

CRYPTOCOMMUNITY CURRENCIES

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What are cryptocurrencies: securities, commodities, or something else? Maybe they are a new form of established currency—a non-sovereign fiat currency. Like other self-governing bodies, the communities that issue cryptocurrencies should be judged on how well they support their currencies. This analysis is not meaningfully different from how we have evaluated traditional sovereign issuers of currency. Indeed, as traditional-sovereign-issued currency becomes entirely digital, functional distinctions between traditionally sovereign-backed fiat currency and widely accepted non-sovereign fiat currency start to disappear. The primary way then to distinguish the value of such currencies from each other becomes the quality of their institutional backing. Through that lens, some self-governing online communities are better-organized and more supportive of their currencies than traditional sovereigns.

By shooting across the bow of the securities-versus-commodities debate, this Article calls on regulators and academics to rethink their assumptions about cryptocurrencies and the communities that develop them. We should recognize well-institutionalized cryptocommunity currencies as non-sovereign fiat currencies and regulate them accordingly.

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INTRODUCTION

Setting up conditions for prosocial behavior can become “[a] powerful engine[] for social stability and economic growth This is especially true in societies characterized by large and diverse populations, free migration, complex production, and anonymous exchange—in other words, in societies like our own.”

—Lynn Stout, *Cultivating Conscience: How Good Laws Make Good People*¹

Lynn Stout was my corporations professor the year she visited at Harvard. She kept in touch with me for nearly twenty years afterwards, and she was responsible for my move from teaching in business schools to law school. The Oxford University Press will soon publish the business ethics book we were writing together when she passed.²

Lynn was particularly interested in communities, how they regulate themselves, and how they set standards for exchanges. In her book *Cultivating Conscience: How Good Laws Make Good People*,³ she describes the importance of setting rules for communities to encourage “prosocial” behavior,⁴ which includes concepts of “cooperation”⁵ and relies on our interacting with each other instead of remaining isolated.⁶

She was interested in technology, and she recognized its possibilities to reshape the future. In the wake of sociologist Robert Putnam’s classic study *Bowling Alone: The Collapse and Revival of the American Community*, though, Lynn was concerned about technology’s potential to degrade communities by “keep[ing] people indoors and isolated, away from public places and from each other.”⁷

¹ LYNN A. STOUT, *CULTIVATING CONSCIENCE: HOW GOOD LAWS MAKE GOOD PEOPLE* 19 (2011).

² J.S. NELSON & LYNN A. STOUT, *BUSINESS ETHICS: WHAT EVERYONE NEEDS TO KNOW* (forthcoming).

³ STOUT, *supra* note 1.

⁴ *Id.* at 19.

⁵ *Id.* at 15.

⁶ *Id.* at 245 (discussing Robert Putnam’s work).

⁷ *Id.* (same).

Yet Lynn loved the ironic twist too. In the growth of online communities in which people seek each other out for identity and exchange, she would have seen the human need for social interaction re-assert itself as it has for millennia to re-form social institutions.⁸ In a brave new online world, these communities have become versions of our “schools, churches and community organizations.”⁹ Indeed, they are developing into exactly the institutions of which Lynn was most fond: self-governing communities.¹⁰ Just before her lung-cancer diagnosis, Lynn was exploring how self-governing communities had become the foundations of (small-“r”) republican governance itself.¹¹

This Article raises the regulatory ramifications of the Federal government’s recognizing digital communities as self-governing.¹² It examines regulation of these communities’ currencies, but its cryptocurrency¹³ application is the tip of an iceberg. Especially after the transfer of control over structural decisions for the Internet from the U.S. government to a community-based group called ICANN,¹⁴ questions of digital community self-government are moving front-and-center. And that is exactly where Lynn liked to be. She would be asking these

⁸ See *id.* at 19.

⁹ *Id.*

¹⁰ An entire panel at Lynn’s memorial conference, for example, was dedicated to her ideas around corporate governance. Corporate Governance Panel, Lynn Stout Memorial Conference (Feb. 1, 2019), <https://www.lawschool.cornell.edu/Events/Lynn-Stout-Memorial-Conference.cfm> [<https://perma.cc/VR96-YTUC>] (Author was moderator).

¹¹ Conversation with Professor David Ciepley, University of Denver Dep’t of Political Science, at the Lynn Stout Memorial Conference, *supra* note 10; see also generally David Ciepley, *Is the U.S. Government a Corporation? The Corporate Origins of Modern Constitutionalism*, 111 AM. POL. SCI. REV. 418 (2017) (arguing that the American political structure was modeled after the governance structure of corporations).

¹² Some may object that cryptocommunities are not necessarily stable institutions, but neither are certain governments nor other sovereigns around the world whose authority to issue currency we recognize. In addition, as explained in more depth, *infra*, digital cryptocommunities have developed more distinct definitions as communities than have many collections of people in the physical world.

¹³ See definition of cryptocurrency, as opposed to cryptoassets generally, *infra* notes 20–24 and accompanying text.

¹⁴ Will Worley, *US Government No Longer Manages Internet’s Technical Functions*, INDEPENDENT (Oct. 1, 2016), <https://www.independent.co.uk/news/world/americas/internet-us-government-managing-online-data-icann-domains-internet-corporation-assigned-names-a7340636.html> [<https://perma.cc/ZJ97-H5DK>].

questions and getting the conversation started. As she would say in challenging ideas: “[g]o get ‘em!”¹⁵

As Lynn noted, when communities are self-governing, they may still need external regulation.¹⁶ The corporation is an excellent example.¹⁷ The pressing question facing digital communities’ currencies into the future is whether they should be regulated as securities, commodities, or something else.¹⁸ This Article further connects Lynn’s ideas to Professor Christine Desan’s work on the history of currencies and their historic ties to sovereigns to argue that cryptocurrencies should be regulated as something else: currencies that have no traditional sovereign *per se*, but have instead a non-national or centralized institutional authority that should be held to the standards of scrutiny, transparency, and process to which sovereigns have been held.¹⁹

¹⁵ Note written by Lynn Stout to Author (on file with Author).

¹⁶ See Lynn Stout Memorial Conference, *supra* note 10; see also generally LYNN A. STOUT, *THE SHAREHOLDER VALUE MYTH: HOW PUTTING SHAREHOLDERS FIRST HARMS INVESTORS, CORPORATIONS, AND THE PUBLIC* (2012) [hereinafter STOUT, *THE SHAREHOLDER VALUE MYTH*] (arguing that the shareholder primacy model could harm societies); Lynn A. Stout & Iman Anabtawi, *Fiduciary Duties for Activist Shareholders*, 60 STAN. L. REV. 1255 (2008) (proposing a reinterpretation of shareholder loyalty rules that treats all shareholders alike); Lynn A. Stout, *On the Nature of Corporations*, 2005 U. ILL. L. REV. 253 (noting the value of capital lock-in as a characteristic of corporations); Lynn Stout, *On the Proper Motives of Corporate Directors (Or, Why You Don’t Want to Invite Homo Economicus to Join Your Board)*, 28 DEL. J. CORP. L. 1 (2003) (centering human altruism in discussing how corporate directors can serve the interests of the firm); Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247 (1999) (proposing the team production model and the public corporation model as superior to the principal-agent model and shareholder primacy model); Lynn A. Stout, *Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation*, 81 VA. L. REV. 611 (1995) (proposing a mediating hierarchy model for thinking about public corporations).

¹⁷ See Lynn Stout Memorial Conference, *supra* note 10.

¹⁸ At the federal level, securities are regulated by the Securities and Exchange Commission (SEC) under several acts including the Securities Act of 1933 (codified as amended at 15 U.S.C. §§ 77a–77aa (2012)), the Securities Exchange Act of 1934 (codified as amended at 15 U.S.C. §§ 78a–78qq (2012)), and the Investment Company Act of 1940 (codified as amended at 15 U.S.C. §§ 80a-1–80a-64 (2012)). The U.S. Commodities Futures Trading Commission (CFTC) regulates commodities under the 1936 Commodity Exchange Act (codified as amended at 7 U.S.C. §§ 1–27f (2012)).

¹⁹ The closest argument in the law review literature to this Article is a suggestion that appears in the final line of a 2016 essay on the CFTC’s regulation of cryptocurrencies as commodities: “A better approach may be to take the view that Bitcoin should be deemed to be a currency since, based on function, structure, and the common definition of currency, there is a sound basis for this conclusion.” Gary E. Kalbaugh, *Virtual Currency, Not a Currency?*, 16 J. INT’L BUS. & L. 26, 31 (2016). This Article fleshes out that tantalizing suggestion and connects it to Professor Desan’s work on the place of the state behind currencies.

After illustrating how cryptocurrencies fall through the cracks of our financial regulatory system because they are neither securities nor commodities, the Article suggests that they should be regulated as their own category of non-sovereign fiat currencies. The conclusion will suggest that regulation of this category should focus on the qualities of the communities behind the currencies, the way that Lynn focused on improving corporate governance to empower self-governing communities in other aspects of the business world.

The current Article narrows its argument to cryptocurrencies qua their use as currencies, and it does not attempt to describe all forms of cryptoassets. As a recent article explains, “a cryptocurrency is just one type of crypto-asset. A crypto-asset is an umbrella term; the special sauce that powers most applications of blockchain technology.”²⁰ As of April 2018, there were four major forms of cryptoassets: cryptocurrencies; platform tokens/cryptocommodities; utility tokens; and transactional tokens.²¹ This Article focuses on cryptocurrencies; longer discussion of the distinctions among these other categories is beyond its scope.

According to common definitions, a cryptocurrency is “a digital or virtual currency that is secured by cryptography.”²² Because it employs cryptography, a cryptocurrency is “nearly impossible to counterfeit.”²³ Cryptocurrency manufacturing is typically decentralized because it is “based on blockchain technology—a distributed ledger enforced by a disparate network of computers.”²⁴ Cryptocurrencies were “created to act as a decentralised alternative to fiat currency which could be easily transacted across the world. Their value fluctuates based on the forces of demand and supply, much like traditional fiat

²⁰ Adam Haeems, *What Is a Crypto-Asset?*, MEDIUM (Apr. 27, 2018), <https://medium.com/babb/what-is-a-crypto-asset-1f0fcc517887> [https://perma.cc/RH7Z-QEYG].

²¹ *Id.*

²² Jake Frankenfield, *Cryptocurrency*, INVESTOPEDIA, <https://www.investopedia.com/terms/c/cryptocurrency.asp> [https://perma.cc/UN4E-PD8M] (last updated Nov. 3, 2019).

²³ *Id.*

²⁴ *Id.* As explained later in this Article, the Author explicitly takes issue with the last part of Investopedia’s definition because it has become increasingly outdated. That last part of Investopedia’s definition is that a “defining feature of cryptocurrencies is that they are generally not issued by any central authority, rendering them theoretically immune to government interference or manipulation.” *Id.*

currencies.”²⁵ Their primary purpose is to be used as a method of payment.²⁶

The most famous cryptocurrency is Bitcoin, which Goldman Sachs succinctly describes as

conceived in 2008 and launched in 2009 by a programmer [or programmers] who used the pseudonym Satoshi Nakamoto and whose identity remains uncertain. The network is based on a mathematical proof; people around the world called “miners” use software programs that follow a mathematical formula to produce bitcoins. The formula and software are freely available for anyone to use. There is a finite number of bitcoins that can be produced and, as more bitcoins are created, the mathematical computations required to create more become increasingly difficult. Bitcoin can be traded or used to buy goods and services. All bitcoin transactions are recorded in the “block chain”—a massive and transparent ledger of each and every bitcoin transaction maintained by the miners.²⁷

The distinguishing feature of cryptocurrencies as currencies is that they are intended to be traded directly for goods and services: they are not being offered by another party as a future investment nor are they valuable apart from being exchanged for something else. Their primary use is as a method of payment. This distinguishes cryptocurrencies from products that might be closer to a security, such as stock (see discussion *infra* subpart II.A).²⁸ Additionally, cryptocurrencies as currencies are not themselves intrinsically valuable, contrasting them from commodities such as wheat or pork bellies (see discussion *infra* subpart II.B).²⁹

For lay purposes, consider the distinction between the U.S. dollars (a fiat currency issued by a traditional sovereign) that you might use to buy tickets at a fair, and the tickets (or tokens) that you buy for use at the fair. The U.S. dollars (the fiat currency, additional discussion *infra* subpart II.C)³⁰ that you paid for the tickets have the backing of the U.S. government and can be used widely. By contrast, the tickets you have purchased at the fair are valuable only by specific agreement

²⁵ Haeems, *supra* note 20.

²⁶ *See id.*

²⁷ Allison Nathan, *All About Bitcoin*, GOLDMAN SACHS: TOP MIND 3 (Mar. 11, 2014), <https://www.paymentlawadvisor.com/files/2014/01/GoldmanSachs-Bit-Coin.pdf> [<https://perma.cc/LM5Z-SYA3>].

²⁸ *See* security discussion *infra* subpart II.A and notes 130–47.

²⁹ *See* commodity discussion *infra* subpart II.B and notes 148–75.

³⁰ *See* fiat currency discussion *infra* subpart II.C and notes 190–221.

within the fair for the goods and services offered by the promoters of the fair for only as long as the fair exists. Perhaps the fair tickets may be exchanged for delineated value such as playing games, bidding on prizes, etc. The tickets, however, have value solely while the fair is in operation for the explicit bargain made through the promoter, or insofar as they may be exchangeable by agreement back into U.S. dollars at the end of the fair. The fair tickets are not general tender that can be broadly exchanged for goods or services outside of the limited efforts of the fair. Thus, the terms and representations upon which those tickets are issued then become very important and specific to the tickets' value. By contrast, the terms upon which you individually trade five U.S. one-dollar bills for a U.S. five-dollar bill, or for a certain number of euros, pounds, or other currencies, should not be the governing factor in those bills' (euros, pounds, or other currencies) general applicability after your trade as tender.

As a programming note, this distinction between U.S. dollars (fiat currency) and fair tickets (tokens) maps well on the distinction between coins and tokens.³¹ Cryptocurrencies (a.k.a., often "coins" with their own blockchain)³² typically have

³¹ Cf. generally, e.g., MARK GRABOWSKI, CRYPTOCURRENCIES: A PRIMER ON DIGITAL MONEY 44 (2019) ("Many altcoins [aka "coins"] are a variant (or 'fork') of Bitcoin, built using its open-sourced, original protocol with changes to its underlying code, thus producing an entirely new coin with different features. For example, Litecoin is an altcoin based on Bitcoin's code that conducts transactions more quickly. Bitcoin Private is an altcoin that offers more anonymity in transactions. There are also altcoins that aren't derived from Bitcoin's open-source code. Rather, such altcoins have created from scratch their own code and blockchain that supports their native currency."); *id.* at 45 ("Tokens differ from other [types of cryptoassets] in their structure. Instead of having their own separate blockchain, tokens operate on top of an existing blockchain that facilitates the creation of decentralized applications (DApps). For example, Basic Attention Token (BAT) is an Ethereum token that aims to improve digital advertising. Narrative (NRV) is a NEO token that aims to incentivize social media influencers."); *id.* ("As of 2018, there were more than 2,000 cryptocurrencies—and that number will likely only increase.").

³² In programming terms, what this Article and many others call "coin" may also be described by programmers as "native protocol tokens," "native cryptoeconomic tokens," or generally "protocol tokens." The key is that they require the development of their own blockchain protocols. See generally Will Warren, *The Difference Between App Coins and Protocol Tokens*, MEDIUM (Feb. 2, 2017), <https://blog.0xproject.com/the-difference-between-app-coins-and-protocol-tokens-7281a428348c> [<https://perma.cc/5GFK-ETSY>] ("When discussing blockchains, the term 'protocol' is typically used to refer to the set of cryptoeconomic rules that maintain distributed consensus across a peer-to-peer network. In this sense of the term, there is one protocol per blockchain and one native token per protocol (with a few exceptions)."); Telephone Interview with Carla Reyes, Professor, Michigan State University (Oct. 21, 2019) (emphasizing

more extensive infrastructure than fair tickets (“tokens”),³³ which run over the territory of their fairgrounds for limited application. As one source summarizes: “The basic difference is relatively simple. [‘Coins’ and ‘tokens’] are both used to define a unit of blockchain value.” Coins “are unique digital currencies which are based on their own, standalone blockchains,” while “tokens are built and hosted on existing blockchains.”³⁴ It is coins that are the form intended to be general currency: “[a]lthough there are some blurry lines between the definition[s] of [‘coins’ and ‘tokens’], the crypto community generally agrees that coins function as a method of payment.”³⁵ By contrast, “[t]okens operate on top of a blockchain and give access to a DApp [decentralized application], enabling the functions of that [specific] project.”³⁶

Accordingly, it requires far more time and effort to create coins (entire blockchain systems) than tokens (which run on other platforms). To create a token, a programmer merely follows “a standard template on the blockchain, such as the Ethereum or NEO platform.”³⁷ Once tokens are created on such a platform (DApp), their purpose and ability to be used is limited to “the application itself. For example, in gaming DApps, tokens give users access to play the game. Music content DApps give users the ability to access features such as watching a music video or streaming a song.”³⁸

The observation that a currency (coin) is tender does not mean that U.S. dollars, euros, pounds, and other fiat currencies are not tied to the well-being of the community issuing them. That would be a fantasy. The relative value of the U.S.

the importance of whether the coin is native to the protocol); Carla L. Reyes & Paolo Saguato, *Smart Governance of Smart Tokens* (forthcoming on SSRN).

