

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

May 23, 2022

Memorandum

To: Members, Committee on Financial Services
From: FSC Majority Staff
Subject: May 26, 2022, Full Committee Hearing entitled, “The Future of Money: Assessing the Benefits and Risks of a U.S. Central Bank Digital Currency”

The full Committee will hold a hearing entitled, “The Future of Money: Assessing the Benefits and Risks of a U.S. Central Bank Digital Currency” on May 26, 2022, at 12:00 p.m. ET virtually on the Cisco Webex platform. There will be single panel with the following witness:

- **Dr. Lael Brainard**, Vice Chair of the Board of Governors of the Federal Reserve System

Introduction

With the rapid growth in digital assets, policymakers, central banks, and the private sector are examining the potential implications of creating and using central bank digital currencies (CBDCs). While the definition of a CBDC varies, the Board of Governors of the Federal Reserve System (the Federal Reserve) defines a CBDC as a “digital liability of a central bank that is widely available to the general public.”¹ Unlike other forms of digital money commonly used via payment apps and bank accounts, which are a commercial bank's liability, a CBDC would be a liability of the Federal Reserve.²

The House Committee on Financial Services has held a series of bipartisan hearings at the full Committee level on digital assets, including a hearing with CEOs of major companies developing cryptocurrencies or otherwise operating in the cryptocurrency marketplace³ and a hearing with the Treasury Department regarding the findings of the “Report on Stablecoins” by the President’s Working Group on Financial Markets (PWG).⁴ The Committee’s task forces and subcommittees have held additional digital assets-related hearings this Congress, examining such topics as investor protection concerns with cryptocurrency,⁵ implications of digital assets for consumer privacy and financial inclusion,⁶ the promises and perils of CBDCs,⁷ the risk of digital assets offering new avenues for sanctions

¹ Federal Reserve (Fed), *Money and Payments: The U.S. Dollar in the Age of Digital Transformation*, at 1 (Jan. 2022); see also the Bank of International Settlements’ definition of a CBDC as “the legal tender issued by a central bank in a digital form. It is the same of a fiat currency and is exchangeable one-to-one with the fiat currency.” Bank of International Settlements, *T Rabi Sankar: Central bank digital currency - is this the future of money*, at 3 (July 22, 2021).

² Fed, *FAQs* (last visited May 17, 2022).

³ House Financial Services Committee (HFSC), *Digital Assets and the Future of Finance: Understanding the Challenges and Benefits of Financial Innovation in the United States*, 117th Cong. (Dec. 8, 2021).

⁴ HFSC, *Digital Assets and the Future of Finance: The President’s Working Group on Financial Markets’ Report on Stablecoins*, 117th Cong. (Feb. 8, 2022).

⁵ HFSC, *America on “FIRE”: Will the Crypto Frenzy Lead to Financial Independence and Early Retirement or Financial Ruin?*, 117th Cong. (June 30, 2021).

⁶ HFSC, *Inclusive Banking During a Pandemic: Using FedAccounts and Digital Tools to Improve Delivery of Stimulus Payments*, 116th Cong. (June 11, 2020); see also HFSC, *Banking the Unbanked: Exploring Private and Public Efforts to Expand Access to the Financial System*, 117th Cong. (June 21, 2021).

⁷ HFSC, *The Future of Money: Digital Currency*, 115th Cong. (July 18, 2018); see also HFSC, *The Promises and Perils of Central Bank Digital Currencies*, 117th Cong. (July 27, 2021); see also HFSC, *Digitizing the Dollar: Investigating the Technological Infrastructure, Privacy, and Financial Inclusion Implications of Central Bank Digital Currencies*, 117th Cong. (June 15, 2021).

evasion and other financial crimes,⁸ and the legal and regulatory framework governing digital wallets.⁹ This hearing will focus on research on CBDCs published by the Federal Reserve, the ongoing developments of foreign CBDCs, the White House Executive Order on Digital Assets,¹⁰ and other recent activity related to CBDCs.

