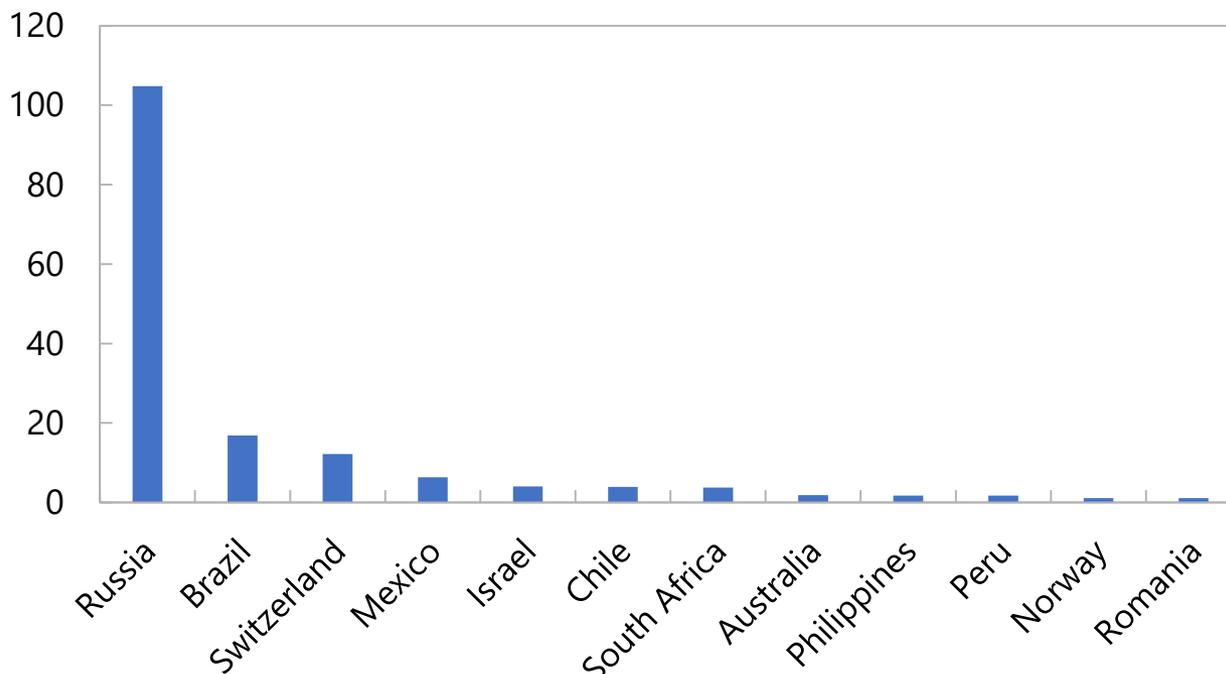
- Lack of infrastructure.
 - CIPS is still only a shadow of CHIPS, and relies on SWIFT for most of its messaging.
- Continued capital controls.
 - Due to prioritizing domestic growth).
- China's governance.



And who holds RMB reserves? Russia, sure. But Brazil?

Countries Holding Chinese Renminbi in Reserve Assets

(in billion U.S. dollars, end-2021)



