Chapter

Perspective Chapter: The Future of Wholesale CBDCs in a Tokenizing and Trumpian World

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Abstract

Globally, the private sector is moving towards expanding the growth of tokenized assets trading, using private money channels (stablecoins) as payment systems. At the same time, the public sector, often central banks in alliance with private sector partners, is engaged in ambitious projects, exploring the feasibility of public payment systems using wholesale CBDCs to facilitate the cross-border use of fiat currencies and to ensure universal public trust in global cross-border payments. The advent of the use of distributed ledger technology over the past decade is enabling these activities to take place. This paper outlines these developments and their impacts and the future emergence of a global assets trading and payments ecosystem. The emergence of this system is also considered in the context of the gradual restructuring of global trade and monetary patterns, via private and public sector initiatives, and the potential significant impact of a Trumpian world order. The future seems to imply a more protectionist and, effectively, isolationist US—in monetary as well as trading terms.

Keywords: wCBDCs, tCBRs, United States, Trump, distributed ledger technology, tokenization, regional digital payment systems, stablecoins, unified ledgers

1. Introduction

The chapter is divided into seven main sections: Introduction; Digital Payments, Tokenization, and Distributed Ledger Technology; Stablecoins in Cross-border Trading and their Regulation; Prerequisites for Successful Tokenisation of Assets Trading; A Potential Global Digital Assets Trading and Payments Ecosystem; Geopolitical Trends; Conclusion. Specific topics covered will include digitised and tokenized payments, the permission of blockchains, unified ledgers, regulatory issues, technological interoperability, central banks' global and regional CBDC projects, shifting global trade impacts, and the impact of changing US stablecoin policies on global assets trading and payments.

Central bank money is the core of the fiat money system within monetary jurisdictions, in terms of establishing the *universal* trust of citizens in fiat money within monetary jurisdictions. Moreover, central banks ensure both clearance and, crucially, final settlement of all financial transactions [1]. Central bank money, either

as cash, state-guaranteed commercial bank money, or central bank reserves in the form of wholesale CBDCs (wCBDCs), is unique and stands as a form of social and legal validation for the conduct of monetary policy and the provision of liquidity insurance, as during the aftermath of the Global Financial Crisis (GFC). A key issue in the putative establishment of a functional and financially stable global ecosystem to support digitised assets trading and payments, providing liquidity, security, and universal clearance and final settlements is likely to be the involvement of wholesale CBDCs. Progress in the US of the Genius Act, ensuring the regulation of stablecoins is an important step in this global development.

The United States has hitherto been slow to engage with CBDCs, abjuring retail CBDCs, now prohibited by President Trump [2] and only reluctantly involved with the research of wCBDCs. This unenthusiastic engagement with wCBDCs appears to be because of a general US view of the equivalence of private (and now cryptographic money channels, such as Bitcoin and stablecoins) [3] with public channels. The future position of the US on both stablecoins as settlement currencies and crypto-assets as investments vehicles, in a global context, is currently uncertain. However, given the widespread use of the US dollar in global assets' trading, for instance, 80% of bond trading is done in dollars.

Notwithstanding the US scepticism, a digitised range of globally traded financial assets, including money, is being explored, involving the Bank for International Settlements (BIS) in various projects with central banks, commercial banks, and large financial companies, see Agora [4] and Nexus [5]. The advent of "tokenization" (digital representation of any asset) is accelerating the general development of digitised global ecosystems, potentially underpinned by wCBDCs to provide final payment settlement. These systems could involve tokenized commercial bank deposits and stablecoins in trading a plurality of tokenized financial assets on programmable distributed unified ledger platforms, with an undergirding of wCBDCs to provide universally validated payment.

At the same time, the private sector is exploring and developing tokenized assets trading. Tokenization may best be defined as the digital representation of assets, including money, established on a programmable digital network platform [6]. Any assets, financial or physical may be represented in this manner and are then potentially tradable across the world. Trading in assets may be processed across a variety of private asset-trading platforms. Currently, the relatively modest level of such trading, principally financial assets is conducted via proprietary platforms such as Ripple, using stablecoins such as, USDC or Tether, the two largest stablecoins by market capitalisation. Other companies involved are Blackrock, Fidelity, and Morgan. Assets trading is set to expand significantly from the current amount of 0.6 billion USD in 2025 to 9.4 billion USDC in 2030 and doubling in the next 3 years thereafter, see Ripple and BCG [7].

> *Our assessment highlights a continuing need for future research to understand the dynamics of global crypto flows. Our analysis indicates that policy measures de- signed to dampen traditional financial flows may have limited impact on constraining cross-border crypto activity. Yet, as crypto assets become more integrated with main-stream finance, understanding the systemic risks and potential contagion effects between these markets will be essential for policymakers and market participants alike. At the same time, the socio-economic implications of increased crypto adoption, particularly in emerging market and developing countries, warrant a deeper examination. This includes assessing the impact on financial inclusion and economic stability and the potential for crypto-assets to serve as a hedge against local currency volatility and weakness [7].*

There is little doubt that progress on the digitization of financial payments has been made in the last decade, both nationally, and increasingly in terms of cross-border transfers. Financial markets have benefitted in relation to lowered costs and risk reduction. One example is the enabling of algorithmic trading on foreign exchange platforms. As indicated above, tokenized assets trading being set to expand substantially in this decade should perhaps lead to the need for clearance and settlement to be provided on public platforms using wCBDCs. This would ensure the provision of essential universal trust and global financial stability. Currently, there is no guarantee that this will happen, though the BIS has been lobbying for such an approach, see BIS citation below, page 4.

One thorny issue is the position of the US and the attitude of the Trump administration, especially towards CBDCs. The advent of the re-election of Trump, and his strong enthusiasm and personal involvement with crypto assets [8] seems likely to reinforce the rejection of the role of CBDCs as a topic to be pursued. However, given the hegemonic, ubiquitous role of the US dollar, and the role of stablecoins in the development of a global assets trading and payments ecosystem, the active participation of the US in such a global system is almost inevitable. The key issue is whether this is viewed as being served via stablecoins as a private money channel of whether central bank wholesale CBDCs will also be involved. Hence, the chapter will also explore three potential scenarios.

First, a scenario based on the continuation of the innovative work being done—much of it involving the BIS, central banks, and commercial banks, together with other private sector financial organisations—in linking the development of assets trading with validated fiat currency payment systems. It will be argued that these technological developments could facilitate a neutral but effective multi-fiat-currency alternative to over-reliance of the US dollar, specifically in relation to trade invoicing, as suggested by Mayer in his 2024 article [9].

Second, a scenario taking into account the changing global economic and trading structure, involving significant substantial shifts to East Asia, and its implications for developments in relation to digitised fiat currency payments, especially those geared to trade invoicing. One example here is the evolving BRICS payments initiative (see page 20), also using a digital ledger technology payments platform.

Third, a scenario exploring how the developing global monetary structure apparently envisaged in a new Trumpian world and its potential impacts that a preference for the use of lightly stablecoins (in comparison with the regulation of commercial banks) as private money channels, perhaps eschewing the integrated use of wholesale CBDC, (wCBDCs)—these are effectively tokenized central bank reserves (tCBRs), see BIS definition [10]—as undergirding fiat currency (including the US dollar) final settlement of payments at global level, as they do *within* monetary jurisdictions.

