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## Assessing the Long-Term Implications of CBDCs for Global Financial Stability, Reserve Currency Dynamics, and the Future of Dollar Dominance

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Peer Review Information	Abstract
<p><i>Submission: 11 Nov 2025</i></p> <p><i>Revision: 22 Nov 2025</i></p> <p><i>Acceptance: 02 Dec 2025</i></p> <p><b>Keywords</b></p> <p><i>Central Bank Digital Currencies, Dollar Dominance, Digital Financial Technologies, Global Financial Governance, Cryptocurrencies</i></p>	<p>The emergence of Central Bank Digital Currencies (CBDCs) has become a prominent subject of worldwide discourse, especially in emerging nations where financial inclusion, monetary sovereignty, and banking stability are essential issues. This study examines the possible effects of CBDC implementation on the profitability and stability of commercial banking systems in these economies. This study employs a qualitative methodology via a literature evaluation of Central Bank Digital Currency (CBDC) implementations in significant rising economies, namely China, Nigeria, Brazil, Russia, and India. The research indicates that although CBDCs can improve efficiency and financial accessibility, their effects differ based on a nation's banking infrastructure, regulatory environment, and financial stability protocols. In certain instances, CBDCs have intensified liquidity issues for commercial banks, whilst in others, they have fostered digital innovation and other revenue sources. The results underscore the necessity for strategic cooperation between central banks and commercial financial entities to alleviate risks while capitalizing on the advantages of CBDCs. Policy considerations encompass establishing restrictions on CBDC holdings, integrating CBDCs with current banking services, and promoting regulatory frameworks that facilitate a balanced financial environment. This study enhances the scholarly discussion on digital currencies and banking by providing insights into the changing roles of central banks and commercial banks within the digital financial ecosystem.</p>

### 1. Introduction

Over the last 20 years, the global monetary system that is based on the US dollar has shown several flaws and is becoming progressively unable to adapt to new political, economic, and financial developments throughout the world. Furthermore, serious structural shortcomings make fixing the long-standing "Triffin problem" more difficult. The financial system is in grave danger due to the negative spillover risks caused by monetary policy changes made by the US and European central banks. Recent trends in energy

trade, gold reserves, and the rapid creation and testing of digital currencies issued by central banks worldwide indicate a "de-dollarization" of the dollar. Many countries have joined the CBDC effort, and the digital dollars, euros, and yen are now in the technical testing phase, which might lead to future legislation, regulation, market adoption, and cross-border use.

We expect the global research and development of Central Bank Digital Currency (CBDC) to accelerate in the coming years. There will be a proliferation of CBDC collaboration projects, and

central banks throughout the world will agree on international norms and legal standards for CBDC governance and coordination. There will likely be a proliferation of CBDC-related activities across a wide range of sectors, including but not limited to commercial banks, central banks, technology companies, and other organizations. In addition, major developments in international and cross-border payments will occur concurrently with the trial use of CBDC in domestic operations. Because of how quickly the world's money supply is changing, CBDC may wind up effecting areas like reserve assets and financial market operations as well.

## 2. What Is CBDCs

Electronic financial systems, in which currency is shown as numerical values on computers instead of actual currency, have been widely used with the advent of the internet and communication technologies. Despite their widespread use, certain drawbacks, such as discriminatory policies, security breaches, and increased use costs, have come from private firms managing these networks. Many nations are contemplating the implementation of a central bank digital currency (CBDC) as a solution to these challenges. An innovative idea in banking and economics, Central Bank Digital Currencies (CBDCs) are digital representations of a nation's fiat currency that are created and authorized by the central bank. These currencies, built on a distributed ledger technology (DLT) platform, guarantee solid, quick, and cheap transactions. Legally recognized as having the same purchasing power as fiat currency, Central Bank Digital Currencies (CBDCs) have several potential uses in the financial sector, such as P2P payments, online purchases, and international money transfers.

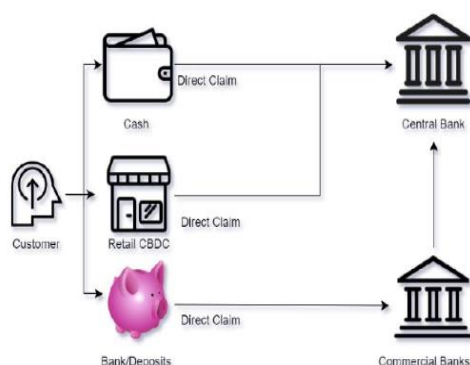


Figure 1: Retail CBDC and Monetary System

In India, CBDCs, or Central Bank Digital Currencies, have the ability to completely transform the banking sector. Their ability to provide a low-cost and accessible payment

system to underbanked and unbanked areas is a major plus since it increases financial inclusion. Moreover, CBDCs have the potential to improve financial stability by reducing worries about private cryptocurrencies and bank runs, both of which pose systemic risks. Central banks are better able to implement monetary policy via CBDCs, which improves their capacity to maintain economic stability.

