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A Brief Primer on Cryptocurrencies, Stablecoins, Tokenization, and Central Bank Digital Currencies

by Stephen M. Anstey

Digital assets, including cryptocurrencies, stablecoins, tokenized assets, and central bank digital currencies, are fundamentally reshaping U.S. and global business and transactions. That said, this transformation is complex, opaque, and often marred by imprecise explanations. The below provides a succinct, albeit cursory, primer on these digital assets. The primer also addresses relevant regulatory and public policy frameworks as well as potential impacts for businesses.

I. Cryptocurrencies and Stablecoins

a. Definitions

Cryptocurrencies are "digital assets, which may be a medium of exchange, for which generation or ownership records are supported through a distributed ledger technology that relies on cryptography, such as a blockchain."[1]

Stablecoins are "a category of cryptocurrencies with mechanisms that are aimed at maintaining a stable value, such as by pegging the value of the coin to a specific currency, asset, or pool of assets or by algorithmically controlling supply in response to changes in demand in order to stabilize value."[2]

b. Brief Overview

While other use cases are available (cryptocurrencies are the central currency of El Salvador and the Central Africa Republic), "cryptocurrencies are primarily used in trading, lending, and collateral activities that involve other crypto-assets[,]" and "are generally speculative in nature."[3] In certain instances, cryptocurrencies are used as a medium of exchange for goods and services and also support "[m]arket and payment system infrastructures for traditional assets using permissioned blockchains."[4]

There are hundreds of different cryptocurrencies circulating, with Bitcoin, Ethereum, BNB, XRP, Dogecoin, Solana, and Shiba Inu among the most well-known.

Stablecoins are, by their design, cryptocurrencies created to maintain a stable value. Stablecoins are primarily used as "collateral on crypto-asset platforms and protocols, and [...] facilitate trading and lending of other crypto-assets, borrowing, and other activities."[5] Stablecoins, "purport to provide features that make them both more stable than non-asset backed crypto-assets as a means of payment or settlement for crypto-asset-based transactions, and potentially, more broadly useful."[6]

Proponents of stablecoins, "believe that stablecoins could become used widely as a means of payment by households and businesses, as well as offering some improvement to the efficiency of cross-border payments by reducing the number of intermediaries in a payment chain."[7] That said, stablecoins can see

rapid devaluations and “runs” when they “lose their peg” (i.e., when the stablecoins value no longer reflects the value of the reference asset or assets it is pegged to). Stablecoins, “including algorithmic and asset-backed stablecoins, have already shown that they are vulnerable to runs.”[8]

The most prominent stablecoins include Tether, USD Coin, Binance USD, DAI, and TrueUSD.

c. U.S. Regulatory and Public Policy Landscape

In the U.S., certain existing regulatory regimes apply to cryptocurrencies and stablecoins, including the Anti-Money Laundering Act (AML), Countering the Financing of Terrorism (CFT), the Bank Secrecy Act, the Securities Act, the Securities Exchange Act, and the Commodity Exchange Act. That said, there is a dearth of cryptocurrency and stablecoin specific U.S. regulation. Paradoxically, this means that both assets fall under the ambit of numerous U.S. regulatory agencies, including the SEC, CFTC, Treasury, Commerce, IRS, FED, FDIC, and OCC.

The SEC has pursued several recent actions to regulate parts of the U.S. cryptocurrency sphere and to cement itself as the preeminent cryptocurrency regulatory agency. For example, the SEC issued a proposed rule on qualified custodians which, among other amendments, would require advisers to maintain crypto-assets (which include cryptocurrencies and stablecoins) with qualified custodians.[9] Additionally, the SEC recently brought an action against one of the largest crypto exchanges for “failing to register the offer and sale of their crypto asset staking-as-a-service program.”[10] The crypto exchange settled for $30 million and agreed to cease its crypto asset staking services.[11] This action severely impedes the ability of non-SEC compliant entities to take part in the staking-as-a-service sphere (which has an estimated value of $90 billion).