2. Digital payments, tokenization, and distributed ledger technology

2.1 Digital payments

There is little doubt that progress on the digitization of financial payments has been made in the last decade, both nationally, and increasingly in terms of cross-border transfers. Financial markets have benefitted in relation to lowered costs and risk reduction. One example is the enabling of algorithmic trading on foreign exchange platforms. However, much remains to be achieved, especially in relation

overall trading efficiency, including overcoming access to securities trading and the inevitable legacy system barriers. With continuing reductions in the number of "correspondent banks" available internationally.

Hence, cross-border payments are still cumbersome, often slow, and, above all, costly, especially compared with the far speedier payments now made *within* monetary jurisdictions. Inadequate cross-border payments hamper the efficiency of global trading and international capital flows and hence impose cost constraints on global economic growth, facilitated by low-cost cross-border transfers. See high cost of cross-border financial transfers in Morgan [11].

Indeed, one of the G20's primary objectives for this decade, set in 2020, is to substantially improve cross-border payment systems. The aim is to have retail cross-border transfers settle within a day and cost no more than 1% of the transaction value, see G20 roadmap in 2020 [12]. A key enhanced role for the Society for Worldwide Interbank Financial Telecommunications (SWIFT) messaging service is envisaged in this endeavour, see SWIFT progress and innovation announced in 2024 [13]. However, the domination and manipulation of SWIFT by the US for geopolitical ends [14] has concerned other countries, especially to those countries allied to the BRICS group. Nonetheless, the Chinese CIPS system, sometimes advertised and used as an alternative to SWIFT, for the time being is still reliant on SWIFT for outside international transactions.

A number of projects have been initiated by the Bank of International Settlements (BIS), involving central banks, commercial banks, and other relevant major financial players. Some of these are briefly discussed in following sections and in the penultimate section (Page 16 ff) ledgers and are also referenced. Two others are not discussed, but are also referenced (Project Helvetia [15] and Project Jura [16]).

2.2 Tokenization

Further progress on digitization, especially the opportunities presented by *tokenization*. In combination with DLT, offers a new way forward for global assets trading and payments. Tokenization, in digital terms, may best be defined as the digital representation of assets, including money, established for operational purposes on programmable distributed ledger technology platforms [6]. (A bank note is also a token, a *physical* representation of a fiat currency.) Stablecoins are another form of tokenized currency/assets. Another form of currency/asset, tested in projects, are tokenized commercial bank deposits. The advent of a more substantial use of stablecoins, and the prospects of unified ledgers, see below Page 9, may accelerate this tokenization development.

2.2.1 Tokenized commercial bank deposits

From a private sector standpoint, a recent article by Marcy Dumitrescu, Senior Product Manager, R3, indicates the potential for tokenized commercial bank deposits in a global context [17].

Tokenized deposits are the next evolution of digital money in financial markets, enabling banks and other institutions to optimise liquidity and treasury management, enhancing their capital efficiency to unlock significant value. Tokenized deposits are *digital representations of bank deposits* recorded on a *DLT or Blockchain*, issued and maintained by depository institutions. Tokenized deposits support banks in providing their clients with:

- *Faster and more efficient transactions*—Tokenized deposits enable real-time, programmable settlement, reducing delays and enhancing liquidity management.

- *Reduced counterparty risk*—By minimising reliance on traditional payment rails, tokenized deposits mitigate counterparty and settlement risks.

- *Enhanced security and transparency*—Built on secure, permissioned DLT infrastructure, tokenized deposits provide improved auditability and regulatory compliance while ensuring privacy and control.

- *Greater security and trust*—Improved transparency helps protect customers from fraud and financial crime, ensuring safer and more reliable transactions.

Tokenized deposits also have the potential to significantly advance the repo market, enabling banks to bypass traditional payment rails, delay final settlement, and facilitate atomic transactions on their preferred schedule. In the traditional repo market, every transaction *must be settled before the next one can take place*, meaning that liquidity is locked up until payment processing is completed. *Delaying final settlement* with *tokenized deposits* allows banks to optimise liquidity and execute repo transactions more flexibly throughout the day. This flexibility and optimization support both internal and client trading activity, with reconciliation over traditional rails consolidated into a single transaction at the end of the day, reducing counterparty and settlement risk, as well as generating potential cost savings [17].

Tokenization of payments structures, including tokenized commercial bank deposits, is important to facilitate the burgeoning development of trading with tokenized financial assets. The application of these technological innovations to cross-border trading, coupled with the use of wCBDCs/tCBRs offers an effective means—independent of SWIFT—of automating cross-border transactions, including cross-border payments.

In 2024, the BIS announced Project Agora. This project not only brings together seven central banks—Bank of France (representing the Eurosystem), Bank of Japan, Bank of Korea, Bank of Mexico, Swiss National Bank, Bank of England and the Federal Reserve Bank of New York—but also seeks to work in partnership with a wider and large group of private financial firms, convened by the Institute of International Finance.

The announcement came on the heels in 2024 of the findings of SWIFT (The Banker 2024), from the second phase of its industry-wide sandbox testing on its central bank digital currency interlinking solution for cross-border payments.

In a press conference held on April 3, 2024, Cecilia Skingsley, head of the BIS Innovation Hub, described the initiative as "an exciting new project which will experiment with how tokenisation can improve the global monetary system." She went on to say that the BIS is starting with a use case that is "near and dear to the BIS" on cross-border payments [18].

> *"We believe that tokenisation is the next frontier in terms of the digitalisation of money and payments. Agorá is the most ambitious project launched by the BIS Innovation Hub so far," said Skingsley. "We will not just test the technology, we will test it within the specific operational, regulatory and legal conditions of the participating currencies, together with financial companies operating in them" [18].*

The project builds on the unified ledger concept proposed by the BIS and will investigate how tokenised commercial bank deposits can be seamlessly integrated with tokenised wholesale central bank money in a public-private programmable core financial platform.

Speaking at the same press conference, Hyun Song Shin, BIS economic adviser and head of research said an important guiding principle for the BIS is the singleness of money, the idea that a payment should go through at the point of transaction irrespective of the means of payment used, whether as cash, by an electronic transfer from a bank, or from a payment app on a phone.

> *"A dollar is a dollar, a euro is a euro, a pound is a pound, and so on," he added. "We're so used to the singleness of money that we take it for granted, but it's worth reminding ourselves that it holds because of the settlement function of the central bank" [18].*

Shin went on to say that in the context of Agorá, tokenisation is not merely the digital representation of claims, it is a digital representation which also incorporates the rules and logic governing transfers.

> *"Tokenisation of deposits and wholesale central bank money means that both the primary means of payment, as well as the settlement function of central bank money, can be integrated seamlessly on the same programmable platform," he added [18].*

2.3 Distributed ledger technology (DLT)

The advent of distributed ledger technology (DLT) has facilitated a number of initiatives as it has been applied to both private and public development in the financial and monetary spheres, especially in cross-border payments and, increasingly, cross-border assets trading. Progress on digitization, including crypto-assets, stablecoins, and CBDCs has been facilitated by the use of this technology, sometimes referred to blockchains, though blockchains are, in fact, a subset of DLT. For a detailed discussion of distributed ledger technology and blockchains in Lloyd [19]. A comprehensive technical discussion is to be found in Kannengiebr and Lins [20].

The definition of DLT has been provided by the Committee on Payments and Market Infrastructures (CPMI) in 2017.