While definitions of a CBDC can vary, understanding what distinguishes cryptocurrency from fiat government-issued currency is fundamental. Fiat currency is money issued exclusively by a nation-state (usually through its central bank), is a liability of the issuing sovereign government, and derives its value through the public's trust in the issuer.¹¹ Unlike other cryptocurrencies, which can be used without central financial intermediaries,¹² CBDCs are regulated by the monetary authorities of a nation, supported by the reserve assets of the country, and pegged to the value of that country's fiat currency. Stablecoins are a subset of cryptocurrencies that usually also peg their value to a reserve asset such as a fiat currency, but there are currently no regulatory requirements to ensure that the value is always matched with the reserve asset. CBDCs may also use permissioned and private blockchains, while cryptocurrencies often use permissionless and public blockchains.¹³ Some digital assets stakeholders have argued that CBDCs may challenge the need for stablecoins and may address long-term goals such as payment systems efficiency and financial inclusion that the digital private sector may not be prioritizing.¹⁴ However, at a January Senate Banking Committee hearing, Chair Powell remarked that a Federal Reserve CBDC would not eliminate the need for stablecoins.¹⁵

The Federal Reserve's Report on CBDCs

On January 20, 2022, the Federal Reserve published a report entitled "Money and Payments: The U.S. Dollar in the Age of Digital Transformation." The report stated that CBDC transactions would need to be "final and completed in real-time, allowing users to make payments to one another using a risk-free asset. Individuals, businesses, and governments could potentially use a CBDC to make basic purchases of goods and services or pay bills. Governments could use a CBDC to collect taxes or make benefit payments directly to citizens."¹⁶ According to the report, potential benefits of a CBDC include improving cross-border payments, supporting the dominant international standing of the U.S. dollar, financial inclusion, and extending public access to safe central bank money. Potential risk and policy considerations include the possibility of a fundamental change to the structure and stability of the U.S. financial system, monetary policy considerations, consumer protection, and the effect on deterring criminal activity.

The report emphasized that an effective U.S. CBDC would contain design characteristics that include being privacy-protected, intermediated, widely transferable, and identity-verified.¹⁷ Furthermore, the report noted that a CBDC should "provide benefits to households, businesses, and the overall economy

⁸ HFSC, [Schemes and Subversion: How Bad Actors and Foreign Governments Undermine and Evade Sanctions Regimes](#), 117th Cong. (June 16, 2021).

⁹ HFSC, [What's in Your Digital Wallet? A Review of Recent Trends in Mobile Banking and Payments](#), 117th Cong. (Apr. 28, 2022).

¹⁰ Executive Office of the President, [Executive Order \(EO\) 14067](#), 87 FR 14143 (Mar. 14, 2022); see also White House, [Executive Order on Ensuring Responsible Development of Digital Assets](#) (Mar. 9, 2022); see also White House, [Fact Sheet: President Biden to Sign Executive Order on Ensuring Responsible Development of Digital Assets](#) (Mar. 9, 2022).

¹¹ See e.g. [Fiat money: Currencies that derive their value largely through trust in the governments that issue them](#), Business Insider (Nov. 19, 2021).

¹² [What are cryptocurrencies and stablecoins and how do they work?](#), Financial Times (May 28, 2021).

¹³ See [Blockchain Council's](#) description of a permissionless blockchain, "In the Permissionless model, which is also known as a public blockchain, there are no restrictions, and the participation is not controlled by an administrator. Anyone can participate in the consensus and validate the data. There are no administrators allowing the users to participate or giving them the permission and rights to make the changes. It is a completely decentralized blockchain platform across unknown parties." Blockchain Council, [Permissioned and Permissionless Blockchains: A Comprehensive Guide](#) (accessed May 23, 2022).

¹⁴ See e.g. [CBDC and stablecoins: Early coexistence on an uncertain road](#), McKinsey & Company (Oct. 11, 2021).

¹⁵ [Stablecoins Could Coexist With CBDCs, Says Fed Chairman](#), BeinCrypto (Jan. 12, 2022).

¹⁶ Fed, [Money and Payments: The U.S. Dollar in the Age of Digital Transformation](#), at 14 (Jan. 2022).

