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# THE POLITICAL ECONOMY OF CBDC: WHY CHINA IS AHEAD

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## Abstract

China has limited bargaining power in the international arena because its cross-border trade significantly relies on the U.S. dollar and its payment rails. Therefore, a trade war with the United States adversely affects China due to the exorbitant privileges the United States possesses in the global financial system. The People's Bank of China (PBoC) Central Bank Digital Currency (CBDC) project, the E-CNY, provides China with an excellent opportunity to reduce the US dollar's hegemony by further internationalizing its domestic currency renminbi (RMB), and therefore migrating from payment rails dependent on the dollar. In this regard, China is seemingly ahead of everyone in developing and implementing a digital currency due to the effectiveness of its launch, issuance, and usage strategies. This article 1) illustrates how China can optimize its global political and financial position by internationalizing its domestic currency and dissolving the dollar hegemony; 2) evaluates the political economy of CBDCs to determine viability and opportunities for China's CBDC in the global financial system; and 3) emphasizes how China can thereby leverage its existing international digital payment infrastructure and political (soft) power channels such as the Belt and Road Initiative as well as massive debt issuance and recovery programs to help the RMB become the one globally dominant currency.

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# 1 Background

China is a critical stakeholder in the global civilization that creates and drives novel ideas and technologies for driving human growth and development. For instance, Bansal and Singh (2021) report that the Song dynasty is responsible for introducing paper money to the world, while the current Xi Jinping regime is asserting the country's global leadership in the development of digital currencies. Moreover, Le Corre (2018) notes that China is increasingly becoming a central player of world politics by building on its economic successes, which emerged almost forty years ago through Deng Xiaoping's Open-Door policy. Rapid industrial development, augmented technological advancements, massive foreign direct investment, and huge productivity increases encourage China to enhance its role in the United Nations, the World Bank, and bilateral relations (Fogel, 2010). In this regard, President Xi's rule has increased the Ministry of Foreign Affairs' funding from 30 billion renminbi in 2011 to 60 billion renminbi in 2018 to project the country's diplomacy and soft power worldwide (Le Corre, 2018). Therefore, the international community is critically assessing Chinese power status to encourage the country to undertake more international responsibilities or illustrate that the country poses a threat to the current international order.

The U.S. Global Leadership Coalition (2019) considers China a political and economic rival to the United States due to increased spending on the Belt and Road Initiative, development of a new ministry-level development agency, and Chinese reluctance to address global threats and debt-trap diplomacy. In this regard, the European Union

(E.U.) believes it is becoming susceptible to a Chinese asymmetric political relationship that encourages some member states to embrace Chinese rhetoric and interests, challenging liberal democracy and Europe's values (Benner et al., 2018). Moreover, the U.S. Committee on Foreign Affairs reported in 2019 that Chinese rapid economic growth is founded on predatory practices that are drastically harming other nations, including the United States, due to the use of added expense rather than the prevailing global order (House of Representatives, 2019). For instance, China's Belt and Road Initiative, focused on expanding China's influence and stimulating economic connectivity and infrastructure development in more than 65 countries on three continents, features predatory lending practices that are forcing beholden countries to give up strategic ports, land, and infrastructure (House of Representatives, 2019). Therefore, the prevalent strategies for evaluating Chinese power status encourage hostility and negative perception of the growing political, economic, and technological advancement.

## 1.1 The US dollar's hegemony

China invented paper money several centuries ago. But since the mid of the 20th century, the American dollar has always been the dominant currency in the global monetary system. Bansal and Singh (2021) posit that the critical role of the dollar in the modern world is storing value, fostering exchange in financial transactions, and providing a unit of account. In this regard, the dollar accounts for about 60% of foreign currency reserves, conferring the United States with a strong geopolitical and economic status in the international financial and political arena (Bansal & Singh, 2021). The critical role of the currency in global trade transactions allows the United States

for its political reasons to impose unilateral sanctions against countries of choice.

It was the Bretton Woods System's termination in the 1970s that allowed the dollar to become the dominant economic force in the global financial system. China, the world's largest trading partner, is beholden to a global financial system that undercuts its economic and political significance because the Chinese currency constitutes less than 2% of the world's reserve currency (Bansal & Singh, 2021). In this regard, China has limited bargaining power in the international arena because its cross-border trade significantly relies on the dollar and its payment rails, such as the Society for Worldwide Interbank Financial Telecommunications (SWIFT). Therefore, a trade war with the United States adversely affects China, frequently involving a US financial institution or dollars in cross-border transactions. Bansal and Singh (2021) indicate that the current dominance of the United States over the popular payment rails would allow it to block China from the global financial settlement mechanism, sanction Chinese companies, or delist Chinese companies from the United States stock exchanges. For instance, the United States effectively directs international clearinghouses to blacklist and stop transactions for a sanctioned country, leading to the inability to complete international transactions or money transfer due cut off from international payment rails (Bansal & Singh, 2021). Meanwhile, the United States run more than 30 active financial and trade sanctions programs that adversely affect target nations. For instance, Iran's cut-off from the international oil market in 2013 has reduced its oil export by 50% while causing a rapid decline in its economy.

In this regard, the dollar hegemony allows the United States to cripple antagonists' financial operation in the international community by

restricting their access to the dollar and subsequently international payments and clearing infrastructure.

## 1.2 The Belt and Road Initiative

China is assuming a critical position in the multipolar world. For instance, the U.S. Global Leadership Coalition (2019) emphasizes that China has invested \$150 billion in Latin America since 2005 and has promised \$250 billion investment in the next decade, making it the largest trading partner to several countries and effectively isolating Taiwan by convincing countries, such as Panama, El Salvador, Nicaragua, and the Dominican Republic, to cut ties. Additionally, Chinese investment in Africa has increased by 520% in the last 15 years, and the largest trading partner to Africa possesses more than 10,000 firms that can generate \$440 billion in revenue by 2025 while leveraging control of critical African infrastructure, such as ports in Djibouti and Kenya. The Chinese influence also further extends to Asia, where the country has spent \$48 billion on diplomacy and development in states that buy its products or support its foreign policy positions.