> *"DLT refers to the technological infrastructure and protocols that allow simultaneous access, validation and immutable record updating to a synchronised ledger that is used by a network of participants that may spread across multiple entities and/or locations. In the context of payment, clearing and settlement, DLT enables entities, to carry out transactions without necessarily relying on a central authority to maintain a single 'golden copy' of the ledger" [21].*

Blockchain, a specific type of DLT, was developed in 2009, it establishes a group of stakeholders, who may or may not be unrelated, but who might all have a valid reason to alter their shared data held on the data network. The validated network participants—validated by "proof of work," in the case of Bitcoin, and by "proof of stake" in the case of Ethereum and other crypto-assets—will agree and maintain a single dataset across an entire network.(see Lloyd [19]).

The other key characteristic in the case of a blockchain is that the data are grouped into sets called "blocks." Once validated, each data block is linked or "chained" to the previous blocks to form a historical record or "blockchain," giving this type of distributed ledger its name. The validation of each dataset/block is made cryptographically, enabling all registered stakeholders to confirm acceptance. It is important to recognise that blockchains, unless modified, are self-contained and sealed to any participant other than those validated by "proof of work," Bitcoin or "proof of stake," later versions of Ethereum. Trust in these systems is *embedded and sealed within* the blockchain.

Trust is hence provided as an *internal* feature for the validated participants. Trust is not a feature present in any outside interaction with outside actors. There are attempts to use algorithmic approaches, utilising past externally-generated data, to provide trust for blockchains where, necessarily, interaction with real world organisations occurs. Solutions to the so-called "oracle" problem, providing a trusted interaction, have not achieved sufficient viability. Given the need for CBDC interaction with outside entities, trust for central banks and other participants such as commercial banks needs to be provided elsewhere other than *within* the DLT database.

From a CBDC perspective, the DLT consensus mechanism also needs to provide *finality* in the execution of transactions. After total finality, that is, non-reversibility/immutability, has been reached across the validating network nodes, committed transactions cannot be retroactively changed. One issue is that such finality is problematic, except with a comparatively small set of validating nodes. Here, with the tCBR data provided by a modest number of already trusted, regulated commercial banks, as in the contemporary monetary systems, this is not a problem. The network of nodes is relatively small, and scalability is not therefore an issue. Bitcoin, on the other hand, has unlimited, though in practice not infinite, number of validated participants (by "proof of work").

> *In the case of a financial payments network, including cross-border payments, each payment, once transferred and validated as a correct payment between verified payers and payees across the network, is recorded and a linked/chained historical dataset is formed and retained on the ledger. In most cases, the involvement of regulated commercial banks together with central bank means that trust is verified outside the system, whichever database platform is used [19].*

In the monetary architecture established in fiat monetary jurisdictions, central banks, in combination with regulated commercial banks, ensure for all financial transactions both clearance and, crucially, final settlement of all financial transactions.

2.4 Permissioned and permissionless blockchains

Permissioning refers to the rules governing who can participate in running the network platform. Despite the terminology such DLT networks are still open, transparent, and distributed. Permissioned (private) DLT networks are preferred by central banks. The aim is to ensure that the validated participants, usually central banks, commercial banks, and other regulated financial organisations are linked in a peer-to-peer nodal structure in a decentralised (or partly decentralised) environment.

Permissionless (public) environments, by contrast, open themselves up to broader resources, a large pool of participants, continuous innovation and considerable cost

savings. Most stablecoins are established on this type of network. The challenge for such DLT networks will need to ensure that the digital tokens involved are secure to use for transaction purposes and will provide final, immutable settlement within the network. It is whether the requirement for final, *immutable* settlement is met by many of the permissionless DLT platforms that concerns central banks, given the need to ensure global financial stability. It has been suggested that there are design mechanisms that may provide similar validation as is achieved by permissioned networks. The validation would involve, as is done on the XRPL blockchain created by Ripple [22]. The methodology is to operate an internal/external validation process via the complete range of network nodes, validating the potential members via a past performance referencing system. However, the problem of ensuring immutability of settlement remains a problem, to which it is not clear there is a technical solution. It is possible that this uncertainty on decentralised blockchain ledgers may not be seen as a legal problem in some monetary jurisdictions. The position of the US on this issue is currently unclear.

The global use of such open DLT networks offers the ability to develop a developing ecosystem of tokenized trading and payments, eventually linking the use of private settlement currencies, that is regulated stablecoins and tokenized commercial bank deposits, and public (state) tokenized central bank reserves, connected across unified ledgers. This structure of an ecosystem—with open, transnational, and decentralised programmable DLT platforms—would present a secure future for the next generation of global assets trading and payments systems, providing global financial stability.

Different DLT platforms are likely to coexist and, ideally, should be interoperable. A useful article on the various issues involved with permissioning and interoperability is provided by Rubin and Arredondo [23].

2.5 Unified ledgers

A DLT unified ledger may be defined as one that combines multiple ledgers into a single, shared ledger, achieving interoperable transactions across different financial platforms. For a full accounting definition and comparison with traditional modular ledgers, see Aqilla [24].

Various central banks, encouraged by BIS, are exploring the development of DLT-based "unified ledgers" that bring together tokenised assets and money. The argument is that a single infrastructure is needed to ensure financial market integrity and maximise the technical advantages of one platform.

In the past, the US has been wary of engaging in the variety of BIS and central bank-led global CBDC projects examining the potential for translating the use of fiat currencies in the context of cross-border trade and payments, utilising *wholesale* CBDCs across unified ledgers as indicated by the BIS [25] and also by Morgan [26]. Whether this involvement will continue seems unlikely, given the position of the Trump administration.

US financial corporates, notwithstanding US political scepticism, are involved in private sector innovation in the areas of tokenized assets trading and DLT-based payments infrastructures, including unified ledgers. The programmability of DLT platforms, within regionally and internationally based trading and payment environments, using stablecoins, is already operational.

Interestingly, the official reluctance to adopt multi-jurisdiction unified ledgers may lead, in some cases, to avoiding, at this stage, decentralised DLT, in favour of a centralised approach. The Buna project (Buna.Co) [27] is a Middle Easts' cross-border

payments initiative that has eschewed DLT and set up regional network based on a central bank "standard" closed, *centralised* system. In this manner, it establishes a centralised unified ledger, built on existing real-time gross settlement platforms, across the participating central banks. The project is owned by the Arab Monetary Fund and supported by the regional Arab central banks and involves commercial banks in the area.

3. Stablecoins in cross-border trading and their regulation

Stablecoins are established on permissionless (public) blockchains, on programmable platforms and are backed by reserves, including cash and other safe assets, such as Treasuries, to ensure that they remain "pegged" to the selected fiat currency, in almost all cases the US dollar. Trust in this context is essentially *embedded* within the blockchain and validated by the adequacy of the reserves held. The use of DLT and blockchains by central banks tend to employ permissioned (private) DLT structures where trust is granted *external* to the DLT structure, such as to tightly regulated commercial banks. In a global trading and payments context, trust is of crucial importance. Although trust can be provided via private money channels, such as stablecoin platform networks, the still unresolved issue is whether global financial stability can be achieved, except via the "undergirding" of private money systems by tCBRs as argued in the previous subsection.

There is increasing evidence, see BIS below [28], of the use of stablecoins in cross border trading, including by large international companies, see the article by Liao and Caramichael in 2022 [29]. Of itself, contained within these firms using DLT programmable platforms, it is not necessarily a major problem However, it appears that if its rate of growth is very high then it may pose a threat to global financial stability.