The SEC is not the only federal entity to take action concerning cryptocurrencies and stablecoins. For example, on March 27, 2023, the CFTC charged the world’s largest crypto exchange and its CEO with “numerous violations of the Commodity Exchange Act (CEA) and CFTC regulations.”[12] Also, the Federal Reserve, FDIC, and OCC recently issued two joint statements on the risks of crypto-assets. The first, issued on January 3, 2023, was a Joint Statement on Crypto-Asset Risks to Banking Organizations and the second, issued on February 23, 2023, was a Joint Statement on Liquidity Risks to Banking Organizations Resulting from Crypto-Asset Market Vulnerabilities. While neither joint statement “prohibit[s] nor discourage[s] […] providing banking services to customers of any specific class or type, as permitted by law or regulation,” they do issue warnings concerning crypto-assets.[13] For example, the Joint Statement on Crypto-Asset Risks to Banking Organizations states, “based on the agencies’ current understanding and experience to date, the agencies believe that issuing or holding as principal crypto-assets that are issued, stored, or transferred on an open, public, and/or decentralized network, or similar system is highly likely to be inconsistent with safe and sound banking practices.”[14] It further opines that “agencies have significant safety and soundness concerns with business models that are concentrated in crypto-asset-related activities or have concentrated exposures to the crypto-asset sector.”[15]

d. Industry Impacts

Crypto exchanges have primarily facilitated cryptocurrency and stablecoin trading and transactions. This trend is shifting as certain regulated “traditional financial institutions” are now allowing consumers

and institutions to trade crypto through their networks. Industry leading companies have also explored issuing their own cryptocurrencies and stablecoins.

The market cap of cryptocurrency, and in certain instances stablecoin, remains volatile. Total market cap for these assets fluctuated from "under $200 billion in January 2020 to approximately $2.9 trillion in November 2021, before falling to less than $1.0 trillion in June 2022."[16]

A combination of offerings by crypto exchanges and traditional financial institutions as well as potential deployment by varied businesses will further drive the adoption of cryptocurrencies and stablecoins.

II. Tokenized Assets (Tokenization)

a. Definition

Tokenization, "is the process of digitally representing an existing real asset (e.g., securities, real estate, commodities, art) on a distributed ledger, [and] involves a public or private ledger that links the economic value and rights derived from these real assets with digital tokens."[17]

b. Brief Overview

Tokenization has the potential to fundamentally effect and alter large sections of business, finance, and the law. Both existing real assets (including securities, real estate, commodities, and art) as well as intangible assets (including patents, trademarks, and intellectual property more broadly) can be tokenized.

The "act of tokenizing any asset […] introduces the technological benefits of [distributed ledger technology] to the related clearing and settlement processes by processing transaction details and automating all other transaction related events through settlement."[18]

c. U.S. Regulatory and Public Policy Landscape

There is a dearth of regulation concerning tokenization, particularly as it relates to the tokenization of real assets, including financial assets that are already regulated. That said, federal agencies have demonstrated the regulatory intent to group tokenized assets with cryptocurrencies, stablecoins, and similar types of digital assets. For example, Treasury, states that crypto-assets,

> […] may be original and integral creations of an underlying distributed ledger or blockchain [(i.e., cryptocurrencies and stablecoins)]— sometimes referred to as being 'native' to a given network. Alternatively, they may be **'tokenized' representations of assets, including other crypto-assets or assets issued by traditional financial institutions or entities—such as stocks or bonds—with no initial reliance on DLT. Digital or tokenized representations of assets are also included in the term 'crypto-assets.** [19]

Because federal entities have packaged tokenized assets together with cryptocurrencies and stablecoins, it is prudent to assume that tokenized assets will be governed by the same existing regulatory regimes that apply to these assets (see above for more information). That said, given the complexities and risks inherent with the tokenization of real and intangible assets, additional regulations will likely need to be implemented. Further, tokenized assets, unlike cryptocurrencies or stablecoins that originate on the blockchain, may also be affected by those regulations that already govern their underlying assets.