In this regard, the Chinese Belt and Road Initiative involves a plan to promote intensified financial integration and increased use of the Chinese currency (the Yuan (CNY) or Renminbi (RMB) respectively) in foreign countries. However, the House of Representatives (2019) posits that the Belt and Road Initiative is a debt trap with predatory lending practices that expands China's political influence, benefits the corrupt officials, provides limited opportunities to the average citizen, and compromises participant sovereignty. The failure to repay the unviable loans leads to the seizure of physical infrastructure or commodities, translating to a cover for Chinese military expansion. In this regard, in 2018, President Trump signed the *BUILD Act*, which advances the

influences of the United States in developing countries by incentivizing private investments (House of Representatives, 2019). Apart from this, Bansal and Singh (2021) report that President Biden declared China a threat to the United States' global dominance, after displacing his country as the European Union's (E.U.'s) top trading partner in 2020 and India's top trading partner in 2021.

Meanwhile, increasing Chinese outbound investment that totals approximately \$1.8 trillion between 2005 and 2018, enhances its footprint in developing as well as developed economies (Le Corre, 2018). The plan illustrates that expanding Chinese international investment extends beyond infrastructure construction and includes an aggressive and opportunistic ambition to institute a new, massive economic platform that will compete and preferably overthrow the dollar hegemony. Le Corre (2018) therefore emphasizes that China's economic rise is challenging traditional geopolitics by exporting political influence through economic channels.

### 1.3 Central Bank Digital Currency

The decades-old system that emphasizes the dollar as the zenith currency is allowing the United States to openly pursue crippling geopolitical interests against rivals (Bansal & Singh, 2021). Zhang and Tao (2014) opine that the dollar-centered reserve system confers exorbitant privileges to the United States, instituting prevalent financial instability and promoting economic inequality between developed and developing nations. In this regard, China is aiming to challenge the hegemony by internationalizing its currency and discarding payment rails dominated by the dollar for new payment rails such as Central Bank Digital Currency (CBDC). In this respect, the digital economy prevailing in the world feature emergent and innovative business models founded, such as artificial intelligence,

DLT, blockchain technology, cloud computing, and Big Data. The People's Bank of China (PBoC, 2021) reports that especially the Covid-19 pandemic is accelerating digital transformation by encouraging the global community to embrace the emerging and innovative technologies in different facets of life. In this regard, the Chinese economy is gradually diverging from the renowned high-speed growth and embracing a digital economy with high-quality development. For instance, Chinese consumers are strongly embracing digital payment methods in their payment transactions, resulting in enhanced demand for innovation and technologies.

However, China is not the only country in the world that is currently experiencing enormous technological advances in finance. To date, many countries have been exploring CBDCs by heavily engaging in research and development. For instance, Auer, Cornelli, and Frost (2020) report that the Central Bank of Ecuador launched *Dinero electronico* in 2014 to allow mobile payments through a central bank-operated system while De Nederlandsche Bank in the Netherlands experimented with a distributed ledger technology (DLT) coin, the *Dukaton*, in 2015. Other experiments in DLT for settling high-value interbank payments include Bank of Canada, Monetary Authority of Singapore, Swedish Riksbank, European Central Bank (ECB), Hong Kong Monetary Authority, Bank of Japan, and Bank of England.

However, while only few of these projects have led to concrete results yet, China has recently successfully completed its pilot phase of a digital yuan (e-CNY). Hence, not surprisingly, China's main competitors (mainly the US and other nations such as France and Japan) are afraid that the e-CNY could decisively help China to internationalize its domestic currency RMB by

building an e-CNY ecosystem in southeast Asia. In this regard, the competitors consider conventional economic cooperation and cultural exchanges with China as potentially problematic and deserve scrutiny. For instance, the E.U. perceives that the primary Chinese motivations are seeking secure regime stability and representing the country political concepts as a competitive superior, political, and economic model achievable. The approach is gradually wilting the Western harmony in the Atlantic and Europe, building international backing on specific matters and policy schemas, and creating an optimistic perception that Chinese dogmatic and monetary systems are viable substitutes to liberal democracies (Benner et al., 2018).

## 2 Research Objectives

A multipolar world requires a multipolar reserve system to enhance accountability, integrity, reliability, and freedom from malicious manipulation by stakeholders with private interests. Zhang and Tao (2014) indicate that a increasing number of cross-border financial transactions and trade settlements have been utilizing RMB since 2009. In this regard, China is researching and developing an e-CNY that could significantly help China further internationalizing its domestic currency (PBoC, 2021).

In this article, the motives of domestic currency internationalization are assessed and linked to characteristics of money digitalization to evaluate how the e-CNY can help China pursue its geopolitical interests. Furthermore, this paper aims at evaluating the political economy of CBDC to determine why China is seemingly ahead of international rivals, such as Japan, European Union, Russia, and the United Kingdom, in

internationalizing the domestic currency. The assessment entails responding to the following critical research questions:

- 1) Which aspects of the political economy of CBDC seemingly implies that China is ahead in international CBDC competition?
- 2) Which motives, instruments, and frameworks does China have for further internationalizing its domestic currency?
- 3) Does China's economic weight challenge the dominance of the United States dollar (USD)?
- 4) How could the e-CNY possibly help China to internationalize renminbi (RMB)?

Formulating a complete and compelling answer to these research questions requires systematic literature analysis. In this regard, the objective of this paper is to

- 1) introduce CBDC and possible motives for implementing a digital currency, including access to payment infrastructure and cross-border payments;
- 2) describe the motives, instruments, and general theoretical framework for currency internationalization;
- 3) describe China's CBDC project based on its whitepaper published on July 21, 2020;
- 4) compare the Chinese e-CNY project characteristics and matureness with other advanced CBDC projects worldwide;
- 5) evaluate the evolution of the U.S. dollar's dominance, assess reasons why it might be threatened amid COVID-19, U.S. budget deficit, and the low dollar index, and to
- 6) evaluate how the e-CNY might help China to internationalize its currency through underlying strategies, including the Belt and Road Initiative and enhanced cross-border payments.

# 3 Currency Evolution

Money provides means of exchange, gauging value, or storing value due to its stable value, relative scarcity, and trust (Jonker, 2018). Therefore, money is a convention that obtains trust through rulers' power, the social cohesion of a community, or the preciousness of the material. Ogachi et al. (2021) indicate that money has been part of human civilization and relationships for the past three millennia since its emergence in the second half of the 7th century BC. Before its invention, people exchanged goods and services through barter trade, but the difficulties of ascertaining value to attach to commodities led to the use of stamped lumps of precious metal, such as electrum, silver, and gold. According to Rajeswari and Krishnan (2018), around 1100 BC, the Chinese abandoned tools and weapons as a medium of exchange and embraced miniature replicas cast in bronze, later abandoned for the less prickly shape of a circle.

