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FIN-TECH and DIGITAL ASSETS

A Primer On the Geopolitical Battle Over Money and Payment Infrastructures:

Can the Dollar be Dethroned?

By

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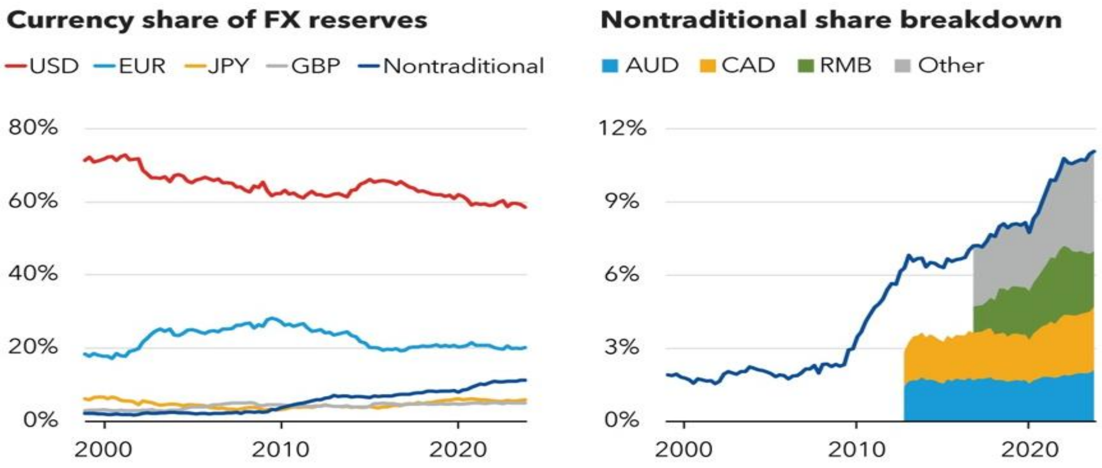
Executive Summary

- This paper examines the geopolitical battle over money and payment infrastructures, analyzing whether the U.S. dollar can be dethroned as the dominant international currency.
- The current international payment system is slow, costly, and complex, particularly for emerging economies. In 2023, the average cost of sending a $200 remittance was 6.2%, and 1.4 billion people remain unbanked.
- The dollar-based architecture grants the U.S. significant advantages, including lower borrowing costs and the ability to impose financial sanctions. The number of U.S. sanctions increased by 933% between 2000 and 2021, with further weaponization following Russia's invasion of Ukraine.
- China is actively developing a new infrastructure, including the digital yuan, the Cross-Border Interbank Payment System and the mBridge project, and has built several alliances with other countries. Its goal is to strengthen the international position of the yuan, but challenges remain, including capital controls, currency convertibility, and trust from global investors.
- The second Trump administration rejected a CBDC and instead focuses on dollar-denominated stablecoins. Although stablecoins grow fast, their market capitalization remains relatively small ($240 billion) and they lack the security of central bank backing. The administration risks underestimating the speed at which alternative systems develop.
- The EU has made limited progress in strengthening the international role of the euro. The EU remains highly dependent on the dollar, with 50% of EU exports, 80–90% of long-term energy contracts, and 17% of bank funding dollar-denominated. The digital euro project aims to improve strategic autonomy in payments, but its ambition remains limited.
- A fragmented monetary order is likely emerging, with CBDCs from autocratic regimes gaining ground in the coming decade. The EU could lead in developing a multilateral liberal-democratic CBDC network, particularly by collaborating with allies such as the UK, Switzerland, Japan, Australia, India, ASEAN nations, and Latin American economies.
- While the dollar remains dominant, its future is increasingly uncertain as new currencies, digital payment infrastructures and the second Trump administration itself challenge its supremacy.

Key Picture: Fall of "The Big Four" Currencies Mirrored By The Rise of Non-Traditional Currencies



Sources: IMF COFER; Arslanlp, Eichengreen and Simpson-Bell (2022, updated). Note: the "big four" currencies are the USD, EUR, JPY and GBP. Non-traditional currencies are all other currencies. China became a COFER reported between 2015 and 2018.