¹⁷ Fed, [Money and Payments: The U.S. Dollar in the Age of Digital Transformation](#), at 13 (Jan. 2022).

that exceed any costs and risks; yield such benefits more effectively than alternative methods; complement, rather than replace, current forms of money and methods for providing financial services; protect consumer privacy; protect against criminal activity; and have broad support from key stakeholders.”¹⁸ The report did not take a specific position on the design or adoption of a CBDC, stating that the paper “is not intended to advance a specific policy outcome and takes no position on the ultimate desirability of a U.S. CBDC.”¹⁹ The Federal Reserve noted it “does not intend to proceed with the issuance of a CBDC without clear support from the executive branch and from Congress, ideally in the form of a specific authorizing law.”²⁰ The report included a request for public comment with a 120-day comment period and 20 different questions, including those referencing CBDCs and financial inclusion.

Recent Digital Assets and Payments-Related Developments in the U.S.

While digital assets may provide the potential for faster payments with lower transaction costs, there have been other research projects aimed at developing faster payments.²¹ On August 5, 2019, after studying the development of faster payments for years going back to at least 2013,²² the Federal Reserve announced the creation of FedNow Service, a 24/7 real-time payment and settlement service that would eventually allow for faster payments once established.²³ FedNow would theoretically enable financial institutions of various sizes and geographic locations across the U.S. to provide safe and efficient instant payment services in real-time, every day of the year.²⁴ While creating a U.S. CBDC is estimated to take several years, the Federal Reserve has stated that FedNow would likely launch in 2023 and will be deployed in phases.²⁵ Chair Powell has questioned the CBDC’s role once FedNow becomes fully functional,²⁶ explaining at a hearing before this Committee that, “[t]he real threshold question for us is does the public want or need a new digital form of central bank money to complement what is already a highly efficient, reliable and innovative payments arena and system.”²⁷

Additionally, the Federal Reserve Bank of Boston has conducted CBDC-related research with the Massachusetts Institute of Technology through Project Hamilton, investigating the technological aspects of a potential CBDC. The first phase of the project, released in February 2022, looked into cryptography, distributed systems, and blockchain technology.²⁸ The research was done in such a way that design elements would not impose policy outcomes before policy decisions had been made, including the role of existing financial institutions as intermediaries. As part of this first phase, the software code developed for the project was published under MIT’s open-source license to expand contributions to the dialogue and to help identify any design defects.

Recent cryptocurrency market events, including the collapse of the algorithmic stablecoin TerraUSD (UST), have raised concerns about the volatility and risk involved with digital assets.²⁹ Algorithmic stablecoins use algorithmic computer codes to maintain price stability, as opposed to

¹⁸ Fed, [Money and Payments: The U.S. Dollar in the Age of Digital Transformation](#), at 1 (Jan. 2022).

¹⁹ *Id.*

²⁰ *Id.* at 3.

²¹ HFSC, [The Future of Real-Time Payments](#), 116th Cong. (Sept. 26, 2019).

²² See Fed, [Payment System Improvement - Public Consultation Paper](#) (Sep. 10, 2013); see also Fed, [Strategies for Improving the U.S. Payment System](#) (Jan. 26, 2015); and [Faster Payments Task Force, Final Report – Part One](#) (Jan. 2017) and [Final Report – Part Two](#) (July 2017).

²³ Fed, [Federal Reserve announces plan to develop a new round-the-clock real-time payment and settlement service to support faster payments](#) (Aug. 5, 2019).

²⁴ HFSC, [The Future of Real-Time Payments](#), 116th Cong. (Sept. 26, 2019); see also [What is FedNow and why is it the most revolutionary thing you’ve never heard of?](#), FXStreet (Apr. 29, 2021).

²⁵ Fed, [Federal Reserve updates FedNowSM Service launch to 2023](#) (Feb. 2, 2021).

²⁶ Fed, [Transcript of Chair Powell’s Press Conference](#) (Apr. 28, 2021).

²⁷ HFSC, [Monetary Policy and the State of the Economy](#), 117th Cong. (Feb. 24, 2021).

²⁸ Federal Reserve Bank of Boston, [The Federal Reserve Bank of Boston and Massachusetts Institute of Technology release technological research on a central bank digital currency](#) (Feb. 3, 2022).

