

United States House of Representatives
Committee on Financial Services
2129 Rayburn House Office Building
Washington, D.C. 20515

July 23, 2021

Memorandum

To: Members, Committee on Financial Services
From: FSC Majority Staff
Subject: July 27, 2021, NSIDMP Subcommittee Hearing entitled, “The Promises and Perils of Central Bank Digital Currencies”

The Subcommittee on National Security, International Development, and Monetary Policy will hold a hearing entitled “The Promises and Perils of Central Bank Digital Currencies” on Tuesday, July 27, 2021, at 10:00 AM ET in 2128 Rayburn House Office Building. There will be one panel with the following witnesses:

- **Dr. Julia Coronado**, President and Founder, MacroPolicy Perspectives
- **Mr. Yaya Fanusie**, Adjunct Senior Fellow, Energy, Economics and Security Program, Center for a New American Security
- **Ms. Julia Friedlander**, C. Boyden Gray Senior Fellow and Deputy Director, Atlantic Council
- **Dr. Andrew Levin**, Professor of Economics, Dartmouth College
- **Mr. Robert M. Baldwin**, Head of Policy, Association for Digital Asset Markets

Introduction

Central Bank Digital Currencies (CBDCs) are a digital representation of paper and coin fiat currency, and are monetary instruments that are direct liabilities of a central bank, making them distinct from both cryptocurrencies (e.g., Bitcoin, Ethereum) and other forms of digital money (e.g., money held by commercial banks).¹ Eighty-one nations, representing 90% of global Gross Domestic Product, are currently researching, developing, or managing CBDCs,² including the Central Bank of The Bahamas, which launched its own CBDC, the Sand Dollar, in October 2020,³ the European Union, which recently announced a two-year CBDC design and distribution project;⁴ and the ongoing pilot of the digital yuan by the People’s Bank of China (PBOC).

Many central banks cite similar motivations for pursuing CBDCs, which include: increasing financial inclusion; facilitating faster and cheaper payment options; countering privately managed virtual assets; and building newer, more direct levers to implement monetary policy.⁵ As government objectives and regulatory landscapes differ by country, the design choices of each CBDC can vary as well. For example, the digital yuan appears to have a structure that minimizes anonymity and maximizes authorities’ visibility into users and their transactions, facilitating Chinese government surveillance of financial

¹ Bank for International Settlements, [Central Bank Digital Currencies: Foundational Principles and Core Features](#) (2020).

² Atlantic Council, [Central Bank Digital Currency Tracker](#) (Accessed July 22, 2021).

³ Forbes, [The First Nationwide CBDC In The World Has Been Launched By The Bahamas](#), (Oct. 21, 2020).

⁴ European Central Bank, [Eurosystem launches digital euro project](#) (Jul. 14, 2021).

⁵ Brookings Institute, [The Current Landscape of Central Bank Digital Currencies](#), (Dec. 13, 2019).

activities and participants.⁶ The Sand Dollar, which aims to provide inclusive access to financial services in underserved and rural communities, especially in the aftermath of natural disasters, was designed for use across the array of mobile payment platforms commonly used by citizens of the Bahamas.⁷

The United States is among those nations considering the use and design of a CBDC.⁸ While no decision has been made by the U.S.' central bank, in late 2019, the Federal Reserve (the Fed) announced that it would analyze potential costs, benefits, and legal issues pertaining to a digital dollar.⁹ In August 2020, the Fed further announced two initiatives to explore the technical challenges of supporting a CBDC,¹⁰ including the aspects like available technology, distribution methods, interoperability, privacy, security, and compliance. Answers about the risks and benefits of a U.S. CBDC are being weighed by technologists, regulators, civil libertarians, economists, and national security experts. Policy makers are also considering what multilateral actions might be appropriate to shape global developments in a manner which benefits U.S. and allied interests, including monetary policy and national security objectives..

Monetary Policy and Financial Stability Considerations

Challenges with Monetary Transmission

Monetary transmission refers to the mechanisms used by central banks to conduct monetary policy and the effectiveness of those mechanisms in achieving central banks' policy objectives. The Fed has traditionally undertaken monetary policy through the federal funds rate, the "interest rate that financial institutions (FIs) charge each other for loans in the overnight market for reserves."¹¹ In theory, the Fed lowers the federal funds rate to stimulate the economy through expansionary monetary policy and raise the federal funds rate to contract economic growth. In recent years, episodes where the federal funds rate has briefly been misaligned with the Fed's target rate,¹² as well stagnant economic growth despite sustained low interest rates,¹³ have raised questions about the current state of monetary transmission. Fed Chair Jerome Powell alluded to this dynamic (which is sometimes referred to as a "declining neutral interest rate") in February 2020 testimony, saying, "there has been a decline over the past quarter-century in the level of interest rates consistent with stable prices and the economy operating at its full potential. This low interest rate environment may limit the ability of central banks to reduce policy interest rates enough to support the economy during a downturn."¹⁴