1. Introduction

Since the end of World War II, the international payment architecture has been based on the U.S. dollar, with the dollar being the most widely used currency for international payments and the world's principal reserve currency. This gives the U.S. a significant advantage over other countries, for example, lower borrowing costs and the use of its currency as a tool of diplomacy. Between 2000 and 2021, the number of financial sanctions imposed by the U.S. increased by 933 per cent.

Following the invasion of Ukraine, the dollar-based system has been further weaponised, with large-scale sanctions and the freezing of Russian assets. With the re-election of Trump, the world is likely to move further into the age of geoeconomics, where—in addition to military power—the ability to enforce sanctions, import tariffs and export restrictions, provide subsidies to specific domestic sectors and encourage reshoring is increasingly important.

For many years, there has been a growing recognition among countries that the dominance of the U.S. dollar may not be in their best interests. In 2023, for instance, Brazil's president, Luiz Inácio Lula da Silva, highlighted this concern by stating, "Every night I ask myself why all countries have to base their trade on the dollar." Presently, many central banks are developing central bank digital currencies (CBDCs) and collaborating on so-called multi-CBDC platforms. A question is whether these alternatives pose a significant threat to the dollar.

To explore the answer, this paper first conceptualises the domestic hierarchy of money, the international hierarchy of currencies, and the hierarchy of central banks. Thereafter, it discusses China's efforts to develop an alternative payment infrastructure and the reactions of the U.S. and the EU. Finally, conclusions are drawn.

2. Monetary Hierarchies

All monetary systems are hierarchical. Over time, the hierarchy may change due to factors such as power struggles, the emergence of new technologies and shifting preferences.

2.1 The Domestic Hierarchy of Money

The current domestic hierarchy of money consists of three tiers or layers (**Figure 1**).

Figure 1: The Domestic Hierarchy of Money

Tier 1	Public money	Central bank coins, notes and reserves (issued by the central bank)
Tier 2	Public-private money	Bank deposits (issued by private banks, publicly insured)
Tier 3	Private money	Bank deposits, money market instruments, stablecoins (issued by private banks but uninsured)

Source: Authors' definition

The current hierarchy is as follows: at the top is public money (tier 1), with private banks having access to digital public money via accounts at the central bank. Non-banks have access to physical central bank notes and coins. Tier 2 consists of public-private bank money, created by private banks but insured via deposit insurance schemes initiated and backed by the public. Tier 3 consists of uninsured forms of money, such as bank deposits above the amount insured by deposit insurance schemes, 'classical' money market instruments as repos and MMF shares, and relatively new stablecoins. Governments control public money (tier 1), regulate public-private money (tier 2) and (try to) manage other forms of private money (tier 3).

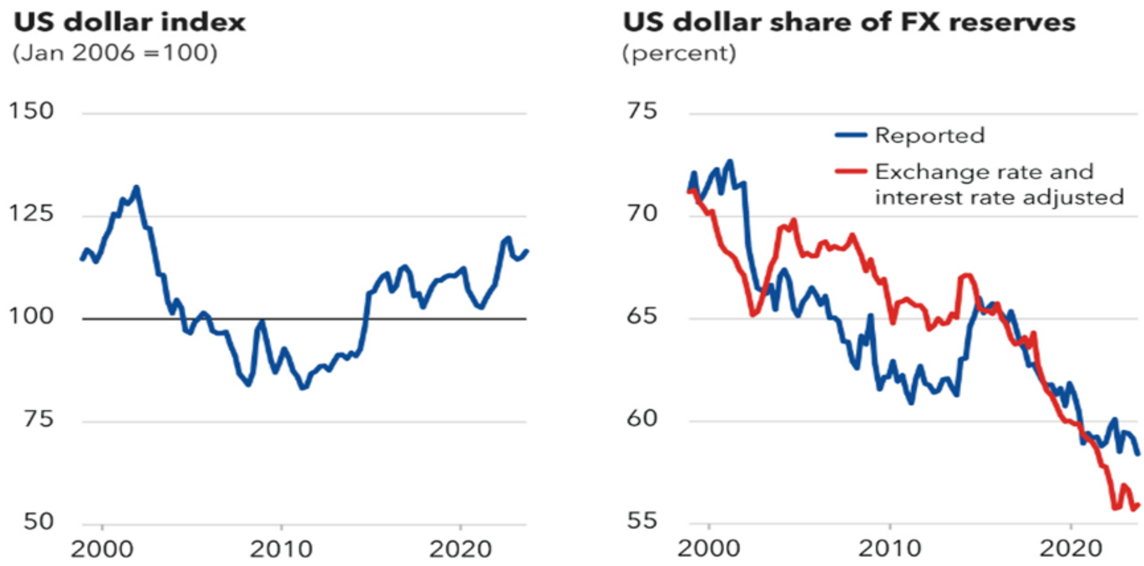
CBDCs have the potential to reshape the domestic hierarchy of money by granting all economic agents direct access to central bank money in digital form—a privilege currently reserved for commercial banks. This shift would reduce reliance on private banks, making non-bank economic agents less dependent on tier 2 and tier 3 money.

