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# Digital Currencies

THE US, CHINA, AND THE WORLD AT A CROSSROADS

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Edited by Darrell Duffie and Elizabeth Economy

EXECUTIVE SUMMARY

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and  
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EXECUTIVE SUMMARY

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## *Executive Summary*

Central bank digital currencies (CBDCs) have taken flight globally. More than ninety central banks are researching, piloting, or deploying CBDCs. Several are already testing cross-border transactions. Among the countries exploring CBDCs, China occupies a particularly important position. It is the first major country to deploy a CBDC widely within its own economy, and its central bank is dominant among those participating in a cross-border payments development project under the auspices of the Bank for International Settlements. China's emergence as a first mover in this space gives Beijing a significant opportunity to cement its international leadership of payments technology innovation and adoption, to set economic norms and technical standards that align with its authoritarian governance system, and to increase its ability to undercut the traditional dominance of the US dollar as a source of geo-economic and strategic influence.

China's government asserts that its CBDC, the e-CNY, is primarily for domestic economic purposes: the e-CNY will yield greater efficiencies within China's domestic payment systems, enable more Chinese people to access the banking system, and allow for greater government oversight and control of business and individual financial transactions. However, Chinese commentators and analysts have also underscored the key role that the e-CNY could play in a larger global technological ecosystem defined by the People's Republic of China (PRC)—a “community of common destiny in cyberspace,” as President Xi Jinping has

put it,\* that engages internet regulation, data security, and international standards. The PRC government views digital currency as one of several areas within the broader cyberspace arena where it can exert a leadership role in setting global norms and rules around both digital policy and technical standards. To this end, China's central bank, the People's Bank of China (PBOC), has already begun to propose international principles for cross-border digital currency transactions. While Chinese officials present a benign view of their engagement with digital currency on the global stage, some Chinese analysts emphasize rivalry with other powers, describing digital currencies as a "new battlefield for competition" in which China can win through its first-mover advantage.

The US government has been alert to China's development of the e-CNY and to the new digital currency's implications for the position of the US dollar as the world's reserve currency, the ability of the United States to implement sanctions through the international financial system, and the potential loss of financial and other personal data privacy. However, US officials have been cautious about exploring the potential creation and deployment of a US CBDC. The US administration and the Federal Reserve System have yet to put forward their own visions for the integration of digital currencies into global payment systems, and have not yet set norms governing the use of public and private digital currencies, domestically or internationally. The focus of the US official sector has instead been primarily on how to manage the explosion of cryptocurrencies and stablecoins that have recently appeared within the United States. However, the stakes are too high and the pace of digital currency development too rapid for the United States to remain on the sidelines. Many emerging economies and an increasing number of the world's advanced economies are moving forward aggressively to develop technological and regulatory frameworks for the deployment of their own CBDCs. For the United States to remain competitive and a leader in global finance and financial technologies, and to ensure the continued strategic influence of the US dollar, Washington should adopt a far more proactive strategy.

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\*Sources for this and other quotations and facts cited in this executive summary are provided in the body of the report, chapters 1 through 6.

## Major Findings

China is a global leader in financial technology (fintech) innovation and adoption, building upon technological advances that largely originated in the United States. Ant Group's Alipay and Tencent's WeChat Pay are the most dynamic and successful fintech payment services in the world. The e-CNY harnesses this technological dynamism for a set of government-directed objectives that include supporting China's transition away from paper money; providing more efficient payment services, both commercial and governmental (including social welfare programs); expanding access to payment systems through the ability to make offline e-CNY payments in areas without cellular or internet services; and reducing corruption. The e-CNY also enables the PBOC to respond more quickly to changes in macroeconomic conditions with adjustments to its monetary policy, including more flexible and targeted forms of liquidity. According to one estimate, the e-CNY also has the potential to save China more than US \$24 billion annually in direct and indirect costs associated with producing and distributing physical money.

The e-CNY is part of a broader push by Beijing for greater control over its own financial sector. In recent years, many Chinese citizens have moved away from their heavy reliance on traditional state-owned commercial banks to take advantage of services offered by China's large fintech sector—dominated by Ant Group and Tencent—not only for payments but also for wealth management, small loans, insurance, and other financial products. In the process, these two giant tech firms have gained access to vast quantities of personal data and undercut the government's control over the financial sector. In response, Beijing recently implemented a raft of regulations designed to limit the market power of Ant Group, Tencent, and other tech firms; reduce their access to Chinese citizens' data; and enhance the ability of China's large state-owned banks to compete. China's government has also banned private cryptocurrencies such as Bitcoin.