CBDCs are a potentially effective method of monetary transmission, since some versions of CBDC could provide central banks with the ability to conduct direct monetary transfers, supplementing the effects of accommodative monetary policy. Direct monetary transfers, sometimes called "helicopter drops" or "helicopter money," is the idea that central banks could stimulate aggregate demand by distributing money to people.¹⁵ These transfers are similar to the Economic Impact Payments (EIPs) distributed through the Congressional COVID-19 relief packages. In CBDC models where every citizen has a digital wallet, or the government has visibility into wallet ownership, the speed at which these

⁶ Financial Times, [Virtual control: the agenda behind China's new digital currency](#), (Feb. 17, 2021).

⁷ Bloomberg, [How the Tiny Bahamas Beat Global Giants in the E-Currency Race](#), (May 20, 2021).

⁸ Federal Reserve Bank of Boston, [The Federal Reserve Bank of Boston announces collaboration with MIT to research digital currency](#) (Aug. 13, 2020).

⁹ Wall Street Journal, [Powell Says Fed Has No Plans to Create Digital Currency](#), (Nov. 21, 2019).

¹⁰ Federal Reserve Bank of Boston, [The Federal Reserve Bank of Boston announces collaboration with MIT to research digital currency](#) (Aug. 13, 2020).

¹¹ Federal Reserve Board of San Francisco, [What is the Fed: Monetary Policy](#).

¹² Federal Reserve, [What Happened in Money Markets in September 2019](#), (Feb. 27, 2020).

¹³ John C. Williams, [Monetary Policy in a Low R-Star World](#), (Aug. 15, 2016).

¹⁴ House Financial Services Committee, [Monetary Policy and the State of the Economy](#), (Feb. 11, 2020).

¹⁵ Bank for International Settlements, [Central Bank Digital Currencies: Foundational Principles and Core Features](#) (2020).

distributions can be made increases considerably while also ensuring that those who are traditionally not served by the banking sector and most in need of countercyclical assistance would be able to benefit.^{16 17}

Fed Chair Jerome Powell alluded to this dynamic (which is referred to as a “declining neutral interest rate”) in February 2020 testimony, saying that in addition to the difficulty that central banks face spurring desired growth through sustained low-interest rates, the Fed has also experienced several recent episodes of monetary transmission disruptions, or perturbations in the “plumbing” of the financial system, that have temporarily challenged the degree of control that the Fed has over the federal funds rate.¹⁸

Banking Sector Disintermediation and Financial Stability

CBDCs could also have implications for the traditional fractional reserve banking system depending on the roles of a nation’s central bank and private sector. One-tier models (also called “direct CBDCs”) establish the central bank as the user-facing enterprise, providing accounts and customer services directly to retail customers. In contrast, two-tier systems (or “indirect CBDCs”) feature private financial services providers (e.g., banks, payment platforms) as an intermediary between retail customers and the central bank. In a two-tier system, the payment service provider is responsible for furnishing customer accounts (including digital wallets), handling retail payments, and maintaining compliance with financial crime obligations, leaving the central bank to handle only the digital wholesale payments.¹⁹

Traditionally, banks and credit unions make money through maturity transformation, taking on short-term liabilities in the form of deposits and lending that money out in the form of longer-term assets, like mortgages. The introduction of CBDCs could fundamentally disrupt this system since the FI would not be able to use the CBDCs that would be stored in the wallets that they manage in a two-tier system or would not play a role whatsoever in a one-tier system.²⁰ Additionally, in certain situations, CBDCs could also pose a risk to financial stability in a system due to concerns around flights to safety in times of economic stress.²¹ In a system where there is no limit on the amount of CBDC that one person can control, individuals may move all their assets into CBDCs, which the government guarantees, potentially causing stress at FIs and within other segments of the financial system.²² Among other things, this could have implications for deposit insurance and the bank resolution framework that prioritizes retail depositors.²³ Models can account for this possibility by limiting the amount of CBDC an individual can control or the overall amount in the system.²⁴

National Security Considerations

Dollar Primacy

A nation’s ability to defend the value of fiat currency, inject stability, and employ monetary policy levers to protect the economy from macro- and microeconomic events is also a significant national security and foreign policy tool. For the U.S., the strength of the dollar is directly related to its political and diplomatic power. The U.S. dollar’s status today is the world’s dominant reserve currency (i.e., the

¹⁶ ICBA, [Digital Dollar Digest: What Central Bank Digital Currency Architecture Means for Community Banks](#). Also see House Financial Services Committee, [Inclusive Banking During a Pandemic: Using FedAccounts and Digital Tools to Improve Delivery of Stimulus Payments](#) (Jun. 11, 2020).

