FitchRatings

China Perspectives

The State of the Monetary World and the Yuan

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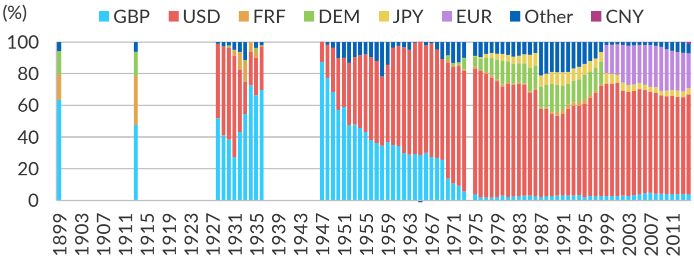
Currency Composition of Globally Disclosed Foreign Reserves in the Long Run



Source: Fitch Ratings, Eichengreen-Mehl-Chuti data on the currency composition of international reserves in the long run; gaps before 1947 due to sparse data available

The US dollar's dominance across the global monetary landscape remains deeply entrenched, with the euro a distant second, Fitch Ratings' analysis of the relative standing of the world's leading international currencies across numerous private and public dimensions shows.

The Chinese yuan has longer-term potential, but is unlikely to challenge the incumbents in the foreseeable future.

Global Incumbents Remain Dominant

The US dollar's pre-eminent role across the private sector is illustrated by its: i) disproportionate share in global foreign-exchange turnover, ii) prominence in international debt markets, iii) widespread use as an invoicing currency for international trade transactions, and iv) leading share in cross-border global payments.

Across the public sector, the US dollar's dominance is evidenced by its: i) large share in central bank foreign reserves, ii) prevalence as an exchange rate anchor, iii) status as the lead numeraire currency for major commodities such as crude oil (quasi-public, quasi-private), and iv) use in conducting official interventions.

The US dollar's leadership is followed principally by the euro, which exhibits many similar characteristics, but on a more limited scale. Other global currencies such as the Japanese yen and pound sterling play only minor roles.

Available data suggest this status quo has remained virtually unchanged for decades, and Fitch expects this dynamic to persist for the foreseeable future, given a lack of compelling alternatives.

Yuan Rising, but Faces Significant Hurdles

International use of the Chinese yuan has been rising in recent years across a number of categories, but from a very low base.

Fitch believes that China possesses key attributes that could make the country a leading global currency issuer. These include its large economic size, dominant share in global trade, strong economic track record, and favourable medium-term growth outlook.

At the same time, China's efforts to internationalise the yuan also face significant hurdles, despite policymakers' recent progress in expanding foreign investors' access to the country's domestic capital markets. These include addressing the widespread prevalence of capital controls, limited liquidity in its government securities, as well as other governance and geopolitical challenges.

There is also a question of inertia, which will tend to favour incumbents in the absence of a major shock of global consequence.

It is worth recalling that the transition from the pound to the US dollar as the leading international currency occurred over multiple decades and against the backdrop of two world wars, a period of history that resulted in a dramatic shift in the global power balance.

Related Research

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The State of the Monetary World

Private Sector

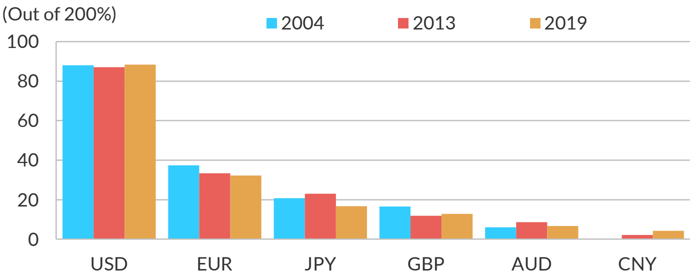
Foreign Exchange Turnover

A large presence in global FX turnover essentially point to frequent demand for a given currency from market participants, whether it is for routine payment settlement or as an investment vehicle.

As reported in the latest BIS Triennial Central Bank Survey, the US dollar is by far the most transacted currency globally, and is represented on one-side of 88% of reported FX trades.[1] While there has been some variability over time, the dollar's dominance seems little changed since 1989 (90%), the first survey point available.