A recent investigation by BIS of the use of Ether, Bitcoin, and other stablecoins (such as USDC [30] in cross border transaction flows indicated the need to find new regulatory approaches to ensuring global financial stability in the new cross border monetary environment [28].

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The EU has already regulated stablecoins, together with other crypto-assets in the Markets in Crypto-Assets Regulation (MiCA) see ESMA [31], though not distinguishing stablecoins as potential alternative settlement currencies, by effectively subjecting them to strict bank regulation, aiming to avoid competition from US dollar-linked stablecoins from competing with a digital euro if and when established. However, despite concerns expressed by the ECB about stablecoins, the European Commission has recently eased the application of the MiCA rules [32].

The UK position is not yet clear but is moving closer to the EU position than the US approach. Andrew Bailey, Governor of the Bank of England, recently raised concerns

about the domestic issuance of stablecoins. However, unlike the EU, he cast the doubt of whether the UK should adopt a retail CBDC, suggesting instead that a better defence against stablecoins n might be tokenized commercial bank deposits [33].

The US, somewhat belatedly, is preparing legislation on the stablecoins, treating them differently from crypto-assets. The Genius Act is currently going through Congress. The Act passed it final Senate vote on June 14 by a substantial majority, before being passed back to the House of Representatives. In effect, the US approach is to make regulated stablecoins the alternative to CBDCs in the US. However, the use of stablecoins in global assets trading and payments means that this will have implications for both innovation and the development of the role of tCBRs in this arena.

Bloomberg's recent 2025 comments [34] on the proposed US legislation are correct to suggest that how Tether—as an issuer of USDT coins, having by far the largest share of the stablecoin market—is treated may be a good test of the strength of the legislation. As they suggest, the legislation, properly, requires stablecoins:

> *to be fully backed by cash and safe assets (such as short-dated Treasuries or government money-market funds). That will help ensure holders can always redeem tokens. The bills also make issuers subject to the Bank Secrecy Act and to anti-money-laundering regulations.*
>
> *So far so good. But legislators surely know that Tether accounts for more than 60% of the stablecoin market and has had multiple run-ins with state and federal authorities, and has never been audited. Its reserves more Treasuries than Germany's. It is USDT coins have been seized and forfeited in cases involving fraud, terrorist financing, sanctions violations and other criminal activity. (The company denies any wrongdoing.)*
>
> *One might argue that such risks are part of the innovative process. But the more intertwined Tether and its competitors become with the broader financial system the greater the risk that a crypto crisis may spread.*
>
> *With that in mind, Congress should clarify exactly how these proposals will deal with Tether. Although both bills would allow regulators to sign off on foreign issuers if they are subject to "comparable" rules overseas, the big question is how strictly the law will deal with those that do not comply [34].*

It may be that Bloomberg is, at this stage, being too alarmist. However, the market dominance of Tether as the issuer of USDT is extremely concerning. The positive attitude of US authorities to stablecoins, and crypto generally, should not lead to weak legislation in regulating stablecoins as potentially major private money channels.

As importantly, the regulation applied to stablecoins should be less restrictive than that applied to banks. The quid pro quo is that stablecoin issuers should not be permitted to become involved in credit creation, as are commercial banks together with the direct link with the central bank to provide clearance and *final* settlement.

However, the discussion in the US, has intensified under Trump:. His January 23rd executive order, the potential implications of the Genius Act, and Trump's unnerving over-enthusiastic endorsement of all things crypto is concerning.

Apparently, according to Bloomberg, a key official whose job is to consider the digitalisation of money at a developed world central bank returned from the Spring International Monetary Fund-World Bank meetings with a deep sense of unease.

> *While unperturbed by the customary condescension from 'crypto-native' digital assets disruptors at closed-door meetings, this person instead came away profoundly unsettled from similar gatherings of central bankers discussing the potentially radical implications of the forthcoming Genius Act – the US stablecoin bill expected to become law in 2025 [34].*

Another key issue for financial stability and the preservation of universal trust in fiat currencies rests on whether or not stablecoins have access to central bank reserves and the conditions applied to their issuers. Currently, the tight regulation applied to commercial banks not only allows access to central bank reserves but also limits to regulated banks the ability to create credit. Given the lighter regulation applied to stablecoin issuers, they should not be able to create credit. In other words, they would become "narrow banks," allowed to lend, but only to the extent of their deposit base [29].

The current trajectory of Trumpian-led US policy in this complex and sensitive area of the fiat monetary system is explored further under the penultimate section below (Page 16 ff) examining three global scenarios, including one considering how Trumpian policies on the issues of stablecoins and of crypto-assets may impact on the global monetary system.

The unresolved issue of the differing US and EU regulatory approaches, as argued in the next section, is that, for global progress on assets trading and payments, there is a need for significant international regulatory conformity.

4. Prerequisites for successful tokenisation of assets trading

Noting the above comments on stablecoins, a key prerequisite is to ensure that there is an appropriate international regulatory framework both to foster innovation and to ensure financial stability. Without it, innovation can lead to a reduction in the security, efficiency, and stability of the developing global monetary ecosystem. It is worth taking into account the positioning of central banks on the issue of tokenization in relation to asset trading payments. The European Union and the UK are adopting approaches on the matter that are diverse in form yet similar in substance with their pilot tCBR regime and digital securities "sandboxes," respectively. Unfortunately, at present, the US position on this issue appears to be more concerned about encouraging private money channels with perhaps less concern about global financial and monetary stability or cooperative internation regulation, especially given the pivotal monetary guarantor of the US and the Federal Reserve as indicated by Merhling in 2015 [35].

It is important to recognise that regulatory interoperability as well a technological interoperability is required. Moreover, global financial stability is probably best achieved by proving access to validated clearance and final, immutable financial settlement of the asset trades involved. The aim should be to achieve a combined and trusted digital ecosystem for tokenized trade and payments, involving both the private sector and the public sector in the form of state regulation and central banks.

Currently, regulation and legal compatibility appears to be moving only slowly at international level. Attempts to achieve international standards via existing international standards bodies are likely to be a time-consuming and probably fruitless exercise. An approach based on mutual recognition of national or preferably regional permissive standards may be the most efficient path to achieving the desired international regulation.

Pursuing such a path to mutually accepted standards while also establishing, at the same time, a public payments platform, using tCBRs, would provide a globally stable network structure and framework, also involving stablecoins, tokenized commercial bank deposits. Such an approach would provide the essential universal trust and clearance and final, immutable settlement to enable a variety of private players to establish their DLT asset-trading superstructures, on top of tCBR payments platform(s) and unified ledgers.

4.1 Regulatory compliance and interoperability

Without international public co-operation, the development of new private market infrastructures, is likely to lead to an unregulated fragmentation of the global ecosystem, dominated by a few major private players, and a potential threat to global financial stability.

Currently, regulation and legal compatibility appears to be moving only slowly. Attempts to achieve international standards via existing international standard bodies is likely to be a time-consuming and probably fruitless exercise. An approach based on mutual recognition of national or regional permissive standards may be the most efficient path to achieving the desired international regulation.

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4.2 Technological interoperability

Regulatory interoperability is a necessary condition for stability and integrity of trading. However, notwithstanding the ability and desirability of private sector innovation in this rapidly emerging environment, it is also the case that technological interoperability is also required for development of efficient systems. This is especially the case at the international level, with a variety of proprietary private programmable platforms needing to be able to work with each other. These DLT data networks can be permissioned or permissionless. Generally, decentralised permission networks are preferred, especially by central banks as they provide trusted governance, security, and risk management. In practice, the issue of choice is about governance.