## 3.1 Classical forms of money

The first minted coins emerged in Lydia around 600 BC when King Alyattes instituted the first official currency, comprising electrum coins (Rajeswari & Krishnan, 2018). Although uncertainties surround the ancient coinage's original function, symbols minted on coins have become informative about the value before the advent of numerical or written value marks (Ogachi et al., 2021). In the meantime, the Chinese invented paper money, and by 120 AD, when Marco Polo visited the empire, money supply with a variety of denominations was prevalent (Rajeswari & Krishnan, 2018). Subsequently, banks and private institutions in Europe were using notes which could be exchanged for their face values in

silver or gold coins by the 17th century. With the first credit card in the world emerging in 1946, the world is now talking about mobile banking apps, cryptocurrencies, and other electronic payment methods (Ogachi et al., 2021).

## 3.2 Digital money

Nowadays, money exists in diverse forms, including gold, commercial real estate, broad money, narrow money, coins and banknotes, and cryptocurrencies, such as Bitcoin, Ethereum, Tether, and Litecoin. Brunnermeier, James, and Landau (2021) indicate that digitization is increasingly revolutionizing money and payment systems, where digital currencies facilitate instantaneous peer-to-peer (P2P) transfers of value. In this regard, social and economic platforms with a global outreach are stimulating new currency development, steering digital payments and reshaping the role of government-issued public money, the architecture of the international monetary system, and the nature of currency competition (Brunnermeier et al., 2021). Subsequently, digital money is surfacing from different business facets, such as WeChat's and Alipay's digital wallets dominating Chinese payment systems, Safaricom's M-Pesa dominating Kenya's money transfer services, and Facebook's Diem that is pegged to a basket of official currencies that focuses on providing money transfer and payment on social media networks.

## 3.3 Cryptocurrencies

Cryptocurrency is a digital currency that uses cryptography and distributed ledger to articulate secure transfer and exchange of digital tokens in online platforms. Dourado and Brito (2014) indicate that Bitcoin was the first cryptocurrency that emerged in 2009, with subsequent currencies employing the same innovation but slightly altering some parameters, mainly in the governing



algorithms. Digital assets rely on cryptography to secure transactions, verify the transfer of assets, and control the creation of additional value units, but individual currencies vary in choice of cryptographic hashing algorithms, latency, and consensus mechanism (Härdle, Harvey, & Reule, 2019). In this regard, a blockchain ensures the distributed verification, updating, and storage of transaction records and histories, where a block holds a set of transactions between cryptocurrency users and verification of the balance (Chiu & Koepl, 2018). In other words, a blockchain imitates a book containing the ledger of past transactions, while a block is equivalent to a new page for recording all current transactions. Berentsen and Schaer (2018) posit that blockchain consists of blocks, with each new block containing information about new transactions building on its predecessors. Although cryptocurrencies lack central authority, they involve P2P digital networks for enforcing the setup rules and algorithmic rules for setting supply limits and rules (Härdle et al., 2019). Meanwhile, the cryptocurrency market has numerous coins such as Bitcoin, Ethereum, Tezos, Celo, Litecoin, and Ripple, and others built on existing blockchain, such as Tether, Uniswap, and Etherisc.

### 3.4 CBDC

The growth of cryptocurrency technology is challenging traditional monetary authorities, leading central banks to initiate CBDC. The Bank for International Settlements (BIS) reports that more than 86% of central banks in developing economies are experimenting or developing a proof-of-concept (PoC) prototype for CBDCs. According to Bilotta (2021), countries and territories are increasingly investing in the development and implementation of CBDC to mitigate the risks of a large number of new privately-owned digital currencies and foreign

CBDCs. Auer, Haene, and Holden (2021) indicate that CBDCs extend existing central bank settlement accounts and central bank money, where wholesale CBDCs are settlement tools between financial institutions and retail CBDCs a form of digital cash accessible to all.

CBDC represents a “digital payment instrument, denominated in the national unit of account that is a direct liability of the central bank” (Didenko & Buckley, 2021, p.5). In addition to the previously mentioned wholesale/retail distinction, it is important to mention that account-based CBDCs do not support international circulation because underlying user identification are available only in specific local territories. On the other side, CBDCs based on anonymous tokens would also allow foreigners to access respective payment services (Auer et al., 2021b). Therefore, CBDC issuance and design to provide complementary central bank money to the public are considered sovereign decisions of specific jurisdiction (BIS, 2020).

## 4 Motives for CBDC

CBDC research and development in different jurisdictions worldwide is based on specific motivations and motives. For instance, the COVID-19 pandemic inspired accelerated CBDC research and development in the United States as an alternative to credit card transfers and costly checks (Auer et al., 2021). CBDCs provide global economies with the potential to catch up with well-established cryptocurrencies such as Bitcoin, utilizing DLT to enable the settlement of transactions through a P2P mechanism and leading to cryptographically secured real-time transactions (Bansal & Singh, 2021). According to Auer et al. (2021), central banks are researching CBDCs to promote domestic payment efficiency,

safety and robustness, financial stability, financial inclusion, and smooth functioning of retail and wholesale payments. PBoC (2021) indicates that the motivation for its CBDC is meeting the public's demand for cash in the era of the digital economy. Bilotta (2021) notes that some CBDCs are emerging as an alternative to SWIFT, reducing costs and political risks associated with the dollar hegemony. Auer et al. (2021b) posit that some economies aim at interlinking domestic systems with a CBDC while facilitating multi-currency cross-border payment systems. Furthermore, some factors motivating central banks to engage in the research and development of digital currencies is the public interest in CBDC, namely the need for financial inclusion, maintaining remittance flow, and demand for trade openness, since CBDCs have the potential to eliminate the limitation on users and place (Auer et al., 2021d). The leading research motivation is a CBDC's useage as a means of payment, enhancing monetary policy tools, promoting continued access to central bank money, improving operational resilience when electronic systems cease to function, increasing payments diversity, supporting public privacy, potential disintermediation of banks, and protecting monetary sovereignty (BIS, 2020).