FX Market Turnover, by Selected Currency

Net-net basis



Source: Fitch Ratings, BIS Triennial Central Bank Survey

The euro is the second-most transacted currency, and is represented on one-side of 32% of FX trades. Its presence in FX markets peaked at 39% in 2010, but has declined modestly since the European sovereign debt crisis. The third-most widely transacted currency is the yen, which likely reflects its long-standing use as a funding currency for global investors.

The yuan's presence in FX markets has grown considerably, but remains low. BIS data indicate the yuan was on one-side of 4.3% of overall FX turnover in 2019, up from virtually zero in 2004 (0.1%).

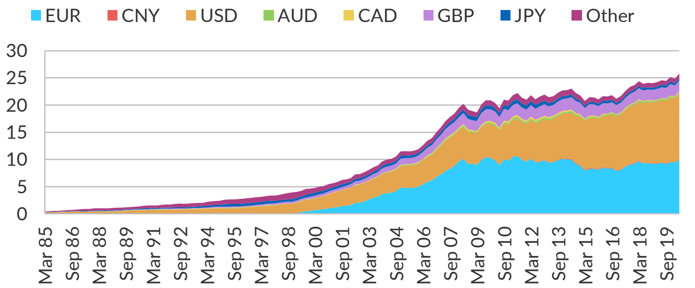
International Debt Securities

A global currency's reach across the private sector can also be gauged through its use as an investment vehicle. For this, we track the currency denomination of outstanding international debt securities, as this provides insights into the currency denominations investors prefer when investing outside of their home markets.

Out of USD25 trillion in international debt securities outstanding as of end-2Q20, about 47% were denominated in the US dollar. The euro was in second place at about 39%, and below its 2009 peak of 50%. The pound is a distant third, at nearly 8%, and likely reflects London's continued position as a leading bond and FX trading hub.

Stock of International Debt Securities by Currency

(USDtrn)



Source: Fitch Ratings, BIS

The yuan's use as a currency for denominating international debt securities is extremely limited at USD104 billion (0.4% of the total) as of end-2Q20. While it has increased from nearly zero over the past decade, the trend has flattened since 2014. This may reflect the increasing two-way flexibility of the currency, which has removed FX appreciation expectations among offshore-yuan investors.

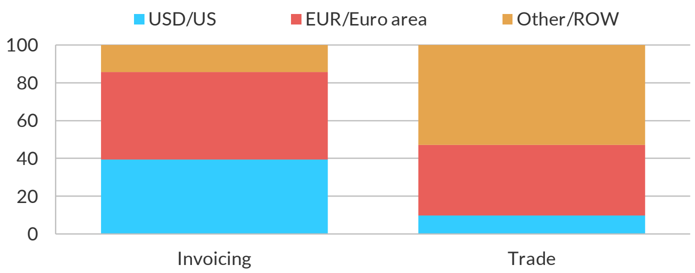
Trade Invoicing

Trade invoicing data, based on customs documents that describe key commercial terms such as the goods sold, amount due, and are used to assess duties and taxes, can provide insights into a global currency's use as a unit of account and medium of exchange[2].

Standard economic models assume that when a country exports goods, it will do so in its own currency. Recent studies have disproved this earlier assumption by empirically documenting that international trade is in practice invoiced in very few currencies. [3]

Shares of Invoicing Currency & Global Trade

(%)



Source: Fitch Ratings, Boz et al. (2020), "Patterns in Invoicing Currency in Global Trade", IMF Working Paper 20/126; Data reflects 1999-2019 average

A recent IMF Working Paper[4] shows the dominance of the US dollar and euro in this regard through data capturing invoicing currencies across more than 100 markets. The researchers estimate that the US dollar accounts for 40% of global trade

[1] The data is out of 200%, as there are two sides to any FX transaction.

[2] Final settlement is often but not always done in the invoiced currency

[3] Studies are numerous but include Gopinath, Gita, *The International Price System* (NBER Working Paper, October 2015)

[4] Boz, Emine, Camila Casas, et al., *Patterns in Invoicing Currency in Global Trade* (IMF Working Paper, July 2020).

invoicing, despite the US only representing 10% of global trade. This points to an outsized role for the dollar as a "vehicle currency" between third parties.