¹⁷ Brookings Institute, [What tools does the Fed have left? Part 1: Negative interest rates](#) (Mar. 18, 2016).

¹⁸ FEDs Notes, [What Happened in Money Markets in September 2019](#), (Feb. 27, 2020).

¹⁹ Ibid.

²⁰ Bank Policy Institute, Ibid.

²¹ Williamson, S., Journal of Economic Dynamics and Control, [Central Bank Digital Currency and Flight to Safety](#), (Jul. 31, 2020).

²² *Id.*

²³ Bank of Canada, European Central Bank, Bank of Japan, Sveriges Riksbank, Swiss National Bank, Bank of England, Federal Reserve, Bank for International Settlements, [Central bank digital currencies: foundational principles and core features](#) (2020).

²⁴ Bank of International Settlements, [Central bank digital currencies](#), (Mar. 2018).

currency that is held most predominantly by central banks around the world).²⁵ According to the Congressional Research Service, “about half of international trade is invoiced in dollars, and about half of all international loans and global debt securities are denominated in dollars. In foreign exchange markets, where currencies are traded, dollars are involved in nearly 90% of all transactions.”²⁶ Thus, considerations about a U.S.-sponsored CBDC involve evaluating a CBDC’s effects on that reserve status and the effects of other nations’ CBDC offerings on the U.S. economy and currency.

In that regard, the imminent roll-out of the PBOC’s digital yuan, more than other CBDCs, is a concern and may be a factor in U.S. decision-making about its own CBDC. Although benefits to China include the ability to stem capital flight and to counter widespread use of private digital payments services such as Alipay and WeChat Pay,²⁷ a primary motivation is to increase China’s economic and trade power vis a vis the United States. Mu Changchun, Director of the Digital Currency Research Institute of China’s central bank, noted, “Our project is to safeguard the monetary sovereignty. And most of the monetary authorities or central banks would like to do the same to avoid dollarization.”²⁸

To successfully undermine, parallel, or replace the U.S. dollar’s status as the world’s primary reserve currency, China’s CBDC would need to offer a viable alternative to conduct and settle cross-border payments, requiring connectivity and adoption in numerous other markets.²⁹ To achieve that, China, which is already engaged in competition with the U.S. and Russia for resources, allies, and status around the globe, is expected to leverage its market size and foreign aid. By predicating both on the use of the digital yuan, China would broaden the adoption of its currency, contributing to its Digital Silk Road initiative.³⁰ This extends, as well, to influence on technology and surveillance standards, spreading China’s digital illiberalism and turning foundational standards for financial and technology infrastructure away from U.S. economic and security interests.³¹

Economic and Trade Sanctions

Cross-border payments systems that might compete with the current structure, including CBDCs, could facilitate sanctions evasion³² by giving sanctions targets access to opaque avenues for the flow of goods, services, and funds. These outlets from the pressure of sanctions could also undermine America’s ability to leverage sanctions as a foreign policy and national security tool;³³ recently, Iran has pursued bitcoin mining to evade sanctions,³⁴ and Venezuela has attempted to launch its own cryptocurrency, the Petro, to sidestep multilateral sanctions.³⁵ Anonymized, tokenized CBDC models, where users cannot be connected to their transactions, would further facilitate evasion and severely impact sanctions efficacy.³⁶

Privacy

Transaction records, including an identifier of participants (that could be anonymous, pseudonymous, or fully attributed), must be recorded to a digital ledger to prevent fraud and double-

²⁵ Congressional Research Service, [The U.S. Dollar as the World’s Dominant Reserve Currency](#), (Dec. 18, 2020).

²⁶ *Id.*

²⁷ Reuters, [Analysis: China digital currency trials show threat to Alipay, WeChat duopoly](#) (Apr. 25, 2021).

²⁸ Ledger Insights, [China suggests principles for cross border CBDC to ‘avoid dollarization’](#) (Mar. 25, 2021).

²⁹ Ferguson, N., Bloomberg, [Don’t Let China Mint the Money of the Future](#) (Apr. 4, 2021).

³⁰ Council on Foreign Relations, [Assessing China’s Digital Silk Road Initiative](#) (Last Accessed Jul. 16, 2021).

³¹ Center for New American Security, [Countering High-Tech Illiberalism](#) (Last Accessed Jul. 16, 2021).

³² House Committee on Financial Services, [Schemes and Subversion: How Bad Actors and Foreign Governments Undermine and Evade Sanctions Regimes](#) (Jun. 16, 2021).

³³ The Belfer Center, Harvard University, [Digital Currency Wars: A National Security Crisis Simulation](#) (Jan. 2020).

³⁴ Elliptic, [How Iran Uses Bitcoin Mining to Evade Sanctions and “Export” Millions of Barrels of Oil](#), (May 21, 2021).

