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***The Rise and Fall of Cryptocurrency: The Three Paths Forward***

by

Joel Seligman  
Dean Emeritus  
Professor of Law

# THE RISE AND FALL OF CRYPTOCURRENCY: THE THREE PATHS FORWARD

By Joel Seligman\*

In a crash reminiscent of the 1929-1933 Stock Market crash in which prices on the New York Stock Exchange fell 83 percent between September 1929 and July 1932 or the 2007-2009 Financial Debacle in which the Dow Jones Industrial Average declined 54 percent between October 9, 2007 and March 9, 2009, crypto market capitalization fell 61 percent between November 2021 and May 2022, collapsing from an aggregate value of \$2.9 trillion to \$1.24 trillion. Bitcoin, the leading cryptocurrency which in late 2021 traded near \$68,000 in November 2021 traded as low as \$25,402 on May 10, 2022 (a decline of 63 percent). Coinbase, the leading crypto exchange, fell by 84 percent between its \$381 opening price and \$61 on May 10, 2021. Most spectacularly, TerraUSD, a stablecoin supposedly pegged to a nonvolatile currency but actually based on a far more risky algorithm, collapsed to prices as low as 10 cents on May 13, 2021, including a spectacular 82 percent collapse in 24 hours. Cryptomania had been succeeded by the Great Crypto Crash of 2022.<sup>1</sup>

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\*Joel Seligman is a Professor of Law and Dean Emeritus at Washington University School of Law and President Emeritus at the University of Rochester.

<sup>1</sup> See Caitlin Ostroff, Crypto-Market Turbulence Intensifies as Prices Gyrate, *Wall St. J.* (May 13, 2022); Caitlin Ostroff, TerraUSD Left Out as Crypto Stabilizes, *Wall St. J.* (May 14-15, 2022); Editorial, Warnings from the Crypto Crash, *Wall St. J.* (May 13, 2022) (“To drum up demand for its currency, Terra’s developers created a “decentralized lending” platform that offered interest rates up to 20%); Alexander Osipovich & Caitlin Ostroff, Stablecoin Crash Shakes Crypto: “Run on the Bank,” *Wall St. J.* (May 13, 2022); Vickey Ge Huang, Tether Codes Territory to Rival Stablecoins as Investors Diversify, *Wall St. J.* (June 10, 2022). One newspaper article estimated that Do Kwon, a young

As with Dante's First Canto of the *Divine Comedy*, United States policymakers have three distinct policy choices concerning the future of cryptocurrency: prohibition, regulation or competition. The United States can choose one policy or combinations of the three, but ultimately the United States will have to choose the fundamental approach which guides its response.

This article explains the implications of each policy alternative and concludes with a proposed path forward.

## I. THE BIDEN EXECUTIVE ORDER

In March 2022, the Biden Administration issued an Executive Order ordering a comprehensive review of Digital Assets.<sup>2</sup>

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trash talking South Korean entrepreneur, was responsible for the \$40 billion crash in Luna and TerraUSD. David Yaffe-Bellany & Erin Griffith, Trash Talk Can't Save Crypto Fund, *N.Y. Times* (May 19, 2022). For 1929-1933 NYSE and 2007-2009 Financial Debacle price collapses, see Joel Seligman, *Misalignment: The New Financial Order and the Failure of Financial Regulation 1-2* (Wolters Kluwer 2020).

<sup>2</sup> Executive Order on Ensuring Responsible Development of Digital Assets (Mar. 9, 2022).

The term *digital asset* was meant to include not only cryptocurrencies, but a wide gamut of derivative products such as stable coins and competitive products such as Central Bank Digital Currencies, popularly known as CBDCs, and tokens, including nonfungible tokens. The Order described the breath of its review in §7(d):

Regardless of the label used, a digital asset may be, among other things, a security, a commodity, a derivative, or other financial product. Digital assets may be exchange across digital asset

The review was notable for seeking coordination of the policy review by over 20 Federal Executive branch departments and regulatory agencies,<sup>3</sup> stressing: “My Administration places the highest urgency on

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trading platforms, including centralized and decentralized finance platforms, or through peer-to-peer technologies.

<sup>3</sup> Section 3 of the Executive Order delineated:

The Assistant to the President for National Security Affairs (*APNSA*) and the Assistant to the President for Economic Policy (*APEP*) shall coordinate, through the interagency process described in National Security Memorandum 2 of February 4, 2021 (Renewing the National Security Council System), the executive branch actions necessary to implement this order. The interagency process shall include, as appropriate: the Secretary of State, the Secretary of the Treasury, the Secretary of Defense, the Attorney General, the Secretary of Commerce, the Secretary of Labor, the Secretary of Energy, the Secretary of Homeland Security, the Administrator of the Environmental Protection Agency, the Director of the Office of Management and Budget, the Director of National Intelligence, the Director of the Domestic Policy Council, the Chair of the Council of Economic Advisers, the Director of the Office of Science and Technology Policy, the Administrator of the Office of Information and Regulatory Affairs, the Director of the National Science Foundation, and the Administrator of the United States Agency for International Development. Representatives of other executive departments and agencies (*agencies*) and other senior officials may be invited to attend interagency meetings as appropriate, including, with due respect for their regulatory independence, representatives of the Board of Governors of the Federal Reserve System, the Consumer Financial Protection Bureau (*CFPB*), the Federal Trade Commission (*FTC*), the Securities and Exchange Commission (*SEC*), the Commodity Futures Trading Commission (*CFTC*), the Federal Deposit

research and development efforts into the potential design and deployment options of a United States CBDC [that is, Central Bank Digital Currency].”

While the Executive Order delineated several objectives<sup>4</sup> and in its text described challenges with “cybersecurity and market failures at major digital asset exchanges and trading platforms have resulted in billions of dollars of losses,”<sup>5</sup> and “increased risks to financial stability.”<sup>6</sup> The Order described digital assets posing “illicit financial risks, including money laundering, cybercrime and ransomware, narcotics and human trafficking and terrorism and proliferation

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Insurance Corporation, the Office of the Comptroller of the Currency, and other Federal regulatory agencies.

Section 7 also supported efforts by the G7, G20, the International Finance Stability Board, and FATF (Financial Action Task Force which addresses money laundering and terrorist financing) “to address the full spectrum of issues and challenges raised by digital assets, including financial stability, consumer, investor and business risks and money laundering, terrorist financing, proliferation financing, sanctions evasion and other illicit activities.”

<sup>4</sup> In §2, these included (a) protecting consumers, investors and businesses in the United States; (b) protecting United States and global financial stability and mitigating systemic risk; (c) mitigating the illicit financial and national security risks posed by misuse of digital assets; (d) reinforcing United States leadership in the global financial systems and in technological and economic competitiveness; (e) promoting safe and affordable financial systems; and (f) supporting technological advances that promote responsible development and use of digital assets.

<sup>5</sup> Section 2(a). See also §7.

<sup>6</sup> Section 2(b).

financing”,<sup>7</sup> “[t]he technological architecture of different assets has substantial implications for privacy, national security, the operational security and resilience of financial systems, climate change, the ability to exercise human rights, and other national goals,”<sup>8</sup> and “implications for energy policy, including as it relates to grid management and reliability, energy efficiency incentives and standards and sources of energy supply.”<sup>9</sup> The Executive Order was tentative in describing the basic approach it would support to resolve this long cavalcade of issues and who, other than through coordination by the long list of agencies already involved, would lead this effort.

## II. PROHIBITION OF CRYPTO AND ITS DERIVATIVES

In the United States, prohibition of financial products in whole or in part has a long history.

After the conspicuous failure of the Continental Congress to issue paper money not backed by gold or silver, the United States Constitution expressly in Article 1 §8 gave only the Federal Government the power to coin money. The States in Article I §10 were expressly prohibited from “[making] any thing but gold and silver coin a tender in payment of debts.”<sup>10</sup>

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<sup>7</sup> Section 2(c). See also Section 5.

<sup>8</sup> Section 2(f). See also §6.

<sup>9</sup> Section 6(b).

<sup>10</sup> The catastrophic mismanagement of the Revolutionary War economy led to its Continental Dollar being worth as little as one cent on a dollar, giving rise to the phrase “not worth a Continental” and the Continental Congress failing to adequately finance Revolutionary War compensation or supply its military. See SELIGMAN, *supra* n. 1, at 141-146.

President Andrew Jackson's 1832 Veto of the Second Bank of the United States was accompanied by a prohibition of any National bank and a requirement in 1836 that only gold and silver could be used to purchase public lands, which the United States then had in abundance, as well as a prohibition on United States paper money which lasted until 1863.<sup>11</sup>

Much of the late 19<sup>th</sup> Century politics would be animated by currency wars. Could the United States new paper money be based on silver and gold or only on gold, leading to William Jennings Bryan's immortal "you shall not crucify mankind upon a cross of gold" 1896 speech, and his nomination for President.<sup>12</sup>

In 1900 Congress enacted the Gold Standard Act effectively designating gold to be the monetary standard of the United States, which it would remain until 1971 when President Nixon ended the convertibility of dollars into gold.<sup>13</sup>

Nearly as fundamental changes occurred in the life insurance and securities industries.

In 1905, the recommendations of New York's Armstrong Commission ended tontine life insurance in New York which in 1905 was responsible for 64 percent of all life insurance in force nationally.<sup>14</sup> Tontine insurance was a negative lottery system, an insurance product in which several individuals would pool investments in a whole life insurance policy (combining a savings plan with death benefit insurance)

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<sup>11</sup> Id. at 221-237.

<sup>12</sup> Id. at 261-277.

<sup>13</sup> See id. at 277, 693-696.

<sup>14</sup> Id. at 346.

with only the living individuals entitled to the benefit of the investment after a period of years, typically 20 or more. The Armstrong Commission sharply criticized high pressure sales tactics and the high costs of marketing practices of the insurance and in 1905, New York State prohibited tontine insurance altogether as did other states that followed New York's approach.<sup>15</sup>

The 1929-1933 Stock Market Crash laid bare similar patterns of high pressure sales, misleading disclosure and stock market manipulation which were among the reasons the United States Congress prohibited sales of most securities to the public without a prior filing of offering documents with what is now the Securities and Exchange Commission (*SEC*) in 1933<sup>16</sup> or in 1934 requiring most securities markets to register with the SEC.<sup>17</sup>

Cryptocurrency, as is by now well known,<sup>18</sup> originated in 2008 in a paper, Bitcoin: A Peer-to-Peer Electronic Cash System written by Satoshi Nakamoto, the pseudonym for the author or authors of a system designed to provide electronic transmissions "without relying on trust." In Nakamoto's original vision, people could transfer value directly to

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<sup>15</sup> *Id.* at 346-362.