In the context of the PRC's authoritarian system, the e-CNY also increases Beijing's ability to enforce political control over Chinese society. The e-CNY will provide state-owned banks with a more direct

window into personal financial transactions. To the extent that the e-CNY becomes heavily used, the PBOC will be able to directly trace money flows via bank accounts, ID cards, domestic phone numbers, and potentially even foreign phone numbers. (Full anonymity will probably apply only to small payments from hardware wallets that function like prepaid gift cards.) Transactions can be tracked, accounts frozen, and balances adjusted. With this power, the e-CNY could become an important tool for punishing Chinese citizens for their social or political activism or criticism of the government. The e-CNY could also be linked to other programs, such as the social credit system, that aim to reward or punish Chinese citizens, as well as Chinese and multinational corporations, for their adherence to or defiance of government regulations and Chinese Communist Party (CCP) norms of behavior.

The international implications of the e-CNY are also significant. Several factors have converged to enable Beijing to promote the internationalization of its currency, the renminbi (RMB), without needing to liberalize capital controls. These factors include the growing role of the Cross-Border Interbank Payment System (CIPS) and other potential alternatives to the payment messaging system of the Society for Worldwide Interbank Financial Telecommunication (SWIFT), the global reach of payment platforms such as Alipay and WeChat Pay, the developing role of the e-CNY in multi-CBDC cross-border payment corridors, and the budding use of the e-CNY in offshore instant payment systems. Even before the e-CNY's deployment, Indonesia and Russia were conducting a substantial part of their bilateral trade with China in RMB. Russia has also shifted the composition of its sovereign wealth fund (the National Welfare Fund) and its central bank's foreign exchange reserves significantly away from dollar-denominated bonds and toward yuan-denominated bonds. Given China's heft in global trade and investment, the e-CNY may become a currency of choice for transactions between a significant number of foreign governments and businesses and their Chinese counterparts.

In addition, China has a robust domestic digital technology infrastructure and a suite of technology products that it exports abroad via the Digital Silk Road, the digital infrastructure pillar of the Belt and

Road Initiative. Huawei, for example, is a strategic partner of the PBOC's Digital Currency Research Institute and collaborates on e-CNY projects related to distributed databases and networks, as well as on e-CNY-enabled mobile phones. This partnership is reflected in Huawei's business and sales at home and abroad. More than 60 percent of smartphones sold in Africa are made in China, for instance, and new phones like Huawei's Mate 40 come with e-CNY wallets. These factors significantly enhance the likelihood of international payments in e-CNY and other RMB instruments, including RMB stablecoins, by consumers and businesses outside China.

The e-CNY also adds to Beijing's ability to weaken the US-led financial sanctions regime. The United States and its allies frequently enforce financial sanctions against international actors via SWIFT. For example, when the United States sanctioned Hong Kong chief executive Carrie Lam for undermining Hong Kong's democracy movement, Lam had to be paid in cash because no bank would provide account services to her. Although CIPS is still largely a Chinese enterprise dominated by Chinese banks, countries such as Turkey and Russia have used CIPS to avoid SWIFT sanctions in the past. The e-CNY might enable more countries to do the same, although the precise mechanisms that could enable this are not yet clear. E-CNY data also enable monitoring that could trigger applications of China's new Anti-Foreign Sanctions Law, which authorizes travel restrictions, asset freezes, and commercial transaction prohibitions to prevent entities from complying with foreign sanctions regimes.

Finally, China is asserting leadership in shaping global norms and institutions for multicurrency cross-border payments. Along with the Hong Kong Monetary Authority, the Bank of Thailand, and the Central Bank of the United Arab Emirates, the PBOC is one of four monetary authorities participating in the m-CBDC Bridge, a Bank for International Settlements pilot project intended to enable cross-border transactions between CBDCs. This project gives China an additional opportunity to advance its norms, for example around privacy, within a group of politically friendly countries under the auspices of a prestigious international institution.