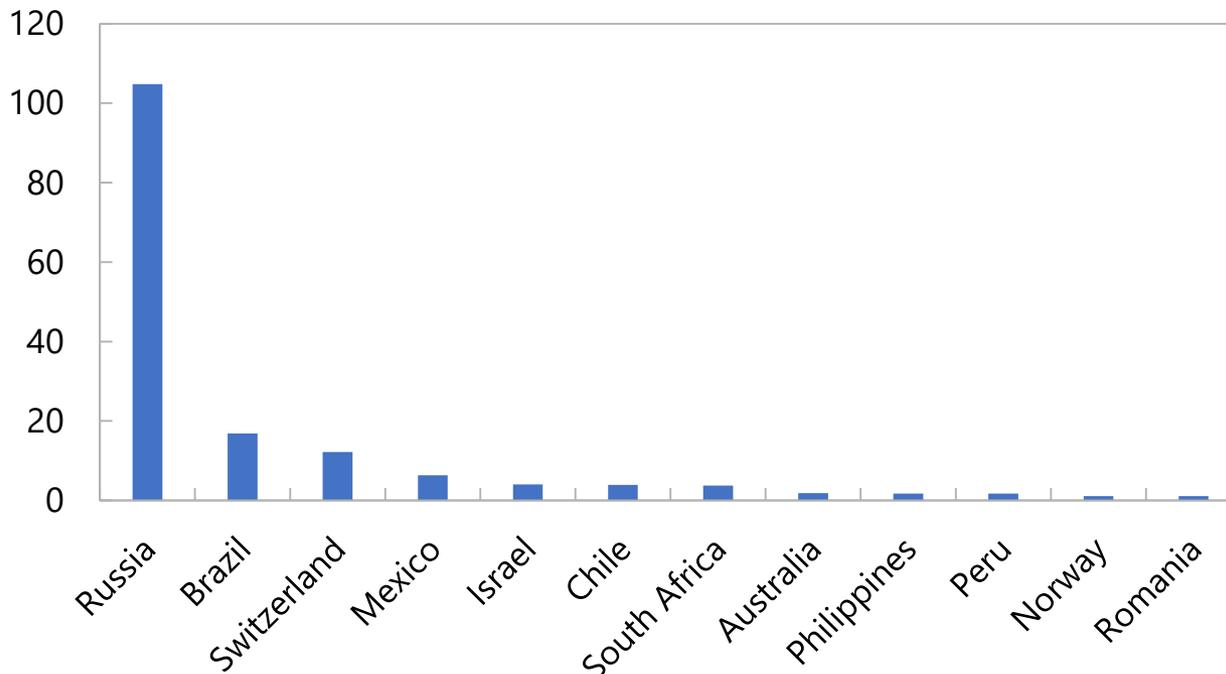
Sources: IMF COFER, IMF Reserve Data Teample, and central bank annual reports.

Note: The chart shows identified countries that hold more than US\$ 1 billion of RMB in reserve assets. Data for Israel, Mexico, Philippines, and South Africa are for Mar 2022, Sep 2021, Dec 2020, and Mar 2021,

For Russia, that's 17% of reserves For Brazil, it's 5%

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(in billion U.S. dollars, end-2021)



Sources: IMF COFER, IMF Reserve Data Team, and central bank annual reports.

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Finally, to head off the inevitable question

- We looked at U.S. sanctions.
- Empirically, past sanctions don't appear to have mattered for reserve currency portfolio choices.
 - Based on our analysis of individual central bank balance sheets.
- But current sanctions and future sanctions may be different.
 - Since Russian reserves have been frozen in an essentially unprecedented move.
- What are the likely effects? If one expect coalitions of countries (US, Europe, UK, Japan, Australia, Canada Sweden) to act in concert, as they did this time, diversifying away from the dollar offer no insulation.
 - But one can also imagine a future conflict where the aforementioned partners put up a less than united front, in which case diversification may have value?
- What about the RMB? Won't the response to Russia prompt movement in that direction?
 - Not clear. China, with good reason, has hesitated to act as a sanction buster. Will it allow Russia to freely access its RMB reserves? We shall see...

Conclusion

- The dollar's dominance is eroding slowly, which is what one should expect (and even hope for!) in an increasingly multipolar world.
- But this has not predominantly been movement into euros and RMB, which both have limitations. Rather, it is movement into nontraditional ("subsidiary") reserve currencies.
- This reflects (i) technical and financial innovation, (ii) more active reserve management, and (iii) low interest rates (unattractive Sharpe ratios) on traditional reserve currencies.
- If this continues, the dollar will be felled not by another giant but by a swarm of midgets.