<sup>16</sup> Joel Seligman, *The Transformation of Wall Street: A History of the Securities and Exchange Commission and Modern Corporate Finance* Chs. 1-2 (Aspen Pub. 3d ed. 2003).

<sup>17</sup> *Id.* at Ch. 3.

<sup>18</sup> See, e.g., Carol Goforth & Yuliya Guseva, *Regulation of Cryptoassets*, Ch. 1 (2d ed. 2022); Josias Dewey, *Blockchain and Cryptocurrency Regulation*, *Global Legal Insights* (2021 3d ed.); Mary Lacity, *Crypto and Blockchain Fundamentals*, 73 *Ark. L. Rev.* 363 (2020); Rebecca Bratspies, *Cryptocurrency and the Myth of the Trustless Transaction*, 25 *Mich. Tech. L. Rev.* 1 (2018).

each other from anywhere in the world without: (1) government issued currencies; (2) relying on third party intermediaries; or (3) needing to reconcile records across trading partners.

As originally conceived, Nakomoto's model provided a libertarian alternative to the United States centralized banking system:

- Bitcoin was intended to be a new currency as an alternative to government-issued currencies and was meant to be impossible to counterfeit.
- There was no central bank such as the Federal Reserve System, no central server, no central storage, no single administrator or need for approval to trade.
- Bitcoin transactions could be conducted by anyone, anywhere, 24/7.
- Bitcoin was intended to protect the privacy of users.
- The Bitcoin model was intended to be democratically run.
- The system was anonymous.
- There was no need for intermediaries.
- Bitcoin provided a means for people without bank accounts to transfer value.

The Nakomoto model was actualized in 2010 with the formation of Bitcoin, which remains the largest cryptocurrency, with a market cap of \$574 billion as of June 10, 2022, approximately 50 percent of the \$1.14 trillion global crypto market.<sup>19</sup> Bitcoin began with each Bitcoin having a value of 30 cents. Over time, the value of each Bitcoin has stunningly increased. In November, 2021, each Bitcoin was worth a high closing price of \$67,802. The value of Bitcoin has proven enormously volatile, by June 10, 2022, Bitcoin fell to \$28,492 or a decline of 58 percent.<sup>20</sup>

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<sup>19</sup> [www.coinmarketcap.com](http://www.coinmarketcap.com); [www.coinbase.com](http://www.coinbase.com).

<sup>20</sup> Id.; see supra n. 1.

As of January 2022, there were 106 million Bitcoin owners, holding over 200 million Bitcoin wallets. Only 21 million Bitcoins were planned to be created.

Each Bitcoin is registered to a Bitcoin address. Each address has a public key and private key that are cryptographically generated. The private key allows the owner to access funds at the address. The public key is used to validate transactions that are communicated from the address. Private and public keys are stored in the crypto trader's wallet.

Miners confirm Bitcoin transactions in each blockchain. Anybody can become a miner but mining requires a lot of computational energy and expansive IT hardware. The miners keep the blockchains unalterable by requiring Proof of Work and creating new chains to protect the system<sup>21</sup> Miners are rewarded for validating transactions with Bitcoins and fees.

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<sup>21</sup> Bitcoin utilized Nakamoto's peer-to-peer currency system. Proof of Work is the consensus algorithm in Bitcoin used to prevent attacks on the system. Bybit Learn Explained: What is Proof of Work (POW in Blockchain (Dec. 8, 2020); Ledger, What is Proof of Work (Oct. 23, 2019).

There are multiple steps in mining. These initially included: (1) A request to transfer a specified number of Bitcoins from one address to another; (2) the request is sent to another Bitcoin address; (3) miners validate that the transferor has sufficient Bitcoin in a wallet to avoid double spending; (4) the transaction is validated using cryptographic algorithms; (5) the new transaction is added to the end of the blockchain. See, e.g., crypto.com, What is Mining?; Fergus O'Sullivan, What is Crypto Mining and How Does it Work?, Cryptocurrency (Dec. 12, 2021); What is Proof of Work and What Does It Mean to Bitcoin and Cryptocurrency, BePay (Mar. 25, 2021).

All transactions are recorded in a ledger or blockchain, which contains previous blocks back to the initial block of a chain. In the Bitcoin system, the blockchain contains a record of every transaction ever conducted in the blockchain. The blockchain ledger enables everyone with access to view any transaction.

Over time, Nakamoto's initial model of Bitcoin experienced considerable evolution.

Wallets now can be held by full clients with access to the entire blockchain or lightweight clients who use simplified payment verification, and only have access to a local copy of the blockchain. Most cryptocurrency participants do not use full nodes, those responsible for an entire blockchain network. Bitcoin miners often join mining pools to minimize the variance of their income.

As with Continental Dollars, tontine insurance and pre-1933 securities sales, Bitcoin has been beset with marketing and product integrity problems as well as severe environmental problems. These include:

- Bitcoin was initially just a payout system beset by slower transaction times and high transaction costs. The Federal Reserve System reported in January 2022 that Bitcoin is only capable of supporting roughly five transactions per second and can cost up to \$60 per transaction.<sup>22</sup>

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<sup>22</sup> Money and Payments: The U.S. Dollar in the Age of Digital Transformation at 11, n.13.

- Crypto has been used in illegal transactions such as money laundering, tax evasion, or to trade illegal goods.<sup>23</sup>
- Crypto remains subject to price volatility, estimated to be eight times greater than S&P 500 and 18 times greater than the dollar. On May 28, 2021, for example, Bitcoin lost 32 percent in 12 hours after Elon Musk announced Tesla would no longer accept Bitcoins.<sup>24</sup>

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<sup>23</sup> Cryptocurrency Money Laundering Rises 3% in 2021, Fin. Magnates Quarterly Intelligence Report Q4 2021 (In 2021, cyber criminals laundered over \$8.6 billion in digital currencies).

In November 2021, it was reported that the Internal Revenue Service Criminal Investigation Unit seized \$3.8 billion for tax fraud during Fiscal 2021 including \$1 billion linked to the darknet Silk Road. Michael Beliusci, IRA Seized \$3.5B in Cryptocurrency during Fiscal 2021, *Coindesk* (Nov. 18. 2021).

In 2021, Werner Vermaak listed 13 countries as the leading tax havens for cryptocurrency including those that entirely or largely exclude crypto trading from capital gains taxation. Werner Vermaak, *Where Are the World's Crypto Tax Havens in 2021?*, [www.coinmarketcap.com](http://www.coinmarketcap.com) (Apr. 18, 2022).

<sup>24</sup> See Paul Krugman, *How Crypto Became the New Subprime*, *N.Y. Times* (Jan. 28, 2022):

Well, I'm seeing uncomfortable parallels with the subprime crises of the 2000s. No, crypto doesn't threaten the financial system – the numbers aren't big enough to do that. But there's growing evidence that the risks of crypto are falling disproportionately on people who don't know what they are getting into and are poorly positioned to handle the downside.

- There have been many crypto thefts, As of 2017, Reuters estimated \$15 billion stolen using 980,000 coins between 2011 and 2017. In February 2022, it was reported that a couple, Ilya Lichtenstein and Heather Morgan, had attempted to sell Bitcoin, then worth over \$4 billion that had been stolen from the cryptocurrency exchange Bitfinex in 2016, when the Bitcoins were valued at \$71 million. The couple was charged with money laundering in what the *Guardian* on February 14, 2022 labeled the "heist of the century."<sup>25</sup>

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<sup>25</sup> See also Ali Watkins & Benjamin Weiser, Modern Crime, A Tech Couple and a Trail of Siphoned Crypto, *N.Y. Times* (Feb. 13, 2022); Dustin Vale & Ian Talley, U.S. Seizes \$3.6 Billion in Stolen Bitcoins, *Wall St. J.*, (Feb. 9, 2022) (roughly 94,000 of 119,754 stolen Bitcoins were recovered); Paul Vigna, Bitcoin Stolen in Hack was Tracked Through Accounts, *Wall St. J.* (Feb. 10, 2022); David Yaffe-Bellany, Theft, Fraud and Lawsuits at Large NFT Marketplace, *N.Y. Times* (June 6, 2022); Paul Vigna, Search Continues for Source of Cryptocurrency Bank Run, *Wall St. J.* (June 6, 2022), focusing on how two digital token firms, Luna and TerraUSD collapsed:

In DeFi, it isn't easy to understand who provides money for loans, where the money flows or how easy it is to trigger currency meltdowns. This is one reason regulators are concerned about the impact of DeFi on investors and the broader financial system.

In March 2022, a different set of hackers stole more than \$500 million of Ethereum and the stablecoin USDC. Paul Vigna & Sarah E. Needelman, Crypto Theft One of Largest, *Wall St. J.* (Mar. 30, 2022).

Later in March 2022, North Korea stole \$615 million from the Ethereum blockchain by hacking the online game Axie Infinity. U.S. Ties North Korea Hacker Group to Huge Cryptocurrency Theft, *Reuters* (Apr. 14, 2022); David Uberti, Laundering Crypto is the Tricky Part, *Wall St. J.* (Apr. 7, 2022). See also David Uberti, Hackers Target

- Because Bitcoin requires each user to retain a private key, a unique system of 64 numbers and letters, Bitcoin accounts can be lost as was the case of a Welshman who lost an account worth half a billion dollars.<sup>26</sup>
- Bitcoin’s energy consumption has been particularly sharply criticized. Bitcoin mining in 2021 accounted for 36.95 million tons of carbon emissions a year. One study estimated that Bitcoin alone could generate enough carbon dioxide to raise global temperatures by 3.6 degrees Fahrenheit in three decades.<sup>27</sup>

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Bridges between Blockchains for Cryptoheists, *Wall St. J.* (Apr. 6, 2022); Mengai Sun & David Smagalla, Cryptocurrency-Based Crime Hit a Record \$14 Billion in 2021, *Wall St. J.* (Jan. 6, 2022) (the volume of cryptocurrency transactions in 2021 was \$15.8 trillion, up 567 percent from 2020. Fourteen Billion in 2021 illegal transactions was also up 79 percent from 2020 and represented only 0.15 percent of cryptocurrency trading volume in 2021).; Paul Vigna, Hackers Get Bolder in Crypto Capers, *Wall St. J.* (Apr. 24, 2022).

By 2021, cryptocurrency jumped from the seventh riskiest scam in 2020 to the second riskiest. Cryptocurrency Scams Increased in 2021, *The Register-Herald* (Apr. 12, 2022).