## 3. Status of CBDC Development at Global Level

### European Union

At present, there are differences in the attitude of the world's mainstream central banks towards the development of CBDC, and their research and development process and regulatory attitudes are also at different stages. The digital euro (e-Euro) effort has been moving at a snail's pace due to the European region's more cautious attitude towards digital currencies issued by central banks. The ECB has placed an emphasis on prudential supervision. Noting the CBDC's legal tender qualities and electronic payment capabilities, the ECB views it as a digital version of central bank money that is available to all institutions and the public. In 2022, the digital euro staging project, which was led and managed by the Bank of France, got a lot of progress. It tested advanced tokens and digital wallet settlements between two CBDCs in the cloud, laying the groundwork for the next phase of using the digital euro for cross-border payments and clearing. Still, when it comes to digital currencies, the UK is one of the most welcoming countries in the world. Proactively embracing the cryptocurrency market and devoting itself to improving the regulatory framework, the UK has gradually instituted a system that includes taxation, anti-money laundering, and investor protection in an effort to attract international capital and expand operations in London's international financial center. There were more than 2.3 million cryptocurrency holders in the UK by June 2021, accounting for 4.4% of the adult population. The median holdings per capita went from £260 to £300 in only one year.

### The United States of America

The public's focus during Biden's administration was on CBDCs and the priorities for the next central bank digital currency (CBDC). In the aftermath, on August 4th, President Biden signed an executive order with the title "Maintaining Services of Qualified Banking and Payments." This is the document in which he ordered the Treasury Department to provide a

report on "Future Currency and Payment Systems" no later than 2023. This article aims to explore several ideas for the design of CBDC that the US may issue. Members of the CBDC workgroup will come from many government agencies, including the US Department of the Treasury, the National Science Foundation, and the White House Office of Science and Technology Policy (OSTP). The group's mission is to support the Federal Reserve's rollout efforts by creating a national program for digital asset research and development. The United States and a number of European countries are among the governments that have instituted sandbox regulations to help develop their CBDC programs. Because of this, CBDC studies may be carried out in real-life market settings.

### **China**

Actually, when it comes to CBDC, China's Central Bank Digital Currency, it's the most advanced one. Starting in April 2020, five cities began testing the digital yuan (e-RMB). By the end of 2022, 26 districts across 17 provinces and municipalities had tested the digital RMB. Furthermore, the digital RMB pilot program has already been launched by the People's Bank of China (PBOC). The Digital Currency Institute of the People's Bank of China and other Belt and Road campus central banks advanced the mBridge project for Thailand's digital currency by February 2022. The platform has accomplished more than any other cross-border CBDC pilot test to date, issuing over 12 million USD in CBDC by August 2022 and enabling over 160 payment and foreign currency transactions totaling over 22 million USD.

### **Japan**

Not only has the world's third-largest economy, Japan, demonstrated tremendous enthusiasm for the quick institutionalization of its own CBDC, but it has also publicly said that it would not be issuing a CBDC in the foreseeable future. It has announced that studies aiming at this institutionalization would go on. The central banks of major economies in the US and Europe are now working on this institutionalization together. The Bank of Japan was spot-on when it said that the rapid use of digital technology in social and economic spheres in the future would cause a massive demand for CBDCs.

### **Developing Countries**

Many believe that developing nations welcome the digital currencies issued by central banks with open arms. Less developed nations are more likely to have introduced digital currencies issued by central banks. The Petro, an asset-

backed CBDC supported by a credit instrument, was established by Venezuela in 2018. Central banks in developing economies often issue digital currencies directly to end users in direct circulation, rather than using a wholesale model like in the Americas or Europe. This retail model is characterized by a single-tier circulation system. The Bahamians and the Chinese are just two examples of the developing nations that have adopted central bank digital currencies and are using a two-tier circulation model, which stands for "central bank-commercial bank-user," to lessen the impact of their monetary policies on the current system.

## **4. Theories of Currency Competition and Reserve Currency Dynamics**

### **• The network effects of dominant currencies**

Network effects play a crucial role in explaining why dominant currencies persist. Vaubel (1986) elaborates on the operation of competing currencies, noting that they are rarely perfect substitutes due to transaction costs that reinforce the formation of payment circuits or currency domains. He argues that 'two competing monies will hardly ever be perfect substitutes' when considering money's role as both a standard of value and a means of payment. This theoretical framework helps explain why, despite some shifts, the dollar has maintained its dominant position over the past several decades.

### **• Historical case studies of de-dollarization efforts**

Past efforts to supplant dominant currencies demonstrate recurring themes and significant obstacles. Eichengreen and Flandreau (2009) examined the transition from the British pound sterling to the U.S. dollar as the principal international reserve currency, explaining the economic and geopolitical factors that facilitated this shift. Specifically, the erosion of British economic hegemony, coupled with the United States' ascendant position following World War II and the subsequent implementation of the Bretton Woods system, were pivotal in establishing the dollar's primacy. Their analysis provides a framework for understanding the variables that could potentially challenge the dollar's present status.