³⁵ Brookings Institute, [Venezuela’s “petro” undermines other cryptocurrencies – and international sanctions](#), (Mar. 9, 2018).

³⁶ Baer, G., Bank Policy Institute, [Central Bank Digital Currencies: Costs, Benefits, and Major Implications for the U.S. Economic System](#) (Apr. 7, 2021).

spending,³⁷ ensuring that a unit of currency cannot be spent more than once. A CBDC model using distributed ledger technology would rely on entities within the system to mutually agree upon all transactions. In contrast, a centralized ledger establishes a single authority to approve transactions and maintain records.³⁸ For CBDCs developed by countries with authoritarian systems, the control and transparency offered by certain ledger models raise privacy concerns for individual and corporate users.³⁹ Not only can the government authority see every CBDC user and transaction, but it could also block transactions of targeted individuals and entities. For American businesses engaged in China, for example, the government could prevent payments to a firm that doesn't cooperate with requested government surveillance or criticizes Chinese policies.⁴⁰ This is also a potential problem for how the data collected can be abused,⁴¹ especially if fused with other intelligence to meet adversarial economic, military, and political objectives.⁴² Privacy concerns persist even in democratic systems; U.S. civil libertarians are wary of CBDC models that might lead to a degradation of American privacy standards or unfettered U.S. government access to identity and transaction data.⁴³

Combating Financial and Other Crimes

A degree of transparency in financial transactions exists in global standards to combat money laundering, fraud, tax evasion, terror finance and other crimes. Laws such as Bank Secrecy Act⁴⁴ provide governments with limited, but targeted, visibility into suspicious transactions to uncover corruption, to claw back fraud payments, or to investigate and prosecute white collar crimes. In adapting to a purely digital ecosystem, CBDC models will need to mirror or improve on current regimes, requiring CBDC systems, platforms, exchanges, and other services to have appropriate anti-money laundering and combating the financing of terrorism (AML/CFT) protections built into their technological and legal foundations. To be viable, compliance and risk mandates will need to be constructed to address activities such as the onboarding of customers, which requires the verification of identity, the evaluation of a customer's risk for financial crime, and an assessment of the beneficial ownership of legal-entity customers (known as Customer Due Diligence, to prevent the anonymity that's commonly used by bad actors to hide assets, transactions, and connections⁴⁵). Determinations about who is responsible for transaction monitoring for AML/CFT concerns, sanctions screening, and fraud detection – to allow for reporting suspicious findings to appropriate regulatory and law enforcement authorities – are also necessary.⁴⁶ A cadre of examiners may need to be built or re-trained, depending on the models chosen.

Cybersecurity

Given the general rise in cyber-enabled financial crime and the digital nature of a CBDC, CBDC systems may also be subject to cyberattacks, as bad actors adapt to the changing financial system. Processing software, wallets, exchanges, and the users themselves are among the points of potential vulnerability. Centralization itself also gives rise to large, singular targets for attacks aimed at transaction and identity data, potentially undermining confidence in CBDC currencies and systems.⁴⁷

³⁷ Investopedia, [Double Spending](#) (Jun. 30, 2020).

³⁸ Brookings Institute, [Design choices for Central Bank Digital Currency](#), (Jul. 23, 2020).

³⁹ Financial Times, [Virtual control: the agenda behind China's new digital currency](#) (Feb. 17, 2021).

⁴⁰ MarketWatch, [U.S. companies, not the government, have most to fear from China's digital yuan, analysts say](#) (May 12, 2021); see also Financial Times, [Virtual control: the agenda behind China's new digital currency](#) (Feb. 16, 2021).

⁴¹ Mark, J., New Atlanticist, [Why China's digital currency threatens the country's tech giants](#) (Jul. 15, 2021)

⁴² Post, K., CoinTelegraph.com, [US intelligence is looking at Chinese CBDC as a national security threat](#) (Nov. 25, 2020).

⁴³ Atako, N., Vanderbilt Journal of Entertainment & Technology Law, [Privacy Beyond Possession: Solving the Access Conundrum in Digital Dollars](#) (2021).

⁴⁴ FinCEN, [FinCEN's Mandate From Congress \(Bank Secrecy Act\)](#) (Accessed July 19, 2021).

⁴⁵ The FACT Coalition, [FACT Sheet: Why Beneficial Ownership Transparency Matters](#) (Apr. 9, 2014).

⁴⁶ Fanusic, Y., [Central Bank Digital Currencies: The Threat From Money Launderers and How to Stop Them](#) (Dec. 14, 2020).

⁴⁷ *Id.* see also Disparte, D., Diplomatic Courier, [The Risks Of Central Bank Digital Currencies](#) (Jun. 16, 2021).