The Bretton Woods Committee

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State of Play in Crypto Markets
OPPORTUNITIES AND DANGERS

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PREFACE

The central tenet of the Bretton Woods Committee (BWC) is that multilateral cooperation and coordination lead to better outcomes than noncooperation and competition. This principle not only applies to the global financial architecture, which includes the activities of the IMF and the World Bank, but it also extends into two newer realms: the emerging digital finance ecosystem and climate finance.

For this reason, BWC has established the Future of Finance Working Group (FFWG) and its two project teams—the Digital Finance Project Team (DFPT) and the Climate Finance Project Team (CFPT)—to tackle each of these issues. The DFPT will cover a broad scope of digital finance issues, ranging from crypto assets and the financial services they enable to digital currencies, including those offered by central banks.

The DFPT's mission is a call to action for legislators, oversight bodies, standard setters, regulators, and international multilateral institutions to engage with those participating in this emerging financial ecosystem. This area of finance is complex, evolving quickly, and largely unregulated. Legal and regulatory guardrails are needed but must be set up in a way that nurtures rather than smothers this new industry.

Specifically, regulators will need to account for how the new businesses are structured and operate—with technology based on open access and often conducted as part of a largely decentralized system. Regulation must be crafted in such a way that it both enables innovation and maintains its benefits while also protecting users and supporting the safety, soundness, and resilience of this new industry.

The DFPT will publish a series of topical briefs to:

- Explain the key issues
- Assess different approaches to regulation
- Recommend the best way forward

Following this introductory brief, the DFPT plans to address seven distinct topics:

1. Positive use cases that could provide insight into significant societal benefits in new functionality, efficiency, transparency, and inclusion

2. Distinguishing features of the underlying technologies—how they could reduce costs, mitigate operational and other risks, support new tools and business models—and the related problems that still need to be solved
3. The potential benefits and risks associated with stablecoins and unbacked cryptocurrencies, and how regulators could support innovation while making these assets safer and more resilient
4. Legal, regulatory, and supervisory gaps in investor protection and market integrity, including ways to ensure effective governance within the ecosystem
5. Security issues such as money laundering, financing of illicit activity, and cyberattacks
6. The relationship between crypto assets and central bank digital currencies (CBDCs) and an evaluation of whether stablecoins and CBDCs are likely to complement or substitute for each other
7. What adjustments are needed in the new financial ecosystem and the incumbent international monetary system to foster greater efficiency and to ensure stability in the provision of cross-border payments and other international financial services

These topical briefs will be complemented by a series of webinars, conferences, and podcasts. They will be designed to encourage discussion of the issues and to amplify the policy messages of the DFPT to BWC members and the broader community.

INTRODUCTION

This first DFPT topical brief evaluates the current state of play in the digital finance world, where crypto assets enable a wide range of financial transactions and services executed on public blockchains.

Activity is growing rapidly and largely outside the regulatory perimeter, in part because many regulators across the globe have been slow to engage and respond. In the United States, the recent executive order[1] by President Biden recognized that the status quo was unacceptable: too few steps were being taken in the public sector to support these innovations and enable them to operate safely within the regulatory perimeter.

The order sets out objectives related to:

- Consumer and investor protection
- Financial stability
- Mitigation of illicit financing and national security risks
- Financial inclusion and responsible innovation
- U.S. leadership in the global financial system
- Economic competitiveness

The issues that the DFPT will address in its briefs are well aligned with these objectives. In fact, the president's executive order underscores our key message: the need for legislators, standard setters, international multilateral institutions, and those operating in the new financial ecosystem to work together.

The collective goal must be to:

- Put in place a legal and regulatory regime that promotes safety and resilience while allowing the new technologies and business models to develop and experiment, succeed, or fail

1 White House, "Executive Order on Ensuring Responsible Development of Digital Assets," March 9, 2022, https://www.whitehouse.gov/briefing-room/presidential-actions/2022/03/09/executive-order-on-ensuring-responsible-development-of-digital-assets/.