This "vehicle currency" role for the US dollar is particularly apparent in the case of Japan, a country that invoices approximately 50% of its exports in US dollars despite its status as a leading trading nation and as an issuer of a (smaller-scale) global reserve currency.

The euro accounts for a slightly larger (46%) share of trade invoicing than the US dollar. This is closer in line with standard trade paradigms given the euro area accounts for an estimated 37% of global trade, although both figures are arguably overstated by the inclusion of intra euro-area trade. In either case, the results suggest a somewhat smaller "vehicle currency" role for the euro compared to the US dollar[5].

A final noteworthy point is evidence that the share of the US dollar and euro in trade invoicing is believed to have risen over time. This is despite the relative decline in the US's and euro area's share of global trade.

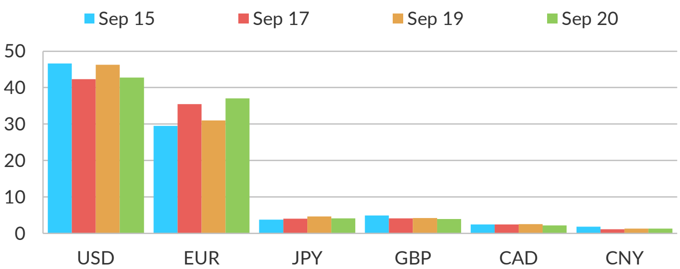
Payments and Settlement

SWIFT, a provider of financial messaging services, is a useful reference in gauging the currency composition of international cross-border payments[6]. In doing so, it is important to keep in mind that SWIFT does not clear or settle payments. As such, the data is best interpreted as the currency composition of payment notifications sent to correspondent banks, with the understanding that final settlement could be transacted in a different currency.

Data from SWIFT indicate the US dollar and euro are by far the most popular international payments currencies, with shares of 43% and 37%, respectively, in August 2020, after excluding payments within the eurozone.

International Cross Border Payments by Value

(% share)



Excluding payments within eurozone
Source: Fitch Ratings, SWIFT RMB Tracker

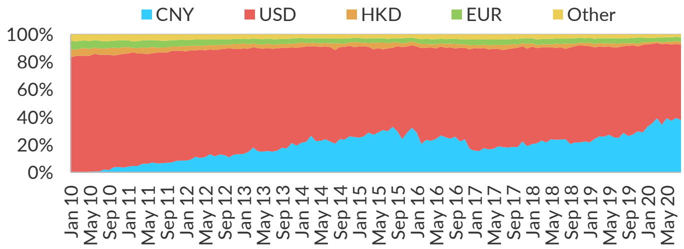
The yuan currently represents 1.3% of cross-border payments, less than the Canadian dollar (2.2%) and Australian dollar (1.6%). The yuan's share has fallen since its peak of 2.5% in 2015, likely due to the impact of the August 2015 exchange rate reforms, which resulted in a sharp depreciation and a period of volatile capital flows. These trends have since stabilised.

The yuan's minimal share in SWIFT's international payment data may also be influenced by the launch of China's Cross-border Interbank Payment System (CIPS) in late 2015, which aims to facilitate cross-border access to yuan clearing. International transactions through CIPS have grown rapidly in recent years, and are believed to have surpassed those reported by SWIFT. While both firms have numerous cooperation agreements in place, CIPS can and does operate independently from SWIFT infrastructure.

This may explain why China's own cross-border settlement data show a sharp increase in yuan-denominated settlement in recent years, from nearly zero 10 years ago to about 38% as of August 2020. This appears to have largely come at the expense of the US dollar, whose share fell from 85% to 55% over this same period.

China: Monthly Cross-Border Receipts & Payments by Non-Banks

Currency share



Source: Fitch Ratings, China SAFE

Given China's large share in global trade (about 12%), the continuation of this trend alongside greater proliferation of CIPS will likely also lead to rising share of the yuan in international payments over time.