³³ In programming terms, what this Article and many others call “token” may also be described by programmers as “ERC20 tokens,” “*non-native* protocol tokens,” or sometimes “app coins.” The key is that they build on other blockchains’ protocols. See generally Warren, *supra* note 32 (“[T]oken sales are being used to drive network effects around specific applications (DApps) rather than the common building blocks (protocols) that make applications possible.”); Reyes Interview, *supra* note 32 (noting that these forms of tokens are progressing beyond the ERC20 smart contract format); Reyes & Saguato, *supra* note 32 (same).

³⁴ HBUS, *Cryptocurrencies: What Is the Difference Between Tokens & Coins?*, MEDIUM (Nov. 5, 2018), <https://medium.com/hbus-official/cryptocurrencies-what-is-the-difference-between-tokens-coins-2f812fcc4302> [<https://perma.cc/M3J5-CYM5>].

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*; see also, e.g., ANDREAS M. ANTONOPOULOS & GAVIN WOOD, *MASTERING ETHEREUM: BUILDING SMART CONTRACTS AND DAPPS* 227–31 (2019) (describing how to program tokens under the ERC20 standard on the Ethereum platform).

dollar versus the British pound, for example, may reflect market wagers on how strong the U.S. economy is versus the British economy, or a consensus on how well the U.S. Federal Reserve will manage the U.S. money supply versus how well the Bank of England will manage the U.K.'s money supply. The community that issues a currency may have a strong interest in its use and may make moves to alter its value on exchanges. But the purchase of a U.S. dollar is not a per-se investment in the United States. The purchase of a dollar is instrumental because it can be so broadly traded for goods, services, and other currencies.

This broad ability to trade as a general currency can typify cryptocurrencies as well. As of August 2018, cryptocurrencies were the equivalent of a U.S. \$224 billion market.³⁹ Bitcoin has the largest share of the market at 53%, or roughly U.S. \$119 billion.⁴⁰ Ethereum⁴¹ is second at 13% (\$29 billion), and XRP is third at 6% (\$13 billion).⁴² Bitcoin Cash (separate from Bitcoin) is fourth at 4% (\$9 billion); EOS is fifth at 2% (\$4.9 billion); Stellar is sixth at 1.9% (\$4.2 billion); and the rest of the players cluster at lower percentages.⁴³

In addition, cryptocurrencies, more like the U.S. dollars used to buy fair tickets than the tickets limited to the fair, can be used to purchase an enormous variety of things in the wider world. A short list of options that can be purchased with bitcoin includes, for example, furniture, jewelry, clothing, and household goods through Overstock.com; computers, parts, and accessories through Newegg.com; hotels, flights, cruises, and vacation rentals through Expedia.com; satellite television through Dish Network; handicrafts and other goods through Etsy.com; sandwiches, drinks, cookies, and food through des-

³⁹ *Historical Snapshot—August 27, 2018*, COINMARKETCAP (Aug. 27, 2018), <https://coinmarketcap.com/historical/20180827/> [<https://perma.cc/U5HL-M4KU>].

⁴⁰ *Id.*

⁴¹ There is a debate, as noted in other sources, whether Ethereum is a cryptocurrency or more properly a platform token/cryptocommodity because additional products can be designed on its platform. Many financial publications routinely refer to Ethereum as a cryptocurrency, however. See, e.g., Robert Hackett, *Cryptocurrency Project Basis Is Shutting Down. Here's What Its Lead Investor Has to Say*, FORTUNE (Dec. 13, 2018), <http://fortune.com/2018/12/13/basis-crypto-shut-down-bain/> [<https://perma.cc/6JM9-3G8T>] (listing Bitcoin and Ethereum as two examples of cryptocurrencies).

⁴² *Id.*

⁴³ *Id.* The cryptoworld is constantly in flux, and readers are welcome to adjust the above published statistics according to the evolving qualities of products. For a discussion of cryptocurrencies as one type of cryptoasset, see generally Haeems, *supra* note 20.

ignated Subway restaurants; and pizza from many sources including Helen's Pizza and PizzaforCoins.com.⁴⁴ Bitcoin may also be used to purchase gift certificates to stores such as WalMart (the world's largest retailer), Whole Foods grocery, Ebay auction site, Starbucks coffee and restaurants, Best Buy electronics, Macy's department store, Uber rideshare, HomeDepot hardware, and over 200 retailers through Gyft⁴⁵ and eGifter.⁴⁶ In physical areas such as Silicon Valley, CA, Austin, TX, New York, NY, and Boston, MA, businesses of all types advertise with signs affirming that "bitcoin accepted here!"⁴⁷

Any difference between cryptocurrencies and traditionally sovereign-backed currencies also cannot be their digital form. In fact, many governments around the world are now considering offering their currencies only in digital form.⁴⁸ In a report entitled "The Coming Currency War: Digital Money vs. The Dollar," the *Wall Street Journal* notes that the U.S. dollar's real competition is from other traditionally sovereign-backed currencies—not cryptocurrencies unassociated with governments—when governments "issue money that would exist only virtually, without a paper or coin equivalent, and be universally accepted as a form of payment."⁴⁹ One of the first examples may be China, which "is expected to launch a digital version of [its] national currency, the yuan, later [in 2019] or early in 2020."⁵⁰

⁴⁴ Steve Fiorillo, *How to Use Bitcoin for Purchases*, THESTREET (Apr. 18, 2018, 11:13 AM), <https://www.thestreet.com/investing/bitcoin/what-can-you-buy-with-bitcoin-14556706> [<https://perma.cc/D34K-2P2D>]; see also Vivian A. Maese et al., *Cryptocurrency: A Primer*, 133 BANKING L.J. 468, 469 (2016) (noting that in 2016 over 100,000 merchants were already accepting bitcoin).

⁴⁵ GYFT, www.gyft.com [<https://perma.cc/Z9G5-9M9G>] (last visited Oct. 5, 2019) (listing over 200 retailers and accepting bitcoin for payment).

⁴⁶ *Buy Gift Cards with Bitcoin*, EGIFTER, <https://www.egifter.com/buy-gift-cards-with-bitcoin> [<https://perma.cc/Y7BL-LPZV>] (last visited Oct. 5, 2019) (asserting that it has a selection of gift cards from over 250 retailers that can be bought with bitcoin).

⁴⁷ See, e.g., COINMAP, <https://coinmap.org/welcome/> [<https://perma.cc/4FEQ-NJSN>] (last visited Oct. 5, 2019) (providing a map of businesses that accept cryptocurrency payments).

⁴⁸ Dave Michaels & Paul Vigna, *The Coming Currency War: Digital Money vs. the Dollar*, WALL ST. J. (Sept. 22, 2019, 10:09 PM), <https://www.wsj.com/articles/the-coming-currency-war-digital-money-vs-the-dollar-11569204540> [<https://perma.cc/XAZ3-JEWZ>].

⁴⁹ *Id.*

⁵⁰ *Id.*; see also Anthony Cuthbertson, *EU Considers Launching Its Own Version of Bitcoin*, INDEPENDENT (Nov. 6, 2019), <https://www.independent.co.uk/life-style/gadgets-and-tech/news/eu-cryptocurrency-bitcoin-facebook-libra-china-european-union-a9187451.html> [<https://perma.cc/PDM9-KQ7Q>] (describing Europe's developing plan to issue official digital currency).

Fundamentally then, what sets a currency apart from other methods through which goods and services may be exchanged is, as we shall see, the qualities of the community behind its issuance. What is so different from a government issuing currency for universal exchange than another entity issuing it? One may say that no other entity has the market power of the U.S. or Chinese governments, but some corporations, for example, have more revenue, and arguably sophistication, than governments. In 2016, consider that the single company Apple had more “cash . . . on hand . . . [than] the GDPs of two-thirds of the world’s countries.”⁵¹ By 2017, in terms of revenue collected, “Walmart exceed[ed] [both] Spain and Australia.”⁵² During that year, in fact, “[o]f the top 100 revenue generators [including both national governments and corporations], . . . 71 [were] corporations.”⁵³

In addition, corporations and other self-governing entities may be as well-organized as some traditional governments in how they create central banking structures and other forms of institutional support for currencies. This Article will return to provide more details of recent initiatives at JPMorgan and Facebook (although Facebook’s initiative now appears to be evolving into a token system instead of a cryptocurrency).⁵⁴ The Article starts, however, with assumptions—as Lynn suggested—that corporations are merely one type of self-governing community that may need regulation, and that there are others.

Cryptocurrencies issued by non-sovereign communities may need standardized regulation for three main reasons. First, because cryptocurrencies are a Wild West form of transaction, regulation would protect investors and others who transact on cryptocurrency marketplaces.⁵⁵ Second, not all

⁵¹ Parag Khanna & David Francis, *These 25 Companies Are More Powerful Than Many Countries*, FOREIGN POLY, <https://foreignpolicy.com/2016/03/15/these-25-companies-are-more-powerful-than-many-countries-multinational-corporate-wealth-power/> [<https://perma.cc/V9U9-THVQ>] (last visited Oct. 6, 2019).

⁵² Eelke Heemskerk, Jan Fichtner & Milan Babic, *Who Is More Powerful—States or Corporations?*, CONVERSATION (JULY 10, 2018), <http://theconversation.com/who-is-more-powerful-states-or-corporations-99616> [<https://perma.cc/ZF9X-XXYL>].

⁵³ *Id.*

⁵⁴ See Facebook Libra discussion *supra* Introduction, *infra* subparts II.A–C, Conclusion, and notes 83–93, 222–238.

⁵⁵ See generally Don Weinland et al., *Pressure Builds on Regulators over Cryptocurrency Irregularities*, FIN. TIMES (Nov. 20, 2018), <https://www.ft.com/content/a7530198-ec7b-11e8-8180-9cf212677a57> [<https://perma.cc/DN8Z-2UEZ>] (explaining the pressure on regulators to increase oversight over cryptocurrencies as a result of extremely volatile markets).

cryptocurrencies are as decentralized as assumed; in fact, most appear designed for explicit manipulation.⁵⁶ Third, because the aspiration of most cryptocurrency communities is to establish the equivalent of fiat currency, that application should be recognized and regulated separately from their technology.⁵⁷ The technology may improve and change, but Bitcoin's⁵⁸ and other cryptocurrency communities'⁵⁹ aspirational goal to establish another form of fiat currency is what allegedly guides them.

On the first point, the failure rate of cryptocurrencies has been extraordinary. As of August 2018, cryptocurrencies were the equivalent of a U.S. \$224 billion market.⁶⁰ By February 2018, 59% of the cryptocurrency offerings in 2017 had already failed, costing investors \$233 million.⁶¹ By contrast, the general first-year failure rate of start-ups is 20%.⁶² And start-ups can raise money only from qualified investors, who are supposed to be more sophisticated and able to accept risk.⁶³ In initial coin offerings, some "founders simply took the money

⁵⁶ See discussion *supra* Introduction and *infra* notes 69–75.

⁵⁷ See discussion *supra* Introduction and *infra* notes 76–81.

⁵⁸ There is, of course, no titular head of Bitcoin, but important influencers in the tech community have spoken out about the community's vision. See, e.g., Arjun Kharpal, *Apple Co-Founder Steve Wozniak Hopes Bitcoin Will Become a Single Global Currency*, CNBC (June 4, 2018 10:56 AM), <https://www.cnbc.com/2018/06/04/apple-co-founder-steve-wozniak-hopes-bitcoin-will-become-global-currency.html> [<https://perma.cc/D75N-CMDX>] (noting that "Twitter CEO Jack Dorsey recently said he believes bitcoin will become the single global currency," and quoting Apple co-founder Steve Wozniak supporting the same aspiration for bitcoin).

⁵⁹ As Bitcoin and cryptocurrency skeptic Ken Hess describes the driving ideology of cryptocurrency communities, their enthusiasm "comes from the excitement of putting one over on the government by escaping its clutches in your business and avoiding some of its taxes. There is the whole libertarian anarchy feeling about it." Allison Nathan, *Interview with Ken Hess*, GOLDMAN SACHS: TOP MIND 10 (Mar. 11, 2014), <https://www.paymentlawadvisor.com/files/2014/01/GoldmanSachs-Bit-Coin.pdf> [<https://perma.cc/LM5Z-SYA3>].

⁶⁰ COINMARKETCAP, *supra* note 39.

⁶¹ Cromwell Schubarth, *About Half of Last Year's ICOs Have Already Failed—With \$233M Lost on Them*, SILICON VALLEY BUS. J. (Feb. 26, 2018, 7:28 AM), <https://www.bizjournals.com/sanjose/news/2018/02/26/cryptocurrency-ico-startups-failure-rate.html> [<https://perma.cc/6G35-K5UD>]. Although the article describes the statistics as for cryptocurrency "initial coin offerings" (ICOs), it is not clear whether all these ICOs were for cryptocurrencies or may have also included utility tokens as well. See discussion of cryptocurrencies as one type of cryptoasset, *supra* note 20.

⁶² Schubarth, *supra* note 61.

⁶³ *Id.* But see Ryan Derousseau, *It Could Get a Lot Easier to Invest in Startups. Here's Why That's Bad*, MONEY (Oct. 1, 2018), <http://time.com/money/5410294/start-up-investing> [<https://perma.cc/U9TR-YXKR>] (noting that the SEC was researching reducing the restrictions on "accredited investors," and that this change would hurt small investors).

and ran.”⁶⁴ This was true of founders who “raised a couple of thousand dollars and a handful [who] raised over \$10 million.”⁶⁵

Second, although there are well-organized cryptocurrencies, there are also much less well-organized cryptocurrencies that have deep problems with transparency and legitimacy. Typically, “cryptocurrencies are decentralized systems based on blockchain technology, a distributed ledger enforced by a disparate network of computers.”⁶⁶ It is thus commonly asserted that a “defining feature of cryptocurrencies is that they are generally not issued by any central authority, rendering them theoretically immune to government interference or manipulation.”⁶⁷

But not all cryptocurrencies are legitimately decentralized and immune from manipulation.⁶⁸ By August 2018, a UBS analysis concluded through demand modeling that, even in the most established Bitcoin system, “70 per cent of price action is speculative.”⁶⁹ And there are many reasons why cryptocurrencies may be manipulated. There is, for example, docu-

⁶⁴ Schubarth, *supra* note 61.

⁶⁵ *Id.*

⁶⁶ Frankenfield, *supra* note 22. This presumed decentralization feature of cryptocurrency is one of the things that William Hinman, SEC Director of the Division of Corporation Finance, focused on in distinguishing Bitcoin from other types of offerings that the agency might consider a security. William Hinman, Director, Div. of Corp. Fin., U.S. Sec. & Exch. Comm’n, Remarks at the Yahoo Finance All Markets Summit: Crypto, Digital Asset Transactions: When *Howey* Met *Gary (Plastic)* (June 14, 2018), <https://www.sec.gov/news/speech/speech-hinman-061418> [<https://perma.cc/6PGJ-MCLL>].

⁶⁷ Frankenfield, *supra* note 22.

⁶⁸ See, e.g., Mitchell Moos, *Explained: Bitcoin 51% Attacks*, CRYPTOSLATE (Dec. 10, 2018), <https://cryptoslate.com/explained-51-percent-attacks-on-bitcoin-cryptocurrencies> [<https://perma.cc/M43A-DFNV>] (explaining that a majority holder of Bitcoin could reduce its value through fraudulent attacks).

⁶⁹ *Bitcoin’s Disruptive Dream Has Fallen Flat with Its Price*, FIN. TIMES (Aug. 21, 2018), <https://www.ft.com/content/7f3fe566-a542-11e8-8ecf-a7ae1beff35b> [<https://perma.cc/59KE-NNAS>]. It must be said, however, that this statistic is shifting over time. In 2014, the co-founder of Coinbase, the largest “wallet” service (holder of access keys) in the United States, explained, “The majority [of market activity] is speculators, but that is shifting. A year ago, 95% of activity was speculation versus 5% real payments. Now, I think it is closer to 80% speculation and 20% real payments, and that shift is ongoing.” Nathan, *supra* note 27, at 8. But see John M. Griffin & Amin Shams, *Is Bitcoin Really Un-Tethered?* 5 (June 13, 2018) (unpublished manuscript), <https://ssrn.com/abstract=3195066> [<https://perma.cc/RME3-KGR9>] (tracing the manipulative financial interactions between Bitcoin and Tether cryptocurrency systems to find that “EOM Bitcoin returns are highly correlated with the magnitude of Tether issuance, and no abnormal returns are observed in months when Tether is not issued”); *id.* at 21–22 (“For a 100 Bitcoin increase in the flow, the average future Bitcoin return goes up by 8.59 basis points.”).

mented large-scale money laundering taking place through the use of cryptocurrencies, including by, among others, “[a] North Korean agent, a stolen-credit-card peddler and the mastermind of an \$80 million Ponzi scheme.”⁷⁰

Additionally, the ledger system (blockchain) that underlies many cryptocurrencies is based on a majority-rule system, so it can be taken over by any actor who accumulates over 50% of its hashing power (way to get access).⁷¹ This systemic vulnerability is an active problem with cryptocurrencies that can be “mined,” which is when more of the currency can be made through the collection of computing power that creates its ledger entries.⁷² By October 2018, cryptocurrency hackers utilizing such “51% attacks” over the previous ten months had

⁷⁰ Justin Scheck & Shane Shiflett, *How Dirty Money Disappears into the Black Hole of Cryptocurrency*, WALL ST. J. (Sept. 28, 2018, 11:49 AM), <https://www.wsj.com/articles/how-dirty-money-disappears-into-the-black-hole-of-cryptocurrency-1538149743> [<https://perma.cc/2D84-HJUJ>] (“They needed to launder their dirty money. . . . They found a common solution in ShapeShift AG, an online exchange backed by established American venture-capital firms that lets people anonymously trade bitcoin, which police can track, for other digital currencies that can’t be followed. . . . Since bitcoin was introduced nearly 10 years ago, law-enforcement authorities have worried the technology could ease money laundering. Now a new breed of cryptocurrency intermediary is giving fresh urgency to those fears, operating in plain view with scant policing and often allowing users to engage in anonymous transactions. A *Wall Street Journal* investigation identified nearly \$90 million in suspected criminal proceeds that flowed through such intermediaries over two years.”).