d. Industry Impacts

Numerous asset types have the potential to be tokenized. As such, the sectors likely to be affected are significant. Treasury explains the scope of tokenization of financial products and assets, which are some of the many asset types that can be tokenized, as follows,

> [t]he scope of future tokenized crypto-asset activities on permissioned blockchains is potentially very large, with proxies for the estimated market capitalization of financial products in this segment including the value of securities held in custody by the Depository Trust and Clearing Corporation (over $70 trillion), and assets under management across asset classes in private markets ($9.8 trillion).[20]

Tokenization is likely to facilitate "faster and cheaper transactions, increased transparency of asset positions, and increased liquidity through fractionalization."[21] Therefore, many entities, including some of the largest tech and financial companies, are actively exploring tokenization.

Regulation of tokenized assets is in its nascent stages and is likely to see significant development.

III. Central Bank Digital Currencies

a. Definition

Central bank digital currencies (CBDCs) "refer to a form of digital money or monetary value, denominated in the national unit of account, that is a direct liability of the central bank."[22]

b. Brief Overview

A CBDC "is a digital form of a country's sovereign currency."[23] In the United States, "the existing forms of sovereign currency are deposits held by banks and selected financial institutions at the Federal Reserve (reserve balances) and Federal Reserve Notes (paper currency)." Treasury, in a piece addressing U.S. design choices for a potential CBDC states,

> CBDC would have three core features. First, CBDC would be legal tender. Second, CBDC would be convertible one-for-one into reserve balances or paper currency. And third, similar to transfers of reserve balances over Fedwire or the FedNow Service, or payments with paper currency, CBDC would clear and settle with finality nearly instantly.[24]

CBDCs present significant potential benefits and risks. For example, "a U.S. CBDC could contribute to a payment system that is more efficient, provides a foundation for further technological innovation, facilitates more efficient cross-border transactions, and is environmentally sustainable."[25] Additionally, "[i]t could promote financial inclusion and equity by enabling access for a broad set of consumers[,…] foster economic growth and stability, protect against cyber and operational risks, be consistent with individual rights, and minimize risks of illicit financial transactions."[26] However, there, "could be unintended consequences of a U.S. CBDC, including runs to U.S. CBDC in times of stress, which could pose risks to financial stability; a reduction in credit availability; or higher credit costs for businesses and governments."[27] Finally, "a U.S. CBDC must be extremely reliable and, for that reason, technological experimentation with U.S. CBDC may not be at the same speed as private sector payment innovations."[28]

c. U.S. Regulatory and Public Policy Landscape

The White House, and federal entities including the Federal Reserve and Treasury have all conducted studies concerning the issuance of a U.S. CBDC. Treasury recently concluded that "[a] U.S. CBDC has

the potential to offer significant benefits, but further research and development on the technology that would support a U.S. CBDC is needed and could take years."[29]

One of the biggest concerns surrounding the issuance of a U.S. CBDC is the potential for significant government control and oversight. U.S. dollars, in many circumstances, offer a certain degree of anonymity. A CBDC, however, would allow the federal government to, potentially, track and control every digital dollar it mints. Though a U.S. CBDC has not yet been created, concerns surrounding the concept have led certain federal and state representatives to introduce bills banning the issuance of a U.S. CBDC or its use in certain states.

d. Industry Impacts

As noted, the U.S. is studying the potential development of a U.S. CBDC. That said, many other countries are more actively exploring CBDCs, and some have already introduced them.