There will be a requirement, at this stage, in the development of a coherent system for private and public cooperation to encourage the technological compatibility of innovative systems to evolve. Competition between systems and platforms will be important, but this stage should probably be followed by a limited number of optimum interoperability solutions emerging.

5. A potential global digital assets trading and payments ecosystem

Already there are a considerable number of cross-border tokenized *projects* involving tCBRs. Three of these projects, mBridge [36], Nexus, and Agora (see References),

are briefly described below to provide a useful picture of the likely future of tokenized cross-border financial transfers and assets trading, and how this preparatory work is helping to usher in a digitised and tokenized global trading and payments ecosystem.

These projects involve the BIS, central banks, commercial banks, and large financial companies. The projects demonstrate how the advent of tokenization is accelerating the development of a global ecosystem, underpinned by tCBRs to provide final, immutable payments settlement, potentially involving commercial bank deposits and stablecoins in trading a plurality of tokenized financial assets on programmable distributed ledger platforms.

There is also the progressive development of the ubiquitous SWIFT network, reported in 2024 [13], indicate the rapid progress that is being made to establish integrated public cross-border payment channels involving central banks, commercial banks, and other financial organisations. Although not yet fully operational globally, the beginnings of such an empirical international development are already evident and will emerge over the next few years, spurred on by private sector tokenization development and trading. A third on-going project, Agora, is indicative of the potential global reach of the technological, operational, and legal experimentation taking place.

There is already private sector trading of tokenized financial assets taking place, using stablecoins (such as USDC) and intermediary trading and payment private DLT platforms, such as those developed by Stellar, Ripple, and R3. These trading activities are processed across these networks facilitated by a shared synchronised ledger, distributed via the network's nodes, other platforms may be based on permissionless blockchains.

Extensive global coverage of tokenized assets trading and tokenized payments and acceptance is likely also to require the involvement of tCBRs, to provide the requisite clearance and final settlement of payments, and universal trust. Joint development of a global ecosystem, involving both public sector and private sector participation, stablecoins, and CBDCs, is a desideratum. See Zelmer and Kronick [37].

6. Geopolitical trends

The development of a widespread digital geoeconomic asset trading and financial payments system has considerable implications for the wider geopolitical environment that this chapter now addresses.

There are three principal areas of concern and contention. First, the increasing number of private money channels, providing not only digital ledger technology and tokenized trading platforms but also clearance and internalised final settlement facilities within blockchains. The issue here is the potential impacts of global financial stability. It is for this reason that the private innovative development is accompanied by a number of important BIS and central bank projects involving the use of tCBRs. These projects, involving the participation by commercial banks and other financial players such as investment banks, point the way to a public/private global partnership approach to the development and secure expansion of tokenized financial assets trading and payments ecosystem.

Second, the developing division of the world into four major geoeconomic trading blocs: East Asia, Europe, the US, and the Global South, represented to an extent by the BRICS Plus group. Albeit with some divisions within these four blocs, this division

is leading to the gradual development of trade invoicing and settlement in various fiat currencies, rather than the US dollar. Indeed, beyond even these four broad goods trading blocs, bilateral trade invoicing in many individual fiat currencies has become prevalent as indicated in an article by Arslanalp and Eichengreen et al. in 2021 [38]. Hence, a *gradual* erosion of trade-invoice settlement using the US dollar. Nonetheless, the dollar *currently* still represents the main trading and settlement currency—notwithstanding the 20% plus share of the euro. Given its extensive use and liquidity, and its relative global overall dominance is not likely to be threatened any time soon.

Third, the short-term uncertainty and potential longer-term instability of global trading and monetary relationships created by the unpredictable policies of the Trump administration, especially, in the context of the global trading and payments area that is the subject of this chapter. The final shape of the expansion of the use of soon-to-be regulated stablecoins into the global trading and payments arena is not yet known. However, the preference of the US—already exhibited prior to Trump's second term see speech by Fed. Governor Waller in 2021 [3]—for the suggested equivalence of private and public, fiat currency channels and the netting, clearance and final settlement structure is concerning in a global context.

In relation to the substantive trust issue, although private money systems may be sufficient to provide an adequate level of trust for the network participants as far as payment clearance and settlement is concerned, they cannot provide the *universal level of trust* provided by advanced fiat currency systems within monetary jurisdictions. The role of strongly regulated commercial banks, as private money channels, together with central banks, *within* the existing fiat monetary systems is crucial. A situation leading to the development of independent private money payment silos across the world, though there may be limited interoperability with lightly regulated stablecoins, is likely to lead to global financial instability. Such an ecosystem is unlikely to provide the requisite universal trust across the complex international trading and financial system.

The main trends involved may now be explored via three potential global development scenarios. Each of the scenarios are based on existing developments that all have some momentum and where major promoters—central banks supporting tCBRs; BRICS payment system commitment; Trump administration support for US private stablecoin—are committed to moving forward. It is important to recognise that the three scenarios are not alternatives. Rather is the issue as to how and to what extent they will interact and hence influence the development path of the global ecosystem over the next 5 years.

6.1 Supporting existing trends of central bank orthodoxy: Scenario 1

6.1.1 Action at international level

Currently, a global unified payments ledger does not yet exist. However, one international project, supported by the BIS and a group of important central banks is exploring how such a global unified ledger might be developed, in the context of a broader global trading and payments ecosystem.

At an international level, further development of cross-border payments is being pursued with Project Agorá, based on a DLT approach. This project, launched in April 2024 by the BIS, brings together seven central banks, including Banque de France, representing the Eurosystem, and the Bank of England, among other public and private financial institutions.

> *The project incorporates central banks, including the Federal Reserve Bank of New York, Bank of England, Bank of France, Bank of Japan, Bank of Korea, Bank of Mexico and the Swiss National Bank.*
>
> *These banks will engage with private sector banks like Citi, HSBC, Deutsche Bank, Standard Chartered, Lloyds Bank and global infrastructure providers such as SWIFT, Euroclear, SDX, Visa and Mastercard, all brought together by the Institute of International Finance (IIF).*

The project will explore further enhancements of the monetary system and provide new solutions potentially using smart contracts and programmability, while maintaining the two-tier structure of the monetary system—central bank money and commercial bank money. The testing of a possible global unified ledger is at the core of this BIS-led project, with the design phase having started in 2024.

The project is ambitious. Even if the technological and operational conceptualization proves feasibility and robustness, especially in relation to global interoperability, there will also be legal and political challenges for any implementation of such an international structure. The participation of the US dollar in any developed system will be important if a global focus is to be comprehensive. Political attitudes in the US, even prior to the current Trump presidency, have been relatively negative. Nonetheless, Agora's successful prosecution, at a minimum, may be to demonstrate the technological and financial feasibility of a truly global system and to produce draft standards of regulatory interoperability.

Another interesting major regional project is Project Nexus. The five central bank partners in Project Nexus—Indonesia, Malaysia, the Philippines, Singapore and Thailand—have agreed to establish a managing entity, the Nexus Scheme Organisation (NSO), which will manage the project in its live implementation stages, in Singapore.

Since 2022, the BISIH Singapore Centre has worked with the central banks and IPS operators of the five central banks to evaluate the model against the reality of their IPS. The project team also consulted with central banks, standard-setting bodies, IPS operators, and commercial banks from around the world to validate that Nexus is scalable and interoperable with IPS beyond those five countries.