⁷¹ Moos, *supra* note 68 (“If a situation arises where a group of miners have control of more than 50 percent of the total hashing power in a network, then that group could ‘outvote’ honest miners. . . . [T]he canonical blockchain is always the longest chain based on Nakamoto’s rules. That means these malicious miners would statistically control who has the longest chain, and therefore determine which transactions to include on the blockchain.”). It should be acknowledged here that not all cryptocurrencies have this same consensus mechanism.

⁷² See, e.g., Morgen E. Peck, *Why the Biggest Bitcoin Mines Are in China*, IEEE SPECTRUM (Oct. 4, 2017, 7:00 PM), <https://spectrum.ieee.org/computing/networks/why-the-biggest-bitcoin-mines-are-in-china> [<https://perma.cc/7949-498H>] (noting how cryptocurrency miners in China are taking advantage of climate and energy costs to more effectively mine Bitcoin); Paul Roberts, *This Is What Happens When Bitcoin Miners Take over Your Town*, POLITICO MAG. (Mar./Apr. 2018), <http://politi.co/2p3fFRF> [<https://perma.cc/2D8G-YP9K>] (discussing the process through which large-scale cryptocurrency miners have tried to gain control over bitcoin); Stephanie Yang, *The Rise of Bitcoin Factories: Mining for the Masses*, WALL ST. J. (Feb. 21, 2018, 10:00 AM), <https://www.wsj.com/articles/the-rise-of-bitcoin-factories-mining-for-the-masses-1519209000> [<https://perma.cc/TX9Z-5UJ6>] (describing the spread of bitcoin mining in the United States); see also Larissa Lee, *New Kids on the Blockchain: How Bitcoin’s Technology Could Reinvent the Stock Market*, 12 HASTINGS BUS. L.J. 81, 107 (2016) (“[M]any miners have joined mining pools that allow them to collectively solve the proof-of-work and then split the reward between them.”).

already stolen the equivalent of U.S. \$20 million.⁷³ Cryptojacking, the unauthorized takeover of systems such as personal computers, game consoles, and corporate servers to create cryptocurrencies, is dramatically on the rise.⁷⁴ Moreover, as with other types of currencies, traditional sovereign governments are playing in the cryptocurrency space. In devaluing its standard currency in 2018, Venezuela pegged its new currency to the “petro,” a cryptocurrency widely rated as meriting “scam status.”⁷⁵

Third, there are parts of cryptocurrencies that are important for different reasons and are too easily misunderstood or glossed over. The distinguishing feature of cryptocurrencies, as opposed to other general applications of distributed ledger (blockchain) technology, is their aspirations to become fiat currencies. As Goldman Sachs’s Global Macro Research Group explains in the example of Bitcoin, “Bitcoin with a capital ‘B’ is a peer-to-peer network that allows for the proof and transfer of ownership without the need for a trusted third party. The unit of that network is bitcoin with a little ‘b’.”⁷⁶

As the values of Bitcoin and other cryptocurrencies have crashed 80% to 90% over the last year,⁷⁷ many in the financial

⁷³ David Canellis, *Report: Cryptocurrency Hackers Earned \$20M with 51-Percent Attacks in 2018*, NEXT WEB (Oct. 23, 2018, 3:01 PM), <https://thenextweb.com/hardfork/2018/10/23/cryptocurrency-51-percent-attacks> [<https://perma.cc/DYS4-XFU9>]; see also Mike Orcutt, *Once Hailed as Unhackable, Blockchains Are Now Getting Hacked*, MIT TECH. REV. (Feb. 19, 2019), <https://www.technologyreview.com/s/612974/once-hailed-as-unhackable-blockchains-are-now-getting-hacked> [<https://perma.cc/TZF2-2SDB>] (describing this systemic vulnerability in systems). Additionally, as far back as 2011, by using an auditor’s computer, hackers were able to “artificially alter the nominal value of one [b]itcoin to one cent and then transfer an estimated 2,000 bitcoins from customer accounts on the [Mt. Gox] exchange.” Darryn Pollock, *The Mess That Was Mt. Gox: Four Years On*, COINTELEGRAPH (Mar. 9, 2018), <https://cointelegraph.com/news/the-mess-that-was-mt-gox-four-years-on> [<https://perma.cc/26Y2-S8NX>] (citing Robert McMillan, *The Inside Story of Mt. Gox, Bitcoin’s \$460 Million Disaster*, WIRED (Mar. 3, 2014, 6:30 AM), <https://www.wired.com/2014/03/bitcoin-exchange/> [<https://perma.cc/NA2J-ZPGK>]).

⁷⁴ Chris Kornelis, *Anatomy of a Cryptojacking*, WALL ST. J. (Sept. 18, 2018, 10:01 PM), <https://www.wsj.com/articles/anatomy-of-a-cryptojacking-1537322460> [<https://perma.cc/EY6Q-WZ4W>].

⁷⁵ Kate Rooney, *Venezuela Is Pegging Its Economic Recovery to a Cryptocurrency That’s Widely Considered a Scam*, CNBC (Aug. 20, 2018, 11:34 AM), <https://www.cnbc.com/2018/08/20/venezuela-is-pegging-its-economic-recovery-to-a-cryptocurrency-thats-widely-considered-a-scam.html> [<https://perma.cc/JNP7-GBV4>] (describing use of the petro as “a smoke-and-mirrors operation typical of Venezuela” (quoting Steve Hanke, professor of applied economics at Johns Hopkins University)).

⁷⁶ Nathan, *supra* note 27, at 1.

⁷⁷ Josiah Wilmoth, *Nearly Every Major Cryptocurrency Is Down at Least 90% from All-Time High*, CCN (Dec. 5, 2018), <https://www.ccn.com/nearly-every-ma>

world have concluded, as has Goldman Sachs, that cryptocurrencies such as Bitcoin may not ultimately fulfill their desire to become replacement fiat currencies (along the models of sovereign-backed currencies around the world), but that the ledger-based technology underlying their systems has promise in other applications to enhance the security of banking and monetary transactions.⁷⁸ A practical problem with the current technology is that it is slow, and that it continues to slow down as entries are added.⁷⁹

Yet do not count out the currency applications. JPMorgan, one of the world's largest investment banks, was an early skeptic of cryptocurrencies,⁸⁰ but is now leading applications of blockchain and cryptocurrency technology. In November 2018 under the headline "Banks [Finally] Find a Use for Blockchain: Cross Border Payments," the JPMorgan-backed Interbank Information Network (IIN) became the first ledger-based technology (blockchain system) to operate at scale commercially.⁸¹ In

jor-cryptocurrency-is-down-at-least-90-from-all-time-high [https://perma.cc/2RQW-VTLG].

⁷⁸ *Id.*

⁷⁹ Jake Frankenfield, *Bitcoin vs. Bitcoin Cash: What Is the Difference?*, INVESTOPEDIA (Apr. 20, 2019), <https://www.investopedia.com/tech/bitcoin-vs-bitcoin-cash-whats-difference> [https://perma.cc/K26E-T295] ("Visa processes 150 million transactions per day, averaging roughly 1,700 transactions per second. The company's capability actually far surpasses that, at 24,000 transactions per second. [By contrast, the bitcoin network can process only seven transactions per second.] Transactions take about 10 minutes to process. As the network of bitcoin users grows, waiting times will become longer since there are more transactions to process without a change in the underlying technology that processes them."). It is possible that improved processing technology will speed up these additional costs, but each core Bitcoin transaction will still take about ten minutes—far slower than most standard financial transactions.

⁸⁰ As recently as October 2017, Jaime Dimon, JPMorgan's CEO, was quoted dismissing Bitcoin as a fad "worse than tulip bulbs." As he continued: "It won't end well. Someone is going to get killed," and . . . cryptocurrencies in general "are not a real thing." Alicia McElhaney, *Jamie Dimon's Cryptocurrency Reversal*, INSTITUTIONAL INV'R, (Feb. 14, 2019), <https://www.institutionalinvestor.com/article/b1d4bnqvhb4qy/Jamie-Dimon-s-Cryptocurrency-Reversal> [https://perma.cc/6EGA-H8WM]. By contrast, in February 2019, the bank has announced that "[w]e have always believed in the potential of blockchain technology and we are supportive of cryptocurrencies as long as they are properly controlled and regulated" *Id.* Moreover, "[a]s a globally regulated bank, we believe we have a unique opportunity to develop the capability in a responsible way with the oversight of our regulators." *Id.*

⁸¹ Laura Noonan, *Banks Find a Use for Blockchain: Cross Border Payments*, FIN. TIMES (Nov. 12, 2018), <https://www.ft.com/content/57b1064a-c1a5-11e8-84cd-9e601db069b8> [https://perma.cc/KY62-8YTU] ("Finally banks may have found a problem that blockchain is able to solve now and at scale: cross border currency transfers. The banking sector has seen years of overhype and experimentation surrounding distributed ledger technology, but one project led by JPMorgan Chase, the Interbank Information Network (IIN), is quietly producing

February 2019, JPMorgan stunned the financial world by issuing its own cryptocurrency.⁸²

Moreover, the cryptocurrency space moves fast. In June 2019, as this Article was in production, Facebook announced plans to launch Libra, a cryptocurrency stablecoin (stabilized currency backed by other assets, described additionally *infra*).⁸³ The announcement drew enormous attention worldwide, triggering U.S. congressional hearings and concerns about national security.⁸⁴ There could be as many as 2.4 billion people a month potentially using Libra to buy goods and services by early 2020.⁸⁵

results at scale.”); *see also id.* (“A success would buoy spirits in an industry that has spent \$1.7bn on blockchain projects which have yet to meet banks’ ‘lofty expectations’”) (quoting analysts at market intelligence advisory Greenwich Associates)).

⁸² Michael J. de la Merced & Nathaniel Popper, *JPMorgan Chase Moves to Be First Big U.S. Bank with Its Own Cryptocurrency*, N.Y. TIMES (Feb. 14, 2019), <https://www.nytimes.com/2019/02/14/business/dealbook/jpmorgan-cryptocurrency-bitcoin.html> [<https://perma.cc/2WZ6-Y5BX>].

⁸³ Jeff Horwitz & Parmy Olson, *Facebook Unveils Cryptocurrency Libra in Bid to Reshape Finance*, WALL ST. J. (June 18, 2019, 6:59 PM), <https://www.wsj.com/articles/facebook-unveils-crypto-wallet-based-on-currency-libra-11560850141> [<https://perma.cc/UHF7-WVHQ>]; *see also* Dirk A. Zetsche et al., *Regulating Libra: The Transformative Potential of Facebook’s Cryptocurrency and Possible Regulatory Responses* (European Banking Inst., Working Paper Series No. 2019/44, 2019), <https://ssrn.com/abstract=3414401> [<https://perma.cc/LQZ7-5YY4>] (“Libra will be a stablecoin—a cryptocurrency the value of which is tied to that of fiat currency. Libra is not the first stablecoin, but it will be the first stablecoin with such breathtaking global reach and utility.”); *id.* (“Libra will be money. Its value will be tied to a basket of major government-issued currencies and for each Libra issued an equal value of such currency, or highly liquid government bonds, will be placed on deposit with a reliable repository.” (citing Libra.org explanatory documents)); discussion of stablecoin *infra* subpart II.B, subpart II.C, and notes 217–27.

⁸⁴ *See, e.g.,* Dave Michaels et al., *Facebook Confronts Bipartisan Resistance to Cryptocurrency Plans*, WALL ST. J. (July 16, 2019, 10:14 AM), <https://www.wsj.com/articles/facebook-says-libra-cryptocurrency-to-be-regulated-by-swiss-financial-authorities-11563208951> [<https://perma.cc/AF23-FQZU>] (“The Trump administration raised national security concerns about Facebook Inc.’s plans to launch a cryptocurrency as a growing chorus of U.S. and international officials voiced resistance to the tech giant operating its own digital money.”). Facebook has announced that the group controlling Libra’s operations and investments will be based in Switzerland and, inasmuch as the group’s actions may be subject to regulation, governed by Swiss authorities. *Id.* As this Article describes (see *infra* subpart II.A) the practical problem, as succinctly summed up by coverage, is that “[i]f Libra isn’t an investment, it would be free from oversight by the Securities and Exchange Commission.” *Id.* This gap would be a fundamental problem regardless of where Libra would be based. (See more on the Libra system throughout the Article’s text and notes *infra*.)

⁸⁵ *See* Kari Paul, *Libra: Facebook Launches Cryptocurrency in Bid to Shake up Global Finance*, GUARDIAN (June 18, 2019, 05:00 AM), <https://www.theguardian.com/technology/2019/jun/18/libra-facebook-cryptocurrency-new-digital-money-transactions> [<https://perma.cc/4QG5-9MGQ>]. The

As a technical note, Libra may end up looking more like a token than a standard cryptocurrency.⁸⁶ Related to the discussion about tickets at the fair, *supra*,⁸⁷ although the generation of currency may be with Facebook and its partners in the nonprofit Libra Association, public transactions in the currency would be through Facebook's for-profit subsidiary Calibra.⁸⁸ While the Libra Association may be creating a currency with aspirations to act like a U.S. dollar, Facebook's Calibra subsidiary would monopolize the terms of trading in the currency, effectively limiting it to tokens good only within the fairground of Calibra's platform. This design ties Libra too closely to a single promoter and that promoter's efforts—making Facebook's proposal look more like a fair ticket than the U.S. dollar with which you bought the ticket. The more the product becomes explicitly tied to the efforts of an entity as its sole promoter, it is pushed into the realm of a security.

Cryptocurrencies such as bitcoin had previously been mined and traded by communities that were intimately involved in their generation and transfer. Now corporations may seek both to generate and trade cryptocurrencies, as opposed to merely tokens (like fair tickets) as discussed *infra*.⁸⁹ Evolving financial technology (“fintech”) firms such as JPMorgan and Facebook may start to create currencies as well as perform more traditional functions of hosting and transferring currencies created elsewhere. But, if fintech companies are going to be both generating and representing the terms of trade, then

target date of early 2020 is from Facebook's own Libra.org documents, see LIBRA ASS'N, AN INTRODUCTION TO LIBRA: WHITE PAPER FROM THE LIBRA ASSOCIATION MEMBERS 10 (June 23, 2019), https://libra.org/en-US/wp-content/uploads/sites/23/2019/06/LibraWhitePaper_en_US.pdf [<https://perma.cc/YA7R-BA27>], but many commentators believe that the actual launch may end up being later. See, e.g., Matthew De Silva, *What Are the Odds Facebook's Libra Launches on Time?*, QUARTZ (July 25, 2019), <https://qz.com/1671887/facebooks-libra-cryptocurrency-could-be-delayed> [<https://perma.cc/P52E-GYBR>] (“This is such a massive proposal, with immediate global scale and consequences, that everyone—including regulators—will need time to think it through.” (quoting a research fellow)).

⁸⁶ As of the time of publication, Facebook's announced plans for Libra were evolving, and its programming choices may yet still change.

⁸⁷ See fair ticket example *supra* Introduction.

⁸⁸ *Frequently Asked Questions: What's the Relationship Between Calibra and Facebook*, CALIBRA, <https://calibra.com/> [<https://perma.cc/T5NG-LLUN>] (last visited Oct 7, 2019) (“The Calibra company is a subsidiary of Facebook, Inc.”). All manner of concerns have been raised about Calibra being a subsidiary of Facebook, including whether it will prioritize Facebook's interests in the administration of Libra, require giving data to Facebook for access to the system, engage in rent-seeking behavior at the expense of consumers, and otherwise not act as a neutral player in the space.

⁸⁹ See initial coin offering (ICO) discussion *infra* subpart II.A and notes 125–38.

we should potentially regulate both parts of these functions. With these two distinct functions (conveniently two separate communities in the case of the nonprofit Libra Association and the for-profit Facebook subsidiary Calibra: one generating and one selling), there may be two lenses to be applied: one to the generation of the currency within the self-governing organization (the cryptocurrency), and another to the representations that the organization makes about the currency to a broader public using it (something that looks much more like securitizing a cryptocurrency). This second function is already familiar. Calibra's sale of tokens is something we might recognize as a form of repackaging that our private banking and financial systems have been doing for a long time, and this part of its operations would most likely be regulated as selling a security. (See definitions of securities⁹⁰ and commodities⁹¹ *infra*.) We are less accustomed to non-traditionally-sovereign communities generating their own currency. The newer development is the nonprofit Libra Association's creation of its own currency. This currency creation by a non-traditionally-sovereign community is the interesting part of the problem for our existing regulatory system, and it is the challenge for the system to address.