<sup>26</sup> See D.T. Max, Coin Toss, *The New Yorker* 22 (Dec. 13, 2021); David Yaffe-Bellany, No Real Names in Crypto, Please, *N.Y. Times* (Mar. 3, 2022) (describing instances where anonymity undermines accountability such as Wonderland, whose value crashed when it was revealed that its treasury manager had served time in federal prison for fraud).

<sup>27</sup> Digiconomist in its January 22, 2022 Energy Consumption Index estimated that Bitcoin’s “network now consumes more energy than a number of countries” and explained why:

In 2015, Ethereum, the second most widely traded cryptocurrency, with market capitalization of \$185 billion on June 10, 2022, was created

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. . . The machines performing the work are consuming huge amounts of energy while doing so. Moreover, the energy used is primarily sourced from fossil fuels. . . .

New sets of transactions (blocks) are added to Bitcoin's blockchain roughly every 10 minutes by so-called miners. While working on the blockchain, these miners aren't required to trust each other. The only thing miners have to trust is the code that runs Bitcoin. . . .

The continuous block mining cycle incentivizes people all over the world to mine Bitcoin. As mining can provide a solid stream of revenue, people are very willing to run power-hungry machines to get a piece of it. Over the years this has caused the total energy consumption of the Bitcoin network to grow to epic proportions, as the price of the currency reached new highs.

In 2022, a consortium of environmental groups launched a campaign to change BitCoin's code to decrease energy use. Paul Vigna, Bitcoin Miners' Energy Use under Fire, *Wall St. J.*, March 30, 2022.

In June 2022, the New York State legislature enacted a two year moratorium on reactivating fossil fuel power plants for cryptocurrency mining. Jimmy Vielkind, New York Crypto Mining Bill Clears, *Wall St. J.* (June 4-5, 2022). The crypto industry launched an intense lobbying effort to dissuade Governor Hochul from signing the bill creating the moratorium. Crypto Industry Pushing Hochul on Mining Ban, *N.Y. Times* (June 8, 2022).

and attempted to address some of the limitations of Bitcoin. Ethereum popularized smart contracts, the use of cryptocurrencies other than its own ETH and Nonfungible Tokens.

A fundamental limitation of Bitcoin was that it initially only provided a means to trade with other Bitcoin wallets. Ethereum smart contracts in contrast allowed Ethereum wallets to trade with a wide array of other applications and popularized Decentralized Finance or DeFi.<sup>28</sup>

Ethereum's innovators were animated by the same libertarian enthusiasm as those who created of Bitcoin. "No lawyers, no bankers, no accountants, everything is outsourced to the Block Chain," as one of the Ethereum developers put it, a vision of building a new decentralized world order based on the blockchain.<sup>29</sup>

As with Bitcoin, Ethereum relies on a blockchain, nodes, the same type of 64 character hexadecimal private key, transaction fees and miners with their proof of work. Ethereum blocks are validated approximately every 12 seconds compared with Bitcoin's validation time of approximately ten minutes.

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<sup>28</sup> See James Barton, How Many Smart Contracts are There? (Jan. 27, 2022): "At the time of writing, there are over 1,000,000 smart contracts deployed on Ethereum, holding a total of over 100,000,000 ETH. Out of these contracts, over 49,000 have been verified on Etherscan. This is a 100 fold increase in the total number of Ethereum smart contracts in existence in just 2 years." See IBM, What Are Smart Contracts? Fabian Schäs, Decentralized Finance: On Blockchain - and Smart Contract-Based Financial Markets (Fed. Res. Bank St. Louis, 2021-04-15).

<sup>29</sup> Daniel Rasmussen, Visionary of Blockchain World, *Wall St. J.* (Mar. 12-13, 2022). See generally Laura Shin, The Cryptopians: Idealism, Greed, Lies and the Making of the First Big Cryptocurrency Craze (Public Affairs 2022).

Unlike Bitcoin, which relies on energy intensive Proof of Work, Ethereum is switching to a much less energy intensive Proof of Stake system. Staking provides a short cut to validation by allowing investors to put their cryptocurrencies in the blockchain by relying on a third party consensus mechanism to verify a transaction.<sup>30</sup> One opinion writer in the *New York Times* explained the difference between Proof of Work and Proof of Stake:

Briefly, [in Proof of Work], you prove your work by doing those quintillions of calculations. You prove your stake by pledging cryptocurrencies that you own. As in a company's shareholder vote, the people with the most coins have the biggest say.

The difference in energy consumed per transaction between the two systems is like the difference in height between the world's tallest building and a single screw.<sup>31</sup>

Nonetheless, whatever its weakness as a currency and defects as an energy glutton, trading of Bitcoin became a hot speculative investment, sometimes described as “digital gold”. Bitcoin is traded on futures markets, by stock market Exchange Traded Funds and custody services from major securities firms including Fidelity and Coinbase.<sup>32</sup>

The years 2020-2022 were the years of crypto. In February 2022, it was estimated that there were 10,397 different cryptocurrencies

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<sup>30</sup> Coinbase, What is Staking? (Apr. 2022).

<sup>31</sup> Peter Coy, Bitcoin is Unlikely To Go Green, *N.Y. Times* (Apr. 24, 2022).

<sup>32</sup> See Karen Hube, Investing in the Crypto Economy, *Wall St. J.* (Mar. 8, 2022).

worldwide.<sup>33</sup> In 2021, Pew Research estimated that 16 percent of agencies and 31 percent of those between 18 and 31 had invested in, traded or used a cryptocurrency. One consumer survey in 2022 reported that 44 percent of all crypto owners first purchased crypto within the past year and 31 percent more within the past one to two years.<sup>34</sup> In 2021, venture capitalists banked 460 blockchain projects, spending nearly \$12.75 billion compared to \$2.75 billion spent in 2020 on 155 projects.<sup>35</sup> Investors included Goldman Sachs, JP Morgan, BlackRock, Citidel, Elon Musk and Mark Zuckerberg.<sup>36</sup> By 2021, cryptocurrency was used in several popular financial services such as Robinhood, Venmo and CashApp. Visa and MasterCard were linking credit and debit cards to crypto brokerage sites.<sup>37</sup> Commercial banks and other enterprises today use cryptocurrency in commercial transactions. In 2021, 14,000 ATMs could engage in Bitcoin transactions. In 2021, it was estimated that Bitcoin was accepted by 2300 businesses. In March 2021, PayPal allowed Bitcoin and Ethereum to make purchases with their currencies. Eric Adams, Mayor of New York City, requested in January 2022 that his first three paychecks be paid in Bitcoin. In April

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<sup>33</sup> Statista.com/statistics/8639171/number-crypto-coins-tokens.

<sup>34</sup> Pew Research, 16% of Americans Say They Have Invested In, Traded, or Used Cryptocurrency (2021/11/11); Allison Whaley, Paxos Survey Finds Consumers Want Early Access to Crypto, Paxos Blog (Feb. 9, 2022).

<sup>35</sup> Ephrat Livni, Division on Crypto on View in Feud of Tech Billionaires, *New York Times*, Jan. 19, 2022.

<sup>36</sup> Michele Chapman & Alex Veiga, Coinbase Soars in Market Debut, Valued Near \$86 Billion, AP Business Wire, April 14, 2021; Justin Baer, Wall Street Warms Up to Crypto, *Wall St. J.* (May 2, 2022).

<sup>37</sup> HUBE, *supra* n. 26.

2022, Fidelity, the nation's largest retirement plan provider, became the first to authorize investors to add Bitcoin to their 401(k)s.<sup>38</sup>

Beginning with the Bitcoin Market in 2010, there were more than 500 cryptocurrency exchanges in 2022. Some 99 percent of crypto transactions are made through centralized exchanges. Centralized Exchange Platforms revolutionized cryptotrading. Coinbase, the largest exchange by the end of 2021, had 89 million retail users, 11,000 institutions and 210 ecosystem partners. Coinbase customers could trade over 500 different cryptocurrencies including Bitcoin, Ethereum and Dogecoin, use a Visa Debit Card and borrow against their accounts

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<sup>38</sup> Deloitte, *Tax Reporting in the Age of Crypto* (2022); Mayor, Booster of Cryptocurrency, Has His First Paycheck Converted to Bitcoin, *New York Times*, Jan. 23, 2022. See also David Yaffe-Bellany, Coin Boon is Drawing New Traders and Tokens, *N.Y. Times* (Feb. 7, 2022) (more than 11,000 cryptocurrencies then existed); Tara Seigel Bernard, Time to Enter the Crypto Zone, *N.Y. Times* (Mar. 24, 2022) (a survey of financial advisers found 16 percent had allocated crypto to their clients' portfolios in 2021, up from 9 percent in 2020); Anna Tergesen, Fidelity to Allow Bitcoins in 401(k), *Wall St. J.* (Apr. 26, 2022).

El Salvador recognized Bitcoin as legal tender, which to date has been little used. Ephrat Livni, El Salvador's Crypto Embrace Prompts Warning from I.M.F., *N.Y. Times* (Jan. 27, 2022); Vyas & Pérez, El Salvador Asks, Can Bitcoin Be a Nation's Currency?, *Wall St. J.* (Feb. 17, 2022).

In 2022, Dubai created the Dubai Virtual Assets Regulatory Authority, reflecting Dubai's vision to become one of the leading jurisdictions for entrepreneurs and investors in blockchain technology. Houston Andrews Kurth, Dubai Issues Its First Crypto Law Regulating Virtual Assets, *National Law Review* (Apr. 14, 2022).

using Bitcoin as collateral. Coinbase itself was a publicly traded company listed on the Nasdaq.<sup>39</sup>

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<sup>39</sup> Coinbase Global, Inc. Form 10-K for Fiscal Year Ended Dec. 31, 2021; Kai Segwick, The Number of Cryptocurrency Exchanges Has Exploded, Bitcoin.com News (Apr. 19, 2022) (there are more than 500 cryptocurrency changes); The Best Cryptocurrency Exchange Platforms in 2022 (“Even though more than 1,000 cryptocurrency exchange platforms are in operation today, not all of them are trustworthy, not all of them provide for fees, and not all of them secure your transactions); Corp. Fin. Inst., Cryptocurrency Exchanges, [corporatefinanceinstitute.com/resources](https://corporatefinanceinstitute.com/resources).

Professor Kristin Johnson generalized about crypto exchanges:

Coinbase, Gemini, Bittrex and Binance are all examples of centralized exchanges. Users deposit their funds direction into a pooled wallet that is controlled by the exchange; the exchange takes custody of traders’ deposited assets, and the exchange directly engages in matching buy and sell orders.

Centralized exchanges create accounts that store customer funds. The exchanges maintain “hot” wallets connected to the platform’s network to facilitate trading. Centralized exchanges generally enable traders to execute, clear, and settle buy/sell orders.