#### **4.1 Cross-border payments**

Cross-border payments in multiple currencies are relatively complex compared to domestic payments, prioritizing local participants in their design due to differences in compliance and regulatory standards. Auer et al. (2021b) indicate that the underlying frictions and risks in cross-border payments institute operational complexities in their management. Hence, CBDC initiatives aim to solve gaps and problems in cross-border financial transactions arising due to numerous intermediaries involved in the process. Bansal and Singh (2021) indicate that CBDCs

provide a transformative solution that improves cross-border payments due to their use of P2P arrangements whereby CBDCs lower transaction costs by eliminating numerous intermediaries involved in cross-border trade. In this regard, cryptocurrencies are responsible for eliminating intermediaries, such as correspondent banks, which update ledgers and perform communication hops in cross-border transfers or payments involving fiat currencies. Legal entities involved in international transactions exert due diligence by performing Anti-Money-Laundering (AML) screening, authenticating payments, and verifying authenticity of users (Bansal & Singh, 2021). CBDCs could thereby significantly reduce the global average cost of retail remittances that average 6.51% (and even 8.19% Sub-Saharan Africa) of the total amount sent (Bansal & Singh, 2021). Therefore, central banks and economies perceive CBDCs as a promising tool for reducing the cost of liquidity management, leading to significantly cheaper cross-border payments.

#### **4.2 CBDC vs. private cryptocurrencies**

The rapid rise of cryptocurrencies competing against traditional forms of money is increasingly inspiring the development and issuance of CBDCs (Auer et al., 2021b). According to Auer et al. (2021), cryptocurrencies are speculative assets that are extremely volatile, making their use as a means of payment difficult, despite their proclivity for facilitating wasteful energy consumption, money laundering, ransomware attacks, and other financial crimes. In this regard, CBDCs aim to eliminate cryptocurrency challenges by embracing a stablecoin model to enhance user trust and confidence. Stablecoins maintain a stable value by backing assets, proving that they are an extension of the conventional monetary system (Auer et al., 2021). Meanwhile, CBDCs allow interoperability through compatible CBDC systems, interlinked

CBDC systems, and a single system for Multiple-CBDC (mCBDC), leading to reduced frictions and barriers to privately offered cross-border and cross-currency services (Auer et al., 2021b). Subsequently, CBDCs provide enhanced opportunities for cooperation through common technical standards in user interfaces, data requirements, cryptographic techniques, and message formats, besides aligned legal, regulatory, and supervisory standards for simplifying transaction monitoring and know-your-customer processes (Auer et al., 2021b). This means that, because CBDCs are still a relatively new technology which are still seeking international standards and design, it makes them an attractive tool for challenging the dollar's hegemony through domestic currency internationalization (Bansal & Singh, 2021).

The entry of big tech into payments further inspires the research and development of CBDCs. Auer et al. (2021) posit that government authorities face significant challenges handling massive volumes of personal data used as input for big tech business activities due to the enhanced need for data privacy and governance, besides promoting safety and integrity of the payment system against illicit activities. In this respect, CBDCs enable central banks to articulate the triple imperative of the integrity of the payment system, data privacy, and competition. Furthermore, central banks aim to collaborate and interlink their systems with private businesses and other countries, leading to increased safety features and efficiency (Auer et al., 2021b). For instance, CBDCs could harness big data from big tech, digital infrastructure from extended mobile phone use and internet use, institutional quality from jurisdictions with high government effectiveness, and innovation capacity from jurisdictions with high innovation scores (Auer et al., 2021c). Moreover, CBDCs confer central banks with centrality in digitized

economies while eliminating threats of foreign and private digital currencies and payment services. For instance, the e-CNY constrains the power of *Tencent* and *Alibaba* in Chinese digital payment infrastructure, while empowering PBoC in the digitized Chinese economy.

## 5 The Digital Yuan (e-CNY)

The digital Yuan (e-CNY) is a stablecoin pegged on the Chinese yuan (CNY), meaning that it is the digital version of its fiat currency. PBoC issues the currency as a hybrid payment instrument with a legal tender that translates to possession of all functions of fiat currency, including medium of exchange, unit of account, and store of value, similarly to RMB. PBoC (2021) reports that the e-CNY represents a continued evolution of money in China with the advancement of science and technology. In this respect, issuance and circulation of e-CNY are equivalent to RMB, allowing transfer of value to the digital form and articulation of the central bank's liabilities to the public. PBoC (2021) notes that e-CNY has a centralized management model with the state possessing the exclusive right of issuance through the central bank, while the commercial banks are the authorized operators distributing the digital currency. Although e-CNY substitutes for cash in circulation (M0), it will coexist with RMB as PBoC's liabilities to the public. This means that the vast Chinese economy will support both e-CNY and RMB to facilitate payment options while meeting the demand for a large population, multiple ethnic groups, and vast differences in regional development (PBoC, 2021). Therefore, e-CNY will provide a convenient complement to cash for online transactions, especially as an alternative to the duopoly of Alipay and WeChat Pay, which

currently controls 94 percent of mobile payments in China.

The implementation of e-CNY will help to accomplish several objectives in the Chinese economy. According to the PBoC (2021), China's e-CNY will help to promote financial inclusion, meet the public's demand for digital cash, and diversify forms of cash from the central bank to the public. Meanwhile, the number of cash payments in the Chinese economy is significantly declining, necessitating the central bank to devise new currency for ensuring citizens have continued access to cash through digitization. Moreover, e-CNY will be available to the broad public without bank accounts through digital wallets. IN this respect, PBoC (2021) indicates that the introduction of e-CNY aims at enhancing the competitiveness, safety, and efficiency of the local retail payment services. The public will have access to coordinated payment methods, where e-CNY will enhance financial inclusion and supplement the existing system by protecting privacy and user information.

## 5.1 Design characteristics

The CBDC market involves two categories founded on purpose and users: wholesale and retail. PBoC (2021) indicates that wholesale CBDC is intended for large-value settlements and is mainly issued to commercial banks, unlike retail CBDC that is readily available to the public for ordinary low-value transactions. While the global development of CBDC currently involves both wholesale and retail, the e-CNY should mainly serve for retail purposes. As a result, e-CNY will meet the public's everyday payment needs, lower retail payment costs, and improve the efficiency of the retail payment system (PBoC, 2021).