Plans for larger-scale commercial applications of self-generated currency push this Article's call for regulatory advancement even more forcefully. As commentators declare, “[g]iven Libra's potential scale once Facebook links its massive client base via Messenger and WhatsApp to Libra, worldwide monetary and financial regulators will have no choice but to regulate Libra.”⁹² Indeed, the emergence of cryptocurrencies such as Libra may be “the first real re-thinking of global monetary arrangements since the end of the link between the U.S. dollar and gold in the early 1970s and the beginning of the era of

⁹⁰ See security discussion *infra* subpart II.A and notes 130–47.

⁹¹ See commodity discussion *infra* subpart II.B and notes 148–75.

⁹² Zetzsche et al., *supra* note 83, at 28. For a note of caution, however, in October 2019, PayPal pulled out of the Libra Association once “Visa Inc., Mastercard Inc., and other financial partners that had agreed to back [L]ibra. . . [began] reconsidering their involvement following a backlash from U.S. and European government officials.” Peter Rudegeair, *PayPal Drops out of Facebook's Libra Payments Network*, WALL ST. J. (Oct. 4, 2019), <https://www.wsj.com/articles/paypal-drops-out-of-facebooks-libra-payments-network-11570218306> [<https://perma.cc/9RNG-63ZG>].

floating fiat currencies.”⁹³ Accordingly, we need now to develop our regulatory system further.⁹⁴

The focus of this Article then is on the fiat currency aspirations of cryptocurrencies—whether generated by spontaneous online communities such as Bitcoin, or more formal self-governing communities such as corporations,⁹⁵ not on the general promise of their ledger technology for other purposes. Recognizing and regulating cryptocurrencies in their aspirational role as currencies is the hardest question for the way our system of regulation has been designed.

I

DISCUSSION BACKGROUND: THE HOLE IN OUR REGULATORY SYSTEM

Our current federal regulations for the structure and issuance of financial offerings focus on whether an item is a security or a commodity.⁹⁶ Various commentators have weighed in

⁹³ Zetsche et al., *supra* note 83, at 28.

⁹⁴ *Id.* at 16 (“[W]e suggest that one of the greatest impacts of Libra may well be that it will prove to be the first of a range of similar proposals, from a range of both private and public organizations. We suspect that these will include stablecoin offerings by other BigTechs as well as governments and possibly international organizations. Many governments have done extensive work preparing to issue a central bank digital currency, and yet no credible government has yet done so as a central bank digital currency means a reworking of the financial system in fundamental ways, the consequences of which are very difficult to predict.”); *see also* Anton N. Didenko & Ross P. Buckley, *The Evolution of Currency: Cash to Cryptos to Sovereign Digital Currencies*, 42 *FORDHAM INT’L L.J.* 1041, 1081 (2019) (“Unlike their freely convertible counterparts, alternative currencies operating (at least nominally) within closed virtual systems remain unregulated.”).

⁹⁵ *See, e.g.*, Horwitz & Olson, *supra* note 83 (describing Facebook’s aspirations for Libra that it be “used to make everyday financial transactions like paying bills, making retail purchases and paying for public transport”).

⁹⁶ *See, e.g.*, 7 ALAN R. BROMBERG ET AL., *BROMBERG & LOWENFELS ON SECURITIES FRAUD* §§ 23–24 (2d ed. 2019) (exploring in depth whether cryptocurrencies are securities or commodities); Neil Tiwari, Note, *The Commodification of Cryptocurrency*, 117 *MICH. L. REV.* 611, 612 (2018) (“Bitcoin and other cryptocurrencies disrupt the securities/commodities dichotomy as they do not cleanly fit in either category.”); *but see* Mitchell Prentis, *Digital Metal: Regulating Bitcoin as a Commodity*, 66 *CASE W. RES. L. REV.* 609, 611, 621–632 (2015) (assessing, as does this Article, whether Bitcoin is a commodity, security, or currency; and then dismissing the possibility of Bitcoin being a commodity). There are also interesting developments in the regulation of cryptocurrencies at the state level, but that discussion is outside the scope of this Article. For arguments that default state commercial laws should control, instead of federal regulation, *see, for example*, Kevin V. Tu, *Perfecting Bitcoin*, 52 *GA. L. REV.* 505, 546 (2018) (advocating use of Article 9 of the Uniform Commercial Code); Sarah Jane Hughes & Stephen T. Middlebrook, *Advancing A Framework for Regulating Cryptocurrency Payments Intermediaries*, 32 *YALE J. ON REG.* 495, 502 & n.25 (2015) (advocating use of Article 4A of the Uniform Commercial Code).

to apply one definition or the other.⁹⁷ This Article further explores the definitions of securities and commodities below.⁹⁸

Meanwhile, the United States does not have an established system to regulate the structure and issuance of currencies that are not its own.⁹⁹ Inside the United States, under the U.S.

⁹⁷ For examples of commentators who support primary regulation by the SEC as a security, see, for example, Shlomit Azgad-Tromer, *Crypto Securities: On the Risks of Investments in Blockchain-Based Assets and the Dilemmas of Securities Regulation*, 68 AM. U. L. REV. 69, 75 (2018) (“When controlling costs, monitoring costs, and systemic risks, *inter alia*, outweigh the costs of regulation on a blockchain-based asset, securities regulation may be warranted.”); Dennis Chu, Note, *Broker-Dealers for Virtual Currency: Regulating Cryptocurrency Wallets and Exchanges*, 118 COLUM. L. REV. 2323, 2325 (2018) (“[T]he SEC’s broker-dealer regulations provide a useful framework from which to approach regulation of cryptocurrency platforms.”); Jonathan Rohr & Aaron Wright, *Blockchain-Based Token Sales, Initial Coin Offerings, and the Democratization of Public Capital Markets*, 70 HASTINGS L.J. 463, 511 (Feb. 9, 2019) (“[T]he SEC could issue interpretive guidance, but at a minimum, the agency should identify the considerations that will govern application of *Howey* to digital tokens through administrative orders and reports.”). For examples of commentators who support primary regulation by the CFTC as a commodity, see, for example, Prentis, *supra* note 96, at 611 (“Bitcoin should be categorized and regulated as a commodity.”); Tiwari, *supra* note 96, at 612 (“[T]he CFTC holds that cryptocurrencies are commodities under the Commodities Exchange Act.” (footnote omitted)). At least one article appears to remain agnostic on the issue and merely says that some regulation of “money” and what constitutes “legal tender” is coming. Stephen T. Middlebrook & Sarah Jane Hughes, *Regulating Cryptocurrencies in the United States: Current Issues and Future Directions*, 40 WM. MITCHELL L. REV. 813, 848 (2014). Another essay would break cryptocurrencies down into their various components or traits and regulate those traits separately. Omri Marian, *A Conceptual Framework for the Regulation of Cryptocurrencies*, 82 U. CHI. L. REV. DIALOGUE 53, 59 (2015).

⁹⁸ For discussion of securities, see discussion *infra* subpart II.A and notes 118–47. For discussion of commodities, see discussion *infra* subpart II.B and notes 148–76.

⁹⁹ The Commodity Futures Trading Commission (CFTC) regulates the trading of foreign currencies, not the issuance of them. See, e.g., 75 Fed. Reg. 55410 (2018) (“[T]he Commission is implementing requirements . . . based on existing CFTC regulations for commodity interest transactions and commodity interest intermediaries, and on existing National Futures Association (‘NFA’) rules with respect to retail forex transactions offered by NFA’s members.”). As the CFTC describes, “[t]he rules implement provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the Food, Conservation, and Energy Act of 2008, which, together, provide the CFTC with broad authority to register and regulate entities wishing to serve as counterparties to, or to intermediate, retail foreign exchange (forex) transactions.” *Foreign Currency Trading*, U.S. COMMODITY FUTURES TRADING COMM’N, <https://www.cftc.gov/ConsumerProtection/FraudAwarenessPrevention/ForeignCurrencyTrading/index.htm> [https://perma.cc/77QB-6ZFC] (last visited Sept. 2, 2019). It also notes that “[t]he CFTC’s regulatory jurisdiction does not extend to fraudulent activities in connection with using U.S. dollars to purchase foreign currency for its actual physical delivery.” *Id.*

Constitution¹⁰⁰ and the Stamp Payments Act of 1862¹⁰¹ “the Federal government [has] the exclusive authority to create official coinage and currency of the United States.”¹⁰² Cryptocurrencies cannot pretend to be official U.S. dollars,¹⁰³ and they are not attempting to do so.

While the United States regulates the trading of foreign currency markets, it does not regulate the structure or issuance of other currencies because the presumption has always been that currencies will be regulated by the sovereigns that stand behind them.¹⁰⁴ After issuance, the relative values of currencies on exchanges have typically been driven by the market’s evaluation of the sovereign’s policy decisions as well as the underlying value of that sovereign’s area’s economy.¹⁰⁵ The U.S. Commodity Futures Trading Commission (CFTC) regulates the trading in, but not the structure or issuance of, foreign currencies.¹⁰⁶ The Office of the Comptroller of the Currency (an independent bureau within the U.S. Department of the Treasury) regulates banks and how they handle existing money.¹⁰⁷

¹⁰⁰ U.S. CONST. art. I, § 8, cl. 5 (“The Congress shall have Power . . . [t]o coin Money, regulate the Value thereof, and of foreign Coin”); *id.* art. I, § 8, cl. 6 (“The Congress shall have Power . . . [t]o provide for the Punishment of counterfeiting the Securities and current Coin of the United States.”); *id.* art. I, § 10, cl. 1 (“No State shall . . . coin Money; emit Bills of Credit; make any Thing but gold and silver Coin a Tender in Payment of Debts”).

¹⁰¹ 18 U.S.C. § 336 (2018) (“Whoever makes, issues, circulates, or pays out any note, check, memorandum, token, or other obligation for a less sum than \$1, intended to circulate as money or to be received or used in lieu of lawful money of the United States, shall be fined under this title or imprisoned not more than six months, or both.”).

¹⁰² Nathan, *supra* note 27.

¹⁰³ 18 U.S.C. § 471 (2018).

¹⁰⁴ See, for example, a U.S. Treasury definition of currency that assumes a government issuer, 31 C.F.R. § 1010.100(m) (2018) (defining currency as “[t]he coin and paper money of the United States or of any other country that is designated as legal tender and that circulates and is customarily used and accepted as a medium of exchange in the country of issuance”); Prentis, *supra* note 96, at 621 (dismissing the possibility that Bitcoin could be a currency because “no government has claimed Bitcoin as its official medium of exchange”).

¹⁰⁵ See Tamon Asonuma, *Sovereign Defaults, External Debts, and Real Exchange Rate Dynamics* 4 (Int’l Monetary Fund, Working Paper No. 16/37, 2016), <https://www.imf.org/external/pubs/ft/wp/2016/wp1637.pdf> [https://perma.cc/W3K8-HG54] (last visited Sept. 23, 2019); Caroline Banton, *How Are International Exchange Rates Set?*, INVESTOPEDIA (Aug. 23, 2019), <https://www.investopedia.com/ask/answers/forex/how-forex-exchange-rates-set.asp> [https://perma.cc/8Y6V-U383].

¹⁰⁶ See *supra* note 99.

¹⁰⁷ *About Us*, OFF. COMPTROLLER CURRENCY, <https://www.occ.treas.gov/about/what-we-do/mission/index-about.html> [https://perma.cc/426Y-5VA5] (last visited Sept. 2, 2019) (describing its mission as to “charter[,], regulate[,], and super-

FinCEN,¹⁰⁸ another bureau within the U.S. Treasury, has applied the anti-money-laundering statute governing money transmitters to cryptocurrencies as though they were any other currency.¹⁰⁹ According to FinCEN's guidance, "[t]he definition of a money transmitter does not differentiate between real currencies and convertible virtual currencies. Accepting and transmitting anything of value that substitutes for currency makes a person a money transmitter under the regulations implementing the [Bank Secrecy Act]."¹¹⁰ But again, FinCEN's action regulates the scope of certain transactions conducted in cryptocurrencies, not the structural integrity and issuance of them.

For tax purposes, the Internal Revenue Service (IRS) simply considers Bitcoin and other cryptocurrencies to be property.¹¹¹ In making this determination, the IRS acknowledges that "[v]irtual currency is a digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value."¹¹² According to the IRS, "[i]n some environments," cryptocurrency "operates like 'real' currency—i.e., the coin and paper money of the United States or of any other

vis[e] all national banks and federal savings associations as well as federal branches and agencies of foreign banks").

¹⁰⁸ FinCEN is the Financial Crimes Enforcement Network. Its mission is to "safeguard the financial system from illicit use, combat money laundering, and promote national security through the strategic use of financial authorities and the collection, analysis, and dissemination of financial intelligence." *Mission*, FINCEN.GOV, <https://www.fincen.gov/about/mission> [<https://perma.cc/RQ9C-EMJZ>] (last visited Sept. 2, 2019).

¹⁰⁹ FIN. CRIMES ENF'T NETWORK, DEP'T TREASURY, APPLICATION OF FINCEN'S REGULATIONS TO PERSONS ADMINISTERING, EXCHANGING, OR USING VIRTUAL CURRENCIES, FIN-2013-G001, at 3 (2013), <https://www.fincen.gov/sites/default/files/shared/FIN-2013-G001.pdf> [<https://perma.cc/BQ5Y-53VM>]. ("An administrator or exchanger that (1) accepts and transmits a convertible virtual currency or (2) buys or sells convertible virtual currency for any reason is a money transmitter under FinCEN's regulations, unless a limitation to or exemption from the definition applies to the person. FinCEN's regulations define the term 'money transmitter' as a person that provides money transmission services, or any other person engaged in the transfer of funds. The term 'money transmission services' means 'the acceptance of currency, funds, or other value that substitutes for currency from one person and the transmission of currency, funds, or other value that substitutes for currency to another location or person by any means.'" (footnotes omitted) (emphasis in original)).

¹¹⁰ *Id.*

¹¹¹ I.R.S. Notice 2014-21, § 4, A-1 ("For federal tax purposes, virtual currency is treated as property. General tax principles applicable to property transactions apply to transactions using virtual currency."); see also Tara Siegel Bernard, *When Trading in Bitcoin, Keep the Tax Man in Mind*, N.Y. TIMES (Jan. 18, 2018), <https://www.nytimes.com/2018/01/18/your-money/bitcoin-irs-taxes.html> [<https://perma.cc/BU7E-SX8S>].

¹¹² I.R.S. Notice 2014-21, § 2; 2014-16 I.R.B. 1.

country that is designated as legal tender, circulates, and is customarily used and accepted as a medium of exchange in the country of issuance—but it does not have legal tender status in any jurisdiction.”¹¹³ The IRS Notice makes no claim to regulate cryptocurrency structure or issuance, and it cites FinCEN’s determination above.¹¹⁴

But exactly the ways in which cryptocurrencies are currencies in their structure and issuance is how they should be regulated. Those qualities have led most commentators to focus on the government’s power to control securities or commodities.¹¹⁵ In fact, the more that cryptocurrencies follow the advice offered from those interested in their future success to adopt greater regulation, the more they move towards becoming the traditional sovereign-or-centrally controlled currencies that cryptocurrencies seek to replace, as opposed to the legal definition of securities.¹¹⁶

In their powerful book on the flaws in our financial regulatory system revealed by the 2007–2009 financial crisis, Professors John Armour, Dan Awrey, Paul Davies, Luca Enriques, Jeffrey Gordon, Colin Mayer, and Jennifer Payne argue that the crisis exposed the disjointed cracks in the international financial regulatory system, and that exposure should drive the need for additional thinking about the limitations of our existing categories.¹¹⁷ Similarly, cryptocurrencies expose the cracks in our regulatory framework in assuming that the

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *See, e.g.*, discussion *supra* note 97 (providing examples of commentators who support primary regulation of cryptocurrencies by the SEC as a security).

¹¹⁶ Voices giving this advice include even the CFTC Commissioner. Annaliese Milano, *Crypto Industry Should Self Regulate, Says CFTC Commissioner*, COINDESK (Mar. 8, 2018, 3:45 PM), <https://www.coindesk.com/crypto-industry-should-self-regulate-says-cftc-commissioner> [<https://perma.cc/6LKP-FZ5J>] (quoting Commissioner Brian Quintenz as telling an audience “I believe that a private cryptocurrency oversight body could bridge the gap between the status quo and future government regulatory action”); *see also, e.g.*, Stephen J. Obie & Mark W. Rasmussen, *How Regulation Could Help Cryptocurrencies Grow*, HARV. BUS. REV. (July 17, 2018), <https://hbr.org/2018/07/how-regulation-could-help-cryptocurrencies-grow> [<https://perma.cc/QV4J-JG9E>] (describing the need to “[e]ncourage the formation of a self-regulatory body to promote and enforce standards among the crypto community”); Adam J. Sulkowski, *Blockchain, Law, and Business Supply Chains: The Need for Governance and Legal Frameworks to Achieve Sustainability 3* (Sept. 16, 2019) (unpublished manuscript), <https://papers.ssrn.com/abstract=3205452> [<https://perma.cc/5XVA-K6B4>] (“A key question to be considered is whether blockchain applications are likely to obviate the need for lawyers and legal frameworks, as some have prognosticated. We conclude that legal frameworks are essential and that a role for attorneys will remain.”).