Public Sector

Official Foreign Reserves

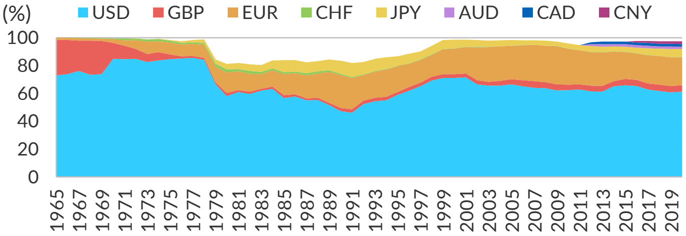
Foreign reserves give insights into central banks' preferences for holding certain currencies (this analysis excludes gold), which are mainly held for precautionary purposes, such as meeting import payments, making payments to international creditors, and conducting official interventions to moderate currency volatility.

As of end-2Q20, the US dollar accounted for 61% of allocated reserves, according to the IMF's Currency Composition of Official Foreign Exchange Reserves (COFER). This makes it by far the most favoured currency, a trend that has remained broadly unchanged over the 55 years that the IMF has reported comparable accounts.

[5] Invoicing data for China is not available as the authorities did not participate in the authors' data collection exercise.

[6] SWIFT also publishes "global payments" but we believe that series is less relevant to our analysis as it also includes domestic payments.

Currency Composition of Official Foreign Exchange Reserves (COFER)



EUR pre-1999 approximated from DEM, FRF, and NLG aggregate; based on allocated reserves (1979-98 gap largely due to ECU)
Source: Fitch Ratings, IMF COFER

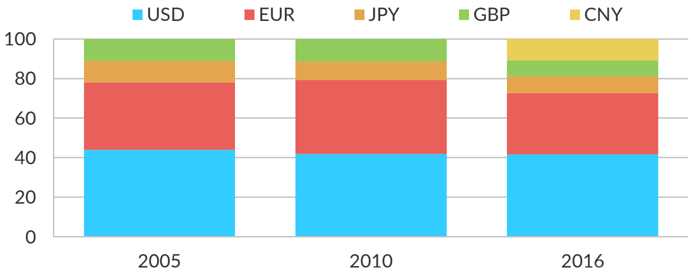
The outsized share of the US dollar in official foreign reserves is likely a reflection of the currency's dominance in other domains, such as in international trade and finance, as discussed previously. It is also reinforced by the perceived risk-free status of US Treasury securities, as well as their unparalleled levels of market liquidity.

The euro is the second-most held currency among central banks' reserve portfolios, accounting for about 20% of the total. A longer time series is not available because the currency was only introduced in 1999. The euro's share rose steadily in the mid-2000s prior to the European sovereign debt crisis, before peaking at 28% in 2009. Holdings are currently broadly in line with their 20+ year average.

Following the yuan's inclusion in the IMF's Special Drawing Rights (SDR) basket, effective in 2016, it has also been featured in the COFER survey. The yuan's share in COFER rose modestly to 2.0% by end-2Q20, from just 1.1% in 2016. This puts it in excess of both the Canadian dollar (1.9%) and Australian dollar (1.7%), but it remains considerably below the yen (5.7%) and the pound (4.5%).

IMF's Special Drawing Rights (SDR) Basket

Currency weight (%)



Yuan's inclusion effective in 2016 following approval in 2015
Source: Fitch Ratings, IMF

Exchange Rate Anchors

The adoption of a currency as an exchange rate anchor is an important manifestation of its acceptance within the official sector as a unit of account. Exchange rate anchors can take many forms, including currency boards, conventional pegs, stabilised arrangements, and a sovereign using it as its explicit legal tender.

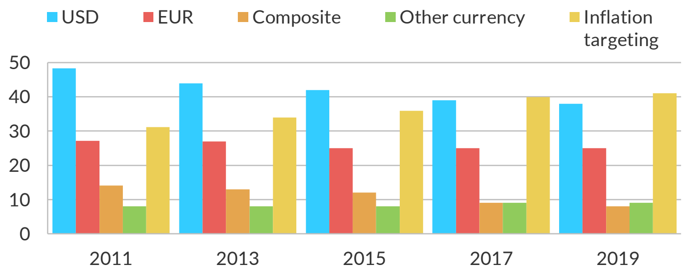
Among the IMF's 191 members, 38 are now classified as using a US dollar anchor as their de-facto exchange rate arrangement. This is followed by the euro (25), composite (8), and other currency (9)[7].