The underlying design of e-CNY promotes time evolution, user-friendliness, inclusivity, and safety

when articulating cost-benefit, technological support, supply model, market demand, and monetary functions (PBoC, 2021). Therefore, the e-CNY project pursues the delivery of an open, inclusive, and reliable digital currency. In this regard, the design principles include compliance with existing laws and regulations on money laundering, privacy protection, and administration of foreign exchange; safety and convenience during online and offline payments; as well as openness and compatibility with traditional digital payment systems. PBoC (2021) further indicates that the e-CNY will be an account-based, quasi-account-based, and value-based hybrid payment instrument, a substitute for M0 that pays no interest, and therefore a reflection of physical RMB that also does not charge exchange and circulation services. The digital currency will provide anonymity when handling a small amount of cash, but it will articulate the traceability of high-value transactions. However, e-CNY guarantees the security of users by utilizing a combination of security measures, including issuance of digital signatures, a digital certificate system, and encryption of stored data to prevent transaction falsification, illegal duplication, double-spending, and repudiation (PBoC, 2021). Additionally, the e-CNY environment will support smart contracts to foster self-executing payments.

From a structural point of view, there exist several approaches for implementing digital fiat currency as legal tender. The two most distinct ones are one-tier and two-tier. The one-tier method involves the central bank issuing, maintaining, and circulating the digital currency to the public, while the two-tier method involves the central bank issuing CBDC to authorized operators who subsequently manage exchange and circulation (PBoC, 2021). In this regard, e-CNY is based on the two-tier method where PBoC is responsible for issuing and disposing digital currency while other

institutions manage the wallet ecosystem (further explained in section 5.2). The central bank, however, is responsible for selecting commercial banks with specific infrastructure to provide e-CNY exchange services, and to support the retail payment infrastructure by assisting with operations and maintenance, business processing, marketing, scenario expansion, and system development (PBoC, 2021). This means that authorized operators will be the intermediaries who will perform onboarding and real-time payment services, while the central bank will periodically receive and store details of retail holdings and transactions (Auer et al., 2021c). PBoC will provide the core infrastructure while authorized operators and payment services providers will deliver service, leading to the distribution of risks across the economy and effectively preventing disintermediation of financial institutions. Moreover, Auer et al. (2021c) posit that the Chinese model of CBDC prevents waste of resources by allowing stakeholders in the financial sector to continue utilizing the existing qualified staff, processing capabilities, and information technology (IT) infrastructure.

The e-CNY infrastructure will entail a database and DLT, which aims to process up to 300,000 transactions per second (TPS) in its matured state. Auer et al. (2021c) note that financial intermediaries continue completing know-your-customer (KYC) checks besides continuing with ordinary interaction with PBoC because e-CNY only supplements RMB rather than replacing it. However, the central bank will continue claiming CBDC because its denomination is RMB, but users will be free to utilize loosely coupled account links to foster anonymity in transactions. The users will be anonymous, but the asynchronous transmission will enable the central bank to access transaction data to track money laundering and other criminal offenses while implementing prudent regulations.

## 5.2 The e-CNY wallet ecosystem

As previously mentioned, authorized operators of e-CNY will be responsible for creating digital wallets for users depending on personal information identification. In this regard, the operators will set transaction or daily limits or maximum balance for users without identities. Users can circumvent the restrictions by upgrading from anonymous digital wallets to higher-level real-name wallets (PBoC, 2021). Users will have access to personal and corporate wallets, where transaction and balance limits depend on the opening mode. Wallets created remotely will have minimal privileges despite supporting customization. According to PBoC (2021), the enhanced wallet ecosystem will support both software and hardware wallets, with software wallets articulated through application programming interface (API), software development kit (SDK), and mobile payment apps. Meanwhile, wallet owners can create and set limits for several sub-wallets for effective distribution or pooling of funds. Therefore, the e-CNY wallet ecological platform is collaboratively built, owned, and shared by PBoC, its authorized operators, and software developers, with PBoC setting the regulations and other stakeholders working on the development of various payment and financial products (PBoC, 2021).

## 5.3 Implications and project outlook

The e-CNY is undergoing a long-term evolution, constant iteration, and dynamic upgrading in response to market demands and technological advancements (PBoC, 2021). E-CNY involves a long-term evolution, constant iteration, and dynamic upgrading depending on market needs and changes in technology (PBoC, 2021). In this respect, operators are free to embrace different technologies that maintain the integrity of e-CNY

and transactions. Hence, the e-CNY system is built on a mix of technologies to promote reliability, soundness, continuous availability, disaster tolerance, and business continuity. The regulatory framework is the People's Bank of China Law, which indicates that RMB entails physical and digital currency. However, the regulatory framework is relatively dynamic to guarantee its effectiveness in changing technological and business worlds. The underlying goals are to ensure authorized operators have precise regulatory requirements, stakeholders can rely on well-applicable anti-money laundering laws and rules, and users operate in a secure environment (PBoC, 2021).

Furthermore, the introduction of e-CNY has significant implications on the existing financial network. The digital currency is likely to institute credit squeeze, narrow banking, and financial disintermediation, while attractive interest may discourage investment in short-term government securities (PBoC, 2021). Meanwhile, the PBoC will continue to improve the e-CNY ecosystem and investigate new application models that will enable CBDC to foster or articulate economic and social development (PBoC, 2021). The central bank states that it will encourage the revision of laws and regulations to improve personal information protection and the formulation of administrative measures on e-CNY, while also conducting a deeper analysis of e-impact CNY's on financial stability, the financial system, and monetary policies (PBoC, 2021).

## E-CNY in a Global Context

E-CNY is the most developed CBDC project in the world. The project commenced in 2014, and PBoC conducted a pilot study involving the Digital Currency and Electronic Payment (DC/EP) in 2019, where the pilot test run in several popular cities, such as Chengdu, Suzhou, and Shenzhen (Auer et al., 2021c). The proposed advancements mentioned in section 5.3 follow the establishment of digital fiat currency research group in 2014, development of first-generation digital fiat currency prototype in 2016, identification of fundamental features of e-CNY, formulation of the e-CNY R&D project in 2017, launching of e-CNY pilots in 2019, and application of 1.32 million scenarios by 30th June 2021. To date, the e-CNY has attracted 3.51 million corporate wallets, 20.87 million personal wallets, and a total of 70.75 million transactions worth RMB 34.5 billion (PBoC, 2021). In the following, the Chinese digital Yuan project is placed in the context of other advanced CBDC projects conducted by central banks worldwide.