De-dollarization efforts have historically yielded limited success. International Monetary Fund (IMF) research by Abdelati (2006) indicates that only a small fraction of countries achieved lasting de-dollarization between 1980 and 2001, with Poland and Israel demonstrating effective

strategies. These nations implemented strong disinflation programs and offered attractive domestic currency alternatives, such as indexed assets and higher interest rates. Conversely, attempts relying on administrative force, without addressing underlying economic issues, proved counterproductive. For instance, Peru and Bolivia's forced currency conversions in the early 1980s resulted in capital flight and a surge in foreign currency deposits. More recent de-dollarization strategies have focused on macroeconomic stability, regulatory reforms, and legal mandates for local currency transactions.

- **Role of sanctions and financial weaponization in currency shifts**

The use of financial sanctions as a strategic tool has become a notable factor influencing de-dollarization discussions. In 2022, the United States and its allies implemented extensive measures against Russia, including freezing approximately \$300 billion of its central bank foreign currency reserves, blocking assets of individuals and Russian banks, and restricting access to the SWIFT payment system. These unprecedented sanctions signaled a significant departure from prior policy, suggesting that access to reserve assets could be tied to geopolitical alignment. Consequently, there has been an increased interest in finding alternatives to dollar-based financial systems. This has prompted central banks to diversify their reserve portfolios, exemplified by Russia holding a substantial portion of its reserves in Chinese yuan. Nevertheless, the U.S. dollar maintains its position as the world's primary reserve currency, indicating that while financial sanctions may accelerate dedollarization trends, they have not yet fundamentally undermined the dollar's dominance.

## **5. Shifting Global Perspectives on CBDCs**

### **Future of Dollar Dominance**

Recently, The Bank of Japan has announced plans to initiate a CBDC pilot program in 2023, the Saudi Arabian Central Bank has signaled an expedited research effort on CBDC, and the Federal Reserve and the European Central Bank have experienced a progressive shift in their perspectives on CBDC. "The Federal Reserve and the European Central Bank have moved from being reluctant to being measuredly receptive to CBDC initiatives, in light of the evolving global research and development landscape. Legislators and the public have also seen a significant rise in regulatory discourse surrounding CBDCs." The European Central

Bank has laid out a clear plan for the digital Euro and plans to start a new era of rule-making regulations in 2033. The implementation of a digital euro, according to ECB President Christine Lagarde, would boost Europe's strategic independence by encouraging the development of payment technologies inside the Euro area. The result is 2,22 Research into digital dollars has been actively monitored by federal authorities, the U.S. Treasury, the Federal Reserve, and the White House since 2022, making it a priority. The New York Federal Reserve Innovation Centre suggested studying a system of controlled liabilities in November of that year. The original plan of the Center was to look into the feasibility of a regulated liability network pilot project in the United States. This project would include Wall Street financial corporations producing tokens and acting as reserve settlement operations of central banks. Digital dollar and digital euro R&D testing and regulatory regulation are expected to go forward at a faster pace. Nevertheless, similar to the struggle between the US dollar and the euro, digital dollars and digital euros may emerge in competition. It is probable that the European Central Bank will move forward before the EU law governing CBDCs is finalized.

Although progress is being made in the development and testing of CBDCs in Asia, the main focus is on improving payment systems and promoting financial inclusion, as opposed to the developed nations of Europe and the US that prioritize domestic compatibility, privacy protection, and multilateral cooperation. Also, South America's rising economy in Venezuela is well-known for its significance. After launching petrocoin in 2018, Venezuela quickly withdrew it because of poor planning for the project's early stages of growth, leading to a "digital currency crisis" and eventual collapse. When other countries are working on digital currencies issued by their central banks, the relevant lessons may be used as a guide. Venezuela plans to use the proceeds from the sale of Petro to alleviate the country's dire economic condition by reducing the impact of the heavy sanctions imposed by wealthy nations in the US and Europe. Venezuela has issued Petro to maintain domestic price levels and alleviate the government's financial crisis in response to its catastrophic inflation and ongoing economic downturn in recent years.

To sum up, the growing trend of re-globalization could lead to major differences in the structure, methods of operation, and international payment applications of Central Bank Digital Currencies (CBDCs) between the US and European central banks and those of developing

countries. This could be because of differences in regulatory frameworks, financial environments, and goals, which could encourage competition.

## 6. Conclusion

This paper has explored the strategic role of dollar-backed stablecoins in reinforcing U.S. financial dominance amid growing global de-dollarization efforts. The analysis highlights how the Trump administration's push for digital dollar initiatives represents both an economic and geopolitical maneuver to maintain U.S. influence in an evolving financial landscape (Riya, 2025). While dollar-backed stablecoins extend U.S. financial power into digital markets, they also introduce risks related to financial surveillance, regulatory resistance, and unintended acceleration of de-dollarization trends. Furthermore, the broader weaponization of the dollar, particularly through sanctions and restrictions on global payment networks such as SWIFT, has intensified efforts by foreign governments to develop alternative financial systems, including CBDCs and DeFi solutions. These dynamics indicate a potential shift toward a more multipolar financial system, challenging U.S. hegemony in international monetary governance.

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