Jurisdictions using the US dollar as an anchor span Latin America, the Caribbean, the Middle East, and parts of Asia. Those that use the euro are largely in Europe's periphery (including seven preparing for euro adoption) or are former African colonies. The yuan is not identified as an anchor for any jurisdiction, but may be partly featured in the "composite" and "other currency" categories.

The US dollar's use as an exchange rate anchor has declined over the past decade, but has not been replaced by other currency anchors (which have also fallen). Instead, the fastest-growing categories are "inflation-targeting" and "other", underscoring the rising popularity of price stability as the main objective of monetary policy. This has resulted in the IMF observing a trend towards more flexible or "less clearly defined" exchange rate regimes.

Exchange Rate Anchors

(No. of IMF members)



Source: Fitch Ratings, IMF AREAR Annual Reports (192 IMF members as of latest data)

Commodity Pricing

The US dollar's role as the leading numeraire currency for oil and commodity contracts provides some additional perspective on why many countries, including major Middle Eastern oil exporters, continue to employ the US dollar as an exchange rate anchor. The associated export revenues have also led these and other commodity producers to accumulate large US dollar balances over time, which has reinforced the dollar's role as a reserve currency.

China has made some efforts over the years to disrupt this long-standing status quo, given its position as the world's largest oil importer and desire to customise a crude contract more tailored to Asian consumption patterns[8]. The most noteworthy example has been the launch of a yuan-denominated oil contract on the Shanghai International Energy Exchange (INE) in early 2018, which is available to both domestic and foreign investors. In addition, futures contracts for iron ore and gold are now tradeable onshore.

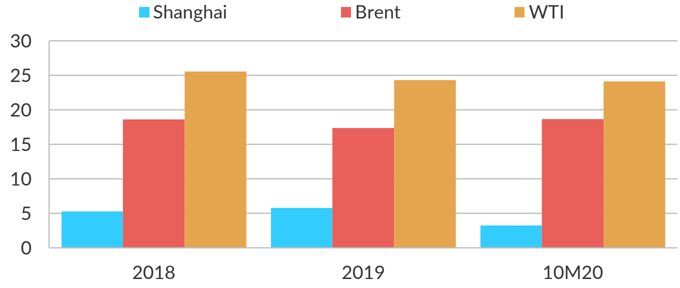
Crude oil futures trading on the Shanghai INE continues to grow, but the contract is far from establishing itself as a global benchmark akin to Brent or WTI, which are denominated in US dollars. A history of policy intervention and a high incidence of speculation in China's commodity markets may be contributing factors, but the largest impediment is likely the persistence of capital controls.

[7] IMF, Annual Report on Exchange Arrangements and Exchange Restrictions, 2019

[8] Medium sour crudes are more prevalent in Asian markets, versus Brent and WTI which are light and sweet.

Crude Oil Futures Trading Volumes on Major Exchanges

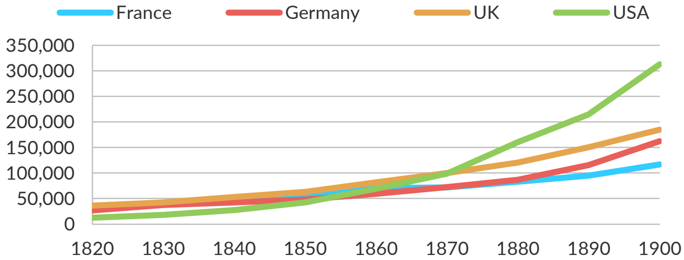
(m of contracts, annual average)



Source: Fitch Ratings, Bloomberg

Historical GDP Levels

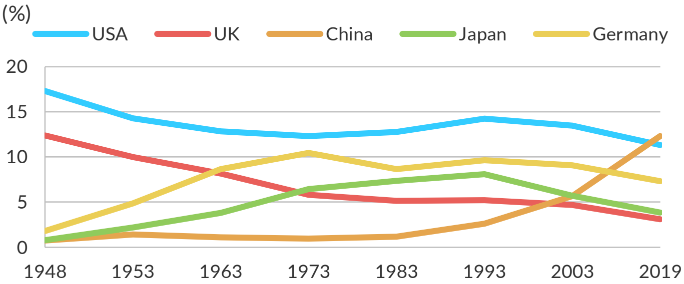
(1990 International Dollar)