2.2 International Hierarchy of Currencies

The economic dominance of the West has declined significantly in recent decades. In the 1980s and 1990s, the G7 economies accounted for around 50% of global GDP. Since then, this share has fallen to 29%, and projections suggest it will continue to shrink in the coming decades. Despite this economic shift, the international status of the U.S. dollar—and to a lesser extent, the euro—has remained largely intact. One reason for this resilience is the relatively stable legal and political environment in the U.S. and the EU—though in the U.S., this stability may be at risk under the second Trump administration.

The dollar is used for approximately 88% of international payments (FX transactions), and the U.S. exerts significant influence over the payment's infrastructure. The Western-dominated Society for Worldwide Interbank Financial Telecommunication (SWIFT) network, a messaging system, is utilised by most banks and financial institutions for their international transactions. The actual clearing and settlement of funds is handled by the Fed-owned Clearing House Interbank Payments System (CHIPS). Moreover, while the U.S. dollar has long been the primary reserve currency, figure 2 shows that its dominance has gradually declined, from 71% in 1999 to 57.4% in Q3 2024, while representing 54% of export invoicing.

Figure 2: Recent US Dollar Appreciation Has Masked The Extent of Shifts Out of Dollar Reserves



Sources: IMF COFER; Arslanlp, Eichengreen and Simpson-Bell (2022, updated). Note; Federal Reserve Board Trade-Weighted Dollar Index (Advanced Economy).

The U.S. dollar's declining dominance as a reserve currency over the past two decades has not been accompanied by corresponding increases in the share of the classical "big four" currencies — the euro, yen, and pound. Instead, it has been accompanied by a rise in the share of "non-traditional reserve currencies", including the Australian dollar, Canadian dollar, and Chinese renminbi. Figure 3 shows the current hierarchy of reserve currencies.

Figure 3: Reserve Currencies

1	U.S. dollar (57.4%)
2	Euro (20,0%)
3	Yen (5.8%), British Pound (5.0%), Canadian dollar (2.7%), Australian dollar (2.3%) and Yuan (2.2%)
4	Other currencies (4.6%)

Source: IMF, Q3 2024

2.3 Hierarchy of Central Banks

Since the 1960s, private banks have increasingly issued bank money denominated in a unit of account of a country they are not based. The most well-known example of this is Eurodollars, i.e. dollars on accounts at banks outside the U.S. For example, 14.9% of all Dutch bank deposits were denominated in dollars in Q4 2023 and 9.5% of all Polish bank deposits and 27.9% of all Bulgarian bank deposits were denominated in euros.

During the global financial crisis of 2007-08, the Federal Reserve implemented swap lines with several central banks to support the offshore private banking system and thereby became the global lender of last resort. In addition, since 2007-08, several central banks have established bilateral swap lines. These arrangements are crucial for facilitating offshore money creation and maintaining financial stability. Figure 4 shows which central banks have access to the Fed swap lines.

Figure 4: The Hierarchy of Central Banks based on Federal Reserve Swap Lines

1	Global lender of last resort	Federal Reserve
2	Central banks with permanent, unlimited swap lines with Fed	The Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan and the Swiss National Bank.
3	Central banks with temporary, limited swap lines with Fed	Banco Central do Brasil, Banco de Mexico, Bank of Korea, Danmarks Nationalbank, Monetary Authority of Singapore, Norges Bank, Reserve Bank of Australia, Reserve Bank of New Zealand and Sveriges Riksbank.
4	Central banks without swap line with Fed	Other central banks, among other People's bank of China

CBDCs have the potential to offer an alternative to swap lines and potentially reducing the Fed's influence.