As it stands, "nearly 105 central banks […] are considering CBDCs."[30] Additionally, "50 countries are in an advanced stage of CBDC exploration, meaning they have moved forward on a pilot program, are testing architecture designs, or have executed a soft launch[, and] 16 of the G20 countries are in the development or pilot phase […]."[31]

China has already launched its CBDC, the digital Yuan. Many other significant economic players, including India, Russia, Thailand, Malaysia, South Korea, and the United Arab Emirates have all established pilot phase programs for a potential launch of their respective CBDCs. The EU, Australia, and UK are also actively exploring CBDCs.

Each nation's issuance of a CBDC will come with specific regulatory requirements and use cases. Companies that work in or with currencies of a respective nation that launches a digital currency must ensure they meet all necessary regulations and requirements while also implementing systems that facilitate transactions between traditional fiat currencies and CBDCs. Finally, as more nations implement functioning CBDCs it becomes more likely for others to follow suit.

Cryptocurrencies, stablecoins, tokenized assets, and CBDCs have the potential to significantly impact industries, nations, and the global economy. As such, those working in, or affected by, digital assets should be cognizant of existing applicable regulations, increased agency enforcement, efforts to pass relevant legislation, and the development of new regulations regarding the digital assets sphere.

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Kilpatrick Townsend's Digital Assets Regulation Blog

Kilpatrick Townsend's Digital Assets Regulation Blog (DARB), which is led by attorney Stephen Anstey, covers various aspects of digital assets regulation, development, and administration, as well as related topics. For more information, please visit our website at Digital Assets Regulation (kilpatricktownsend.com).

Footnotes

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[1] Exec. Order No. 14067, 87 FR 40881 (2022).
[2] *Id.*
[3] U.S. Department of the Treasury, *Crypto-Assets: Implications for Consumers, Investors, and Businesses*, 15 (2022).
[4] *Id.*
[5] *Id.* at 16.
[6] *Id.* at 21.
[7] U.S. Department of the Treasury, *The Future of Money and Payments*, 17 (2022).
[8] *Id.*
[9] The Securities and Exchange Commission, *Proposed Rule 17 CFR Parts 275 and 279 Safeguarding Advisory Client Assets* (2023).
[10] The Securities and Exchange Commission, *Release 2023-25, Kraken to Discontinue Unregistered Offer and Sale of Crypto Asset Staking-As-A-Service Program and Pay $30 Million to Settle SEC Charges* (2023).
[11] *Id.*
[12] The Commodity Future Trading Commission, *CFTC Charges Binance and Its Founder, Changpeng Zhao, with Willful Evasion of Federal Law and Operating an Illegal Digital Asset Derivatives Exchange* (2023).
[13] The Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency, *Joint Statement on Crypto-Asset Risks to Banking Organizations* (2023); The Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency, Joint Statement on Liquidity Risks to Banking Organizations Resulting from Crypto-Asset Market Vulnerabilities (2023).
[14] The Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency, *Joint Statement on Crypto-Asset Risks to Banking Organizations* (2023).
[15] *Id.*
[16] U.S. Department of the Treasury, *Crypto-Assets: Implications for Consumers, Investors, and Businesses*, 14 (2022).
[17] Exec. Order No. 14067, 87 FR 40881 (2022).
[18] U.S. Department of the Treasury, *Crypto-Assets: Implications for Consumers, Investors, and Businesses*, 21 (2022).
[19] *Id.* at 5.
[20] *Id.* at 21-22.

[21] *Id.* at 20.
[22] Exec. Order No. 14067, 87 FR 40881 (2022).
[23] U.S. Department of the Treasury, *The Future of Money and Payments*, 19 (2022).
[24] White House, Technical Design Choices for a U.S. Central Bank Digital Currency System, 5 (2022).
[25] U.S. Department of the Treasury, *The Future of Money Payments*, 45 (2022).
[26] *Id.*
[27] *Id.*
[28] *Id.*
[29] *Id.*
[30] Congressman Jim Himes, *Winning the Future of Money: A Proposal for a U.S. Central Bank Digital Currency* (2022).
[31] *Id.*