In over 70 countries, today, domestic payments reach their destination in seconds at near-zero cost to the sender or recipient, thanks to the growing availability of instant payment systems (IPS). Connecting these IPS to each other can enable cross-border payments from Sender to Recipient within 60 seconds (in most cases).

Rather than a payment system operator building custom connections for every new country that it connects to, the operator can make one connection to the Project Nexus platform. This single connection allows a fast payments system to reach all other countries on the network. Nexus could significantly accelerate the growth of instant cross-border payments. The project team also consulted with central banks, standard-setting bodies, IPS operators and commercial banks from around the world to validate that Nexus is scalable and interoperable with IPS beyond those five countries.

6.1.2 Action at European level

At the European level, the potential of a DLT-based European unified ledger that would include tokenised assets while retaining a two-tier monetary system is being

explored. A further project is pursuing a similar approach to a potential European unified ledger. Led by the Banque de France. This two-pronged approach to unified ledgers, indicates that the evolution towards a unified global may be approached by initially creating an inter-connected multi-fiat currency layer, given the absence of a widely-accepted global unit of account, save for the limited issuance of International Monetary Fund (IMF) Special Drawing Rights (SDRs).

The European Central Bank is running a twin-track approach through projects at Deutsche Bundesbank and Banque de France, and Banca d'Italia with the former creating a bridge between the existing Target 2 RTGS arrangement and DLT-based tokens; the latter creating a DLT-native setting for DLT-based tokens to be settled atomically in tokenised wholesale CBDC/tCBRs.

Various solutions for the settlement of tokenised assets in central bank money are being tested. The Eurosystem banks' partners Banca d'Italia and Deutsche Bundesbank have put forward different proposals regarding the settlement of tokenised assets in ECB central bank money.

> *It will build on the Eurosystem's exploratory work on new technologies for wholesale central bank money settlement, conducted between May and November 2024. This work gave 64 participants – comprising central banks, financial market participants and DLT platform operators –the opportunity to conduct over 50 trials and experiments. Trials included actual settlement in central bank money, while experiments were tests with mock settlement [39].*

The approach is cautious, as Banque de France indicates.

> *Of course, none of these projects intends to abruptly replace the current infrastructures that have been meticulously developed and already provide state-of-the-art services for most use cases in payments and securities settlement. However, we need to plan forward and ensure that our infrastructures are not only up to date but future-proof [40].*

Some of these European regional projects are aimed at piloting a global trading and payments platforms, establishing regional DLT network platforms that utilise a number of connected payments platforms, utilising a limited number of fiat currencies to provide clearance and final settlement.

There are also other regional pockets of progress, one eschewing DLT, as already indicated above (page 9), the Buna project [27]. This project is a Middle Eastern cross-border payments initiative, setting up regional network based on a central bank "standard" closed and centralised system. Hence, fiat currencies of the member countries are linked across a centralised unified ledger, built on existing real-time gross settlement platforms, involving the participating central banks. The project is owned by the Arab Monetary Fund, supported by the regional Arab central banks and involving commercial banks in the area.

6.2 Implications of a changing trading world and BRICS+: Scenario 2

Partly linked to the trade vision of the Trump administration and its actions, but also because of secular trends in global economic development and trading relationships, we appear to be moving towards a quadripartite global trading structure (the US, the EU, Asean, and the BRICS), with a similar structure of evolving supply networks. The size of the South-East Asian economy is impressive, ASEAN+3

(China, Japan, and South Korea) account for 30% of global GDP, 28% of global trade, and 20% of inward FDI [41]. The BRICS grouping is expanding via new members (BRICS+ has 11 members) and associate countries and includes some key countries in the Global South.

It may also be argued that Russia and the Eurasian bloc suggests a further global trade grouping. However, *in relation to trade finance invoicing*, it is not unreasonable to suggest that this Russian-led grouping may be subsumed under the BRICS plus umbrella.

China has now taken over from the BIS as the leader of the mBridge project, involving the central banks of China, Thailand, the UAE, and the Hong Kong MA, has been running since 2021 (and since 2024 the Saudi central bank).

The project is a cross-border, decentralised, multiple CBDC DLT platform that seeks to support real-time, peer-to-peer, cross-border payments and foreign exchange transactions. The aim is to provide a multipolar global financial system, where individual countries' digital currencies can play a much larger role in international trade, thus also avoiding use of the US dollar.

In 2024, at the BRICS annual meeting, such a cross-border payments network, even the limited to the adherents to BRICS would be transformative in shifting some significant trade finance from the US dollar, within this grouping.

The potential for using the latest DLT is relevant to the recent activity and monetary instruments development within the BRICS plus grouping as Michael Lloyd's BRICS 2024 annual meeting report indicates:

> *Given the collective scope of BRICS Plus, there are clearly divergent interests. Achieving consensus on any major geopolitical issue is going to be difficult as the issue of UN security council membership reform indicates. For this reason, it is the development of technical monetary and trade initiatives where one should look for BRICS progress [42].*

For some BRICS states, such a digital payments system would offer a path to new markets. For others, it would permit the circumvention of US sanctions. The BRICS Pay initiative from 2018 first proposed linking the credit or debit cards of BRICS citizens to online wallets, accessible 24/7 for payment via a mobile application installed on their smartphones. The pilot project started in South Africa in early April 2019 and has intensified. The commitment is demonstrable. In 2020, the Russian BRICS Presidency proposed the idea of a commercial "BRICS Pay" for "BRICS" countries for the consideration of the BRICS Business Council as reported by Lloyd in 2023 [43].

There is no substantial direct challenge from the BRICS to the US dollar in the form of a supplanting of the hierarchical monetary structural position of the dollar at its apex. Nonetheless, there are various initiatives that are being pursued by the BRICS that are likely to attempt to partially supplant the role of the US dollar in both bilateral trade finance between BRICS countries and in supplanting the role of the US-dominated SWIFT global financial payments system. The earlier launched BRICSPay initiative is utilising the results of mBridge to develop the system for wider trade invoicing among the BRICS+ members.

As Lloyd suggests:

> *The biggest advantage of BRICS Pay is in developing an integrated network payment system, using distributed ledger technology (DLT). Such a structure would make possible the use of BRICS members' national digitised currencies used for external payments, over the DLT network, and thus avoiding the use of the US dollar for trade*

> *payments. Currently, external settlements between BRICS members still require a conversion into US dollars, which requires the engagement of US banks. The BRICS Pay system would thus allow the members to reduce their dependence on Western-dominated international systems [42].*

Two aspects of this technological initiative are worth noting. First, that development of tCBRs in payments systems is likely to be *regional* in terms of digital currency areas. Second, given the key role of China in the BRICS digital payments system, and their long-standing support for a global unit of account, independent of any single country, it is highly unlikely to support any suggested attempt to establish BRICS+ reserve currency. What this putative development suggests is that this BRICS+ evolving payments initiative is paving the way for using the technological opportunities discussed in this chapter to reduce significantly reliance on the US dollar, and initially on the use of the SWIFT network. This task involves, however, a difficult, long-term commitment and is not an imminent development.