Kristin Johnson, *Regulating Decentralized Finance: Cryptocurrency Exchanges*, 62 Wm. & Mary L. Rev. 1911, 1953 (2021).

By 2022, 60 percent of trading was conducted by four platforms (Coinbase, 21 percent; PayPal, 20 percent; Robinhood, 10 percent; and Square’s Cash App., 9 percent) WHALEY, *supra* n. 27.

To address the volatility of Bitcoin, several cryptocurrencies rely on Stablecoins, pegging the value of the cryptocurrency to a stable currency. Led by Tether, the largest stablecoin with a market capitalization of \$72 billion as of June 10, 2022 is pegged to the United States Dollar. Other Stablecoins have been pegged to fiat currencies like the Euro and also can be pegged to gold, silver, oil or other cryptocurrencies. Stablecoins backed by a fiat currency are backed by the full faith and credit of the Government that issues the currency. But as the experience of TerraUSD painfully illustrates, not all stablecoins are stable. Unlike traditional stablecoins, several stablecoins were algorithmic stablecoins. Algorithmic stablecoins are not backed by specific assets but rely on an algorithmic program to maintain a relationship to the United States dollar.<sup>40</sup>

Cryptotokens were popularized. Tokens are digital assets that represent other types of assets which either can be fungible such as airline frequent flyer miles or Nonfungible Tokens (*NFTs*) which are for a particular object such as a work of art or real estate property. In either case, the cryptotoken can be exchanged for the asset.

In the *Wall Street Journal*, Justin Scheck, recounts in 2021 NFT trading “has also become a haven for fakes and scammers trying to get

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A decentralized exchange, in contrast, does not require a transfer of cryptoassets to a third party but is a peer-to-peer system. They are anonymous and do not require an investor to complete a know your customer opening form. But they have key disadvantages. An investor who does not remember keys or passwords can lose the total value of the accounts. Corp. Fin. Inst., *supra*.

<sup>40</sup> See *supra* n. 1; Coinbase, What Is a Stablecoin?; Adam Hayes, Julius Mansa & Sylan Clairene, Stablecoin, Investopedia; Monika Ghosh, Stablecoins in a Nutshell: Subverting Fiat Currency by Relying on It, Jumpstart (June 2, 2021).

users' money or access to their newfangled assets.” Growth on the NFT market nonetheless was meteoric, from \$95 million in 2020 to \$25 billion in 2021, led by the Bored Ape Yacht Club, a series of 10,000 digital images of languid simians in various shades. The speculative value of limited edition artistic NFTs is highly volatile and the unregulated trading markets are subject to the same risks of manipulation and fraud that other forms of cryptocurrency have been. By May 2022, the sale of NFT digital tokens had declined 92 percent from a peak of 225,000 in September 2021 to 19,000 the previous week.<sup>41</sup>

China, in September 2021, acting through its People's Bank banned all digital currencies, ruling that all virtual currency transactions

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<sup>41</sup> Elizabeth Howcraft, NFT Sales Hit \$25 Billion in 2021, But Growth Shows Signs of Slowing, *Reuters* (Jan. 11, 2022); Getting Past the NFT Money Business, *Wall St. J.* (Feb. 12-13, 2022); Zachary Small, Reframing NFTs for the Art Market, *N.Y. Times* (Apr. 15, 2022); Louis White, Most NFT Sales Are People Buying Their Own NFTs, Evidence Suggests, *Stealth Opinion* (Feb. 11, 2022); Paul Vigna, Sale of NFT Digital Tokens Stall as High Rates Deter Risky Trades, *Wall St. J.* (May 4, 2022). See also Abby Schultz, What's Ahead for NFTs, *Wall St. J.* (Mar. 8, 2022):

Most of us own portfolios of stocks and bonds. Adventurous investors are sprinkling in Bored Apes and CryptoPunks. These cartoonish sounding characters aren't anything like traditional investments – they have no physical properties, don't pay dividends or interest and provide no claims to future cash flows. But they're among the most popular nonfungible tokens or NFTs, a type of digital collectible or digital asset. Prized NFTs now cost more than a new Ferrari – Bored Apes are going for an average minimum price of \$248,000 on trading platform OpenSea. A CryptoPunk recently sold for \$11.75 million.

– including services that provide foreign exchange to Chinese citizens – were illegal.<sup>42</sup> Paradoxically, the gravitation of Bitcoin mining in China, which relied in part on hydropower, to other nations such as the United States and Kazakhstan, more reliant on fossil fuels, appears to have aggravated the negative environmental consequences of cryptocurrency mining.<sup>43</sup> The Chinese ban focused solely on cryptocurrency. In January 2022, China concluded that Nonfungible Tokens could continue to be traded in China as long as they were linked to blockchains such as Ethereum or Bitcoin.<sup>44</sup>

United States law does ban specified products such as consumption of dangerous substances, but the case for proscribing cryptocurrency alone on the grounds that it is speculative is not a persuasive one. Securities and other investments in the United States often are speculative, but the basic thrust of securities regulation in the United States is on disclosure of material facts about an investment, not

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<sup>42</sup> Coined News, *China Bans All Crypto-Related Transactions* (Oct. 11, 2021); Ralph Jennings, *How China’s Ban on Cryptocurrency Will Ripple Overseas*, *China News* (Oct. 2, 2021); World Econ. Forum, *What is Behind China’s Cryptocurrency Ban?* (Jan. 31, 2022) (People’s Bank emphasized curtailing financial crime and proscribing capital flight); Jialiang David Pan, *China Steps Up Crypto Clampdown with Threat of Jail Sentences*, *Bloomberg* (Feb. 25, 2022); Anne Stevenson-Yang, *Crypto vs. China’s Digital Currency: Never the Twain Shall Meet*, [www.forbes.com](http://www.forbes.com) (Jan. 12, 2022) (“China dislikes the energy consumption and greenhouse gasses associated with crypto-currency mining”).

<sup>43</sup> See, e.g., Hiroke Tabuchi, *Ban from China Made Bitcoin Less Friendly to Climate, Study Says*, *N.Y. Times* (Feb. 26, 2022).

<sup>44</sup> Colsen News, *China Bans Cryptocurrencies But Preserves NFT* (Jan. 18, 2022).

prohibition.<sup>45</sup> The Federal Securities Laws long ago rejected “merit” regulation of securities issuance that is regulation on which a Securities Commissioner could prohibit a security based on her or his view of its “soundness”.<sup>46</sup> The same basic approach should be taken towards cryptocurrency, regardless of whether or not it is a security.

Two aspects of cryptocurrency as exemplified by Bitcoin are different.

First, energy consumption by Bitcoin miners poses a threat to the United States currently in the midst of a climate change crisis that President Biden has labelled “the existential threat of our times”.<sup>47</sup> The climate change crisis in part involves reduction of energy consumption and was believed to be a reason China banned cryptocurrency.<sup>48</sup>

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<sup>45</sup> See, e.g., 1 Louis Loss, Joel Seligman & Troy Paredes, *Securities Regulation* Chs. 1.G and 2.B.1.b (Wolters Kluwer 6<sup>th</sup> ed. 2019).

SEC Chair Gensler put this simply in an interview reflecting on his first year as Chair: “You want to raise money from the public and the public wants to take the risk, that’s fine, as long as you register with the SEC and you give them full and fair disclosure and don’t lie to them.” Ephrat Livni, Gensler Reflects On First Year as the SEC Chairman, *N.Y. Times* (Apr. 18, 2022).

<sup>46</sup> SELIGMAN, *supra* n. 16, at ch. 1.

<sup>47</sup> Jennifer Dlouhy & Josh Wingrove, Biden Calls Climate Change “Existential Threat of Our Times,” *Bloomberg Green* (Dec. 19, 2020).

<sup>48</sup> *Supra* nn. 34-35; Lyle Doly, Sold Crypto in 2021? 5 Things to Know about your Taxes, *The Ascent* (Feb. 17, 2022).

The Biden administration is contemplating additional tax revenue. In 2022, the White House estimated that closing the crypto reporting gap

The United States should prohibit excessive energy consumption in cryptoproducts. As with tontine insurance, which was proscribed but not life insurance generally, this would mean a prohibition of cryptoproducts that consume more than specified levels of energy, but not all cryptoproducts. A phase-in of this prohibition would permit Bitcoin and other excessive energy consumers to restructure their business model to the new regulatory regime but would definitively ban cryptoproducts that engages in energy use above the specified levels.

There may well be opposition to this prohibition from some in the Federal government or some States. Sales of cryptocurrency held by investors can be taxed as property and subject to ordinary income taxation or held and taxed as capital assets.<sup>49</sup> States, such as Texas, seek to provide crypto miners a welcome mat.<sup>50</sup> What justifies the extreme step of prohibition is the energy gluttony of Bitcoin miners.

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could net up to \$28 billion in new tax revenue over the next 10 years. Joint Comm. on Taxation Report (JCX-33-21) (Aug. 2, 2021).

<sup>49</sup> Revenue Ruling 2019-24, Robert W. Wood, IRS Gives Crypto Tax Warning: Don't Forget to Report (Mar. 20, 2022); Brady Dale, Biden Targets Crypto Wealth for \$11 Billion in New Tax Revenue (Apr. 4, 2022).

<sup>50</sup> Nicholas Pongratz, Texas Crypto Mining Leads to Rising Power Bills for All (Mar. 16, 2022).

By December 2021, 33 States and Puerto Rico had pending legislation in the 2021 legislative season, 17 states had enacted legislation or adopted resolutions. Heather Morton, Cryptocurrency 2021 Legislation (NCSL (12-16-21)). By April 2022, Florida, Kentucky and Wyoming had passed laws making it easier to create or operate a crypto company in their states. Eric Lipton & David Yaffe-Bellany, Crypto Firms Have a Wish List, States Are Turning It into Law, *N.Y.*

The second basis for China’s prohibition on cryptocurrency equally applicable in the United States involves its secrecy which can facilitate illegal transactions including tax evasion, money laundering and finance of international terrorists.<sup>51</sup> A prohibition on all cryptoproducts that do not provide access to United States law enforcement agencies to detect and enforce criminal laws is preferable to a global prohibition of all cryptoproducts. This cuts to the heart of the libertarian “Trust No One” and guaranteed complete anonymity of Bitcoin and similar cryptocurrencies. Bitcoin’s approach is exceptional. In the United States enforcement either as facilitated by Federal enabling laws or with appropriate subpoenas generally has access to records of crimes. It provides no comfort whatever that after several days the United States was able to recover some or all of the ransomware that Colonial Pipeline in 2021 paid in Bitcoin to ransomware operations.<sup>52</sup> This is exactly backwards. The fact that Bitcoin generally is untraceable invites crime.