3. The Potential of CBDCs and New Payment Infrastructures

The current international payment systems have not kept pace with the scale of cross-border monetary and financial flows. The systems are costly, slow and complex, especially for transactions among emerging economies. For example, in 2023, the average cost of sending a $200 remittance was 6.2%, and around 1.4 billion people are still unbanked.

In the current system, when an economic agent makes an international payment, the transaction triggers a chain of debits and credits across multiple private (correspondent) banks and at least two central banks. This process is often slow and costly, particularly for payments between countries in emerging markets, countries in group 4 of figure 4.

With the implementation of CBDCs, cross-border transactions could—theoretically—be settled almost instantaneously, bypassing traditional intermediaries. If a network of wholesale CBDCs exists or if economic agents have access to foreign CBDCs making an international payment between two mobile devices could become almost as seamless as exchanging physical cash. This shift would significantly reduce reliance on dollar-based (and to a lesser extent the euro-based) payment infrastructures.

In recent decades, both central and private banks have made significant progress in digitizing payment processes, improving efficiency—particularly for domestic transactions. However, this progress has largely been confined to private bank money, while public money (central bank-issued currency) remains inaccessible in a digital form for most economic agents. Today, economic agents primarily use mobile devices or cards to transfer private bank money, which exists in tier 2 and tier 3 of the money hierarchy (as shown in **Figure 1**).

These transactions do not constitute direct money transfers; rather, they rely thus on banks to update their internal ledgers, communicate with other financial institutions, and interact with the central bank to process payments. In contrast, bitcoin moves directly over the internet without the need for intermediaries, and a well-designed CBDC could facilitate similarly direct—or at least significantly more direct—transactions, reducing reliance on traditional payment infrastructures.

3.1 China's Initiative in the Digital Currency Race

In the aftermath of the global financial crisis in 2009, Xiaochuan, the Governor of the People's Bank of China (PBoC), proposed the establishment of a new monetary system centred on a super-sovereign reserve currency. However, this proposal did not materialise. Within the international community, which was predominantly comprised of Western banking institutions, a consensus emerged that the bank-based system should prevail, and that 'better' regulatory oversight was required.

Since 2014, China has been developing its own digital currency: the digital yuan. The country has also recognised the importance of establishing a new payment infrastructure to support this currency as well as those of its allies and trading partners. China aims to gain a competitive advantage by developing from a 'clean slate' and to move first.

In 2015, China launched its alternative to the SWIFT-network and the Fed-owned CHIPS: the Cross-Border Interbank Payment System (CIPS). Today, CIPS has 160 members and has seen a significant increase of 80% in transaction volume since 2022. However, when it comes to international payments, China is still dependent on SWIFT and CHIPS, which leaves it vulnerable.

Furthermore, China embraced the digitalisation of money domestically much earlier than many Western countries. Chinese companies Tencent (WeChat) and Alibaba (Alipay) dominate the domestic payments sector. This is in contrast to the EU and the U.S.

Moreover, over the past decade, China has broadened its international collaboration through initiatives such as the Belt and Road Initiative, the Digital Silk Road, and its participation in BRICS. Additionally, China has helped establish alternatives to Western-led governance institutions, including the Asian Infrastructure Investment Bank, the BRICS New Development Bank, and the Global Development Initiative.

From April 2020 onwards, the PBoC conducted several pilots in China, and in 2021 the PBoC announced that the digital yuan was technically ready for cross-border use and the "Global Sovereign Digital Currency Governance" plan was published. China emphasised that the success of cross-border CBDCs depends on shared arrangements, implying that monetary authorities must agree on common rules and governance structures. Since then, China has engaged in multilateral experiments and tests involving cross-border CBDC transactions in various ways, most notably in the mBridge project.

In this project, China collaborated with Hong Kong, Thailand, the United Arab Emirates, and the Bank for International Settlements (BIS) to build a platform that facilitates the use of local currencies for international payments. Central banks and several private banks from these countries were involved. The project was successful as the benefits for mBridge participants include almost instantaneous payments—reducing processing times from 3-5 days to just 2-10 seconds—a 50% reduction in costs, simplified currency conversion, and, arguably most importantly but not officially mentioned, diminished reliance on the dollar. By providing private banks and other financial institutions with direct access to currencies issued by foreign central banks, the mBridge project eliminated the need for intermediaries or correspondent banks, making transactions both faster and more cost-effective.