¹¹⁷ JOHN ARMOUR ET AL., *PRINCIPLES OF FINANCIAL REGULATION* 6 (2016).

things we trade fall into the neat categories of securities; commodities; or fiat currencies separately structured, issued, and tied to the behavior of traditional sovereigns.

II

NOT A SECURITY, AND NOT A COMMODITY: A FIAT CURRENCY

Cryptocurrencies are not comfortably either securities or commodities. They are non-sovereign fiat currencies that do not fit well into either category. A brief survey of how we understand securities and commodities makes this point.

A. Not a Security

According to an American Bar Association publication, “[t]he definitions of the term ‘security’ in the 1933 and 1934 Acts are virtually identical to each other[,] and also are nearly identical to the definition in Section 2(a)(36) of the 1940 Act.”¹¹⁸ Under the 1940 Act, “security” is defined through a list of originally paper-based items that were linked to the value of other assets such as a “note, stock, treasury stock, security future, bond, debenture,” etc., or “privilege entered into on a national securities exchange relating to foreign currency, or . . . instrument commonly known as a ‘security’, or any certificate of interest or participation in . . . any of the foregoing.”¹¹⁹

¹¹⁸ ROBERT H. ROSENBLUM, INVESTMENT COMPANY DETERMINATION UNDER THE 1940 ACT: EXEMPTIONS AND EXCEPTIONS 27, 30 (2003). The 1933 Act is the Securities Act of 1933. See Securities Act of 1933, 15 U.S.C. §§ 77a–77aa (2018). The 1934 Act is the Securities Exchange Act of 1934. Securities Exchange Act of 1934, 15 U.S.C. §§ 78a–78qq (2018). The 1940 Act is the Investment Company Act of 1940. Investment Company Act of 1940, 15 U.S.C. §§ 80a-1–80a-64 (2018).

¹¹⁹ According to the full language of the 1940 Act:

“Security” means any note, stock, treasury stock, security future, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on any security (including a certificate of deposit) or on any group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly known as a “security”, or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing.

15 U.S.C. § 80a-2(a)(36) (2018).

Beyond the Acts' listed items, in its landmark 1946 case *SEC v. W.J. Howey Co.*,¹²⁰ the U.S. Supreme Court introduced an economic reality test for when an "investment contract" should be considered a security. In *Howey*, the Court defines an "investment contract" as "a contract, transaction or scheme whereby a person invests his money in a common enterprise[,] and is led to expect profits solely from the efforts of the promoter or a third party."¹²¹ The Court has repeatedly returned to its definition in *Howey* to determine, for example, that a variable annuity contract is a security,¹²² and that a "withdrawable capital share[] in a state-chartered savings and loan association" is a security.¹²³ An investment contract and a security may not be the same thing,¹²⁴ but the Court certainly looks to the representations and terms on which a person invests for whether he or she is investing in a security.¹²⁵

The U.S. Securities and Exchange Commission (SEC) has taken the position that it will regulate cryptocurrencies' initial coin offerings (ICOs) because they, like many other securities offerings, include certain representations and terms about the value of the vehicle that investors buy into.¹²⁶ ICOs seek to float tokens: issuers make explicit representations about their value like the limited tickets (tokens) inside a fair.¹²⁷ Their name is misleading because ICOs are typically the offerings of

¹²⁰ *SEC v. W.J. Howey Co.*, 328 U.S. 293 (1946).

¹²¹ *Id.* at 298–99.

¹²² *SEC v. Variable Annuity Life Ins. Co. of Am.*, 359 U.S. 65, 72 n.13 (1959).

¹²³ ROSENBLUM, *supra* note 118, at 33 n.22 (citing *Tcherepnin v. Knight*, 389 U.S. 332, 338 (1967)); *see also, e.g., id.* (describing *SEC v. United Benefit Life Ins. Co.*, 387 U.S. 202 (1967) as "holding that the accumulation portion of a flexible fund variable annuity contract was an investment contract").

¹²⁴ *Compare* *United Hous. Found. Inc. v. Forman*, 421 U.S. 837, 852 (1975) ("We perceive no distinction, for present purposes, between an 'investment contract' and an instrument commonly known as a 'security.'"), *and* *Landreth Timber Co. v. Landreth*, 471 U.S. 681, 691 (1985) ("[W]e would note that the *Howey* economic reality test was designed to determine whether a particular instrument is an 'investment contract,' not whether it fits within any of the examples listed in the statutory definition of 'security.'").

¹²⁵ *See generally, e.g., Landreth*, 471 U.S. at 690 ("All of the cases on which respondents rely involved unusual instruments not easily characterized as 'securities.' Thus, if the Acts were to apply in those cases at all, it would have to have been because the economic reality underlying the transactions indicated that the instruments were actually of a type that falls within the usual concept of a security." (internal citation omitted)).

¹²⁶ *See* Jake Frankenfield, *Initial Coin Offering (ICO)*, INVESTOPEDIA (Dec. 20, 2018) [hereinafter Frankenfield, *ICO*], <https://www.investopedia.com/terms/i/initial-coin-offering-ico.asp> [<https://perma.cc/HK7R-EABZ>].

¹²⁷ *See* fair ticket example *supra* Introduction.

tokens instead of true coins.¹²⁸ Moreover, as one investment source explains, an ICO

is the cryptocurrency space's rough equivalent to an IPO [initial public offering] in the mainstream investment world. ICOs act as fundraisers of sorts; a company looking to create a new coin, app, or service launches an ICO. Next, interested investors buy in to the offering In exchange for their support, investors receive a new cryptocurrency token specific to the ICO. Investors hope that the token will perform exceptionally well into the future, providing them with a stellar return on investment. The company holding the ICO uses the investor funds as a means of furthering its goals, launching its product, or starting its digital currency.¹²⁹

But many cryptocurrencies need not make such representations about their currency to outsiders, and they would therefore not be subject to regulation as securities under the SEC's current approach.¹³⁰ For example, REcoin,¹³¹ Dia-

¹²⁸ See programming discussion of the difference between coins and tokens *supra* Introduction and notes 34–38. See also James J. Park, *When Are Tokens Securities? Some Questions from the Perplexed*, HARV. L. SCH. FORUM ON CORP. GOVERNANCE & FIN. REG. (Dec. 20, 2018), <https://corpgov.law.harvard.edu/2018/12/20/when-are-tokens-securities-some-questions-from-the-perplexed/> [<https://perma.cc/2MZH-9F2C>] (“ICOs typically raise funds by selling tokens . . . to investors, many of whom hope to profit as the value of such tokens increases. Hundreds of companies developing projects relating to blockchain technology have sold tokens through ICOs directly to public investors without filing a registration statement with the SEC. Such sales are unlawful if such tokens fall within the ambiguous definition of a security.”).

¹²⁹ Frankenfield, *ICOs*, *supra* note 126; see also Shaanan Cohny, David Hoffman, Jeremy Sklaroff, & David Wishnick, *Coin-Operated Capitalism*, 119 COLUM. L. REV. 591, 593 (2019) (“[T]he ICO was named after the IPO, or ‘Initial Public Offering.’ . . . Unlike its namesake, an ICO does not typically involve the sale of equity in (or governance rights pertaining to) a corporation. Instead, ICO participants buy an asset—a ‘token’—that enables its holder to use or govern a network that the promoters plan to develop with the funds raised through the sale.” (citations omitted)).

¹³⁰ This is developing law, and there seems to be potential disagreement here between courts and the SEC. The SEC, as described further *infra* subpart II.A and notes 144–47, has largely declined to exercise jurisdiction over cryptocurrencies as opposed to initial coin offerings. Yet in September 2018, Judge Raymond Dearie of the federal Eastern District of New York refused to dismiss a securities-fraud indictment against the founder of two cryptocurrencies, on the basis that “[t]he [i]ndictment plainly alleges that REcoin and Diamond were two of the ‘countless and variable schemes’ that[,] in the ever-evolving commercial market, ‘fall within the ordinary concept of a security.’” *United States v. Zaslavskiy*, No. 17-CR-647-RJD, 2018 WL 4346339, at *9 (E.D.N.Y. Sept. 11, 2018) (citing *SEC v. W.J. Howey Co.*, 328 U.S. 293, 299 (1946) (internal quotation marks and citations omitted)).

¹³¹ See *Zaslavskiy*, 2018 WL 4346339, at *9.

mond,¹³² and DAO Tokens¹³³ may be subject to regulation by the SEC, while Bitcoin and Ether would not.¹³⁴

To return to our example of tickets at the fair, the more the operators of the fair uniquely control the value of the tickets and the forum in which they may be spent (e.g., worth three games as long as the fair does well), the more those tickets might become securities because they are tied to “profits solely from the efforts of the promoter or a third party.”¹³⁵ Thus the more Facebook (or Facebook’s subsidiary Calibra) makes external representations as the sole way to access and value the currency that the Libra Association manufactures, the more what Calibra sells may fall into the category of regulation as a security instead of as a broader cryptocurrency.¹³⁶

William Hinman, SEC Director of the Division of Corporation Finance, highlights the importance of the promoter’s role in distinguishing ICOs as securities from non-securities such as Bitcoin. As Director Hinman explains,

[i]n the ICOs I have seen, overwhelmingly, promoters tout their ability to create an innovative application of blockchain technology. . . . The purchaser usually has no choice but to rely on the efforts of the promoter to build the network and make the enterprise a success. At that stage, the purchase of a token looks a lot like a bet on the success of the enterprise

¹³² See *id.*

¹³³ Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO, Exchange Act Release No. 81,207, 2017 WL 7184670, at *1 (July 25, 2017) (“[T]he Commission has determined that DAO Tokens are securities under the Securities Act of 1933 (‘Securities Act’) and the Securities Exchange Act of 1934 (‘Exchange Act’).”)

¹³⁴ See Hinman, *supra* note 66; Kate Rooney, *Federal Judge Says SEC Rules Apply to Initial Coin Offering*, (Sept. 11, 2018, 5:03 PM), <https://www.cnn.com/2018/09/11/federal-judge-says-sec-rules-apply-to-initial-coin-offering.html> [<https://perma.cc/V5Q8-N5W2>] (“As of Tuesday, bitcoin and ether are the only cryptocurrencies the SEC has come out and said are exempt from Securities law.”); see also JAMES J. PARK, WHEN ARE TOKENS SECURITIES? SOME QUESTIONS FROM THE PERPLEXED, LOWELL MILKEN INST. POL’Y REP. 1 (Dec. 2018), <https://lowellmilkeninstitute.law.ucla.edu/wp-content/uploads/2018/12/When-are-Tokens-Securities.pdf> [<https://perma.cc/JBY9-FRQJ>] (summarizing the following problems with regulating certain cryptocurrencies based on the SEC’s announcements: “Selling tokens through an ICO without SEC registration requires escaping what we call the ‘Hinman paradox.’ A token can only be widely distributed to the public if the project it is associated with is functional. But a blockchain project can only be functional if its tokens are widely distributed. . . . The SEC’s incremental approach to regulating ICOs reflects the difficulty of balancing the policy goals of protecting investors and promoting entrepreneurship. As the risk of harm to retail investors increases, the SEC should enforce the securities laws more decisively.”).

¹³⁵ SEC v. W.J. Howey Co., 328 U.S. 293, 299 (1946).

¹³⁶ See Libra discussion *supra* subparts II.A–C.

and not the purchase of something used to exchange for goods or services on the network.¹³⁷

But note the temporal problem with this analysis because it focuses on size and whether a product has already been adopted, rather than the quality of the community behind the product. This conundrum has been described as the “Hinman paradox.”¹³⁸ Do Bitcoin and Ether escape regulation merely because they are already in existence, and the SEC does not have to evaluate how their systems initially grow? Although Bitcoin and Ether are arguably decentralized systems, representations about how their codes work were made at some point by someone trying to encourage new people to adopt them. In fact, because the systems are arguably decentralized, such representations may have been made by more people in more places at more times for their own financial advantages.¹³⁹ Having more potential misrepresentations in the market for a mature product would seem to argue for a *greater* need to regulate, not to support an argument against regulation.

Moreover, supposedly once independent of their promoters, cryptocurrencies rise and fall on their own values; but this is a tricky line because even traditional currencies are supported by institutional structures. The SEC seems to be caught on the issue of scale and how “decentralized” a product is, as opposed to thinking about the qualities of the community behind a currency. As Director Hinman explains:

If the network on which the token or coin is to function is sufficiently decentralized—where purchasers would no longer reasonably expect a person or group to carry out essential managerial or entrepreneurial efforts—the assets may not represent an investment contract. Moreover, when the efforts of the third party are no longer a key factor for determining the enterprise’s success, material information asymmetries recede. As a network becomes truly decentralized, the ability to identify an issuer or promoter to make the requisite disclosures becomes difficult, and less meaningful. And so, when I look at Bitcoin today, I do not see a central

¹³⁷ Hinman, *supra* note 66.

¹³⁸ See, e.g., Park, *supra* note 134 (describing the ‘Hinman paradox’ as when “[a] token can only be widely distributed to the public if the project it is associated with is functional. But a blockchain project can only be functional if its tokens are widely distributed.”).

¹³⁹ See discussion of how 70% or more of Bitcoin trading is speculative, *supra* Introduction and note 69.

third party whose efforts are a key determining factor in the enterprise.¹⁴⁰

Additional problems with Director Hinman's analysis here stem from his focus on generational processes (with the perverse use of decentralization as a proxy for maturity), and not on the organizational qualities of the communities behind currencies. First, in the case of Bitcoin, for example, there was at one point a central person—the legendary Satoshi Nakamoto¹⁴¹ who invented the processes to create Bitcoin—who then involved a community around him to follow those uniting instructions.¹⁴² These people are, of course, still part of Director Hinman's "person or group to carry out essential managerial or entrepreneurial efforts" necessary for a currency, but not to be permitted under his analysis. Second, studies of Bitcoin, including the UBS one described in the text *supra*,¹⁴³ are revealing Bitcoin to be not as decentralized in performance as advertised—even by the SEC. Nonetheless, there is no serious talk of regulating Bitcoin as a security.

Finally, the current chairman of the SEC, Jay Clayton, has not taken a particularly aggressive stance in attempting to regulate cryptocurrencies.¹⁴⁴ As he explains, "[m]y view is that our rules have stood the test of time".¹⁴⁵ There is no need to get the Commission more involved and modernize: "I'm not going to change rules just to fit a technology."¹⁴⁶ The *New York Times*'s takeaway is that instead of the SEC moving, "crypto might [have to] be the one to change, to meet the law."¹⁴⁷ But the SEC's current test is in the opposite direction of the reliable standardization from regulation that cryptocurrency needs.

¹⁴⁰ Hinman, *supra* note 66.

¹⁴¹ Of course, Satoshi Nakamoto's gender and other elements of identity remain a mystery. It is easy to substitute "she/her," "it/its," or "they/their," for the appropriate person or group as needed in this sentence. See Satoshi Nakamoto discussion *supra* Introduction and note 27.

¹⁴² See Bitcoin origin discussion *supra* Introduction and note 27.

¹⁴³ See discussion *supra* Introduction and note 69.

¹⁴⁴ See *Is It Time for Crypto to Catch up with the Law?*, N.Y. TIMES: DEALBOOK/BUS. & POLY (Dec. 3, 2018), <https://www.nytimes.com/2018/12/03/business/dealbook/trade-war-truce.html> [<https://perma.cc/RJ8W-ANWC>].

¹⁴⁵ *Id.* (quoting SEC Chairman Jay Clayton).

¹⁴⁶ *Id.* (same).

¹⁴⁷ *Id.* The SEC's position creates practical problems for hedge funds as well. In September 2018, "the SEC announced its first ever enforcement action finding an investment company registration violation by a hedge fund manager based on its investments in digital assets." BROMBERG ET AL., *Uncertainty of SEC's Future Regulatory Approach to Cryptocurrencies, Initial Coin Offerings and Blockchain*, *supra* note 96, § 23:5 (citing CryptoAsset Mgmt., LP, Securities Act Release No. 10544, 2018 WL 4329663 (Sept. 11, 2018)).

B. Not a Commodity

This Article turns next to whether cryptocurrencies are a commodity. The definition of a commodity comes from the Commodity Exchange Act of 1936 (CEA). The CEA defines “commodity” through a list of tangible items such as wheat, cotton, rice, livestock, etc., as well as “other goods and articles” and “services, rights, and interests” in which “contracts for future delivery are presently or in the future dealt in.”¹⁴⁸ In 2015, the CFTC, describing the “definition of a ‘commodity’ [as] broad,” announced that “Bitcoin and other virtual currencies are encompassed in the definition and properly defined as commodities.”¹⁴⁹

In March 2018, Judge Jack Weinstein of the Eastern District of New York agreed.¹⁵⁰ The decision’s reasoning is fairly brief. In concluding that “[v]irtual currencies can be regulated by [the] CFTC as a commodity,” Judge Weinstein writes that “[v]irtual currencies are ‘goods’ exchanged in a market for a uniform quality and value.”¹⁵¹ As such, “[t]hey fall well-within the common definition of ‘commodity’ as well as the CEA’s defi-

¹⁴⁸ According to the full language of the statute:

The term “commodity” means wheat, cotton, rice, corn, oats, barley, rye, flaxseed, grain sorghums, mill feeds, butter, eggs, *Solanum tuberosum* (Irish potatoes), wool, wool tops, fats and oils (including lard, tallow, cottonseed oil, peanut oil, soybean oil, and all other fats and oils), cottonseed meal, cottonseed, peanuts, soybeans, soybean meal, livestock, livestock products, and frozen concentrated orange juice, and all other goods and articles, except onions (as provided by section 13-1 of this title) and motion picture box office receipts (or any index, measure, value, or data related to such receipts), and all services, rights, and interests (except motion picture box office receipts, or any index, measure, value or data related to such receipts) in which contracts for future delivery are presently or in the future dealt in.