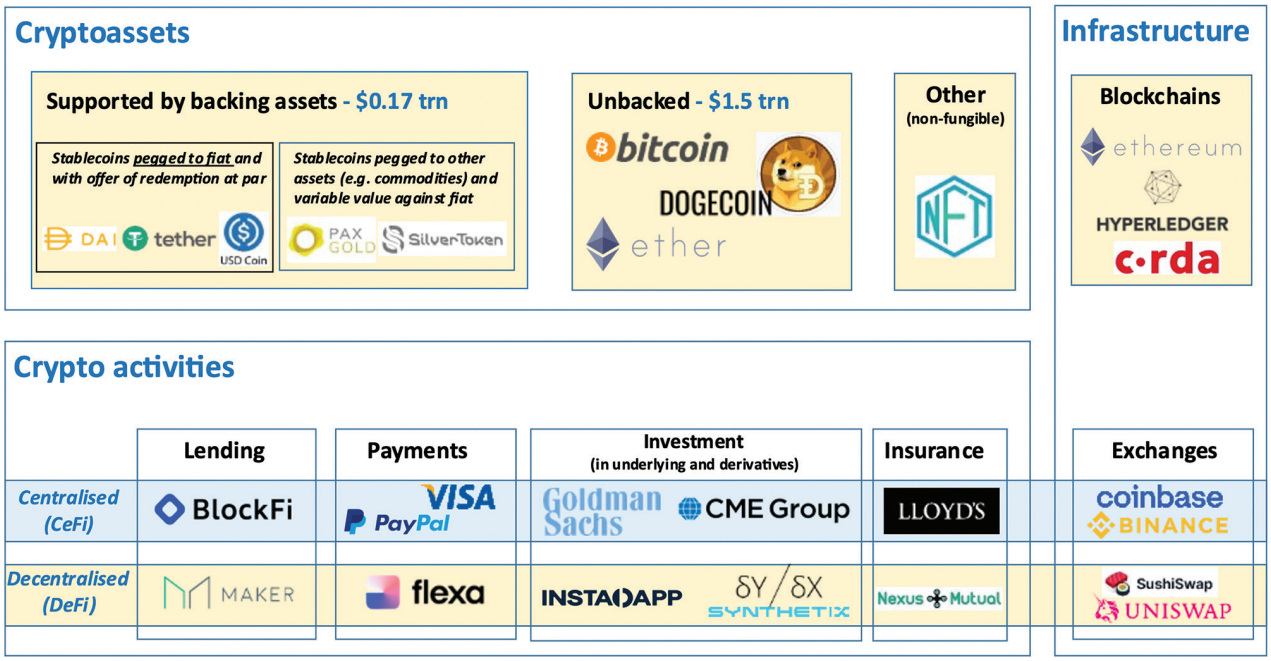
- Coordinate with international standard-setting bodies to minimize the inefficiencies that come with regulatory fragmentation and to limit the opportunities for regulatory arbitrage

The crypto ecosystem is growing rapidly

Crypto assets are at the core of a fast-growing ecosystem that provides a wide range of financial services—payments, lending, investment, and insurance—and that is enabled by blockchain-based technologies (figure 1). The Financial Stability Board estimates that crypto-asset market capitalization increased 3.5 times in 2021 to $2.6 trillion.[2] A Pew Research Center study finds that the proportion of U.S. households that have engaged in transactions using cryptocurrency or stablecoins reached 16 percent last year. By contrast, in 2015 just 1 percent had ever used Bitcoin.[3]

These services are increasingly provided in a decentralized manner using "smart contracts," where decentralized finance (DeFi) protocols play the role that intermediaries do in centralized finance (CeFi).[4] The total value locked in DeFi has exploded from near zero in 2017 to $229 billion at the end of the first quarter of 2022.[5] The range of financial offerings is also growing rapidly, with users now able to invest in a basket of crypto assets, hedge exposures, take leveraged positions, and use non-fungible tokens (NFTs) as collateral or as an investment (e.g., artwork). Significant investment is being made in improving the capacity and throughput of blockchain ledger applications.