Last November, the BIS unexpectedly exited the project, officially citing that it had reached the minimum viable product stage. However, several analysts believe that the U.S. pressured the BIS to withdraw, as mBridge could potentially be used to circumvent dollar sanctions and threaten the dominance of the dollar. The project is now in the hands of China and its partners. Saudi Arabia joined the project at the end of 2024, and several more countries are expected to do so in 2025.

In summary, it appears that China's strategy is to develop the technological backbone for CBDCs and cross-border CBDC transactions. This would make participating countries dependent on Chinese technology and standards for trade and financial transactions, while also equipping China with several advantages such as the collection of vast amounts of data.

However, despite significant technological progress, China and its allies face substantial policy, legal, governance, and economic challenges. Key challenges include defining responsibility for liquidity provision and its conditions, determining ownership and voting rights, and establishing frameworks for privacy and data protection. While many nations share the overarching goal of reducing dollar dominance, reaching consensus on the specifics – such as how, by whom, and when – remains a significant task.

Finally, and crucially, China's government and monetary policies, including capital controls and exchange rate interventions, continue to undermine the yuan's international position. Also in the future, many international investors remain likely wary of the extensive state control over economy, which significantly hampers broader global adoption of the (digital) yuan.

3.2 The U.S. Private-Sector Approach

As discussed, the increasing use of geoeconomics and the weaponization of the dollar-based financial system have incentivised other countries to seek alternatives. Meanwhile, digital technologies have enabled the development of new currencies and international payment infrastructures. So far, however, the responses from the U.S. and the EU have been markedly different.

The U.S. finds itself in a classic innovator's dilemma: as the issuer of the world's key currency and the guardian of the global financial infrastructure, the U.S. has little immediate incentive to overhaul a system that works in its favour. On 9 March 2022, President Biden signed an executive order on 'Ensuring Responsible Development of Digital Assets', indicating a growing recognition of the geopolitical implications of digital assets, particularly CBDCs. However, on 23 January 2025, President Donald Trump signed an executive order prohibiting the development of a CBDC. Opposition to CBDCs predates the Trump administration and has been widespread for years. Resistance has come from mainstream Republicans, financial institutions, Silicon Valley libertarians, and anti-establishment leftists, all of whom cite concerns over privacy, government overreach, and potential financial surveillance.

At the same time, several analysts—such as Lipsky and Kumar (2024)—have argued that the Federal Reserve has been lagging behind in recognizing the risks posed by emerging cross-border CBDC arrangements. A hallmark of the innovator's dilemma is that incumbents tend to underestimate the potential of emerging alternatives.

Rather than pursuing a central bank issued digital dollar, the U.S. has opted to reinforce the existing public-private monetary framework which it dominates, relying on privately issued money denominated in dollars both domestically and offshore. Trump's economic team appears to view *stablecoins* as the eurodollars of the 21st century, if many market participants will prefer a less regulated—or even unregulated—offshore system for dollars, even though stablecoins, unlike eurodollars, do not pay returns. A key open question remains whether the Fed would intervene in the (unfortunate) event of a widespread run on U.S. dollar denominated stablecoins. Moreover, the current proposed GENIUS and STABLE acts do not clearly define the use of stablecoins as money under private commercial law, tax law, and accounting rules.

Finally, the unpredictability of the second Trump administration is already generating considerable uncertainty. If this unpredictability persists, it could gradually erode international trust in U.S. institutions—and, by extension, in the dollar's long-term reliability as the world's key currency

3.3 Europe's Half-Hearted Attempt

Initially, the internationalisation of the euro was not a policy objective and the ECB adopted a passive stance. The financial crisis of 2007-08 severely undermined the attractiveness of the euro and raised several questions about the credibility of EU institutions. After 2008, the number of AAA-rated euro area countries has fallen from eight to just three. By 2022, AAA-rated sovereign debt accounted for only 10% of eurozone GDP, compared with over 70% in the U.S.