7 U.S.C. § 1a(9) (2018).

¹⁴⁹ Order Instituting Proceedings Pursuant to Sections 6(C) and 6(D) of The Commodity Exchange Act, Making Findings and Imposing Remedial Sanctions, *In re Coinflip, Inc., d/b/a Derivatix, and Francisco Riordan*, CFTC Docket No. 15-29, at 3 (Sept. 17, 2015), https://www.cftc.gov/sites/default/files/idc/groups/public/@lrenforcementactions/documents/legalpleading/enfcoinflip_rorder09172015.pdf [<https://perma.cc/N67K-362F>].

¹⁵⁰ Mem. & Order, *Commodity Futures Trading Comm’n v. Patrick K. McDonnell, and Cabbagetech, Corp. D/B/A Coin Drop Markets*, No. 18-CV-361, at 28 (E.D.N.Y. Mar. 6, 2018) (reported subsequently as *Commodity Futures Trading Comm’n v. McDonnell*, 287 F. Supp. 3d 213, 228 (E.D.N.Y. 2018), adhered to on denial of reconsideration, 321 F. Supp. 3d 366 (E.D.N.Y. 2018)).

¹⁵¹ *Id.* (quoting Prentis, *supra* note 96, at 626). Accord Prentis, *supra* note 96, at 626 (“It would make sense for regulators to treat Bitcoin as a commodity. Commodities are generally defined as ‘goods sold in the market with a quality and value uniform throughout the world.’ This categorization would be appropriate because it realistically reflects the economic behavior of Bitcoin users and squares with traditional economic conceptions of exchange.”).

inition of ‘commodities’ as ‘all other goods and articles . . . in which contracts for future delivery are presently or in the future dealt in.’”¹⁵²

Our tickets at the fair, for example, are arguably a commodity if they are valuable within the fair by agreement for uniform prizes, food, or other goods in the future. But this fixed quality of the agreement is a distinction from the U.S. dollars from which the fair tickets were bought that could be traded broadly without such agreement about what they were always worth in other goods. In the Facebook example, Calibra tokens could arguably be considered a commodity insofar as Facebook (through its Calibra platform) has established the things of uniform quality and value for which its tokens can be traded. Unlike a currency, however, Calibra’s system would not allow libra to become more fungibly tradeable off of its platform for the whole world of possible goods.

As an additional note, even if non-sovereign fiat currencies could be considered commodities, the CFTC’s jurisdiction might not permit the type of comprehensive regulation cryptocurrencies need. The CFTC cannot regulate spot transactions of commodities, unless there is fraud or manipulation.¹⁵³ This would be a serious limitation in an agency’s ability to set rules for a new class of tradeable and malleable items such as fast-moving cryptocurrencies.¹⁵⁴

Further holes in both the arguments for cryptocurrencies as securities or as commodities are highlighted in one of the sources Judge Weinstein quotes in his decision supporting the CFTC. As Goldman Sachs’s Head of Global Commodities Research, economist Jeffrey Currie,¹⁵⁵ opines:

A commodity is any item that “accommodates” our physical wants and needs. And one of these physical wants is the need for a store of value. Throughout history humans have used different commodities as a store of value—even cocoa beans—but, more persistently, gold.

¹⁵² *McDonnell*, 287 F. Supp. 3d at 228 (quoting 7 U.S.C. § 1(a)(9) (2012)).

¹⁵³ See BROMBERG ET AL., *supra* note 96, § 24:6 (“CFTC does not have regulatory authority over simple quick cash or spot transactions that do not involve fraud or manipulation. 7 U.S.C.A. § 2(c)(2)(C)(i)(II)(bb)(AA) (The CFTC does not have jurisdiction over ‘spot’ transactions that ‘[result] in actual delivery within 2 days.’). This boundary has been recognized by the CFTC.”).

¹⁵⁴ See *id.*

¹⁵⁵ *Bio: Jeff Currie*, *Global Investment Research*, London, GOLDMAN SACHS, <https://www.goldmansachs.com/insights/outlook/bios/currie-bio-pdf.pdf> [<https://perma.cc/ZB5E-ZMQ7>] (describing Currie’s history of teaching “undergraduate and graduate level courses in microeconomics and econometrics” and his PhD in economics from the University of Chicago) (last visited Jan. 27, 2020).

In contrast, a security is any instrument that is “secured” against something else.

As a currency is usually secured by a commodity or a government’s ability to tax and defend, it is considered to be a security.

By these definitions, bitcoin with a lower case “b,” is a commodity, and not a currency, while Bitcoin with a capital “B” is the technology, or network, that bitcoin moves across. The analogy would be Shale technology versus shale oil.¹⁵⁶

Notably, Judge Weinstein quotes the economist for a legal analysis of cryptocurrencies as a commodity, but Mr. Currie’s definitions—certainly the expansive definition of a security as “secured” against something else—are at odds with how the Supreme Court and the SEC have considered securities.¹⁵⁷ Contra Mr. Currie, the SEC has already said that certain cryptocurrencies are not securities.¹⁵⁸ ICOs and certain tokens may be securities, but not currencies themselves.¹⁵⁹ Yes, currencies are “secured” in an important conceptual way that this Article has already mentioned in how communities have an interest in the value of their currencies, and that it will return to later in describing fiat currencies. The quote in Judge Weinstein’s decision, though, highlights how out of step our regulatory categories are with an economist’s functional analysis.

Additionally, in thinking about commodities, holding currencies such as Bitcoin or U.S. dollars is not like trading in

¹⁵⁶ *McDonnell*, 287 F. Supp. 3d at 224 (quoting Jeff Currie, *Bullion Bests bitcoin, Not Bitcoin*, GOLDMAN SACHS: TOP MIND 7 (Mar. 11, 2014), <https://www.paymentlawadvisor.com/files/2014/01/GoldmanSachs-Bit-Coin.pdf> [<https://perma.cc/LM5Z-SYA3>]). In the original text and Judge Weinstein’s decision, these statements were recorded as a single paragraph. Splitting them apart allows the reader to see more of the problems with the statements’ connections.

¹⁵⁷ See, e.g., discussion of the *Howey* test and the SEC Chairman’s approach *infra* Part II.A and notes 118–47.

¹⁵⁸ According to the Chairman of the SEC in addressing Bitcoin, for example: “As a replacement for currency, that has been determined by most people to not be a security.” Neeraj Agrawal, *SEC Chairman Clayton: Bitcoin Is Not a Security*, COIN CENTER, (Apr. 27, 2018), <https://coincenter.org/link/sec-chairman-clayton-bitcoin-is-not-a-security> [<https://perma.cc/C9DX-AWUC>] (quoting SEC Chairman Jay Clayton’s testimony to Congress and attaching video footage).

¹⁵⁹ See Bob Pisani, *Bitcoin and Ether Are Not Securities, but Some Initial Coin Offerings May Be*, *SEC Official Says*, CNBC (June 14, 2018, 12:27 PM), <https://www.cnbc.com/2018/06/14/bitcoin-and-ethereum-are-not-securities-but-some-cryptocurrencies-may-be-sec-official-says.html> [<https://perma.cc/FW8Q-SAYG>].

camels or gold, which are easily commodities.¹⁶⁰ The fair tickets in our running hypothetical may be commodities, especially if side-deals spring up for tickets within the fair as a store of value.¹⁶¹ But the U.S. dollars that were used to purchase the fair tickets are far more standardized and centralized than those limited side-deals for tickets within the fair. In the case of Bitcoin and other established cryptocurrencies, there is an authority that determines whether transactions can happen or not, and that validates those transactions the way that a bank would in traditional currency movements.¹⁶² In cryptocurrencies, this authority is often run by decentralized majority rule, but the fact that it still has such a system makes it vulnerable to hacking the way that banks can be electronically burgled.

Unlike tangible stores of value in fair ticket-stubs or the camels or gold that a person may watch over and hold on to, because fiat currencies are so liquid, they can disappear in ways that traditional commodities cannot. Traditionally-backed currency banking systems have to be concerned about online hacking, and so do cryptocurrencies. Not so differently from the way in which traditional-currency transfers are dependent on banking codes,¹⁶³ cryptocurrencies such as Bitcoin are typically spent using digital signatures that depend on hav-

¹⁶⁰ See generally *Commodity Futures Trading Comm'n v. U.S. Metals Depository Co.*, 468 F. Supp. 1149, 1159 (S.D.N.Y. 1979) (regulating sales of gold); BROMBERG ET AL., *supra* note 96, § 24:6 (“The original grant of power to the [Commodities Exchange Act] was designed to control trading in agricultural commodities.”).

¹⁶¹ This explanation uses the court’s language; the CEA equivalent is making them “goods” in which “interests” in “contracts for future delivery” may be “dealt in.” 7 U.S.C. § 1a(9) (2018).

¹⁶² Again, these type of transfers trigger concerns about the limits of the CFTC’s limited jurisdiction over spot transactions. See BROMBERG ET AL., *supra* note 96, § 24:6 (“CFTC does not have regulatory authority over simple quick cash or spot transactions that do not involve fraud or manipulation. 7 U.S.C.A. § 2(c)(2)(C)(i)(II)(bb)(AA) (The CFTC does not have jurisdiction over ‘spot’ transactions that ‘[result] in actual delivery within 2 days.’). This boundary has been recognized by the CFTC.”).

¹⁶³ See, e.g., *North Korean Hackers Used Swift Network to Steal More than \$100m*, FINEXTRA RES.: SECURITY (Oct. 5, 2018), <https://www.finextra.com/new-sarticle/32742/north-korean-hackers-used-swift-network-to-steal-more-than-100m---fireeye> [<https://perma.cc/HWT7-ABDD>] (“A North Korean hacking group has used the Swift network to try to steal more than \$1.1 billion dollars from at least 16 financial institutions around the world since 2014 . . .”). The industry standard network for transactions in traditional currencies is the Society for Worldwide Interbank Financial Telecommunications (SWIFT), <https://www.swift.com/> [<https://perma.cc/KEC7-QK9V>] (last visited Oct. 11, 2019).

ing a private key (access code).¹⁶⁴ When hackers steal private keys, they have access to the money in that account.¹⁶⁵

When there is a digital bank robbery of a currency, the cash is gone and cannot be easily restored. In the 2018 traditional-currency bank theft committed by North Korean hackers using Bangladesh's codes, the loss was U.S. \$81 million.¹⁶⁶ As of fall 2018, the security firm FireEye estimates that since 2014 the same North Korean hacking group has used vulnerabilities in the traditional-currency banking network to steal "more than \$1.1 billion dollars from at least 16 financial institutions around the world."¹⁶⁷ Similarly, cryptocurrency exchanges such as Mt. Gox have discovered that vast sums can disappear from their electronic vaults without fingerprints.¹⁶⁸ The cryptocurrency loss for Mt. Gox and its customers in February 2014 was the equivalent of U.S. \$473 million.¹⁶⁹ In January 2018, hackers using such codes stole over U.S. \$500 million in NEM coins from Coincheck, making it allegedly the "biggest theft in the history of the world."¹⁷⁰ Merely a month later, in February 2018, hackers using the same technique stole Nano coins from the BitGrail exchange worth the equivalent of U.S. \$187 million.¹⁷¹ In February 2019, when the CEO of Quadriga

¹⁶⁴ See, e.g., Jimmy Song, *Mt. Gox Hack Technical Explanation*, MEDIUM (July 26, 2017), <https://medium.com/@jimmysong/mt-gox-hack-technical-explanation-37ea5549f715> [<https://perma.cc/A8LR-FMW7>] ("Bitcoin is spent using digital signatures. In order to create a digital signature, you have to have the private key.").

¹⁶⁵ *Id.*

¹⁶⁶ *North Korean Hackers*, *supra* note 163.

¹⁶⁷ *Id.*

¹⁶⁸ For a discussion of the distinction between commodities and securities, see Tiwari, *supra* note 96, at 623–24 ("When analyzing commodities like gold or silver, courts hold that those minerals are not securities because their value depends on market forces, not the efforts of others." (first citing *SEC v. R.G. Reynolds Enters.*, 952 F.2d 1125, 1135 (9th Cir. 1991); then citing *SEC v. Belmont Reid & Co.*, 794 F.2d 1388, 1391 (9th Cir. 1986); and then citing *Noa v. Key Futures, Inc.*, 638 F.2d 77, 79 (9th Cir. 1980)).

¹⁶⁹ Pollock, *supra* note 73.

¹⁷⁰ Alex Munkachy, *30+ Cryptocurrency Exchange Hacks—A Comprehensive List*, COINQ (June 21, 2018), <https://coinq.com/cryptocurrency-exchange-hacks> [<https://perma.cc/HDV8-MEPP>]; see also Darryn Pollock, *Story of Coincheck: How to Rebound After the 'Biggest Theft in the History of the World.'* COINTELEGRAPH (Apr. 3, 2018), <https://cointelegraph.com/news/story-of-coincheck-how-to-rebound-after-the-biggest-theft-in-the-history-of-the-world> [<https://perma.cc/9JSL-C943>] (describing how the coins were stolen by theft of the private key without authorization); Samburaj Das, *Majority of \$550 Million Stolen NEM Already Laundered: Report*, CCN (Mar. 27, 2018), <https://www.ccn.com/majority-of-550-million-stolen-nem-already-laundered-report> [<https://perma.cc/NDY7-Y8TB>] (noting that the hackers have already laundered the stolen NEM and are close to cashing out completely).

¹⁷¹ Munkachy, *supra* note 170.

CX disappeared, so did the access keys to approximately U.S. \$250 million.¹⁷²

Professor Eric Posner has noted the way in which Bitcoin and other cryptocurrencies can be remotely controlled, even while in others' possession. As Professor Posner explains, "Bitcoin is not completely autonomous. It actually has its own central bank in a way."¹⁷³ In the way that the cryptocurrencies are designed, "[t]he people who maintain the Bitcoin network can change the money supply through a majoritarian process."¹⁷⁴ This structure "means that the supply of bitcoin is a function of what the majority of these people think at any given time."¹⁷⁵

We may not think of Bitcoin as a traditional fiat currency because there is no sovereign state involved in its issuance per se, but that is a distinction that has to do with existing norms of political legitimacy and transparency. As Professor Posner explains, the majority controlling Bitcoin's valuation "are not economists or monetary experts, but technology and programming experts, and entrepreneurs. I find that unsettling and I think most people would feel the same way."¹⁷⁶

But what happens when "technology and programming experts, and entrepreneurs"¹⁷⁷ gain legitimacy to run a large-scale system? Such grants of legitimacy have been bestowed before, most recently and publicly in the shifting of the regulation of the Internet's structure to a non-governmental entity. The "California-based NGO Internet Corporation for Assigned Names and Numbers (ICANN)" is now charged with managing "the database for top-level domain names such as .com and .net and the corresponding numeric addresses that allow com-

¹⁷² Karen Zraick, *Crypto-Exchange Says It Can't Pay Investors Because Its C.E.O. Died, and He Had the Passwords*, N.Y. TIMES (Feb. 5, 2019), <https://www.nytimes.com/2019/02/05/business/quadriga-cx-gerald-cotten.html> [<https://perma.cc/2SWE-KAJW>]. The company maintains that its thirty-year-old CEO died suddenly in India. *Id.* Many people believe his death is a hoax. *Id.* As Professor Emin Gün Sirer notes mildly, the CEO's "death came at a very odd time in the history of [the] company" as sleuths were questioning where the company stored its assets. *Id.* (quoting the Cornell University professor and co-director of its Initiative for CryptoCurrencies and Contracts). According to auditors, the company appears to have "no discernible accounting system and no bank account." *Id.* (describing Ernst & Young court filings).

¹⁷³ Allison Nathan, *Interview with Eric Posner*, GOLDMAN SACHS: TOP MIND 4 (Mar. 11, 2014), <https://www.paymentlawadvisor.com/files/2014/01/Goldman-Sachs-Bit-Coin.pdf> [<https://perma.cc/LM5Z-SYA3>] (quoting Professor Posner).

¹⁷⁴ *Id.* (same).

¹⁷⁵ *Id.* (same).

¹⁷⁶ *Id.* (same).

¹⁷⁷ *Id.* (same).

puters to connect” to create and maintain the Internet.¹⁷⁸ ICANN is “a collection of academics, technical experts, private industry and government representatives, public interest advocates and individual users around the world.”¹⁷⁹ That collection sounds slightly more official than “technology and programming experts, and entrepreneurs,”¹⁸⁰ but is not actually that different.