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*Times* (Apr. 11, 2022). See generally GOFORTH & GUSEVA, *supra* n. 18, Ch. 14.

For state-by-state summary of state rules as of March 15, 2021, see Matthew Kohen, *State Regulations on Virtual Currency and Blockchain Technologies* (Apr. 9, 2021).

<sup>51</sup> See James Fanelli, *Crypto Guru Gets Prison Time over Trip to North Korea*, *Wall St. J.* (Apr. 13, 2022) (unsuccessful effort to instruct North Korea on how to circumvent sanctions using the blockchain); *Crypto Can’t Evade Sanctions*, *Wall St. J.* (Apr. 13, 2022) (uncertainty as to how widespread crypto has been in sanctions evasion).

<sup>52</sup> See, Perlroth, Griffith & Banner, *Cyber Cash is Traceable After All*, *N.Y. Times*, June 20, 2021.

### III. REGULATION OF CRYPTOPRODUCTS

The predominant United States response to cryptomania has been regulatory. In the absence of a clear National policy several Federal agencies today are engaged in regulatory efforts.

Bitcoin was unusual in that it was created without raising any funds. Subsequent cryptocurrency projects have sought investor support through Initial Coin Offerings, Security Token Offerings and Initial Exchange Offerings. In an Initial Coin Offering, the investor provides funds to the issuer and receives tokens in exchange. Fundraising has been substantial. Between 2014 and 2018, Initial Coin Offerings raised approximately \$14 billion; 119 Security Token Offerings in 2018 raised over \$17 billion. Since 2018, Initial Exchange Offerings allow investors to fund transactions with coins and buy tokens.<sup>53</sup>

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<sup>53</sup> See Dell’Erba, *From Inactivity to Full Enforcement: The Implementation of the “Do No Harm” Approach in Initial Coin Offerings*, 26 Mich. Tech. L. Rev. 175 (2020); Amigh Taylor, *Watch Out for “Rug Pull” Scam That’s Tricking Investors Out of Millions*, *Fortune* (Mar. 3, 2022) (In 2021, dishonest crypto developers who absconded with funds, stole \$2.8 billion from investors, 31 percent of all crypto scam revenue that year).

AirDrops provide an alternative way to create a new cryptoproduct. An issuer simply distributes free tokens to existing accounts to launch a product. The Bored Ape Yacht Club, see *supra* n. 40, did so in March 2022, quickly becoming among the most well known NFTs and briefly saw the value of ApeCoins double. *Someone Borrowed 5 Bored Apes to Claim \$1.1 Million of APE Tokens*, [www.coinmarketcap.com](http://www.coinmarketcap.com) (Mar. 19, 2022).

As crypto currency has soared in popularity, so has the intensity of regulatory concern.

In August 2021 remarks to the Aspen Security Forum, SEC Chair Gary Gensler recognized: “Right now, we just don’t have enough investor protection in crypto. Frankly at this time, it’s more like the Wild West. . . . The asset class is rife with fraud, scams and abuse in certain applications.” Gensler stressed: “In my view, the legislative priority should center on crypto trading, lending and DeFi platforms. . . . Right now large parts of the field of crypto are sitting astride of – not operating within – regulatory frameworks that protect investors and consumers, guard against illicit activity, ensure for financial stability, and yes, protect national security.”<sup>54</sup>

When a crypto coin or digital asset satisfies the *Howey* test<sup>55</sup>, the Commission and the courts have concluded that a crypto platform or coin is an investment contract, a type of security as defined in the Federal Securities laws. In *Howey*, the United States Supreme Court held that a combination of a small real estate investment in an orange grove and a service contract employing the seller or a third party to manage the cultivation and sale of the oranges was an investment contract under the Securities Act of 1933 when there was (i) an investment of money, (ii) in a common enterprise, and (iii) an expectation of profits from the efforts of the promoter or a third party. Whether *Howey* is satisfied turns on whether a transaction in a cryptoproduct creates an expectation of profits because of the managerial efforts of others such as the organizer of the crypto platform or token program.

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<sup>54</sup> See SEC Chair Gensler Address, August 3, 2021 to the Aspen Security Forum.

<sup>55</sup> SEC v. W.J. Howey, Co., 328 U.S. 293 (1946).

In 2021, Cornerstone Research published a summary of SEC Cryptocurrency Enforcement. Through the end of 2021, the SEC had brought 97 cryptocurrency-related litigation and administrative actions, issues 20 trading suspensions and imposed approximately \$2.35 billion in total monetary penalties against digital asset market participants. Gensler in his 2021 remarks to the Aspen Security Forum took pride in the fact: “We haven’t yet lost a case.”

In July 2017 the Commission published a notable Report of Investigation Pursuant to §21(a) of the Securities Exchange Act of 1934.<sup>56</sup> While the Commission determined not to pursue an enforcement action, the DAO Report addressed initial coin offerings, tokens, smart contracts and the Federal Securities law requirements for crypto products to register both as a security and as an exchange:

. . . The DAO was created by Slock.it and Slock.it’s co-founders, with the objective of operating as a for-profit entity that would create and hold a corpus of assets through the sale of DAO Tokens to investors, which assets would then be used to fund “projects.” The holders of DAO Tokens stood to share in the anticipated earnings from these projects as a return on their investment in DAO Tokens. In addition, DAO Token holders could monetize their investments in DAO Tokens by re-selling DAO Tokens on a number of web-based platforms (*Platforms*) that supported secondary trading in the DAO Tokens.

In April and May 2016, the DAO offered and sold approximately 1.15 billion DAO Tokens in exchange for 12 million Ether, the virtual currency used on the Ethereum Blockchain. When the DAO offering was closed, the DAO was valued at \$150 million:

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<sup>56</sup> The DAO, Sec. Ex. Act Rel. 81,207 (2017).

. . . All funds raised were to be held at an Ethereum Blockchain “address” associated with The DAO and DAO Token holders were to vote on contract proposals, including proposals to The DAO to fund projects and distribute The DAO’s anticipated earnings from the projects it funded. The DAO was intended to be “autonomous” in that project proposals were in the form of smart contracts that exist on the Ethereum Blockchain and the votes were administered by the code of The DAO.

DAO created DAO Tokens proportional to the amount of Ether paid. DAO intended to earn profits by funding projects that provided DAO Token holders a return on their investment. DAO tokens were widely traded:

In addition to secondary market trading on the Platforms, after the Offering Period, DAO Tokens were to be freely transferable on the Ethereum Blockchain. DAO Token holders would also be permitted to redeem their DAO Tokens for ETH through a complicated, multi-week (approximately 46-day) process referred to as a DAO Entity “split.”

For a project to be considered for funding with DAO, contractors were required to submit proposals to DAO that included a written smart contract that would be included in the Ethereum Blockchain and posted on the DAO website. Each DAO proposal was required to be approved by one or more of DAO’s curators, individuals chosen by Slock.it before being submitted to a shareholder vote.<sup>57</sup>

Applying the *Howey* test, the SEC Report concluded that DAO tokens were securities because investor profits were derived from the

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<sup>57</sup> DAO became newsworthy when an unknown individual or group diverted approximately \$50 million or one-third of the total Ether raised in the DAO 2016 offering. See LACITY supra n. 18.

managerial efforts of Slock.it, its co-founder and the DAO curators. DAO token holder voting rights were limited.

DAO was required to register its initial coin offering under §5 of the Securities Act because DAO had not established a valid exemption.

The Report also found that the DAO system was an exchange under §3(a)(1) and Rule 3b-16(a) of the Securities Exchange Act of 1934 because it was an:

[O]rganization, association, or group of persons . . . considered to constitute, maintain, or provide “a marketplace or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange,” if such organization, association, or group of persons: (1) brings together the orders for securities of multiple buyers and sellers; and (2) uses established, non-discretionary methods (whether by providing a trading facility or by setting rules) under which such orders interact with each other, and the buyers and sellers entering such orders agree to the terms of the trade.<sup>58</sup>

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<sup>58</sup> DAO did not satisfy any of the available exemptions from Rule 3b-16(a) such as that provided by Alternative Trading Systems. Subsequently, the SEC proposed to amend Rule 3b-16 which will facilitate Commission cases against cryptocurrency exchange platforms. See Dentons, SEC Appears to Target Crypto Trading Venues with Proposed Stealth Regulation (Feb. 15, 2022).

In 2022, after Coinbase Global refused to voluntarily register with the SEC as an exchange, the Commission initiated a study of ways to register crypto trading platforms as exchanges. Paul Kiernan, Crypto Platform Oversight Studies, *Wall St. J.* (Apr. 5, 2022). See also Alex Gailey, The SEC Announced New Crypto Regulation Initiatives This Week. Here’s What Investors Should Know, *Next Advisor* (Apr. 5,

In December 2021, there were more than 4000 decentralized anonymous organizations or DAOs with an aggregate value of \$13 billion.<sup>59</sup>

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2022) (plans to register and regulate crypto exchanges); Staff Acct. Bull. No. 121 (Apr. 11, 2022) (staff views on accounting for entities that have obligations to safeguard crypto assets); Mark R. Hake, XRP Crypto Looks Stronger Now That Ripple Has Gained Ground Fighting the SEC, *Investor Place* (Ripple Labs ongoing litigation with SEC).

Particularly after the 2022 Crypto Crash, private litigation increased. See, e.g., James Fanelli, Crypto Industry Sees Surge in Lawsuits, *Wall St. J.* (June 2, 2022); Anne Tergesen, Suit Targets a Hurdle to Crypto in 401(k)s, *Wall St. J.* (June 3, 2022); see also Tiffany Hsu, Stars Taking Heat for Hying Virtual Currency, *N.Y. Times* (May 18, 2022); David Yaffe-Bellany, From Celebrities Who Are Cashing In, *N.Y. Times* (June 1, 2022) (the Crypto Crash has increased scrutiny of stars and online influencers who promote crypto); Connie Driesbuch & Tim McGinty, Coinbase Executives Pocket \$1.2 Billion, *Wall St. J.* (May 28-29, 2022); David Yaffe-Bellany, A Crypto Emperor's Vision: No Pants, His Rules, *N.Y. Times* (May 15, 2022) (Sam Bankman-Fried raised more than \$40 billion in fewer than three years by the age of 30).

<sup>59</sup> Eric Lipton & Ephrat Livni, Cracks in the Pillars of a Crypto Utopia, *N.Y. Times* (Mar. 9, 2022) (Many were wrestling with challenges including huge financial losses from software flaws and hacks, internal divisions and allegations of improper diversion of community funds).