## Recommendations

The United States should embrace the opportunity to shape the future digital economy. In particular, it should pursue three key priorities. First, the United States should move quickly to determine the appropriate nature and role of digital currencies within the US economy. Second, the United States should attempt to prevent the e-CNY from undermining US geo-economic and strategic influence, which derives in significant part from the dominance of the US dollar in the global economy. And third, the United States should take adequate steps to prevent the global spread of RMB-based payment arrangements, including the e-CNY, from threatening individual freedoms and human rights.

A further top US priority should be to initiate a well-resourced CBDC research and development effort that engages the innovative strength of the private sector and the intellectual capital of US universities. The partnership between the Boston Fed and the Massachusetts Institute of Technology is only one step in this direction. To bring payment-system technology development to the next stage, the Center for Enterprise Modernization, the US Treasury Department's research and development center, should coordinate and provide contracts for the development of CBDC and other digital payment technologies, while also generating standards for modernized payment systems. The federal government should also utilize its program of Cooperative Research and Development Agreements, a federally sanctioned system that enables industry to collaborate with the government to jointly research and develop technologies with both commercial and governmental applications. Further, Congress should pass the US Innovation and Competition Act, legislation that focuses on improving US competitiveness. The Senate bill, which was passed on a bipartisan basis, would invest more than \$200 billion into US scientific and technological innovation over the next five years. The final version of the bill, which is currently being considered by the House of Representatives, should explicitly fund CBDC research and development and other projects that modernize US payment systems.

While it is crucial that the United States develop CBDC technology, this does not imply that the United States should necessarily deploy its

own CBDC. A CBDC design that maintains the privacy of Americans, while at the same time defeating illegal payments and providing for a competitive, inclusive, and innovative payments landscape, will not be a simple or rapid achievement. However, precisely because it will take some time to reach these design objectives, the United States should move now to develop CBDC technology.

More broadly, the United States should establish a strategic plan for the role of payment systems in the US digital economy. This plan should provide for the development of data-privacy standards and the integration of payment infrastructure such as CBDCs, fast-payment systems, and private payment arrangements including stablecoins into many forms of economic transactions. To date, the US government has concentrated on managing risks to conventional US payment systems. While controlling these risks is critically important, regulations that shield legacy payment systems from competitive disruption may hinder innovations that can improve the everyday lives of Americans and enable the United States to lead in the rapidly evolving global digital economy. In addition to developing new forms of payment rails, the United States can upgrade its legacy bank-railed payment systems by regulating in favor of greater competition and by leveraging the potential power of FedNow, the new fast-payment system currently under development by the Federal Reserve System.

The United States should also position itself as a global leader in the digital currency space, especially in the development of a global framework of regulatory principles that is consistent with US expectations concerning consumer protection, privacy, financial anti-crime compliance, financial stability, and the protection of monetary sovereignty. The United States should ensure high standards for cross-border uses of CBDCs and other payment instruments such as stablecoins.

In particular, the United States and other democracies should make clear that international adoption of the e-CNY and other Chinese e-payment platforms could give the Chinese government significant coercive leverage over countries, companies, and individuals outside China. These democracies should move expeditiously to coordinate standards for privacy and for the protection of monetary sovereignty in

relation to the use of CBDCs and private cryptocurrencies. Such coordination can counter the potential proliferation of standards being set by China's government that are not consistent with the norms of market democracies.

Alignment of principles is already underway within the G7. However, several members of our working group support broadening that effort to include other democracies—large and small—that are in the CBDC research and development phase or that have already deployed CBDCs. The United States should be vocal in its leadership. Given China's dominance in global trade, its e-CNY technology and the lack of privacy norms embodied in that technology are likely to proliferate rapidly unless compelling alternatives are available.

In addition to leadership in standard setting, Washington and its key allies and partners should prioritize assistance to other countries interested in exploring CBDCs or other digital payment systems. Such an effort should be included in the G7's Build Back Better World (B3W) partnership. Support can be provided from the US Development Finance Corporation and the US Agency for International Development. Further support for developing countries to participate in this emerging financial ecosystem should also be provided by the World Bank in a manner that is consistent with the standards that are being set by market democracies.

This volume supports and elaborates on this brief summary of the findings and recommendations of our working group. Our work is based on extensive evidence-based research and group deliberation over the past year. While the members of the working group may not agree on every specific step that the United States should take, we stand as one in underscoring the urgent need for the United States to reassert its leadership in this fast-moving and decisively important arena.