Source: Fitch Ratings, Maddison, A. The World Economy: Historical Statistics. (Development Centre Studies, OECD Publishing, 2003)

Share in World Trade

(%)



Defined as average of share in world exports and imports
Source: Fitch Ratings, World Trade Organization

Foreign investors that post margin in US dollars are guaranteed currency convertibility, but local investors must trade and settle in yuan. This closed loop system limits potential capital outflows, but also prevents yuan balances from accumulating overseas, an important component to internationalising the currency. Since oil is the world's most actively traded commodity, it will be important to monitor the evolution of the Shanghai INE contract.

Official Intervention

Most governments do not disclose interventions by currency denomination. However, if the US dollar is the most commonly transacted currency in FX markets, and central banks hold a majority of foreign reserves in US dollar, then it stands to reason that it would also be the most favoured intervention currency[9].

The US dollar's use as an exchange rate anchor underscores this point, as official interventions would presumably be done in the anchor currency. Exceptions likely fall along Europe's periphery, particularly among countries preparing for entry to the eurozone.

Preconditions and China's Reform Priorities

Economic Size

Most studies that examine the relatively few turning points in history when an incumbent global currency was dethroned by a rising challenger have identified similar economic preconditions.

The first is economic size, in terms of aggregate output and share in global trade. The US surpassed the UK as the world's largest economy in 1872 and as a leading exporter during the first World War (1914-1918), before the US dollar began to challenge the pound as the world's leading reserve currency in the mid-1920s.[10]

China has already surpassed the US as the world's leading trading nation, and based on current trends, may well overtake the US in economic size towards the end of this decade. If so, history suggests the US dollar will maintain its status as the leading global reserve currency for at least another two decades, and may remain so longer given the considerations discussed below.

Economic Track Record

Beyond size, a strong economic record is also essential. This speaks to a global currency's role as a store of value, and encompasses price stability, macro stability, and credible policy management, among others. The UK was the first major economy to abandon the gold standard in 1931, which coupled with other economic troubles, eroded perceptions of the pound as a store of value.

It is also unlikely coincidental that a period of runaway inflation in the US during the late 1970s and early 1980s coincided with a sharp decline in the US dollar's share of global foreign reserve holdings.

So far, China has demonstrated a consistent record of robust growth and macroeconomic stability, which bodes well for the continued internationalisation of the yuan. This outcome is, however, by no means guaranteed, and could be undermined by a shock emanating from longstanding challenges, such as the economy's high leverage metrics and financial imbalances.

A smaller such incident occurred following the August 2015 exchange rate reform, which caught market participants by

[9] Kenen, Peter B., *The Role of the Dollar as an International Currency* (Group of Thirty Occasional Papers, 1983)

[10] Eichengreen, Barry and Marc Flandreau, *The Rise and Fall of the Dollar, or When Did the Dollar Replace Sterling as the Leading International Currency?* (NBER, July 2018).

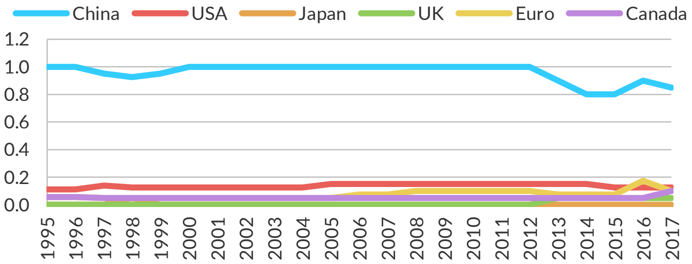
surprise and put an end to a decade of yuan appreciation. This was followed by market volatility, large capital outflows, and a prolonged period of yuan depreciation. Many commentators view this as a major setback in internationalisation efforts, even while it also set the stage for more two-way flexibility in the exchange rate.

Capital Account Convertibility

Another obstacle for China includes addressing the widespread prevalence of capital controls. A recurring study[11] among IMF members points to China's capital account restrictiveness as a significant outlier among major reserve currencies. The data also highlights periods of increasing restrictiveness in recent years.