Figure 1: Stylized map of crypto assets, activities, and infrastructure



Source: Adapted from Bank of England figure in "Under the Western Sky" https://www.bankofengland.co.uk/speech/2021/november/carolyn-a-wilkins-keynote-speaker-at-autorite-des-marches-financiers-annual-meeting; figures updated as of March 8, 2022.

2 Financial Stability Board, "Assessment of Risks to Financial Stability from Crypto-assets," February 16, 2022, https://www.fsb.org/2022/02/assessment-of-risks-to-financial-stability-from-crypto-assets/.

3 Pew Research Center, "16% of Americans Say They Have Ever Invested in, Traded or Used Cryptocurrency," November 11, 2021, https://www.pewresearch.org/fact-tank/2021/11/11/16-of-americans-say-they-have-ever-invested-in-traded-or-used-cryptocurrency/.

4 Technically, these are not contracts in a legal sense. They are arrangements in which transfers of value are executed when a prespecified set of conditions is satisfied.

5 See DeFi Llama, https://defillama.com.

Although this explosive growth may have been enabled by blockchain, it also has been fueled by growing frustration with the lack of innovation by traditional financial intermediaries and the desire to streamline inefficient processes—and, in some cases, to avoid regulation or taxes. It has also been motivated by a search for yield, given the low level of short-term interest rates in the traditional financial system. The fact that the total revenue from payment services in the United States has been growing faster than GDP over the last decade underscores why greater competition and efficiency in financial services is needed.[6]

Activity involving Bitcoin is the best known and most divisive example in the crypto space. For advocates, Bitcoin is an innovative way of transferring value and making payments—also an attractive investment asset and hedge against inflation. For critics, Bitcoin is a Ponzi scheme, with the increase in Bitcoin's value fueled not by its utility but by promotion designed to attract a new group of naïve speculators. They emphasize that Bitcoin, being neither a stable store of value nor efficient, performs poorly as a payment medium in terms of throughput, cost, and energy consumption. The war in Ukraine has raised a new open question about whether Bitcoin is a malign force that undermines the economic sanctions put in place to punish those that invade independent sovereign nations.

Looking past Bitcoin, a growing set of DeFi services have the potential to leverage technology and new business models to increase efficiency, decrease costs, and better manage operational risks while increasing the transparency of and access to financial services (figure 2). For instance, these new applications could prove to be much faster, available 24-7, interoperable, and able to share data and to host and execute smart contracts.

Possibilities and Risks of DeFi

Efficiencies and lower some operational risks:

- Decentralisation reduces the reliance on intermediaries and their inefficient infrastructure.
- Smart contracts enable automated execution and creation of new financial instruments and digital assets.
- Data are easily shared, as opposed to traditional siloed platforms that do not talk to each other.
- DeFi protocol code is visible and auditable, and every transaction is visible on the blockchain.

Illicit activity:

- Risk of fraud, misappropriation, and conflicts of interest
- Money laundering, terrorist financing, avoidance of sanctions

Government failures:

- Operations and activities within DeFi are often governed or administered by a small group of developers and investors

Technology failures:

- Risks related to the underlying technology

Financial stability

6 For more insight, refer to McKinsey & Company, *The 2020 McKinsey Global Payments Report*, October 2020, https://www.mckinsey.com/~/media/mckinsey/industries/financial%20services/our%20insights/accelerating%20winds%20of%20change%20in%20global%20payments/2020-mckinsey-global-payments-report-vf.pdf.