See Staff amplification of analysis of when a crypto product was a security in William Hinman, SEC Director, Division of Corporation Finance, Speech, Digital Asset Transactions: When *Howey* met Gary (Plastic), Yahoo Fin. All Markets Summit: Crypto (June 14, 2018); SEC, Strategic Hub for Innovation & Fin Tech., Framework for “Investment Contract” Analysis of Digital Assets (Apr. 3, 2019); see

In August 2021, SEC Chair Gensler reported that nearly three-fourths of trading on all crypto trading platforms occurred between a Stablecoin and a token.<sup>60</sup> The Commission supported the President's Working Group on Financial Markets, the FDIC and Office of the Comptroller of the Currency, Report on Stablecoins in November 2021. By October 2021, the market capitalization of Stablecoins issued by the largest Stablecoin issuers exceeded \$127 billion.<sup>61</sup> The President's Working Group Report highlighted:

Stablecoins and stable-coin related activities present a variety of risks. Speculative digital asset trading, which may involve the use of stablecoins to move easily between digital asset platforms or in decentralized finance (*DeFi*) arrangements, presents risks related to market integrity and investor protection. These market integrity and investor protection risks encompass possible fraud and misconduct in digital asset trading, including market manipulation, insider trading, and front running, as well as a lack of trading or price transparency. . . .

Stablecoins also pose illicit finance concerns and risks to financial integrity, including concerns related to compliance with rules governing anti-money laundering (*AML*) and countering the financing of terrorism (*CFT*) and proliferation. To prevent misuse

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also Leaders of CFTC, FinCen & SEC, Joint Statement on Activities Involving Digital Assets (Oct. 5, 2019) (recognizing that digital assets include instruments that may qualify under applicable U.S. laws as securities, commodities, and security- or commodity-based instruments such as futures or swaps).

<sup>60</sup> See *supra* n. 53.

<sup>61</sup> See *supra* n. 21, at 9.

of stablecoins and other digital assets by illicit actors, Treasury will continue leading efforts at the Financial Action Task Force (*FATF*) to encourage countries to implement international AML/CFT standards and pursue additional resources to support supervision of domestic AML/CFT regulations. . . .

To address the prudential risks of payment stablecoins, the President’s Working Group on Financial Markets (*PWG*), along with the Federal Deposit Insurance Corporation (*FDIC*) and the Office of the Comptroller of the Currency (*OCC*) (together, the *agencies*) recommend that Congress act promptly to enact legislation to ensure that payment stablecoins and payment stablecoin arrangements are subject to a federal prudential framework on a consistent and comprehensive basis.<sup>62</sup>

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<sup>62</sup> *Id.* at 9. Stablecoins in part were popular because of high yields with USD Coin and Tether in April 2022, advertising yields of 9.3 percent and another advertising as high as 12 percent. Barron’s reported: “The days of earning 9% yield on cryptocurrencies appear to be ending for retail investors as regulatory pressures ramp up.” Daren Fonda, High-Yield Crypto is Dying under Regulatory Pressure, *Barron’s* (Apr. 19, 2022).

See also Alexander Osipovich, Crypto Coins Touting Stability Prove Risky, *Wall St. J.* (Apr. 19, 2022): Describing algorithmic Stablecoins, “edgy upstart siblings of conventional stablecoins” as “a disaster waiting to happen”:

Issuers of conventional stablecoins say they hold cash or bonds so each of their digital coins is backed by a dollar’s worth of real assets. But algorithmic stablecoins aren’t necessarily backed by any assets at all. Instead, they rely on financial engineering to maintain their link to the dollar. Some have failed, saddling investors with losses. . . .

In 2021, the Department of Treasury announced that it would require any transfer of \$10,000 or more in cryptocurrency to be reported to the Internal Revenue Service.<sup>63</sup>

Parallel steps were taken by other Federal regulatory agencies.

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Proponents say algorithmic stablecoins are better than the conventional kind because they aren't run by a single centralized entity. Instead, they run autonomously on blockchain-based networks, relying on traders who could be anywhere in the world to keep them tied to the dollar. Such a design makes it more difficult for regulators to control algorithmic stablecoins, often seen as an advantage in crypto circles.

<sup>63</sup> National Law Journal, U.S. Treasury Announces Cryptocurrency Reporting Requirements, June 10, 2021: “Despite constituting a relatively small portion of business income today, cryptocurrency transactions are likely to rise in importance in the next decade, especially in the presence of a broad-based financial account reporting regime. Within the context of the new financial account reporting regime, cryptocurrencies and cryptoasset exchange accounts and payment service accounts that accept cryptocurrencies would be covered.”

In May 2021, the Department of Treasury stated in The American Families Plan Tax Compliance Agenda at 2 that the President's tax proposal sought to include additional resources for the IRS to address the growth of cryptoassets: “Although cryptocurrency is a small share of current business transactions, such comprehensive reporting is necessary to minimize the incentives and opportunity to shift income out of the new information reporting regime.”

In 2014, the Commodity Futures Trading Commission defined virtual crypto currencies to be a “commodity” subject to oversight under the Commodity Exchange Act. The CFTC position can be harmonized with the SEC Enforcement position under *Howey*. With a cryptocurrency such as Bitcoin or Ethereum is solely used for peer-to-peer transactions, it does not satisfy the requirement that an investment contract generate profits from the efforts of others since the decentralized owners of Bitcoin and Ethereum control the governance of the systems.<sup>64</sup>

Since registering TechExchange in 2014 to trade Bitcoin swaps, the CFTC has registered crypto futures markets often relying on self-certification.<sup>65</sup>

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<sup>64</sup> CFTC v. McDonnell, 287 F. Supp. 3d 213 (E.D.N.Y. 2018) (affirming CFTC jurisdiction over virtual currencies as commodities and concurrent jurisdiction depending on facts and circumstances of the SEC, the Department of Justice and state criminal agencies, the Treasury Department or FinCen, the Internal Revenue Service and state regulation or a combination of agencies); and CFTC v. My Big Coin Pay, Inc., 334 F. Supp. 3d 492 (D. Mass 2018) (Bitcoin engages in futures trading in virtual currencies).

In 2016, the CFTC brought an enforcement action against a Bitcoin exchange that was offering unregistered futures. BFXNA, Inc., d/b/a BITFINEX, CFTC Docket No. 16-19. See generally CFTC Retail Commodity Transaction Involving Digital Assets, 85 F.R. 37,734 (June 24, 2020).

<sup>65</sup> See Chicago Mercantile Exchange and CBOE Futures Exchange (Dec. 1, 2017). On CFTC self-certification, see generally CFTC, Backgrounds and Oversight of and Approach to Virtual Currency Futures Markets (Jan. 4, 2018); CFTC, Digital Assets Primer (Dec. 2020); JOHNSON, *supra* n. 33.

In February 2022 testimony to the United States Senate Committee on Agriculture, CFTC Chair Rostin Behnam explained that the CFTC had brought nearly 50 enforcement actions since 2014, but now sought additional resources to adequately address the digital sector.<sup>66</sup>

In October 2021, Deputy Attorney General Lisa Monaco announced that the Department of Justice had begun a new Civil Cyber-Fraud Initiative. This new initiative is similar to the work of the Treasury's Financial Crimes Enforcement Network, called FinCEN, which is intended "to safeguard the financial system from illicit use, combat money laundering and its related crimes including terrorism, and promote national security through the strategic use of financial authorities and the collection, analysis and dissemination of financial intelligence." FinCEN since 2001 has addressed money laundering, Domestic and Foreign Financial Transactions Reporting Requirements and the Bank Secrecy Act, which FinCEN has used to characterize virtual currencies as a type of reportable account.<sup>67</sup>

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<sup>66</sup> Testimony of Chairman Rostin Behnam Regarding "Examining Digital Assets: Risks, Regulation and Innovation" (Feb. 9, 2022).

<sup>67</sup> Department of Justice Press Release, Deputy Attorney General Lisa O. Monaco Announces New Civil Cyber-Fraud Initiative (Oct. 6, 2021); GOFORTH & GUSEVA, *supra* n. 18, Chs. 2-5; Application of FinCEN's Regulation to Persons Administering, Exchanging or Using Virtual Currencies, Dept. of Treasury, FinCEN Guidance 2013-G001 (Mar. 18, 2013).

Bitcoin was characterized as money subject to the criminal money transmitting and money laundering statutes, 18 U.S.C. §§1956(h), 1960, in *United States v. Faiella*, 39 F. Supp. 3d 544 (S.D.N.Y. 2014). See also *United States v. Murgis*, 200 F. Supp. 3d 398 (S.D.N.Y. 2016)

While these efforts are appropriate, they alone are inadequate to provide effective comprehensive regulation of cryptoproducts. There are gaps and omissions, no agency charged with coordination of those efforts, no agency charged with systematic examination and investigation, no agency charged with attempting to stay ahead of the curve in a fast evolving field with new issuers and products seemingly on a daily basis.

As was the case in the 2010 Dodd-Frank Act<sup>68</sup> for a new Bureau of Consumer Financial Protection,<sup>69</sup> the case for a new standalone agency to address cryptoproducts is a strong one. Cryptoproducts are different in kind than existing currencies, securities or commodities. The concern that was long expressed with other agencies regulating consumer finance was that such regulation would not provide the attention a standalone agency could provide. Bank regulators, for example, prioritized the safety and solvency of banks. Consumer regulation was rarely emphasized.<sup>70</sup>

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(criminal convictions for engaging in an unlicensed money transmitting business, trading Bitcoin).

In 2015, FinCEN assessed a \$700,000 fine for violations of the Bank Secrecy Act and failing to maintain an adequate anti-money laundering program against Ripple Labs, Inc. and a subsidiary in its first civil enforcement action. FinCEN Pr. Rel. (May 15, 2015).

<sup>68</sup> Pub. L. No. 111-203, 124 Stat. 1376 (2010).

<sup>69</sup> See SELIGMAN, *supra* n. 10, at 1122-1125.

<sup>70</sup> *Ibid.*

There are two alternatives to a new standalone cryptoproducts regulatory agency.