Cryptocurrencies’ move to become more similar to traditional, centrally controlled currencies should not, however, become the basis for their not being regulated. The problems already discussed with cryptocurrencies’ reliability will not disappear—the key must be developing a system for regulating currencies that is not dependent on their having a traditionally sovereign issuer. Even more radically, we may start to recognize central governance of cryptocurrencies as in place of a sovereign issuer the way that we have allowed regulation of the Internet to be moved from within the United States government to an independent non-national body.

If cryptocurrency communities want to realize their aspirations to become significant alternatives to traditional fiat currency, they will have to develop their own institutions beyond current application of distributed ledger technology. As the *Financial Times* describes the market’s demand for institutionalization:

In the top 50 cryptocurrencies listed on CoinMarketCap, just one was showing any kind of stability: USD Coin, a dollar-based coin issued by Goldman Sachs-backed crypto wallet company Circle and the centralised overlords of the decentralised future, Coinbase. Stability in the sense that traders were so desperate to get out of their positions in free-floating cryptos that they were willing to pay a 2 per cent premium for the luxury of holding something they can redeem for [a] dollar. (It was trading around \$1.02—a bit like a bond yielding minus 200 basis points.)¹⁸¹

¹⁷⁸ Worley, *supra* note 14.

¹⁷⁹ *Id.*

¹⁸⁰ Nathan, *supra* note 173, at 4 (quoting Professor Posner).

¹⁸¹ Jemima Kelly, *Forking Hell, Crypto Is Collapsing!*, FIN. TIMES (Nov. 15, 2018, 9:30 AM), <http://ftalphaville.ft.com/2018/11/15/1542292237000/Forking-hell—crypto-is-collapsing-> [<https://perma.cc/GL3R-PK5F>]. Similarly, Professor Eric Posner describes how a de facto institutional infrastructure is being developed around Bitcoin. As he explains, “[i]n the case of Bitcoin as it stands now, [transaction] costs are largely avoided, at least to the extent that you can technically send bitcoins from one wallet to another wallet without incurring fees; no middlemen are required to do this. The problem is that most people will end up relying on intermediaries when they use bitcoin, not in least part due to security concerns around storing bitcoin on hard drives that can crash, be hacked, or, as

Institutionalization for the self-governing communities behind cryptocurrencies is coming. In August 2018, the Bitcoin community announced that it was developing its own chamber of commerce.¹⁸² As the *Financial Times* remarked, “[t]he news is on a par with anarcho punk band Napalm Death announcing a lounge jazz album. Cryptocurrencies, as championed by libertarians, were meant to challenge the financial establishment via fiat money, not apply for membership.”¹⁸³

But all types of commercial activities mature, and cryptocurrency communities, like other systems before them, continue to adapt beyond mere applications of ledger technology to rescue their goals of becoming fiat currencies. There are even community plans to set up “a working group of crypto exchanges, the Virtual Commodity Association.”¹⁸⁴ Understanding the real threat that lack of accountability creates, “[c]onsumer protection is among its priorities.”¹⁸⁵

Even more importantly, significant members of cryptocurrency communities are requesting validation through regulation by the U.S. government. In launching its new cryptocurrency, JPMorgan explains that “we are supportive of cryptocurrencies as long as they are properly controlled and regulated.”¹⁸⁶ The Winklevoss twins have applied to the SEC to launch a regulator-approved exchange-traded fund investing in bitcoin.¹⁸⁷ The Commission has rejected their application

in one famous case, thrown away. Most people will buy bitcoins from exchanges and use bitcoin service providers like Coinbase or Bitpay to store their bitcoins and transfer money to somebody in another part of the country or the world. Then that person will maintain their bitcoins with a service provider and/or will convert the bitcoins back into the money they use. And perhaps the same or other intermediaries will provide insurance or protection from exchange rate volatility. When you throw in all of these things, the effective price of using bitcoin is going to be greater than zero. Is it going to be as much as it costs right now to use your credit card or a bank wire? Maybe not, but it is too soon to tell.” Nathan, *supra* note 173, at 5 (quoting Professor Posner).

¹⁸² *Bitcoin’s Disruptive Dream Has Fallen Flat with Its Price*, *supra* note 69.

¹⁸³ *Id.*

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ McElhaney, *supra* note 80 (quoting JPMorgan’s cryptocurrency announcement).

¹⁸⁷ *Bitcoin’s Disruptive Dream Has Fallen Flat with Its Price*, *supra* note 69; see also Zraick, *supra* note 172 (“Dean Skurka, vice president for finance and compliance at . . . cryptocurrency platform, bitbuy.ca, said the case ‘highlights the need for regulation’ of crypto-exchanges, which must comply with laws regarding money laundering and terror financing but are otherwise largely ungoverned in many jurisdictions.”). The exchange-traded fund may not be a traditional cryptocurrency.

The Winklevoss twins are also connected to a stabilized coin that they are attempting to market as a more traditional cryptocurrency. They were eventually

twice.¹⁸⁸ There are consequences for not being able to satisfy regulation. In December 2018, when Basis, the world's then-best funded cryptocurrency with mechanisms to stabilize its value, established that it would be considered an unregistered security by the SEC, its inventors shut it down, and it returned all of the U.S. \$133 million that it had raised.¹⁸⁹

C. A Fiat Currency

The U.S. Treasury has described currency, of which fiat currency is a type, as “[t]he coin and paper money of the United States or of any other country that is designated as legal tender and that circulates and is customarily used and accepted as a medium of exchange in the country of issuance.”¹⁹⁰ In 2018, a general investing site described fiat currency, also called fiat money, as “currency that a government has declared to be legal tender, but it is not backed by a physical commodity.”¹⁹¹ This is similar to another respected site's definition: “[f]iat money refers to any currency lacking intrinsic value that is declared legal tender by a government.”¹⁹² It also matches the *Encyclopedia Britannica's* definition of “[f]iat money [as], in a broad sense, all kinds of money that are made legal tender by a government decree or fiat.”¹⁹³

Possibly making a distinction between fiat money versus legal tender that the U.S. Treasury does not, it is interesting that the first of these three similar websites modified its definition of fiat money in 2019 (during the publication process for this Article) to read more narrowly as a “government-issued currency that is not backed by a physical commodity, such as

able to secure some regulatory approval for their stablecoin at the state level through the New York Department of Financial Services. *Winklevoss Twins Launch New Stablecoin*, BEINCRYPTO.COM (Jan. 22, 2019), <https://beincrypto.com/winklevoss-twins-launch-new-stablecoin/> [<https://perma.cc/42ZE-X7KY>].

¹⁸⁸ *Bitcoin's Disruptive Dream Has Fallen Flat with Its Price*, *supra* note 69.

¹⁸⁹ Laura Noonan, *2018's Wild Fintech Ride and Tamed Expectations*, FIN. TIMES NEWSL. (Dec. 18, 2018), <https://www.ft.com/content/1a218abc-02c7-11e9-99df-6183d3002ee1> [<https://perma.cc/552C-UZNS>]; *see also* Hackett, *supra* note 41 (reporting the comments of Basis's lead investor on the shutdown).

¹⁹⁰ 31 C.F.R. § 1010.100(m) (2018) (defining currency).

¹⁹¹ James Chen, *Fiat Money*, INVESTOPEDIA, <https://web.archive.org/web/20181228174140/https://www.investopedia.com/terms/f/fiatmoney.asp> [<https://perma.cc/F2LM-4HTF>] (last visited Dec. 26, 2018).

¹⁹² *Fiat Money*, INVESTING ANSWERS, <https://investinganswers.com/dictionary/f/fiat-money> [<https://perma.cc/JP45-87Y6>] (last visited Oct. 11, 2019).

¹⁹³ *Fiat Money*, ENCYCLOPEDIA BRITANNICA, <https://www.britannica.com/topic/fiat-money> [<https://perma.cc/M54D-XYEY>] (last visited Oct 11, 2019).

gold or silver, but rather by the government that issued it.”¹⁹⁴ By any of these definitions, however, “[t]he U.S. dollar is fiat money, as are the euro and many other major world currencies.”¹⁹⁵

Fiat currencies explicitly differ “from money whose value is underpinned by some physical good such as gold or silver, called commodity money.”¹⁹⁶ As opposed to commodity money, “[t]he value of fiat money is derived from the relationship between supply and demand and the stability of the issuing government, rather than the worth of a commodity backing it as is the case for commodity money.”¹⁹⁷ Commodity money is largely outdated. “The United States, for example, used a gold standard for most of the late 19th and early 20th century. A person could exchange U.S. currency—as well as many public and even some private debts—for gold as late as 1971.”¹⁹⁸

As plain-spoken investors put the issue: “Those who advocate for a gold or similar standard often use the argument that fiat currencies aren’t really ‘worth’ anything, since there isn’t anything tangible that underpins its value.”¹⁹⁹

By contrast, however, with trading in an intrinsically valuable commodity, “[a] fiat currency’s value is underpinned by the strength of the government that issues it, not its worth in gold or silver.”²⁰⁰

Similarly, it is increasingly the qualities of the infrastructure and administration of cryptocurrencies that, just as in the world of fiat currencies issued by sovereigns, separate the value of one cryptocurrency from another. As *Forbes’s* introduction to cryptocurrencies starts, “[i]n the words of our [sovereign] country’s Founding Fathers, all [people] are created equal.

¹⁹⁴ James Chen, *Fiat Money*, INVESTOPEDIA (Sept. 2, 2019), <https://www.investopedia.com/terms/f/fiatmoney.asp> [<https://perma.cc/594W-QNN8>].

¹⁹⁵ Jason Hall, *Fiat Currency: What It Is and Why It’s Better than a Gold Standard*, MOTLEY FOOL (Sept. 20, 2018, 3:13 PM), <https://www.fool.com/investing/general/2015/12/06/fiat-currency-what-it-is-and-why-its-better-than-a.aspx> [<https://perma.cc/6ZX5-3RLH>].

¹⁹⁶ *Id.*

¹⁹⁷ Chen, *supra* note 194.

¹⁹⁸ Hall, *supra* note 195.

¹⁹⁹ *Id.*; see also Dominic Wilson & Jose Ursua, *Is Bitcoin a Currency? No.*, GOLDMAN SACHS: TOP MIND 6 (Mar. 11, 2014), <https://www.paymentlawadvisor.com/files/2014/01/GoldmanSachs-Bit-Coin.pdf> [<https://perma.cc/LM5Z-SYA3>] (“[F]iat currencies are generally protected by extensive regulation. They are usually recognized as legal tender; the government is generally obliged to accept them for tax payments; and the central bank is almost always the sole issuer.”).

²⁰⁰ Hall, *supra* note 195.

But, in the world of fiat and monies, not all currencies are valued equally.”²⁰¹

As with other fiat currencies, the relative values of cryptocurrencies are “[i]nfluenced by market inflation, debt, interest rates, trading agreements, and of course, political stability.”²⁰² As with any other fiat currency, “the balance between any two currencies is in a state of constant fluctuation, directly impacting its exchange rate. An ‘exchange rate’ is the price of a nation’s currency in terms of another currency.”²⁰³

In a very important way, fiat currencies are then *secured* by something else: by the faith and credit of the entity or community that issues them. Were U.S. regulatory law not interpreted in such a constrained way,²⁰⁴ this would be the key functional distinction between commodities (things traded for themselves) and securities writ broadly (things traded to represent the credit of something else).²⁰⁵

Professor Christine Desan’s work on the evolution of money into fiat currency drives home the importance of how currency is backed. Traditionally, the backing was from a sovereign, who was in her work mainly the English crown, but a power from before the medieval Italian city-states and later through the U.S. Federal Reserve.²⁰⁶ Importantly, however, the same decisions can be backed by the power of a community, even if the community exchanges through virtual means.²⁰⁷

²⁰¹ Andrew Rossow, *What Millennials Need to Know About Cryptocurrency Exchanges*, FORBES (Oct. 16, 2018, 11:32 AM), <https://www.forbes.com/sites/andrewrossow/2018/10/16/what-millennials-need-to-know-about-cryptocurrency-exchanges> [<https://perma.cc/RF6V-BZ43>].

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ See securities discussion *supra* subpart II.A and notes 83–100.

²⁰⁵ There is a tantalizing hint that the SEC may reverse its decision not to regulate cryptocurrencies as securities should they develop more centralization. It is not clear where such a line might lie, but this analysis does not seem popular with the current administration. See *generally* Pisani, *supra* note 159 (describing William Hinman, head of the Division of Corporation Finance at the SEC, specifically saying that “bitcoin is not a security because it is decentralized: there is no central party whose efforts are a key determining factor in the enterprise. In addition, ether is also not a security because the ethereum network is also decentralized.”).

²⁰⁶ CHRISTINE DESAN, *MAKING MONEY: COIN, CURRENCY, AND THE COMING OF CAPITALISM* 425–30 (2014) (describing the evolution of the “political task” of spreading money “throughout the body of the kingdom” as it evolved through time from the medieval world through the 2008 Financial Crisis and beyond).

²⁰⁷ Cf. *id.* at 15 (“That constancy—the foundation of money in the viability of a political community—may be the common aspect that brought contemporaries to recognize a currency.”).

Consider in three parts Professor Desan's discussion of how markets, even prisoner-of-war camp markets for cigarettes, operate. First,

each community defines and supports the conditions that invite "exchange" at all, rather than theft, autarchic subsistence, familial sharing, or charity. . . . [W]hen it acts to define and support those conditions, each community decides what flow of value it should recognize or disallow as well as who should contribute materially to the effort to support exchange[,] and whether it should be in labor, supplies and services, or a currency that will transfer value to the collective.²⁰⁸

These are the hallmarks of institutionalization that cryptocurrencies are developing.²⁰⁹ Bitcoin is evolving established exchanges, the backing for those exchanges, as well as the rules for how to add or withdraw from those exchanges such that individuals can "transfer value to the collective" endeavor.²¹⁰

Second,

each community determines the way people within it will produce and claim resources relative to the larger group [W]hen it acts to determine that, each community draws territories [ed: physical or digital] of obligation and exclusivity that define how many resources people should share, use, or hoard, and for how long, including claims of ownership and inheritance, duties of support, and limits to reciprocity.²¹¹

These are the hallmarks of institutionalization that cryptocurrency communities such as Bitcoin have largely already developed. They do describe how their currency will be mined and owned though access keys, and thus how they will be transferred from one person, and eventually theoretically from one generation, to the next.²¹²

Third, as Professor Desan concludes, "[i]nsofar as money itself represents an intricate arrangement of claim and obliga-

²⁰⁸ Christine Desan, *Coin Reconsidered: The Political Alchemy of Commodity Money*, 11 THEORETICAL INQUIRIES L. 361, 368 (2010).

²⁰⁹ See discussion *supra* Introduction and notes 51–59.

²¹⁰ Desan, *supra* note 152, at 368.

²¹¹ *Id.*

²¹² There are proposals for these features of cryptocurrencies also to become more transparent, as they might be with a sovereign subject to the scrutiny of the markets. See, e.g., Lee, *supra* note 72, at 127 ("Using Bitcoin's underlying technology—the Blockchain—issuers will be able to create cryptosecurities that will allow anyone in the public to be able to see each transaction as it is taking place, which will remove some of the shroud of secrecy surrounding much of the high frequency and dark pool trading occurring today.").

tion, then the market is also a collective orchestration rather than the aggregate of individual choices.”²¹³ This could be a founding description of a cryptocurrency community and its decision to operate as a community. There is a “collective orchestration” in individuals creating a community that follows the same rules in its choices.

Professor Desan’s historical research shows that a sovereign leader traditionally made and controlled these decisions for the community. But there is no reason, as long as these decisions are being made in an orchestrated way, why a community—digital or otherwise—could not become the institution making these decisions for itself. This recognition is part of the same democratic experiment that undergirds the French, American, and other revolutions in establishing organizations of people themselves as sovereign.²¹⁴

Along these lines, a main objection from economists to cryptocurrencies being considered fiat currency is discomfort with how inadequately cryptocurrencies had been initially institutionally protected and secured. In their definition of fiat currency, economists write: “fiat currencies are generally protected by extensive regulation. They are usually recognized as legal tender; the government is generally obliged to accept them for tax payments; and the central bank is almost always the sole issuer.”²¹⁵ In addition, “[m]ost currencies are subject to banking system regulations, are routinely used for lending and saving and are often backed by deposit insurance.”²¹⁶

The economists’ objections to Bitcoin’s (and other cryptocurrencies) being considered fiat currency has been the previous lack of institutionalization that, as noted above, is now starting to develop. In 2014, “[t]here [was] no obvious mechanism that ensures that [B]itcoin will achieve” the stability of fiat currency.²¹⁷ Now there are entire categories of stabilized coins, which may or may not soon include libra as issued by the nonprofit Libra Association.²¹⁸

²¹³ Desan, *supra* note 208, at 370.

²¹⁴ See, e.g., Ciepley, *supra* note 11, at 418 (“The key Federalist innovation was to substitute the People for the King as the chartering sovereign.”); *id.* at 418 (“[B]orrowings from [] corporate principles and practices [] ultimately produced, in the Anglo-American line of development especially, the liberal democratic state—a state with juridical personhood, a representative assembly, an elected executive, and liberal constitutionalism, with a written constitution and judicial review.” (emphasis and citations omitted)).

²¹⁵ Wilson & Ursua, *supra* note 199, at 6.