Existing legacy systems are vulnerable to these innovations because they are inflexible, complex, and cumbersome to modernize. These shortcomings grow even more acute as the number of intermediaries involved in the payments/investment chain increases and when the transactions must pass across multiple legal jurisdictions to be executed. In response, the Committee on Payments and Market Infrastructures (CPMI) has set out the building blocks for a multiyear roadmap to increase the efficiency of cross-border payments.[7]

As in the traditional system, DeFi comes with risks of illicit activity, failures of governance, and bugs in the technology that must be managed. For example, with an estimated $3.2 billion worth of cryptocurrency stolen in 2021,[8] it's clear that cryptocurrency exchanges and wallets are vulnerable to criminals. Smart contracts that sit on the blockchain depend on the reliability of outside data sources (i.e., oracles), which themselves could be subject to manipulation.[9] Moreover, despite claims of complete decentralization, there are often concentrations of power in governance and decision-making. It is therefore critical that DeFi governance supports market integrity and is sufficiently attentive to operational risk. Finally, DeFi may make it easier for bad actors to evade or mitigate the impact of international payment and economic sanctions.

There are also issues related to the crypto assets that enable DeFi activities through the transfer and store of value within the system. Nearly 70 percent of DeFi activities run on Ethereum, an unbacked crypto asset, and others such as stablecoins, Tether, and Dai are gaining traction. Stablecoins are crypto assets that are backed by other assets (e.g., fiat or commodities) to stabilize their value. In these cases, the DeFi system will only be as safe and sound as the foundational crypto assets. For instance, unregulated stablecoins may not have sufficient collateral to accommodate large-scale redemptions, and collateral liquidation could potentially destabilize the broader financial markets.[10]

Financial stability concerns are intensifying as this system grows, becomes more integrated with the traditional financial system, and involves high degrees of leverage.[11] These concerns are particularly relevant because the regulatory regime has done little to put protections and safeguards in place. In the United States, the process has been slowed by lack of agreement about what some of these products and activities are. For instance, is a cryptocurrency a security, commodity, or some combination that may still change over time? As a result, who has regulatory jurisdiction over the asset and business activity remains an open question in many cases.

U.S. regulators have also been slow to establish ground rules for these new products and businesses and to approve applications that would allow access to central bank services or create new investment products. For example, in the case of stablecoins, the President's Working Group determined that very little could be done to address risks in this area without Congressional legislation.[12]

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7 Bank for International Settlements, "Enhancing Cross-Border Payments: Building Blocks of a Global Roadmap," July 13, 2020, https://www.bis.org/cpmi/publ/d193.htm.

8 For more insight, refer to Chainalysis, "2022 Crypto Crime Report," available for download at https://www.chainalysis.com/chainalysis-reactor/?utm_source=google&utm_medium=cpc&utm_campaign=&utm_term=&utm_content=575745490220&gclid=EAIaIQobChMIpeKY7o_G9gIViKeGCh2DjA9tEAAYASAAEgLwN_D_BwE.

9 The LIBOR scandal, in which LIBOR submissions were manipulated to influence Eurodollar futures prices for profit, illustrates the potential for this.

10 The Commodity Futures Trading Commission (CFTC) fined the issuers of Tether last year for having lied or misled investors about the nature of the backing assets.

11 For more insight, refer to Financial Stability Board, "Promoting Global Financial Stability: 2021 FSB Annual Report," October 27, 2021, https://www.fsb.org/wp-content/uploads/P271021.pdf.

12 President's Working Group on Financial Markets, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency, "Report on Stablecoins," November 2021, https://home.treasury.gov/system/files/136/StableCoinReport_Nov1_508.pdf.

In the same vein, the Federal Reserve has been reluctant to approve fintech companies that are seeking access to the central bank's settlement services. As a case in point, Facebook (now Meta) sought to determine what the Fed required for the Libra (now Diem) global stablecoins project to gain access to the Fed's payment and settlement regime. Despite the firm's expressed willingness to make whatever adjustments were necessary to meet Fed requirements, the effort went nowhere.