6.3 A geopolitical payments future in a Trumpian world: Scenario 3

The Trumpian global trading vision—which may become more entrenched than some observers are assuming—will have implications for its impacts of the above scenarios. In 2023, the Biden Administration initiated a foreign policy process that it termed the New Washington Consensus (NWC), for definition see Lloyd article published in 2025 [44]. The aim was to establish a US-led alliance of Western liberal democracies, to set against a supposed autocratic alliance led by China, including *inter alia* Russia, Iran, North Korea and other autocratic countries. Trump may agree with some elements of the NWC, but *not* the idea of any quasi-formal alliance with other Western nations, the US under Trump is likely to become more isolationist, demanding "tribute" from its allies for protection [44].

The advent of the Trump presidency, including Trump's own involvement with crypto-assets, only strengthens the US preference for private money channels and reinforces doubts on US participation in international government fora on issues of global regulation of private money channels.

It is also important to recognise that even regulated US stablecoins will still represent private money channels. They will not be equivalent to the issued fiat currencies of *regulated commercial banks* whose issued currencies become fiat currencies as a result of the banks' access to central bank reserves, so providing full clearance and final settlement. It is this fiat currency system within monetary jurisdictions that provides the universal trust that enables a functioning monetary economy and society to function. This position was only arrived at over a period of the past 200 years, leaving behind earlier unregulated and uncoordinated independent private banks.

It would, however, be possible for stablecoins, or at least the dominant issuers, to be given access to central bank reserves, this may happen in the US. It may be argued that such access would simply increase the number of "banks." The problem would be that, unless the stablecoin issuer's regulation was as tight as that of the current commercial banks, then there would be direct competition between stablecoins and commercial bank deposits, echoing the concern that has been expressed by some commentators have expressed about retail CBDCs. Moreover, it is not clear in the US whether stablecoin issuers would be permitted to create loans, beyond their deposit base, despite being less strongly regulated than commercial banks, for a discussion see Lloyd [19].

At a global level, there is a need for any putative global ecosystem to establish the same level of universal trust between monetary jurisdictions as within those jurisdictions. Such an ecosystem may only be credibly established with the participation of tCBRs, providing the underpinning payments platforms.

There is a serious danger that the current US position may prevent such a desired outcome. Attempts to trade in financial assets may then lead to emerging global financial uncertainty and instability. Trump has already ruled out any idea of the US establishing a US retail digital central bank currency and he may also rule out wholesale US digital central bank currency participation in global payments. In practice such participation, via supporting US-regulated stablecoins would further strengthen the role of the US dollar in assets-trading, so he may not.

As ever in the Trumpian world, we are left with a high degree of unpredictability. It might be argued that the above potential problems can be ignored. Such an insouciant argument ignores the crucial fact of the pivotal role of the US dollar in monetary and trading terms and the role of the US central bank (the Fed.) as, effectively, a global central bank, in addition to its internal US monetary jurisdiction role.

Trump issued an early executive order [45] that challenged the view of its previous chair, Gary Gensler—that crypto-assets, including some stablecoins—were to be regarded unequivocally as securities. Gensler resigned immediately. Under the new chair, Paul Atkins, appointed by Trump, the SEC US regulatory role as far as crypto-assets are concerned is currently under review as indicated by Ralhi, Georgetown Law School [46]. It appears likely that any new SEC regulatory regime will be less severe than that under Gensler. However, though the regulatory balance may shift to being in favour of innovation, risks to investors will still have to be assessed and investors protected. The risks were clearly demonstrated in the Terraform stablecoin case. The TerraUSD (UST) stablecoin protected its peg to the US dollar by an algorithmic system link with its governance token LUNA, which promised high returns, but the system collapsed, losing $40 billion of its market value, resulting in a legal judgement against the company [47].

On the positive side, though somewhat belatedly, the US Genius Act—aimed at regulating stablecoins and stablecoin issuers such as Tether—is going through Congress. How far and well this legislation will ensure financial and monetary stability will depend on the final legal text of the act and how this will be interpreted by US regulators and US courts. It does appear that the Act, appropriately, separates the regulation of stablecoins as settlement currencies, from the plethora of speculative investment crypto-assets more widely.

If any potential concerns about adequate regulation in the crypto area could be restricted to the US, then it might not be a global problem. The difficulty is that despite Trump's apparent desire to isolate the US in some respects, it cannot be quarantined or isolated in the international trading or monetary terms. US policies and actions in the area of global monetary policy and the global monetary system affect all countries, given the omni-present role of the US dollar. Despite some movement away from the use of the US dollar in relation to trade invoicing and settlement, the US dollar remains at the apex of the global monetary system.

7. Conclusion

There are clear challenges, both to the private sector and the public sector in the developing global context of tokenized assets-trading and payments. For the private

sector, there are issues of technological interoperability for the many digital ledger technology databases and networks. Clearly, it will be important to preserve innovation, though it is likely that, over time, there are likely to be only a handful of major players, and here, there will be a need for compatibility. It is already the case that there are perhaps four dominant US stablecoins, with perhaps some question of the USDT issued by Tether being preponderant. This issue may be addressed by US legal regulation.

For the public/state sector the challenges appear to be considerable, especially given the need to ensure global financial stability. The main international organisations involved—the BIS, the IMF, and the World Bank—and perhaps notably the BIS, have all discussed the issue of the impact of private money payment channels in the context of global financial stability. There is a potential for the development of regional assets-trading networks underpinned by tCBR fiat currency unified ledger systems. Such regional network systems may likely involve both stablecoins and tokenized commercial bank deposits, combining both private and public sectors technologies.

There are also strong challenges for any attempt, for instance, by the BRIBS, to establish an alternative, widespread multi-currency platform cross-border payments platform to compete with an innovating SWIFT, given the liquidity and dominance of the use of the US dollar. The BRICSPay cross-border initiative is a potential, long-term challenger, though there are substantial geopolitical barriers to be overcome.

The future situation would perhaps be clearer were it not for the current uncertain global trading and monetary environments. The more likely evolution would appear to be towards the creation of a network of regional multi-fiat currency platforms with a foreign exchange conversion and central banks' payments layer, as suggested above.

This approach which is argued could provide a significant step forward towards a multipolar structure with regionalized operational systems. Such a regional DLT platform structure development would still leave the US dollar, including US stablecoins, as the dominant trading and reserve currency, but with a more balanced utilisation of other digitised fiat currencies, such as the euro, the yuan, and the yen.

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References

[1] Kregel J. The economic problem: From barter to commodity money to electronic money. In: Levy Institute Working Paper 982. 2021. Available from: www.levyinstitute.org/wp-content/uploads/2024/02/wp_982.pdf

[2] Trump D. Executive Order on Digital Assets. 2025. Available from: https://www.reedsmith.com/en/perspectives/2025/02/trump-signs-executive-order-digital-assets-american-financial-technology

[3] Waller F. Federal Reserve Speech by Governor Waller. Reflections on Stablecoins and Payments Innovations. 2021. Available from: https://www.bis.org/review/r211119e.htm

[4] Project Agora. Top Commercial Lenders Join G7 Central Bank-Dominated Digital Currency Trial. 2024. Available from: https://uk.finance.yahoo.com/news/top-commercial-banks-join-g7-161916215.html

[5] Project Nexus. Connecting Instant Payment Systems. 2025. Available from: https://www.bis.org/about/bisih/topics/fmis/nexus.htm

[6] BIS. Tokenization May Create New Risks for Central Banks. 2024. Available from: https://www.pymnts.com/blockchain/2024/bis-tokenization-may-create-new-risks-central-banks/

[7] Ripple and BCG. Future Expansion of Assets Trading. 2025. Available from: https://ripple.com/ripple-press/global-financial-infrastructure-entering-a-new-era/