### 6.1 Sveriges Riksbank

Sweden also has a highly digitized economy with declining use of cash, even actively encouraging shops to discontinue the use of physical cash. Subsequently, Auer et al. (2021c) indicate that the Swedish economy is experiencing a fast decline in cash worldwide. Meanwhile, Riksbank has approached several central banks to participate in the development of CBDC, but the collaboration has not substantially materialized yet. Riksbank is currently developing a PoC of the e-krona, which is, similarly to the e-CNY, intended to complement cash rather than replacing it. Riksbank researchers

report that the pilot phase involves a decentralized database of all e-kronor, where the central bank is responsible for verifying and approving all transactions before completion (Auer et al., 2021c). The e-krona infrastructure is based on R3's Corda and DLT to implement the solution, with the central bank maintaining full control and ownership of the CBDC. Riksbank's pilot further utilizes account-based access technology. However, the central bank is now also considering implementing token-based prepaid cards. Auer et al. (2021c) report that Riksbank will be issuing CBDC, stored in wallets at intermediaries, where identification is required to access a wallet. With the tender stage of the project, the central bank may consider token-based access, where users will have CBDC payment cards for small-value payments rather than digital wallets. Although the project involves account-based access, users will remain anonymous, but Riksbank will have access to individual account balances and payments without account holders' identification details. Furthermore, while e-krona mainly targets the domestic market, it will allow foreigners to access the CBDC through prepaid cards, but only for low-value purchases.

## 6.2 The Bank of Canada

The Bank of Canada engages in extensive research and evaluation of policies on digital currencies. In this regard, the Bank of Canada does not have official communication on developing a CBDC pilot or PoC, but staff members acknowledge engaging in extensive research. Nonetheless, the Bank of Canada has established plans for identifying conditions that necessitate the development of a CBDC. The financial institution has identified models and is increasingly accumulating relevant technical knowledge for implementing the innovative payment technologies. Auer et al. (2021c) indicate that Canada currently does not

have a compelling case to issue CBDC because the current payment ecosystem effectively serves all Canadians. However, the Bank of Canada acknowledges that some global trends in technology or financial behaviors of the Canadians are likely to encourage issuance of CBDC to continue guaranteeing access to trustworthy payment methods.

The Bank of Canada is evaluating two possible scenarios: the reduction of physical cash or its elimination. Meanwhile, the increasing popularity of private cryptocurrencies and stablecoins is enhancing their use in payment and fund transfer. In this regard, the Bank of Canada aims to better understand the operations of CBDC and their reliability as legal tender within the country and in international transactions. The central bank inclines to issue CBDC where it has a claim and mimics physical cash properties because the primary goal are accessibility features and expedient resilience (Auer et al., 2021c). The Bank of Canada may offer Direct CBDC, in which it provides the entire CBDC payment system, Hybrid CBDC, in which it issues and redeems CBDC with end-user service provided by intermediaries, and Intermediated CBDC, in which the central bank does not have access to the entire ledger of retail transactions (Auer et al., 2021c). In the hybrid system, the central bank may offer retail payments directly to the users, but with intermediaries executing the majority of payments.

Furthermore, the Bank of Canada has extensive experience with PoC of payment systems due to collaboration with different central banks worldwide. In this respect, DLT may be the probable infrastructure for the contingency plan, but the bank has not revealed the proposed infrastructure. Nonetheless, the Bank of Canada is likely to choose suitable infrastructure depending on performance and reliability. Moreover, the

CBDC will likely involve account and token-based access solutions, where anonymous token-based options will entail value cards for smaller payments that require access devices such as tablets, laptops, and mobile phones to complete transactions (Auer et al., 2021c). On the other hand, account-based access is highly suitable for completing large purchases and enforcing AML policies, making it the most practical option. Unlike e-CNY, the main focus of the e-krona will most likely be the local market, while the implementation of token-based CBDC will at least enable tourists and foreigners to access the digital currency in prepaid cards for making low-value payments.

### 6.3 Emerging economies

Emerging economies currently exhibit the most advanced CBDC projects in the retail application for promoting financial inclusion, while advanced economies are increasingly focused on wholesale application to aid interbank systems and capital markets. PwC (2021) notes that more than 88% of CBDC projects use blockchain technology due to its effectiveness in configuring confidentiality features, increasing interoperability with digital assets, and supporting smart contract programmability. There are several examples of emerging countries that are currently conducting research and experimenting with retail CBDC.

The *Sand Dollar Project* was launched by the Bahamas in December 2019 to issue a digital version of the Bahamian dollar through authorized financial institutions (AFIs). The *Sand Dollar* was available in October 2020 to the residents through digital wallets accessible for payment and transfer via physical payment cards and mobile applications (Auer et al., 2021). PwC (2021) notes that the project aims to institute efficient Bahamian payments systems, strengthen controls against anti-money laundering and anti-counterfeiting,

enhance citizens' access to payment systems, promote access to financial services, and improve financial inclusion. Another example, the Eastern Caribbean Central Bank (ECCB), contracted Bitt in 2019 to mint a digital version of the Eastern Caribbean Dollar to circulate alongside physical notes and coins (PwC, 2021). The goal has been to provide an efficient payment method, support customers' needs, and reduce transaction costs. Similarly, the National Bank of Ukraine (NBU) began exploring CBDC in September 2018 and completed the pilot project in December 2018. The project's goal was to develop an innovative, low-cost, secure, and operational payment system. In the testing phase, NBU issued 5,443 *e-Hryvnia* when evaluating distributed ledgers and assessing the framework's ability to articulate regulations, accounting, and macroeconomic stability.

Meanwhile, the National Bank of Cambodia (NBC) commenced research on digital currencies in 2018 and tested a DLT-based interbank payment system in 2019 before launching it officially in 2020 (PwC, 2021). To date, The *Project Bakong* links 11 local commercial banks, but the central authority is also exploring the feasibility of digital wallets in cross-border transactions. Similar to other CBDC projects in emerging economies, NBC is aiming to significantly improve financial inclusion in a society where most people do not have access to bank accounts, despite high mobile phone utilization.

However, so far not every test phase has led to promising implications for the future. For example, Uruguay launched their *e-Peso* project in 2017 to test feasibility of CBDC, leading to the issuance of \$20 million to 10,000 users who had wallets capped at \$30,000 for individual users and \$200,000 for registered businesses (PwC, 2021). The pilot phase allowed anonymous but traceable payment in registered stores and P2P transfers to inhibit double-spending and falsification.



However, the failure to involve Banco Central del Uruguay (BCU) led to cashing out and destruction of all e-Pesos at the end of the pilot phase. Another project that led to a PoC but was not successful was conducted by the Ecuadorian Central Bank (BCE) who issued *dinero electrónico* in 2015, allowing fund transfer through mobile applications. Nonetheless, Ecuador's National Assembly abolished *dinero electrónico* in 2017 after recording only 1,100 transactions per day with a total value of less than \$800,000.