Looking at the situation from afar, many policymakers appear reluctant to take affirmative steps that would allow such activities to take place within the regulatory perimeter. Presumably, this reluctance stems from concern about the precedents such approvals would establish and uncertainty about how such approvals might influence the future evolution of the digital finance industry and its technology. There has also been little progress in building efficient interfaces between the new technologies and the existing legacy systems or in ensuring that what is developed will have good interoperability across sovereign borders.

A proactive and consultative approach is needed

This situation needs to change, particularly given that the new business models and technologies show promise. Instead of throwing sand in the wheels, which encourages the new fintech businesses to operate mostly outside of the regulatory perimeter, policy makers and regulators should take steps to make it feasible and attractive for these new businesses and activities to come inside that perimeter. This will require establishing clear terms, conditions, and regulatory expectations for the new entrants and the businesses that they operate.

Questions that firms will need the regulators to answer (as soon as possible) include:

- What products can be offered to investors and savers?
- How well-qualified or informed do investors need to be to engage in different products and services?
- Under what circumstances will firms and activities be judged systemic?
- How will requirements change when a business entity crosses that threshold?
- What will be the requirements about knowing your customers (KYC)?
- What will be the requirements about safeguarding customers' data and privacy?
- What are the regulatory expectations with respect to governance and risk management?
- What governance framework will apply, including for defining conflicts of interest or business activity restrictions, decision-making processes, and assigning responsibility when regulatory or fiduciary shortcomings become evident in decentralized environments?
- What are the tax treatment and related reporting requirements for businesses and their DeFi and crypto activities?

To be effective, regulators will need staff with the business and technological expertise to inform their decision-making, augmented by advisory groups of technologists and fintech entrepreneurs. They will also need a constructive mindset with the goal of regulating the firms in a way that best nurtures and preserves the benefits of the new business models and technologies. To enable a more fulsome discussion about what the requirements should be:

- *Regulators* must focus on how to induce this formerly unregulated activity to move inside the regulatory perimeter while achieving the desired outcomes in terms of business conduct, safety, and soundness. Based on firms' decisions, regulators will need to determine whether proposed regulatory requirements are burdensome and require adjustment or whether the businesses

simply were not viable when they had to bear the costs of appropriate regulatory guardrails.

- *Businesses* must focus on how their business models could be adjusted to make regulation more palatable or on how the regulator could achieve the same outcome by setting guardrails that are "fit for purpose" for the new business models instead of simply imposing unchanged rules from the current regulatory scheme.

Businesses that seek to compete in retail payments will also need to know whether the central bank plans to issue its own digital currency, as well the main design features (e.g., remunerated or not) and distribution model (e.g., directly to customers or indirectly through financial institutions and other payment providers).

Decisions about the role and design of a CBDC will have profound implications not only for DeFi businesses, but also for the much-needed modernization of the U.S. financial system (e.g., by providing a reliable base for programmable money). Also, as highlighted in the president's executive order, these decisions will have profound implications for role of the U.S. dollar in the international financial system, particularly if other jurisdictions join China in issuing their own CBDCs. It will be critical for central banks to consult widely, among themselves and with the new entrants and incumbents in the private sector, to ensure a design that supports efficiency, financial stability, and interoperability.

Such an iterative and consultative approach is needed given the complexity of the new technologies, proliferation of alternative business models, and the rapid pace of change.

The imperative to act

As with the dawn of the Internet many decades ago, digital finance will continue to evolve, and there will be winners and losers in the process. While the Internet has afforded significant benefits, it is largely unregulated. Over time, its drawbacks for society have become more evident. History is rife with examples where unregulated financial activities conducted at scale ended in tears. This inevitably provokes justifiable outrage—after the fact—that not enough was done earlier to protect households and businesses.

This situation is avoidable. Authorities must be proactive rather than reactive and build a legal and regulatory framework that will guard against the further increase of risks and support this promising new financial ecosystem. Efforts should also focus on strengthening the traditional financial and monetary system so that we can reap the benefits of these new technologies and business models without compromising investor and consumer protection and financial stability.

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