The first is to rely on the plethora of existing agencies to continue their regulation. This type of multiregulatory agency approach was widely criticized<sup>71</sup> in the aftermath of the 2007-2009 financial debacle that originated in the housing industry but ultimately led to the systemic 2007-2008 financial crisis with stock prices falling 54 percent, global stock market losses of \$35 trillion, United States unemployment more than doubling from 4.5 to 10.1 percent, and the Federal deficit exploding from \$459 billion in 2008 to \$1.413 trillion in 2009.<sup>72</sup>

The separate regulator model to address the 2007-2009 financial crisis was beset by ineffectual communication and coordination of the regulatory agencies, regulatory arbitrage in which private banks, securities or commodities firms sought the most accommodating regulator, and gaps and omissions in oversight examination of firms, investigation and enforcement.<sup>73</sup> There is little reason to believe that

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<sup>71</sup> See, e.g., Department of Treasury, *Blueprint for a Modernized Financial Regulatory Structure* (Mar. 2008) (urging consolidation of specified regulators); Bipartisan Policy Center, *Dodd-Frank's Missed Opportunity: A Road Map for a More Effective Regulatory Architecture* (2014) (urging consolidation of specific bank and investment regulators); the Volcker Alliance, *Reshaping the Financial Regulatory System: Long Delayed, Now Crucial* (2015) (criticizing the “highly fragmented, outmoded and ineffective” existing system of financial regulation and the uneven application of existing regulation to a growing number of organizations that operated outside of regulatory oversight). See SELIGMAN, *supra* n. 10, at Ch. 6, esp. 1101-1110.

<sup>72</sup> SELIGMAN, *supra* n. 10, at 2-3.

<sup>73</sup> See *id.* at Ch. 1; GAO, *Financial Regulatory Reform: Financial Crisis Losses and Potential Impact of Dodd-Frank* (GAO 13-180 Jan.

similar problems would not plague our current model of separate agency regulation of cryptoproducts if no agency is definitively in charge.

The consensus concerning the inability of a system of largely separate regulatory agencies to address a systemic financial crisis led in 2010 to the enactment of the Dodd-Frank Wall Street Reform and Consumer Protection Act with a Financial Stability Oversight Council (*FSOC*) including the Secretary of Treasury, the Chair of the Federal Reserve, the Comptroller of the Currency, the Director of the Treasury's Bureau of Consumer Financial Protection, the Chair of the SEC, the Chair of the Federal Deposit Insurance Corporation, the Chair of the Commodity Futures Trading Commission, the Director of the Federal Housing Finance Agency, and the Chair of the National Credit Union Administration.<sup>74</sup>

FSOC represents a half-way house to effective regulation. The Council is largely advisory and can attempt to persuade, but usually not direct, constituent agencies to adopt new standards. To former Secretaries of the Treasury Tim Geithner and Hank Paulson and former Fed Chair Ben Bernanke, the Dodd-Frank Act failed to simplify “the ludicrously byzantine mess” of United States financial regulation.<sup>75</sup>

The Government Accountability Office summarized the deficiencies of the post Dodd-Frank model of financial regulation in 2016, citing repeated examples in which fragmented United States regulatory structures complicated securities and derivatives oversight

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2013); Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States (2011).

<sup>74</sup> Pub. L. No. 111-203 §111, 124 Stat. 1376 (2010)

<sup>75</sup> Ben Bernanke, Timothy Geithner & Henry Paulson, *Firefighting: The Financial Crisis and Its Lessons* 112-129 (Penguin Books 2019).

split between the SEC and the CFTC, limited insurance oversight, providing inconsistent safety and soundness and consumer protection oversight, delayed regulatory action, complicated the United States position in international negotiations, and limited the capacity to achieve fully effective systemic risk monitoring.<sup>76</sup>

A single regulatory agency in contrast could address the full gamut of current cryptoproducts including those now regarded as currency, securities, commodities or none of the above and provide regulatory oversight to new products such as coins, tokens and nonfungible tokens, trading platforms whether currently regulated by the SEC, CFTC or no one, and alternative means of trading such as those currently through securities broker-dealers, commodities futures dealers, mutual funds and Exchange Traded Funds. The new agency could also focus on new products and means of trading that emerge in the future.

Under a single regulator model, the new enabling law could be enacted to provide comprehensive regulation of all cryptoproducts and means of crypto trading and particularly focusing on current gaps and omissions. As always in financial regulation, the proof is in the details and in developing the new enabling law, Congress will want to hear testimony from some or all of the long list of current agencies involved in developing the Biden approach<sup>77</sup>, as well as those in the cryptoindustry.<sup>78</sup>

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<sup>76</sup> GAO, Financial Regulation: Complex and Fragmented Structure Could Be Streamlined to Improve Effectiveness (GAO 16-175 Feb. 2016).

<sup>77</sup> See *supra* n. 2.

<sup>78</sup> The SEC had considerable success with such a broad approach involving the industry when it developed rules for crowdfunding securities offerings. See 3 Louis Loss, Joel Seligman & Troy Paredes, *Securities Regulation* 457-515 (Wolters Kluwer 6<sup>th</sup> ed. 2020).

The new enabling law should provide for registration of all cryptoproducts whether denominated currency, security, commodity, property or any other label. The intent of the broad generic definition would be to include all current cryptocurrencies, coins including initial coin offerings whether in the form of stable coins or otherwise, tokens including Nonfungible Tokens and other digital assets used as cryptoproducts and be sufficiently elastic to include new crypto products under whatever new labels may be involved as they develop in the future.

Three aspects of a new cryptoproduct registration system are particularly consequential.

First, definitions.<sup>79</sup> Besides a capacious definition of *cryptoproducts*, the new Act would need to broadly define *issuer* of new products to distinguish between those responsible for initiating the new product and those who are merely investors. For example, in a DAO, mere members would be excluded from the definition of *issuer* but not those who organized the DAO or registered it. Other definitions would address gatekeepers involved in the preparation and marketing of a new cryptoproduct. In Federal Securities law, this would include underwriters, dealers and other sellers and accountants, attorneys and other experts who certify aspects of a registration statement.<sup>80</sup> The terminology is not important but including all relevant intermediaries in

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<sup>79</sup> See 2 Louis Loss, Joel Seligman & Troy Paredes 1101-1504 (Wolters Kluwer 6<sup>th</sup> ed. 2019) (for the Securities Act of 1933 approach to definitions).

<sup>80</sup> See discussion of distribution techniques, the basic prohibitions of §5 and the registration procedure of the Securities Act, LOSS, SELIGMAN & PAREDES, *supra* n. 45, at 647-1138.

the sales and marketing process would be. Currently in many securities offerings, sponsors are pivotal but undefined actors in the sale of many securities offerings.<sup>81</sup> Sponsors in the marketing and sale of new cryptoproducts should be included as intermediaries when they are compensated for their efforts by designated levels of cash, cryptoproducts or options or warrants to purchase interests in the new cryptoproduct.

Second. Regulation. With the sale of new registered cryptoproducts, regulation would include public disclosure of the specific business and property of the new product, whether it or its key intermediaries or governing board, if it has one, are involved in legal proceedings, listing cryptoproduct and other assets of the firm, financial data including actual or potential dilution of cryptoproduct values, discussion by the management of the firm of their analysis of financial and competitive conditions, conflicts of interest and compensation of the issuers, other intermediaries and management of the firm and all other material information.<sup>82</sup>

In the SEC model of registration under the Federal Securities Act, there is a waiting period before a new security can be sold to the public, fraud remedies for material misrepresentations and material omissions which can be enforced by the Commission, the Department of Justice in criminal cases and private investors, as well as a stop order procedure by which the Commission can prevent the sale to the public of a security

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<sup>81</sup> Compare for discussion of sponsors, Andrew Tuch & Joel Seligman, *The Further Erosion of Shareholder Protection: SPACs and Direct Listing*, \_\_\_ Iowa L. Rev. \_\_\_ (forthcoming 2022).

<sup>82</sup> 2 LOSS, SELIGMAN & PAREDES, *supra* n. 72 at 3-851 for discussion of Regulation S-K and S-X which address SEC textual and financial disclosures).

when the registration statement is inadequate.<sup>83</sup> This provides a model for registration, but challenging issues would need to be resolved for cryptoproducts concerning whether a waiting period is necessary and whether new product disclosure about a new product should be limited to a disclosure document. Design of the elements of fraud and related remedies and who can enforce them has been a frequent topic of controversy under the Federal Securities Acts.<sup>84</sup>

Regulation should not be limited to an initial registration statement and fraud remedies. There also should be continuous periodic disclosure concerning cryptoproducts employing the same basic framework for textual and financial disclosure as would be used in the initial disclosure requirements<sup>85</sup>, recordkeeping, voting and confidentiality provisions.<sup>86</sup>

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<sup>83</sup> SEC, Department of Justice and Private Enforcement of the Federal Securities Laws are discussed in 8 Louis Loss, Joel Seligman & Troy Paredes, Securities Regulation 147-708, 10 Louis Loss, Joel Seligman & Troy Paredes, 2-961; the SEC stop order procedure under the Federal Securities Act is discussed in 1 LOSS, SELIGMAN & PAREDES, supra n. 45, at 1098-1113.

<sup>84</sup> See Private Securities Litigation Reform Act of 1995, Pub. L. 104-67, 109 Stat. 737, which cut back on private rights of action), discussed in 10 Louis Loss, Joel Seligman & Troy Paredes, Securities Regulation 295-353 (Wolters Kluwer 5<sup>th</sup> ed. 2018).

<sup>85</sup> See 4 Louis Loss, Joel Seligman & Troy Paredes, Securities Regulation 303-452 (Wolters Kluwer 6<sup>th</sup> ed. 2020).

<sup>86</sup> See 7 Louis Loss, Joel Seligman & Troy Paredes, Securities Regulation 3-15 (Wolters Kluwer 6<sup>th</sup> ed. 2022 for broker-dealer recordkeeping requirements; 4 LOSS, SELIGMAN & PAREDES 454-747 on voting under the Federal Securities laws; 10 LOSS, SELIGMAN & PAREDES 1005-1011 on confidentiality provisions of the Acts).

Third, exemptions would need to be carefully designed. For example, if the Federal Reserve System implements a Central Bank Digital Currency as described in the next Section, the CBDC would be regulated by the Fed, not the new single cryptoproducts agency. Would there also be exemptions for *de minimis* offerings?<sup>87</sup> Secondary trading, that is the resale of initial cryptoproduct offerings, normally would not require registration.<sup>88</sup> How would exemptions be designed, if at all, for initial founders and designers of cryptoproducts before they are sold to the public? The Securities Act in its definition of *sale* in §2(a)(3) of the Securities Act provides the opportunity for underwriters to engage in preliminary negotiations with an issuer<sup>89</sup> and for founders and designers of new products to receive unregistered stock in private offerings.<sup>90</sup> Comparable language would need to be customized for cryptoproducts. Unlike Federal Securities laws, there should not be exemptions for intrastate offerings. Cryptoproducts are designed to be bought and sold throughout the world.

Trading platforms, whether denominated exchanges or otherwise, also would need to be regulated. These have been the frequent target of hackers and thieves as discussed earlier.<sup>91</sup> In the Federal Securities laws, exchanges are registered whether in the form of organized exchanges such as the New York Stock Exchange or securities dealer

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<sup>87</sup> Compare limited offerings under the Federal Securities Laws, 3 LOSS, SELIGMAN & PAREDES, *supra*, at 325-523).