²⁹ [Luna Crypto Crash: How UST Broke, Why It Matters and What’s Next](#), CNET (May 18, 2022).

stablecoins pegged to reserve assets such as fiat currencies. On May 9, 2022, due to a series of large redemptions and sales of UST, it lost its \$1.00 peg, and over the following days, UST continued to drop in value, leading to major cryptocurrency exchanges delisting UST.³⁰ As of May 23, it is valued at approximately \$0.06.³¹ The failure of UST, in tandem with the collapse of Luna, an affiliated cryptocurrency, put downward pressure on other cryptocurrencies, with Tether, the largest stablecoin in market capitalization, breaking its peg and falling to \$0.95 before recovering,³² and Bitcoin, the largest cryptocurrency overall, falling to less than half of its value since its peak in 2021.³³ This ongoing volatility, including the collapse of UST, a purported stablecoin, has raised concerns of contagion and financial instability within the broader digital assets ecosystem, leading some digital assets stakeholders to argue that central banks should prioritize the development of CBDCs.³⁴

Executive Orders on Digital Assets

On March 9, 2022, President Biden issued an executive order on digital assets that directed relevant U.S. government agencies to collaborate to examine the risks and benefits of cryptocurrencies, and produce reports with various time frames ranging from 60, 90, to 180 days on when agencies must present their policy recommendations.³⁵ The executive order focuses on six key areas: consumer and investor protection; financial stability; illicit activity; U.S. leadership and competitiveness on a global stage; financial inclusion; and responsible innovation.³⁶ The executive order aims to create a federal policy for digital assets by fostering collaboration between various federal agencies.³⁷ Of note, the Treasury, in consultation with other agencies, must explore the development of a U.S. CBDC, and produce a report on the future of money, the payment systems, and the role of cryptocurrencies.

The executive order requires the Financial Stability Oversight Council (FSOC) to provide recommendations and produce a report identifying systemic financial risks and regulatory gaps in the digital assets ecosystem. The executive order encourages the Federal Reserve Chairman to continue to research the potential of a U.S. CBDC and how it may reduce costs of payments systems, and to develop a strategic plan for its implementation.³⁸

International CBDC Efforts

According to a survey from the Bank for International Settlements (BIS), more than 85% of central banks worldwide are researching, piloting, or in advanced stages of developing CBDCs.³⁹ The proliferation of CBDCs worldwide has raised questions about whether the U.S. has fallen behind relative to the pace of developments in the international financial system and whether that could affect its "reserve

³⁰ [Crypto Exchanges Are Delisting Terra Tokens After Meltdown](#), Bloomberg (May 13, 2022); see also [Terra's luna dives 45% after the network's stablecoin lost its dollar peg again, adding to the pressure on bitcoin](#), Markets Insider (May 10, 2022); see also [Luna and Terra's stablecoin UST are both crashing: Here's a guide to tether, USD Coin, terra and other reserve-backed cryptocurrencies](#), Markets Insider (May 11, 2022).

³¹ CoinMarketCap, [TerraUSD Price](#) (last accessed May 23, 2022).

³² [Stablecoin tether breaks its peg and drops to \\$0.95 as panic hits crypto markets after collapse of TerraUSD](#), Business Insider (May 12, 2022).

³³ [Bitcoin has lost more than half its value in the last six months amid broader tech sell-off](#), NBC News (May 14, 2022).

³⁴ See e.g. [UST's Collapse Might Push Central Banks Closer to a CBDC](#), Blockworks (May 16, 2022).

³⁵ White House, [Executive Order on Ensuring Responsible Development of Digital Assets](#) (Mar. 9, 2022).

³⁶ White House, [Fact Sheet: President Biden to Sign Executive Order on Ensuring Responsible Development of Digital Assets](#) (Mar. 9, 2022).

³⁷ *Id.*

³⁸ *Id.*

³⁹ Codruta Boar and Andreas Wehrli, [Ready, steady, go? – Results of the third BIS survey on central bank digital currency](#) (Jan. 2021).

currency" status.⁴⁰ Yet, countries' experiences with CBDCs to date are quite varied.⁴¹ For example, while most countries that are exploring CBDCs are only in the research and development stage, China's central bank—the People's Bank of China (PBOC)—has developed and implemented its CBDC, known as the e-CNY, which facilitated approximately two million yuan (\$315,761) in payments each day of the 2022 Winter Olympic Games in Beijing, according to the PBOC.⁴²