## 7 RMB Internationalization

An international currency needs to store value besides functioning as a unit of account and a means of exchange beyond the boundaries of issuing authority or country. Moreover, it can be favorable that a currency is held by nonresidents for transactions beyond borders of the issuing country (Zhang & Tao, 2014). Internationalization of a national currency, according to Zhang and Tao (2014), is generally a market-driven process that requires a well-developed financial market, price stability, strong economic growth, foreign confidence in the convertibility regime, and a stable balance of payments situation. Some countries, however, are opposed to currency internationalization because of difficulties enforcing monetary policies, increased vulnerabilities to external shocks and financial instability, increased global policy responsibility, external constraints on domestic monetary autonomy, and a tendency toward currency appreciation (Zhang & Tao, 2014). Nonetheless, there are some significant key benefits of currency internationalization for a country; such as soft national power, political leverage, transaction cost savings, macroeconomic flexibility, and blunting

the adversarial qualities of external financial shocks (Zhang & Tao, 2014).

The determinants of currency internationalization are multiple and work cohesively rather than independently. The leading economic and political powerhouses provide the global currencies. For instance, the dominant role of the United States in global politics and trade allows it to internationalize its dollar while the country's large-scale economy supports creating deep and liquid financial markets (Maziad et al., 2011). Moreover, a country needs extensive international trade networks with strong economic power to support large-scale purchases in the international market with the local currency. In this regard, global share of exports and specialized manufacturing products stimulate invoicing in foreign currency, meaning that commodity exporters adopt the global standard reducing their invoices in domestic currencies. Meanwhile, low and stable inflation in a country combined with a high domestic product (GDP) growth rate increases currency attractiveness as a store of value, leading to motivated internationalization. Maziad et al. (2011) further indicate that countries aiming to internationalize their currency need to provide borrowers and investors access to a range of financial instruments backed by the sovereign's fiscal position. They should exhibit offshore market development with financial deepening onshore, the dominance of international finance, unfettered markets, build credibility as a safe global investment partner, and express willingness to act as a global liquidity provider.

An international currency exhibits several characteristics that distinguish it from domestic currencies. The issuing government removes all foreign exchange trading restrictions to local and international entities besides removing limitations on foreigners holding the domestic currency and

derivative instruments denominated in the respective currency (Kenen, 2009). Moreover, an international currency allows foreign firms, financial institutions, official institutions and individuals to hold amounts they deem helpful and prudent, while local financial institutions and non-financial firms use the currency to issue foreign markets instruments (Kenen, 2009). Additionally, other countries should include the currency in their currency baskets for governing exchange rate policies. In this context, Huang, Wang, and Fan (2014) indicate that China has made significant progress in promoting the international use of RMB and stabilizing investors' currency expectations. Therefore, China is increasing the international use of RMB, enhancing cross-border capital mobility, motivating holding of RMB assets by nonresidents, and offering instruments for hedging currency risks. Kondratov (2021) reports that neighboring countries, including Mongolia, Vietnam, Russia, Myanmar, South Korea, Nepal, and the Philippines, have made RMB their trading currency with China.

## 7.1 The US dollar and its dominance

After World War II, the dollar has been dominating the global reserve currency. Prasad (2014) indicates that there exists the perception of global stakeholders, including foreign central banks and international investors, that the United States financial markets are safe havens which cement the status of the dollar as the dominant world currency. Bertaut, van Beschwitz, and Curcuru (2021) posit that the main factors supporting the dollar status include strong property rights, established rule of law, consistent capital flows, stability and openness to trade, and the size and strength of the United States economy. However, the conception provides the United States with exorbitant privileges entailing significant capital inflows and extensive borrowing from the global

community to support massive current account deficits (Prasad, 2014).

A critical function of money is to store value, meaning that investors can save and retrieve money without considerable loss of purchasing power. Bertaut et al. (2021) indicate that investors exhibit confidence in different currencies as effective value storage through official foreign exchange reserves. In this regard, the disclosed official foreign reserves in 2021 show that the USD dominates with 60%, a drop from 71% in 2000, while the EUR controls 21%, JPY 6%, GBP 5%, and the Chinese RMB 2% (Bertaut et al., 2021). The rise of different currencies has contributed to the loss of the dollar market share, with numerous countries diversifying their reserve holdings during the last 20 years. Nonetheless, the dollar dominates 90% of all transactions in foreign exchange markets, while 50% of international trade invoices are in dollars, and 50% of all international loans and global debt securities are dollar-denominated (Congressional Research Service [CRS], 2021). Therefore, most traders in the international market continue to trust the dollar in financial transactions to eliminate or significantly reduce transaction costs.

Furthermore, institutional and private foreign investors hold a considerable fraction of the dollar reserves in the United States Treasury securities. Bertaut et al. (2021) indicate that in the first quarter of 2021, foreign investors were holding 33% (\$7.0 trillion) of marketable Treasury securities, while private domestic investors held 42% compared to 25% held by the Federal Reserve System. However, important to mention is that the fraction of Treasury securities held by foreign investors had declined by 50% between 2015 and 2020, equating to the share of euro-area government debt held by foreigners in the euro area and

incomparable with shares of British and Japanese government debt controlled by foreigners.

Having said that, it is important to note that the shift from one dominant international currency to another is a very time-consuming process. For instance, the dollar has been dominant since the United States overtook the United Kingdom as the largest economy and exporter in the mid-20th century. However, the economic growth of China is clearly threatening the dollar hegemony. For example, CRS (2020) notes that China is increasingly liberalizing its capital account to improve transparency and predictability of the government's role in the market. Nevertheless, RMB still lacks convertibility in the capital account, forcing the country to rely on foreign currency markets to channel RMB back to the country. But, according to CRS (2020), RMB exhibits significant achievements in the international market, becoming the 8th most traded currency and the 6th most used currency for global payments by value. The development of e-CNY is therefore likely to enable China to challenge the United States sanctions and dollar hegemony.