²¹⁶ *Id.*

²¹⁷ *Id.*

²¹⁸ See discussion *supra* Introduction, subpart I.C, and notes 83–94.

Similarly, the economists object that “[f]or fiat currencies, central banks are tasked specifically with preserving a relatively stable value (in the case of the Fed for instance, that the value of cash currency will depreciate in real terms by roughly 2% per year over the medium term). To do that, they are able to vary the supply of currency.”²¹⁹

But Bitcoin and other cryptocurrencies do have majoritarian mechanisms to vary the amount of currency that can be produced. Although the total number of bitcoins is currently capped at twenty-one million units, like most things in blockchain programming systems, the cap is changeable by majority rule.²²⁰ That may be a more cumbersome institutional mechanism for variance than decisions by the U.S. Federal Reserve, but those are differences in degree and not in kind.²²¹

Moreover, even this distinction from the U.S. Federal Reserve is changing, and more in cryptocurrencies’ favor than in the Federal Reserve’s. Facebook’s plans for Libra envision “a permissioned and centralized network whose operation will be [initially] governed by the 28 member-firms of the Libra Association along with Facebook’s Calibra (digital wallet).”²²² When “the number of validators [] reach[es] 100, . . . each validator including Facebook will have an equal share (i.e. 1%) of voting rights.”²²³ As one commentator has noted, Libra’s proposed centralized governance structure will thus eventually represent “an improvement over the Board of Governors of the Federal Reserve System,” in which “not all of the twelve Federal Reserve Banks have voting rights.”²²⁴ As the Fed itself describes its process, outside of “the president of the Federal Reserve Bank

²¹⁹ Wilson & Ursua, *supra* note 199, at 6. It is generally assumed that some type of “state” should be involved in stabilizing and managing the money supply. Often these discussions are couched in terms of a more traditional sovereign than the community behind a cryptocurrency, but the same analysis of that entity’s functions should apply. For more on how a “state” should be involved in the money supply, see generally MORGAN RICKS, *THE MONEY PROBLEM* (2016); and Morgan Ricks, *Money As Infrastructure*, 2018 COLUM. BUS. L. REV. 757.

²²⁰ Nathan, *supra* note 59, at 11.

²²¹ Interestingly, some commentators see a future for a government-backed cryptocurrency when they would not support Bitcoin. See, e.g., *id.* (“I think that there is a future for crypto-currencies. I just don’t think it will be in Bitcoin. The possibility for a government-backed crypto-currency is high.”) (quoting Ken Hess).

²²² John Taskinsoy, Facebook’s Project Libra: Will Libra Sputter Out or Spur Central Banks to Introduce Their Own Unique Cryptocurrency Projects? 11 (July 20, 2019) (unpublished manuscript), <https://ssrn.com/abstract=3423453> [<https://perma.cc/EFR5-8JQB>]; accord LIBRA.ORG, *supra* note 85, at 4 (listing the initial 28 members).

²²³ Taskinsoy, *supra* note 222, at 1 (summarizing Libra.org documents).

²²⁴ *Id.*

of New York[,] . . . four of the remaining eleven Reserve Bank presidents . . . [merely] serve one-year terms on a rotating basis.”²²⁵ Furthermore, Facebook’s white paper on Libra describes how, like a central bank, to ensure that “authorized resellers will always be able to sell Libra coins to the reserve at a price equal to the value of the basket,” its “Libra Reserve” will act “as a ‘buyer of last resort.’”²²⁶ It does not also seem to be an accident that the Libra Association names its new cryptocurrency’s centralized authority the “Libra Reserve,” after the U.S. Federal Reserve.

Should greater institutionalization and regulation then be developed around Bitcoin, the nonprofit Libra Association’s part of Facebook’s plan, and other cryptocurrencies, as now appears on the horizon, the organizational objections from economists about potential cryptocurrencies not having sufficient institutional mechanisms to be considered currencies will have been overcome. There would not then be a functional objection to cryptocurrencies being non-sovereign fiat currency, merely the problem again of legal categories not catching up with reality.²²⁷

CONCLUSION: NEED FOR REGULATION FOR NON-SOVEREIGN FIAT CURRENCIES

This Article does not argue that Bitcoin, Libra, and other future cryptocurrencies will be successful in becoming de facto fiat currencies, only that that is often their aspiration, and that they are making the moves to develop the institutional structures they will need to follow that path. The irony of our regulation system, however, is that the more that cryptocurrencies make moves to institutionalize and create stability, the less our current two basic forms of regulation cover them. Bitcoin is really much more like the U.S. dollars being used to buy fair tickets than the tickets within the fair. Our system of regulation plays only in the sandbox of the fair: it would regulate the sale of tickets as securities insofar as they are tied to the efforts of a promoter (the fair operator) or third party; and it regulates fair tickets as commodities insofar as they can be exchanged for goods of uniform quality and value at the fair. But where

²²⁵ Board of Governors of the Federal Reserve System, *Federal Open Market Committee: Structure of the FOMC*, FED. RES. BOARD (last updated Sept. 18, 2019) <https://www.federalreserve.gov/monetarypolicy/fomc.htm> [<https://perma.cc/9PLJ-J7WK>].

²²⁶ LIBRA ASS’N, *supra* note 85, at 8.

²²⁷ See discussion *supra* Part I and note 117.

does that leave the U.S. dollars that were used to buy the fair tickets? We have a large hole in our regulatory system. We have assumed that currencies' issuance was regulated by the sovereigns (in our hypothetical, the United States) behind them. What about when that currency is being issued by a corporation or other self-governing body? The fact that non-sovereign communities issue currency should not put those currencies beyond our regulatory system. Indeed, the fact that the non-sovereign community issuing the currency may be a for-profit corporation or self-identified group online such as Bitcoin should make it *more*, not *less*, likely that regulation would be necessary.

The entry into cryptocurrencies of the world's arguably best-organized self-governing communities in the shape of corporations like Facebook may be inevitable. This reality should be additionally driving our push to plug the hole in our regulatory system. There is already deep suspicion of Facebook's motives in developing its own cryptocurrency. In exploring the political objections to Libra, national security concerns seem to fall into two broad categories of threats: first, concerns about more widespread money laundering and transactions of illegal goods; and second, concerns about challenge to the hegemony of the U.S. dollar.²²⁸ Both those sets of concerns argue for establishing regulation. Combatting widespread money laundering and transactions of illegal goods was one of the first arguments for regulation in this Article.²²⁹ Protecting the hegemony of the U.S. dollar may ultimately depend on the wisdom of the country's foreign policy choices. But insofar as other steps are helpful, we should regulate what we can of our financial system or lose that power because rival sovereign currencies are already becoming digital, and cryptocurrencies will be

²²⁸ See, e.g., Donald J. Trump, (@realDonaldTrump), TWITTER (July 11, 2019, 8:15 PM), <https://twitter.com/realDonaldTrump/status/1149472282584072192> [<https://perma.cc/CWE5-Y9XJ>] ("I am not a fan of Bitcoin and other Cryptocurrencies [sic], which are not money, and whose value is highly volatile and based on thin air. Unregulated Crypto Assets [sic] can facilitate unlawful behavior, including drug trade and other illegal activity . . ."); Donald J. Trump, (@realDonaldTrump), TWITTER (July 11, 2019, 5:15 PM), <https://twitter.com/realDonaldTrump/status/1149472285905940480> [<https://perma.cc/44YP-XS74>] ("We have only one real currency in the USA, and it is stronger than ever, both dependable and reliable. It is by far the most dominant currency anywhere in the World [sic], and it will always stay that way. It is called the United States Dollar!").

²²⁹ See discussion *supra* Introduction and note 70.

based around the world anyway—à la Libra in light-touch Switzerland.²³⁰

A deeper concern specifically about Facebook launching its own cryptocurrency is adding even more financial data to the enormous amount of information that the company and its partners already collect on individuals.²³¹ Ironically then, the wider-spread use of other cryptocurrencies, insofar as individuals *are* allowed to remain anonymous within those payment systems (which may not be what Facebook allows through Calibra), may help combat concerns about personal data abuse. A longer discussion of Libra's potential benefits and detriments is beyond the scope of this Article, but the announcement is a sign of general progress toward new financial options.

Meanwhile, Facebook's plans continue to evolve under pressure.²³² As of October 2019, Facebook's CEO Mark Zuckerberg has promised that the company would not launch Libra in the United States until it satisfies the country's regulators.²³³ The company has "hired seven additional lobbying firms to work on financial issues and cryptocurrencies since June, [according to] federal disclosures."²³⁴ Its "lobbyists have [similarly] emphasized to congressional staffers a willingness to work with U.S. authorities."²³⁵ As of October 2019, however,

²³⁰ See Michaels et al., *supra* note 84. Accord American Public Media, *How Much Can a School Remake the Neighborhood It's in?*, MARKETPLACE 2:30, 4:41 (Oct. 14, 2019), <https://www.wnyc.org/story/how-much-can-a-school-remake-the-neighborhood-its-in/> [<https://perma.cc/9XKC-BHBW>] ("Frankly, [Facebook does not] need U.S. regulatory approval [for Libra] to operate. They can operate in other countries. There's a big world out there." (quoting analyst from Gartner Research)); *id.* at 4:50 ("Some of the biggest growth [is] in African countries. So what regulators in Washington or Europe may do may not matter much there.").

²³¹ See, e.g., Anthony Cuthbertson, *Facebook Libra Is 'Most Invasive and Dangerous Form of Surveillance Ever Designed'*, *Critics Say*, INDEPENDENT (June 18, 2019), <https://www.independent.co.uk/life-style/gadgets-and-tech/news/facebook-libra-cryptocurrency-privacy-data-collection-a8963381.html> [<https://perma.cc/XQ3E-RAYX>] ("Facebook's plan to launch [] its own currency has once again raised significant privacy concerns, with some critics claiming it could be the most 'invasive and dangerous' form of surveillance the technology giant has yet conceived.").

²³² See Bowdeya Tweh & Peter Rudegeair, *Facebook CEO to Testify at House Panel About Libra*, WALL ST. J., (Oct. 9, 2019), <https://www.wsj.com/articles/facebook-ceo-to-testify-at-house-panel-about-libra-11570638146> [<https://perma.cc/XAL5-YPKC>].

²³³ *Id.*; but see also American Public Media, *supra* note 230, at 4:41 ("Frankly, [Facebook does not] need U.S. regulatory approval [for Libra] to operate. They can operate in other countries. There's a big world out there." (quoting analyst from Gartner Research)).

²³⁴ Tweh & Rudegeair, *supra* note 232.

²³⁵ *Id.*

Mastercard, Visa, PayPal, eBay, and Stripe had dropped out of the coalition for Libra's plans based on concerns about regulatory stability.²³⁶

We started with the arguments for why cryptocurrencies should be regulated, and large parts of the industry itself are now asking for government regulation to help improve stability and trust. If we are going to have cryptocurrencies, we should regulate them. But we may need to develop a new legal category of non-sovereign fiat currency in order to do so. As Lynn quoted John Maynard Keynes, “the ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. . . . Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist.”²³⁷ She urged us to free ourselves from being the “slaves of some defunct economist” by rethinking established orthodoxies based on observations about the heterogeneity of community interests and organizations.²³⁸ We should do the same in the case of digital communities' currencies.

Moreover, it is a new wrinkle on corporations as miniature forms of governments—as Lynn's collaborator Professor David Ciepley has described, “Leviathans on a leash”—that they may move into traditional government forms of action such as issuing currencies. As Professor Ciepley has traced this history, “[t]he corporation is in effect a ‘replicant’ of the state—a Leviathan on a leash, with juridical personhood and legislative authority (like a state), franchised by the state to manage undertakings that, at least historically, the government wanted done but could not or would not do itself.”²³⁹ Effectively regulating entry of corporations into the cryptocurrency space, especially as the U.S. dollar is already being most directly

²³⁶ AnnaMaria Andriotis & Peter Rudegeair, *Mastercard, Visa, eBay Drop Out of Facebook's Libra Payments Network*, WALL ST. J., (Oct. 11, 2019), <https://www.wsj.com/articles/mastercard-drops-out-of-facebook-s-libra-payments-network-11570824139> [<https://perma.cc/D4C3-E35H>].

²³⁷ STOUT, *THE SHAREHOLDER VALUE MYTH*, *supra* note 16, at 113–14 (quoting John Maynard Keynes).

²³⁸ *Id.*

²³⁹ David Ciepley, *The Purpose Debate: Social Good Uprooted*, DIRECTORS & BOARDS (Third Quarter 2019), <https://www.directorsandboards.com/articles/singlepurpose-debate-social-good-uprooted> [<https://perma.cc/5H88-XFWV>]. Also, as far back as 1932, seminal corporate theorists Adolf Berle and Gardiner Means explained that, as “[p]ublicly traded corporations . . . had become semi-sovereign entities, with power comparable to that of national states” they are “quasi-public.” *Id.*

challenged by the digitization of other traditional sovereign currencies, could then be an opportunity for the U.S. government to do what it wants “done but could not or would not do itself” to shape the future of international financial markets. Regulating cryptocurrencies would be a particularly appropriate reassertion of the place of the state over its ‘replicant’ communities.²⁴⁰ This is the “leash” that the corporation, as a mini-Leviathan, should be on for the government to allow these transactions to exist in a reliable and regulated way: exactly what businesses want from the world financial system too.

Finally, the United States is behind other countries in its work on this issue. There is progress along these lines in Europe and elsewhere in regard to even non-corporate-issued cryptocurrencies. As of 2013 in Germany, for example, the Finance Ministry recognized Bitcoin as a category of private tender not tied to a governmental entity. As reports explain, the “bitcoin has been recognized by the German Finance Ministry as a ‘unit of account’, meaning it is [sic] can be used for tax and trading purposes in the country.”²⁴¹ This category is “a financial instrument under German banking rules. It is more akin to ‘private money’ that can be used in ‘multilateral clearing circles.’”²⁴² The move is recognition of an issuer behind the cryptocurrency that is not a sovereign. As a member of the German parliament’s Finance Committee explains: “We should have competition in the production of money. I have long been a proponent of Friedrich August von Hayek[’s] scheme to denationalize money. Bitcoins are a first step in this direction.”²⁴³

²⁴⁰ *Id.*

²⁴¹ Matt Clinch, *Bitcoin Recognized by Germany as “Private Money,”* CNBC (Aug. 21, 2013, 6:24 AM), <https://www.cnbc.com/id/100971898> [<https://perma.cc/YH9J-QL5Q>].

²⁴² *Id.*

²⁴³ *Id.* (quoting Frank Schaeffler). Even more interestingly, the Court of Justice of the European Union ruled in 2015 that Bitcoin was exempt from taxation as part of the protection of being like “currency, bank notes and coins used as legal tender.” See Press Release, Court of Justice of the European Union, Press Release No 128/15: Judgment in Case C-264/14, *Skatteverket v. David Hedqvist, The Exchange of Traditional Currencies for Units of the ‘Bitcoin’ Virtual Currency is Exempt from VAT 1 (2015)*, <https://curia.europa.eu/jcms/upload/docs/application/pdf/2015-10/cp150128en.pdf> [<https://perma.cc/AM9P-JAUL>] (quoting Council Directive 2006/112/CE, 2006 J.O. (L347) 1). The coins could not, like a commodity or service, be taxed under the VAT. *Id.*

In August 2019, the New Zealand tax authority permitted certain cryptocurrencies to be used as legal tender in paying employees’ salaries. The government would permit cryptocurrencies to be used because “a significant purpose of the crypto-asset is to function like a currency.” Matthew De Silva, *New Zealand Gives a Vote of Confidence in Bitcoin, While the US Remains Wary*, QUARTZ (Aug. 15, 2019), <https://qz.com/1687151/new-zealands-tax-authority-approves-crypto->

In November 2019, “[d]raft documents from the European Central bank urge[] the EU to come up with a consistent approach to all cryptocurrencies, which range from decentralised currencies like bitcoin, to state-backed efforts currently underway in China.”²⁴⁴

The U.S. regulatory system is deeply behind in failing to regulate non-sovereign fiat currencies.²⁴⁵ We should recognize cryptocurrencies as a new form of established currency. In doing so, we need to evaluate the organizational qualities of the communities behind them: it should be key to our approval of cryptocurrencies that the self-governing communities behind them have appropriate structures, procedures, and incentives in place. Cryptocurrencies are growing into their own, and our systems of regulation must catch up.

wages-and-salaries/ [https://perma.cc/32UD-SXCP] (quoting the government tax authority). Cryptocurrencies that are permitted under this standard include “bitcoin, bitcoin cash, bitcoin gold, ether, and litecoin.” *Id.* Moreover, cryptocurrencies that are “‘pegged to one or more fiat currencies,’ such as Tether and the Paxos Standard,” may be used. *Id.* But only “stablecoins that are readily convertible into fiat money on an exchange satisfy the rules.” *Id.*

²⁴⁴ Cuthbertson, *supra* note 50.

²⁴⁵ See also Saule T. Omarova, *New Tech v. New Deal: Fintech as a Systemic Phenomenon*, 36 YALE J. ON REG. 735, 791 (2019) (cautioning about the current balance of power without such reforms, that “[a]t the higher level of magnitude, fintech’s systemic impact has to be assessed in terms of its potential to cause a decisive shift in the currently existing public-private balance in finance” heavily towards the private sector).