The European Central Bank is presently conducting CBDC-related research to establish a prototype by the end of 2023 and unveil a European CBDC by 2025.⁴³ The Eastern Caribbean Central Bank has piloted its own CBDC called DCash in four countries, but technical issues earlier this year caused the platform to crash, leaving its users in limbo.⁴⁴ Following a ten-month pilot, the Central Bank of the Bahamas introduced its Sand Dollar CBDC in late 2020.⁴⁵ The International Monetary Fund (IMF) released a statement highlighting the Sand Dollar's potential to "help foster financial inclusion and payment system resilience in the event of a natural disaster."⁴⁶ However, the IMF also recognized that the CBDC "makes up less than 0.1 percent of the currency in circulation, and there are limited avenues to use the Sand Dollar."⁴⁷ The Bank of Japan has completed its first phase of testing a Proof of Concept and will soon move to its second phase to examining the feasibility of a CBDC.⁴⁸ Additionally, leaders at the Group of 20 summit in 2021 encouraged a variety of international bodies, including the IMF, World Bank, and BIS, to "continue deepening the analysis on the potential role of central bank digital currencies in enhancing cross-border payments and their wider implications for the international monetary system."⁴⁹

For countries such as Iran, Russia, and Venezuela, early interest in CBDCs (between 2016 and 2018) may have been driven by a desire to evade U.S. sanctions.⁵⁰ With Russia launching its attack on Ukraine in February 2022, some have called these events the first crypto war.⁵¹ On February 26, 2022, a large coalition of states, including the European Union, U.S., Canada, and the United Kingdom, agreed to ban select Russian banks from the Society for Worldwide Interbank Financial Telecommunications (SWIFT).⁵² After the U.S. and its allies and partners imposed sanctions, the appeal of the cryptocurrency market was quickly amplified in Russia, given its anonymity and decentralization from the global banking sector.⁵³ The Biden administration and European officials say they are heightening surveillance of blockchains to try to identify activity from individuals connected to the Kremlin who are subject to sanctions. While cryptocurrency companies have agreed to enforce a blacklist, many have refused to outright ban all Russian users.⁵⁴

⁴⁰ Congressional Research Service (CRS), *The U.S. Dollar as the World's Dominant Reserve Currency* (Dec. 18, 2020); and CRS, *Central Bank Digital Currencies: Policy Issues* (Feb. 7, 2022).

⁴¹ See CRS, *Central Bank Digital Currencies: Policy Issues* (Feb. 7, 2022); see also Atlantic Council, *Central Bank Digital Currency Tracker* (accessed May 18, 2022).

⁴² *Over \$315,000 in digital yuan used every day at Olympics, PBOC official says*, Reuters (Feb. 16, 2022).

⁴³ *Digital euro bill due early 2023*, Politico Europe (Feb. 9, 2022).

⁴⁴ *Caribbean CBDC platform crashes*, Finextra (Feb. 1, 2022).

⁴⁵ *Features of Central Bank of the Bahamas Sand Dollar and Eastern Caribbean Central Bank DCash (Updated)*, The Global Fintech Intelligencer (Apr. 12, 2021).

⁴⁶ *Staff Concluding Statement of the 2022 Article IV Mission*, International Monetary Fund (Mar. 21, 2022).

⁴⁷ *Id.*

⁴⁸ Bank of Japan, *The Release of "The Bank of Japan's Approach to Central Bank Digital Currency"* (Oct. 9, 2020); see also *Bank of Japan enters second phase of CBDC experiments*, Ledger Insights (Mar. 25, 2022).

⁴⁹ Rome Summit, *G-20 Rome Leaders' Declaration* (Oct. 30-31, 2021); see also Financial Stability Board, *G20 Roadmap for enhancing cross-border payments: First consolidated progress report* (Oct. 13, 2021).

⁵⁰ *The Impact of Digital Money on Sanctions*, Kharis & Knoble (June 10, 2021).

⁵¹ *Russia's invasion of Ukraine is being called the world's first crypto war*, National Public Radio (NPR) (Mar. 3, 2022).

⁵² *What Does Russia's Removal From SWIFT Mean For the Future of Global Commerce?*, Foreign Policy (Mar. 8, 2022).

⁵³ *Russia's invasion of Ukraine is being called the world's first crypto war*, NPR (Mar. 3, 2022).

⁵⁴ See e.g. *Big Crypto Exchanges Resist Banning Russian Users*, CNET (Mar. 4, 2022).