Capital Account Restrictions Index

(1 = most restrictions)



Source: Fitch Ratings, Fernandez, Klein, Rebucci, Schinder and Uribe (2016) " Capital Control Measures: A New Dataset", IMF Economic Review Vol. 64 (3): 548-574, 2016

Since 2017, the Chinese authorities have taken gradual steps towards liberalisation in this regard. For example, policymakers expanded access to the country's onshore capital markets by removing quota restrictions on the Qualified Foreign Institutional Investors (QFII) and Renminbi QFII schemes, and through enhancements to Bond Connect, which allows international investors access to China's bond market through Hong Kong.

Chinese government bonds now also form part of major indices such as the Bloomberg Barclays Global Aggregate Index and the J.P. Morgan Government Bond Index – Emerging Markets, with the FTSE Russell World Government Bond Index also set to join this list.

At the same time, China's general approach to capital account opening has thus far been highly asymmetric in its prioritisation of foreign inflows, while maintaining a tight lid on resident outflows.

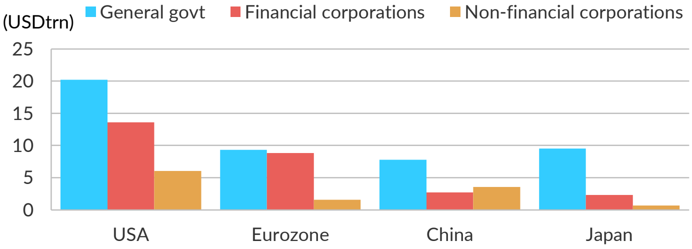
In the absence of deeper institutional reforms, investors will likely harbour doubts as to whether their ability to liquidate yuan-denominated holdings for international payment needs will remain unfettered during periods of heightened market stress. This is an essential attribute for any leading reserve currency, as highlighted by the US Federal Reserve establishing emergency swap lines to ease the global US dollar shortage during the height of the coronavirus pandemic.

Bond Market Depth and Liquidity

A related reform area is the bond market. Capital account reforms would provide the administrative certainty that yuan holdings can be repatriated on demand, but investors will still require deep and liquid bond markets to ensure large transactions can be executed without affecting prevailing market pricing.

Not only is the US bond market the world's largest, but US Treasuries have by far the highest average daily trading volume across the main global reserve currency issuers, which we estimate at nearly USD600 billion (about 5.5x that of eurozone government bonds). Liquidity for Chinese government bonds has risen rapidly in recent years from a low base, and is now above that of Japan.

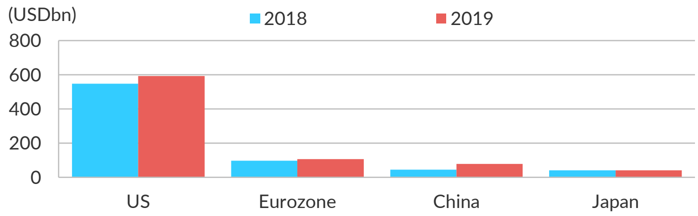
Domestic Bond Market Estimated Size



Note: For China, general government bonds include central and local government bonds, central bank bills and policy bank bonds, Financial corporation bonds include commercial bank bonds, ABS and NCDs
Source: Fitch Ratings, BIS, ECB, China Bond/SHCH, data as of end-1Q20

Market Liquidity - Government Bonds

Average daily trading volume



Note: China data includes central government, local government and policy bank bonds traded in the interbank market and Shanghai Stock Exchange
Source: Fitch Ratings, FRBNY, AFME, China Bond, Shanghai Stock Exchange, Japan Securities Dealers Association, ADB, Haver, CEIC

One potential challenge for the eurozone and China compared to the US is the lack of issuer uniformity in their flagship sovereign bond markets. Eurozone governments all issue in euros, but can vary widely in credit quality and market liquidity conditions, as underscored during the European sovereign debt crisis. In contrast, the US Treasury market has but a single obligor.

China may face a similar challenge, as the largest bond issuers are local governments and policy banks, which have varying standalone credit profiles. Fitch believes the sovereign would ultimately bear responsibility for all explicit government obligations, but liquidity varies across such a diverse pool of issuers, and may be influenced by market perceptions of standalone credit quality.