Recognising the need for change, in 2018 the European Commission published 'Towards a Stronger International Role of the Euro', and in 2021 the ECB officially launched the digital euro project. While the digital euro is often promoted as a tool for more efficient payments and a monetary anchor, it is also a strategic initiative aimed at strengthening Europe's "strategic autonomy" and improving the global position of the euro. This is needed because the euro still lags the dollar in several ways. Today, around 50% of EU exports, 80-90% of long-term energy contracts and 17% of bank funding are dollar denominated. Moreover, the share of euro-stablecoins is negligible, accounting for just 0.2% of the total stablecoin market. The EU is also heavily dependent on U.S. payment networks such as Visa and Mastercard for cross-border transactions, as there is no pan-European payment infrastructure.

Although the ECB often emphasises strategic autonomy as a key objective, several analysts argue that the scope of the digital euro project remains too narrow. Much of the ECB's effort is focused on designing features that minimise risks to banking stability—essentially protecting the legacy banking system and its business model. As in the U.S., political debates in Brussels and several national capitals are dominated by concerns about privacy, programmability and potential government control. What is rarely discussed, however, is the broader geopolitical dimension—namely, the opportunity or even necessity of developing a CBDC based on liberal-democratic values that could counter CBDCs of autocratic countries and could serve as a global alternative in an increasingly fragmented monetary landscape.

In short, the EU and especially the U.S. appear to be underestimating the determination of several BRICS+ countries, especially autocracies, to transition to alternative payment infrastructures. As a result, it also underestimates the risk that autocratic CBDCs could become widely available over the coming decade(s).

4. Conclusion

For decades, the U.S. dollar and Western banks have dominated the international payment infrastructure. However, momentum for fundamental change has increased significantly. The weaponisation of the dollar-based architecture, combined with advances in digital technologies, is creating momentum to challenge both the domestic and international monetary hierarchy. At present, it seems evident that no single country can supplant the U.S. dollar and that alliances are therefore essential.

China is pursuing a long-term strategy, gradually developing new payment infrastructure and forging strategic alliances. The potential of the digital yuan, along with multi-CBDC platforms and bilateral payment arrangements, is becoming increasingly evident. Many of China's partners have strong incentives to shift to alternative payment systems, making fragmentation of the international payment landscape likely in the coming decade. Moreover, CBDCs issued by autocratic regimes are likely to be implemented (on a large scale), though the extent of their global adoption remains uncertain. However, for the yuan to challenge the dollar's dominance, far more is required—including free capital flows, a freely floating exchange rate, a significantly deeper capital market, and a stable legal and political framework.

The U.S. faces a classic innovator's dilemma. It remains reluctant to overhaul a system from which it still benefits but risks underestimating the willingness of many countries to experiment with and implement alternative payment infrastructures. Additionally, the continued weaponisation of the dollar and record-high public debt levels pose significant risks. Further uncertainty arises from Trump's geoeconomic approach. Ironically, while

Trump will likely impose tariffs on countries attempting to move away from the dollar, such actions may accelerate efforts to develop alternatives. The U.S. bet on stablecoins is risky. Although stablecoins grow rapidly, they remain relatively small, with a total market capitalization of around $240 billion, and their stability will likely be tested coming decade.

The EU is well-positioned to take the lead in developing a liberal democratic CBDC, particularly if it adopts an open design and reconsiders limits on accounts. Moreover, it should cooperate with countries including the UK, Switzerland, Japan, Australia, New Zealand, India, ASEAN nations, and key Latin American economies to establish global standards. Additionally, the EU could strengthen the international role of the euro by promoting the integration of euro-denominated money creation into cross-border value chains.

The ECB, for its part, could facilitate the expansion of offshore euros by offering more generous swap lines to other central banks. However, to secure a leading position in the long term, Europe must also significantly increase the supply of euro-denominated safe assets. While the digital euro could contribute to this effort, a broader issuance of safe euro-denominated bonds will be essential.

While new digital currencies and payment infrastructures could challenge the dominance of the dollar, only China and the EU can mount a serious challenge in the coming decade—and even they would need to collaborate. Moreover, the pace and nature of this transformation remain uncertain. Analysts hold divergent views: Bleicher and Lipsky argue that "few predicted the transition from the pound sterling to the dollar in the 1920s," and that the shift happened relatively quickly. In contrast, Bilotta contends that "transformations in the international choice of currency happen exceptionally slowly. But they do happen." Our take is that digital technologies will lead to a new structure, but that the geopolitics of digital currencies is hard to predict.