Meanwhile, the prevalent use of sanctions by the United States to influence the objectionable behavior of foreign governments is encouraging the development of non-dollar payment processing systems, contracts denominated in non-dollar currencies, and increased use of currency swap lines and digital currencies (CRS, 2020). The sanctioned countries reduce their dependency on the United States financial system by avoiding transactions denominated in dollars. For example, sanctions on Russia in 2018 forced the country to sell \$100 billion in US dollar-denominated assets and replace them with euro- and RMB-denominated assets, resulting in the dollar reserve declining from 46% to 23%, euro reserve increasing to 32% from 22%, and renminbi

share expanding by 3% to 14% (Prasad, 2019). Additionally, the US-China trade war has forced PBoC to purchase gold and diversify away from dollar reserves, leading to official gold holdings increasing from 600 metric tons in 2008 to 1,852 metric tons in 2018 (Prasad, 2019). Last but not least, the tendency of the United States to interfere with the internal affairs of different countries is creating a perception of an unreliable and untrustworthy partner in military, trade, and other agreements. is also progressively necessitating the dissolving of the dollar hegemony.

## 7.2 The role of the Digital Yuan

As already previously outlined, currency internationalization is a slow process with high probability of numerous setbacks. Chen (2019) indicates that internationalization entails a currency's degree of circulation abroad, a market scale of financial products priced in the currency, and a high number of settled transactions. With the e-CNY, China now has the chance to gradually increase the number of international transactions denominated in RMB, thereby also encouraging central banks worldwide to increasingly embrace its currency reserve. For example, the strongly enforced use of e-CNY in the Belt and Road Initiative will provide faster and much cheaper transactions for investments in infrastructure-related projects in over seventy countries (Bansal & Singh, 2021). Already in 2019, yuan circulation with trade between China and Belt and Road Initiative partner countries has surpassed 9.27 trillion yuan while China becoming the largest trading partner to twenty-five countries, and signing favorable currency swap agreements with more than 20 countries (Bansal & Singh, 2021). It is clear that this approach will further enhance China's withdrawal from the US-centric financial system.

Furthermore, the increased participation of China in international aid programs enables the country to amass soft power around the world. Between 2013 and 2018, China appropriated aid worth \$41.8 billion, where 4% were interest-free loans, 48% were concessional loans, and 47% were grants (Bansal & Singh, 2021). Therefore, increasing weak economies' dependence on China's loans, enhances their likelihood of adopting e-CNY for bilateral transactions. The large amounts for Chinese debts encourage individual states to accumulate e-CNY for paying the loans because it is relatively cheap compared to transactions in dollar. Moreover, the provision of concession on e-CNY loans will enhance international acceptance, while additionally the low cost of switching will discourage international partners from further engaging in trade transactions with China in dollars.

Another interesting aspect is that the already existing international Chinese payment infrastructure provides many promising opportunities to further promote e-CNY. Chinese digital payment companies, including WeChat Pay, Alipay, and UnionPay are popular with numerous worldwide stores and outlets. Alipay is available in forty-two countries, and WeChat Pay can be found in forty-nine countries, allowing China to immediately access a 1.9 billion user base when distributing e-CNY over preexisting payment platforms. Bansal and Singh (2021) report that Alipay has switched its Quick Response (QR) code payment clearing system to UnionPay, while PayPal Holdings Inc. partnered with UnionPay in 2020, allowing UnionPay cardholders to access PayPal's extensive network.

CBDCs are critical tools for reducing high transaction costs, settlement risks, and delayed payments during international transactions. Digital currencies guarantee global users with the ability

to send money overseas with only a touch of a button. Therefore, availing e-CNY to African countries where China has a significant influence will provide a cheap alternative for sending and receiving remittances (Bansal & Singh, 2021). In this regard, UnionPay is accepted in over fifty African countries, where its partnership with Interswitch East Africa (Kenya) guarantees its access across the East Africa region for online payments and wide acceptability of its cards (Bansal & Singh, 2021). Meanwhile, the Shanghai International Energy Exchange (SINE), established in 2018, encourages the global market to use e-CNY in pricing and valuing crude oil because China is the world's largest importer (Bansal & Singh, 2021). Furthermore, the increased number of bilateral swap agreements (BSAs) ease the availability and access of RMB. E-CNY guarantees cost-effectiveness of trade transactions, pricing, and international reserves. Additionally, the digital currency eliminates the need for establishing a strong offshore RMB market due to its reliance on universal digital payments networks.

The significant influence of China over numerous African and Asian countries enhances negotiation on regulations for allowing distribution of e-CNY to foreign nationals. In this regard, China has an extensive network setup for facilitating e-CNY global use by exploiting the first mover advantage in setting and promoting internationally recognized CBDC standards.

## 8 Conclusion

China is a critical stakeholder in the global civilization due to its role in creating novel ideas and technologies for driving human growth and development. However, the international community lacks a standardized measure or continuity in methodology development for evaluating a country's power status, enabling the perception of China as a political and economic rival to the United States. Chinese increased spending on the Belt and Road Initiative, the new ministry-level development agency, and the reluctance to address global threats and debt-trap diplomacy perpetuate the narrative. Meanwhile, the U.S. dollar accounts for about 60% of foreign currency reserves, enabling the United States to maintain a powerful geopolitical and economic status through the dollar hegemony in the global financial system. In this respect, the United States uses its control over the global financial system to thwart financial engagement of antagonists by isolating them from world markets – the privilege provides the United States with undue political mileage. In contrast, China still has limited bargaining power in the international arena because its cross-border trade significantly relies on the dollar and its payment rails.

China has one of the most advanced CBDC projects in the global arena for both retail and wholesale application. With the e-CNY, the country clearly intends to undercut the dollar hegemony, thereby reducing its reliance on the United States financial system. China further aims to increase the centrality of personal data in its economy, lower cross-border transaction costs by eliminating numerous intermediaries, increase interoperability through a compatible CBDC

system, and articulate the triple imperative of the integrity of the payment system, data privacy, and competition. The country will thereby leverage its existing international digital payment infrastructure, strong demands for cheap remittances in Africa, and especially political soft power channels such as the Belt and Road Initiative and massive debt issuance and recovery programs to further internationalize its domestic currency.

Meanwhile, China's growing role in the global economy is challenging the dominance of the United States dollar which is struggling with increasing pressure on its perception as the number one global currency and the widespread creation of CBDC. Especially the latter will exhibit a crucial function during the coming decades, as the characteristics of CBDC and its payment rails allow for much faster and intensified expansion of the international payment network, providing China with an excellent opportunity to internationalize its currency and thus massively increase its importance in the global arena. Therefore, it is considered a crucial message to the global economic forces that China is seemingly ahead of everyone in the development and implementation of CBDC due to the effectiveness of its launch, issuance, and usage strategies. Constant innovation, regulatory adaptability and, last but not least, the drive towards more digitalization will ultimately show who will win the race in the international CBDC competition.

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