Governance Considerations

The quality of governance has also been cited as a key attribute for reserve currency issuers. The subject matter is broad and notoriously difficult to quantify, but encompasses important rule

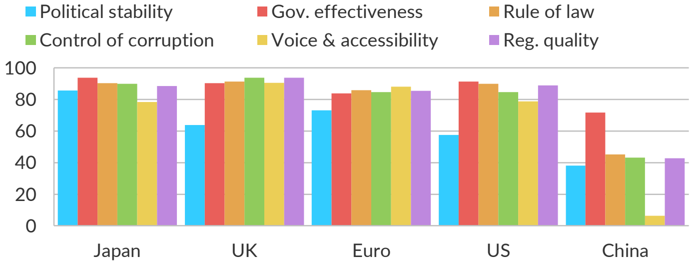
[11] Fernandez, Andres, Michael Klein, et al., *Capital Control Measures: A New Dataset* (IMF Economic Review, 2016).

of law questions. These include whether investors believe financial contracts will be enforced reliably, disputes will be adjudicated impartially, and the central bank and financial regulatory bodies can operate independently and free from political interference.[12]

The World Bank Worldwide Governance Indicators (WGI) provide one lens from which to compare this subject matter. As illustrated in the chart below, the leading global reserve currency issuers still hold a considerable margin over China in areas such as "Rule of Law" and "Regulatory Quality". This points to the potential need for reforms in areas that could be politically contentious, such as greater central bank and financial regulatory autonomy.

Governance Indicators

Percentile rank



Euro refers to eurozone median
Source: Fitch Ratings, World Bank

At the same time, a continuation of policy gridlock in the US amid high levels of polarisation may weaken institutions and reduce the propensity for bipartisan cooperation necessary to efficiently address the country's economic and fiscal challenges. If sustained, this could erode the attractiveness of the US dollar as a store of value in favour of other global currencies, including the euro and yuan.

One governance area where China has established some track record is the lender of last resort role of its central bank. The US dollar was essentially non-existent as a global reserve currency prior to the establishment of the Federal Reserve in 1913, which filled a lender of last resort role that was critically absent during the 1907 financial panic. In contrast, the Bank of England had been fulfilling this role since the mid-1850s, which arguably prolonged the role of the pound as a global reserve currency.

Geopolitics

Another area of uncertainty is geopolitics. The supplanting of the pound by the US dollar occurred between two wartime allies that shared a military alliance largely underwritten by the US. Some have argued that US military strength has also been a factor perpetuating the role of the US dollar as the world's leading reserve currency ahead of other contenders such as the euro and yen.[13]

Amid heightened geopolitical tensions between China and a number of major economies including the US, governments around the world may be forced to make strategic decisions about where to allocate their foreign reserves based on both financial and security considerations. This may present an opportunity for China, but will likely come along with certain costs and responsibilities.

A related unknown is whether political systems matter. Every leading international currency in history has been issued by a republic or democracy[14], which by design have a degree of checks and balances on executive power. At the same time, given a limited number of relevant datapoints, it remains to be seen whether this constitutes a precondition for any aspiring global currency issuer.

Inertia

Finally, the role of inertia is also consequential. Once a currency takes on a globally systemic role across the full spectrum of functions described here, it requires a lot to unwind them. It is worth bearing in mind that the multi-decade transition from the pound to the US dollar as the world's pre-eminent international currency took place against the backdrop of two world wars, from which European economies were left in tatters while the US emerged a global power.

It is therefore reasonable to assume that any future reordering of the international monetary landscape might also occur against the backdrop of an unforeseen and globally consequential period in history, even if it does not necessarily include a military dimension.

[12] Eichengreen, Barry, *The Renminbi as an International Currency* (Policy Paper, January 2011)

[13] Cohen, Benjamin J. in *Will History Repeat Itself? Lessons for the Yuan* in *Renminbi Internationalization* (Asian Development Bank Institute and Brookings Institution Press, 2015)

[14] Eichengreen, Barry, Arnaud Mehl, et al., *How Global Currencies Work: Past, Present, and Future* (Princeton University Press, 2018).