[8] Trump. Trumpy Launches His Own Crypto Currency. 2025. Available from: https://www.bbc.co.uk/news/articles/c9vmym2jvy9o

[9] Mayer J. De-dollarization: The global payment infrastructure and wholesale central bank digital currencies. In: FMM Working Paper 102-2024. IMK at the Hans Boeckler Foundation, Macroeconomic Policy Institute; 2024. Available from: https://ideas.repec.org/f/pma1008.html

[10] BIS. Central Bank Digital Currencies—Executive Summary. 2023. Available from: https://www.bis.org/fsi/fsisummaries/cbdcs.htm

[11] Morgan JP, Wyman O. Unlocking $20 Billion Value in Cross-Border Payments. 2020. Available from: https://www.jpmorgan.com/kinexys/documents/mCBDCs-Unlocking-120-billion-value-in-cross-border-payments.pdf

[12] G20. G20 Roadmap for Enhancing Cross-border Payments. FSB; 2020. Available from: https://www.fsb.org/uploads/P131021-1.pdf

[13] SWIFT. New Collaborative Experiments Explore more Complex CBDC Use Cases. 2024. Available from: https://www.swift.com/news-events/news/new-collaborative-experiments-explore-more-complex-cbdc-use

[14] Russia Ban from Using SWIFT—Australian Parliament Explainer. Available from: https://www.aph.gov.au/About_Parliament/Parliamentary_departments/Parliamentary_Library/Research/FlagPost/2022/March/Exclusion_of_Russia_from_SWIFT

[15] Project Helvetia. 2022. Available from: https://www.bis.org/about/bisih/topics/cbdc/helvetia.htm

[16] Project Jura. 2021. Available from: https://www.bis.org/about/bisih/topics/cbdc/jura.htm

[17] Dumitrescu M. Tokenized Deposits: The Future of Banking. 2025. Available from: https://r3.com/tokenized-deposits-unlocking-the-future-of-banking/

[18] Skingsley C, Shin H, BIS. Project Agora Press Conference. 2024. Available from: https://www.youtube.com/watch?v=7EQKwB_DDmk

[19] Lloyd M. Central Bank Digital Currencies: The Future of Money. Agenda Publishing; 2023. Available from: https://agendapub.com/page/detail/central-bank-digital-currencies/?k=9781788216326

[20] Kannengiebr N, Lins S. Trade-offs between distributed ledger technology characteristics. ACM Computing Surveys. 2020;**53**(2):42, 37 pages. DOI: 10.1145/3379463

[21] CPMI. 2017. Available from: https://www.bis.org/cpmi/info_pfmi.htm

[22] Ripple X. Available from: https://xrpl.org/

[23] Rubin, Arredondo. Decentalized Finance is Not All Block and White. 2025. Available from: https://www.omfif.org/2025/05/decentralised-finance-is-not-all-block-and-white/

[24] Aqilla. Unified Ledgers vs Modular Ledgers. 2025. Available from: https://www.aqilla.com/resources/do-you-wish-your-finance-system-was-always-in-balance-unified-ledger/

[25] BIS. Speech by A Carstens in May 6th, 2024. 2024. Available from: https://www.bis.org/speeches/sp240506.htm

[26] Morgan JP. Speech by U. Farooq, May7th, 2024. 2024. Available from: https://www.ledgerinsights.com/jp-morgan-explains-why-it-prefers-unified-ledger-over-public-blockchain-for-tokenization/

[27] BUNA Middle-East Unified Ledger. 2025. Available from: https://buna.co/

[28] Stablecoins Pose Risks and Fall Short of Monetary Standards, Warns BIS. Available from: https://www.thebanker.com/content/44a3906d-18b0-4843-9d00-0b70225c2873

[29] Liao, Caramichael. 2022. Available from: https://www.federalreserve.gov/econres/ifdp/files/ifdp1334.pdf

[30] USDC. Regulated Stablecoin. 2025. Available from: https://www.circle.com/usdc

[31] ESMA. Markets in Crypto-Assets Regulation. 2025. Available from: https://www.esma.europa.eu/esmas-activities/digital-finance-and-innovation/markets-crypto-assets-regulation-mica

[32] European Commission Eases Stablecoin Rules Despite ECB Concerns. Available from: https://www.ainvest.com/news/european-commission-eases-stablecoin-rules-ecb-concerns2506/

[33] BOE Governor Bailey Warns Banks Against Issuing Own Stablecoins. Available from: https://www.bloomberg.com/news/articles/2025-07-13/boe-governor-bailey-warns-banks-against-issuing-own-stablecoins

[34] Bloomberg UK. Potential Problems with the Genius Act. 2025. Available from: https://www.bloomberg.com/news/articles/2025-06-10/stablecoins-bring-crypto-closer-to-the-mainstream-what-could-go-wrong

[35] Mehrling. Elasticity and Discipline in the Global Swap Network. 2015. Available from: https://www.

ineteconomics.org/uploads/papers/WP27-Mehrling.pdf

[36] mBridge. Connecting Economies Through CBDC. Available from: https://www.bis.org/publ/othp59.htm

[37] Zelmer, Kronick. Stablecoin and CBDCs Together. 2021. Available from: https://cdhowe.org/publication/two-sides-same-coin-why-stablecoins-and-central-bank-digital-currency-have/

[38] Arslanalp S, Eichengreen B, Simpson-Bell C. The Stealth Erosion of Dollar Dominance: Active Diversifiers and the Rise of Nontraditional Reserve Currencies. IMF WP/22/58. Washington, DC, USA: IMF; 2022

[39] ECB Unified Ledger Eurosytem Project. Available from: https://www.ecb.europa.eu/press/pr/date/2025/html/ecb.pr250220_1~ce3286f97b.en.html

[40] Banque de France wCBDCs Project. Available from: https://www.banque-france.fr/en/financial-stability/financial-stability-mandate/supporting-digital-transformation-financial-sector/wholesale-mnbc

[41] AMRO Asia. Asean+3 in a Fragmenting World. 2025. Available from: https://amro-asia.org/asean3-in-a-fragmenting-world

[42] Lloyd M. BRICS Plus 2024 Annual Meeting. GPI; 2024. Available from: https://gpilondon.com/publications/brics-annual-meeting-2024

[43] Lloyd M. BRICS Plus 2023 Annual Meeting. GPI; 2023. Available from: https://gpilondon.com/publications/brics-annual-meeting-2023

[44] Lloyd M. Biden's new Washington consensus in a Trumpian world. Atlantic Economic Journal. 2025. p. 3. Available from: https://uk.search.yahoo.com/yhs/search?hspart=sz&hsimp=yhs-002&p=Lloyd%2C+M+%282025%29+Biden%E2%80%99s+New+Washington+Consensus+in+a+Trumpian+World%2C+Atlantic+Economic+Journal&type=type80260-4258542761&gdpr=1&param1=475798463

[45] Strengthening American Leadership in Digital Financial Technology. Available from: https://www.whitehouse.gov/presidential-actions/2025/01/strengthening-american-leadership-in-digital-financial-technology/

[46] Ralhi AS. Beyond Enforcement the SEC's Playbook on Crypto Regulation. 2025. Available from: https://www.law.georgetown.edu/ctbl/blog/beyond-enforcement-the-secs-shifting-playbook-on-crypto-regulation/

[47] SEC. Judgement on Terraform. 2023. Available from: https://www.sec.gov/newsroom/press-releases/2023-32