<sup>88</sup> See discussion of §4(a)(1) of the Securities Act, *id.* at 523-531.

<sup>89</sup> 1 LOSS, SELIGMAN & PAREDES, *supra* n. 45, at 817-823.

<sup>90</sup> 3 LOSS, SELIGMAN & PAREDES, *supra* n. 87, 325-523.

<sup>91</sup> See *supra* at n. 25.

trading in the over-the-counter market such as the Nasdaq.<sup>92</sup> Cryptoplatforms or exchanges, like securities exchanges, also should be subject to reporting requirements, other substantive regulation, fraud and other remedies and have exemptions, among others, for *de minimis* trading.<sup>93</sup> Unlike securities trading, where the Financial Industry Regulatory Authority buttresses SEC and Department of Justice enforcement<sup>94</sup>, there currently is no self-regulatory organization for cryptoproducts. It is unclear that there is a need for one. When the SEC and Commodities Futures Trading Commission jointly began regulation of the swap markets after the Dodd-Frank Act in 2010<sup>95</sup>, they did so without a new self-regulatory organization.<sup>96</sup>

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<sup>92</sup> See 6 Louis Loss, Joel Seligman & Troy Paredes 2-225 (Wolters Kluwer 6<sup>th</sup> ed. 2021). In January 2022, the Commission proposed rule amendments to expand the Federal Securities Law definition of *exchange* to require some Cryptoplatforms to be subject to SEC regulation either as exchanges or as Alternative Trading Systems, see 5 LOSS, SELIGMAN & PAREDES, *supra* n. 91 at ch. 7.A.1.g.(vi). If the Rule is adopted, it inevitably will be subject to lengthy litigation concerning the SEC's authority to regulate Cryptoplatforms, see Paul Kiernan, Crypto Firms Contest Exchange Proposal, *Wall St. J.* (Apr. 28, 2022). In any event, it will not reach Cryptoplatforms subject to the CFTC, see *supra* nn. 63-65, or possibly some that will remain unregulated.

<sup>93</sup> *Ibid.*

<sup>94</sup> See *id.* at 208-225.

<sup>95</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010).

<sup>96</sup> See discussion in 5 Louis Loss, Joel Seligman & Troy Paredes, Securities Regulation 864-1056 (Wolters Kluwer 6<sup>th</sup> ed. 2021).

The SEC has separate oversight of broker-dealers.<sup>97</sup> Aspects of broker-dealer regulation likely would need to be retained such as regulation of margin or loans to investors. But given the frequency with which cryptotrading is initiated without intermediaries, this aspect of a comprehensive regulatory scheme similarly likely would be limited.

A significant incentive for crypto firms and crypto investors to seek Federal regulation would be the creation of a customer protection corporation like the Securities Investor Protection Corporation (*SIPC*) which would charge covered crypto firms an annual assessment (in *SIPC*, ½ of 1 percent) and create a fund to insure each crypto customer accounts up to a specified amount (in *SIPC* up to \$500,000 for each account).<sup>98</sup>

#### IV. COMPETITION WITH CRYPTOCURRENCY

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<sup>97</sup> 6 LOSS, SELIGMAN & PAREDES, supra n. 92, at 424-832 for discussion of registration, exemptions and discipline, and 7 LOSS, SELIGMAN & PAREDES, supra n. 86, at 3-319 for discussion of broker-dealer substantive regulation including margin or loans to investors).

<sup>98</sup> See LOSS, SELIGMAN & PAREDES, supra n. 85, at 272-302 for discussion of *SIPC*. In June 2022, United States Senators Cynthia Lummis and Kirsten Gillibrand proposed the Responsible Financial Innovation Act, S. 4356, which among other things would undermine existing securities laws by transferring sole new authority to the Commodity Futures Trading Commission and create an exemption to the 2021 bipartisan law that requires cryptocurrency brokers to furnish information to the Internal Revenue Service. Paul Kiernan, Senators Propose Cryptocurrency Bill, *Wall St. J.* (June 8, 2022).

A distinctly different approach was taken by the Federal Reserve System when it proposed competition with cryptocurrency.

In January 2022, the Federal Reserve System published *Money and Payments: The U.S. Dollar in the Age of Digital Transformation*, the first step in a public discussion between the Fed and stakeholders about Central Bank Digital Currencies (*CBDCs*). The paper defined a CBDC “as a digital liability of a central bank that is widely available to the general public. In this respect, it is analogous to a digital form of money:”

Payment technologies offered by the Federal Reserve have evolved over time. In the Federal Reserve’s early years, it established a national check-clearing system and used dedicated telegraph wires to transfer funds between banks. In the 1970s, the Federal Reserve developed an automated clearinghouse (*ACH*) system that offered an electronic alternative to paper checks. And in 2019, the Federal Reserve committed to building the FedNow Service, which will provide real-time, around-the-clock interbank payments, every day of the year.

Recent technological advances have ushered in a wave of new private-sector financial products and services, including digital wallets, mobile payment apps, and new digital assets such as cryptocurrencies and stablecoins. These technological advances have also led central banks around the globe to explore the potential benefits and risks of issuing a CBDC.<sup>99</sup>

Notably, a CBDC would be a liability of the Federal Reserve, not of a commercial bank:

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<sup>99</sup> *Id.* at 1.

A CBDC could potentially offer a range of benefits. For example, it could provide households and businesses a convenient, electronic form of central bank money, with the safety and liquidity that would entail: give entrepreneurs a platform on which to create new financial products and services; support faster and cheaper payments (including cross-border payments); and expand consumer access to the financial system. A CBDC could also pose certain risks and would raise a variety of important policy questions, including how it might affect financial-sector market structure, the cost and availability of credit, the safety and stability of the financial system, and the efficacy of monetary policy.<sup>100</sup>

The Fed acknowledged:

While the existing U.S. payment system is generally effective and efficient, certain challenges remain. In particular, a significant number of Americans currently lack access to digital banking and payment services. Additionally, some payments – especially cross-border payments – remain slow and costly.

Digital financial services and commercial bank money have become more accessible over time, and increasing numbers of Americans have opened and maintain bank accounts. Nonetheless, more than 7 million – or over 5 percent of U.S. households – remain unbanked. Nearly 20 percent more have bank accounts, but still rely on more costly financial services such as money orders, check-cashing services, and payday loans.<sup>101</sup>

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<sup>100</sup> Id. at 3.

<sup>101</sup> Id. at 8.

Two months later in his comprehensive Executive Order,<sup>102</sup> President Biden ordered the Fed to go further, stating in part:

(iii) A United States CBDC may have the potential to support efficient and low-cost transactions, particularly for cross-border funds transfers and payments, and to foster greater access to the financial system, with fewer of the risks posed by private sector-administered digital assets. A United States CBDC that is interoperable with CBDCs issued by other monetary authorities could facilitate faster and lower-cost cross-border payments and potentially boost economic growth, support the continued centrality of the United States within the international financial system, and help to protect the unique role that the dollar plays in global finance. . . .

(c) The Chairman of the Board of Governors of the Federal Reserve System (*Chairman of the Federal Reserve*) is encouraged to continue to research and report on the extent to which CBDCs could improve the efficiency and reduce the costs of existing and future payment systems, to continue to assess the optimal form of a United States CBDC, and to develop a strategic plan for Federal Reserve and broader United States Government action, as appropriate, that evaluates the necessary steps and requirements for the potential implementation and launch of a United States CBDC. The Chairman of the Federal Reserve is also encouraged to evaluate the extent to which a United States CBDC, based on the potential design options, could enhance or impede the ability of monetary policy to function effectively as a critical macroeconomic stabilization tool.<sup>103</sup>

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<sup>102</sup> See EXECUTIVE ORDER, *supra* n. 1.

<sup>103</sup> *Ibid.* See Paul Kiernan, Yellen Presses for Stablecoin Regulation, *Wall St. J.* (May 11, 2022) (in testimony after cryptocrash described in text accompanying note 1). Cf. Emily Parker, China's Digital Yuan

A CBDC to compete with existing cryptoproducts is unlikely alone to persuade many investors to seek a government organized competitive product. The more direct impact that the CBDC would have on our financial system would be on banks and other depository institutions. To proceed with a CBDC, the priority for the Federal Reserve likely will be a way to coordinate the new means of payments with existing payment systems that operate through private banks. The new CBDC could do relatively little in adding the unbanked 5 percent of the United States population to a new system.<sup>104</sup> It is unclear how many of the “unbanked” will seek a new payment system.

But President Biden’s major point in pressing the Fed to act has cogency. If other leading nations adopt their own versions of a CBDC, the United States may need to adopt one to maintain its competitive position in global finance. This is an issue currently being studied. As the Federal Reserve System January 2022 Money and Payments Report explained, the United States already has a sophisticated payment system that may be able to coordinate with other Nation’s CBDCs.

## CONCLUSION

This essay proposes three separate approaches to cryptoproducts, each of which can be implemented consistent with the other approaches.

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Shows Why We Still Need Cryptocurrencies Like Bitcoin, CNN (Feb. 4, 2022); See generally n. 44.

<sup>104</sup> See supra n. 97.

First, given the unique challenges of Bitcoin, the leading cryptocurrency, and others who have adopted its model, the United States should explore prohibiting cryptoproducts that engage in excessive energy consumption and do not provide United States law enforcement agencies investigating crimes with access to records. Neither of these prohibitions will end cryptoproducts but will create strong incentives to transform these cryptocurrencies to lower energy use and comply with new Federal legislation requiring access to records.

Second, it is preferable to have a single standalone cryptoproduct regulatory agency instead of the multiple agencies currently regulating cryptoproducts. This agency could enforce the energy use and criminal compliance mandates and would, like the SEC, have a wide mandate to register products and means of trading and to enforce these new regulations with appropriate fraud, examination and inspection powers. Critically, a single regulator would reduce the possibility that problems are not addressed or effectively addressed that can occur when there are multiple regulators. The new cryptoproducts or digital asset regulation presumably either would have a seat or presence on the Financial Stability Oversight Council.

Third, there is still much to learn with respect to a new Central Bank Digital Currency. The need for a CBDC would largely be to ensure compatibility with other CBDCs adopted abroad. As of this time, it is uncertain how many nations will adopt their own version of a CBDC or whether adoption by the United States is necessary to ensure compatibility with other systems. While a United States CBDC might have a modest role in competing with existing cryptoproducts, the potential United States CBDC is largely a payment system, best left to the Federal Reserve to administer in coordination with a new standalone cryptoproduct regulator.