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The Impact of Regulatory Measures Imposed on Initial Coin Offerings in the United States Market Economy

Joseph D. Moran⁺

INTRODUCTION

With the emergence of Initial Coin Offerings (ICOs) in the United States financial market, numerous authorities in various countries across the globe have taken regulatory measures that provide clarity and investor protection.¹ Regulators, central banks, and major financial institutions have offered guidance to, acted upon, and provided rules to entities offering cryptocurrencies to both general (“retail”) and accredited investors² on various blockchain technology-based platforms.³ In 2017 alone, both U.S. domestic and foreign companies raised billions of dollars in revenue (“funding or “capital”) from ICOs, surpassing amounts raised by private equity groups (*e.g.*, venture capitalists) through the traditional Initial Public Offering (IPO) method of raising capital.⁴ While a vast

⁺ Candidate for Juris Doctor, May 2019, The Catholic University of America, Columbus School of Law; Bachelor of Science 2014, Florida State University. This Note benefitted greatly from the insight and expertise of Professor Patrick McCarty. The Author would like to thank Professor McCarty for his guidance in drafting this Note, as well as the associates and editors of the Catholic University Journal of Law and Technology for their contributions to this Note.

¹ PAUL VIGNA & MICHAEL J. CASEY, *THE AGE OF CRYPTOCURRENCY* 13 (2015); *see also* Lee A. Sheppard, *News Analysis: Is Bitcoin Going Out of Style?*, *TAX NOTES INT’L MAG.*, Sept. 2005, at 1027 (describing how regulators in China took a hard stance and made ICOs illegal).

² Securities Act of 1933, § 2(a)(15), 15 U.S.C. § 78(c) (2012) (recognizing an “accredited investor” as someone who is financially sophisticated and has a reduced need for protection of regulatory disclosure filings; for example, an individual, bank, insurance company, broker or trust.); *Accredited Investors*, SEC.GOV, <https://www.sec.gov/fast-answers/answers-accred-htm.html> (last updated Nov. 27, 2017).

³ *Investor Bulletin: Initial Coin Offerings*, SEC.GOV (July 25, 2017), https://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_coinofferings (providing cautious guidance to potential investors).

⁴ Paul Vigna, *A Primer on the Initial Coin Offering*, *WALL ST. J.*, Oct. 4, 2017, at B16;

majority of the companies participating in ICOs have so far been tech startups, the promising technology of blockchains⁵ and smart contracts⁶ has caught the attention of well-established companies, many of whom have adopted the technology to streamline operations by removing layers of unnecessary procedural steps in business transactions, while offering customers greater transparency.⁷

Part I of this note will explain ICOs generally, and explore the underlying technology that accompanies them.⁸ Part I will then examine the market impact that ICOs have on the economy, and provide examples of major enterprises that have begun to implement the technology within their structures.⁹ Lastly, Part I will explain the various methods, approaches and opinions that major financial institutions - including federal regulators and global central banks - have taken regarding ICOs and the distributed ledger technology that serves as their platform.¹⁰

Part II of this note will compare the different ways in which tokens are offered in ICOs, whether they are “utility tokens” or “security tokens,” and examine the risks associated with each offering structure.¹¹ Part II will further provide a legal framework that both regulators and legal practitioners have recommended for entities to incorporate into their decision-making when offering tokens through a public exchange (“offering” or “funding”), as well as touch on the impact that regulations may have on secondary markets that trade digital currencies.¹² Part II will then compare the various stances foreign jurisdictions have taken on ICOs with those the United States has taken, and will lastly discuss the likely future of ICOs, noting opinions from leading players in the technology and financial

see also Ollie Blears, *Rise of the ICO: Attempting to Harness Blockchain's Wildchild*, INT'L BANKER (Feb. 26, 2018), <https://internationalbanker.com/brokerage/rise-ico-attempting-harness-blockchains-wildchild/> (stating that in 2017, 235 ICOs raised \$3.7 billion in cryptocurrency).

⁵ *Infra* Part I, Section B.

⁶ *Infra* Part I, Section B.

⁷ *See, e.g., R3's Corda partner network grows to over 60 companies including Hewlett Packard Enterprise, Intel and Microsoft*, R3 (Nov. 13, 2017), <https://www.r3.com/blog/2017/11/13/r3s-corda-partner-network-grows-to-over-60-companies-including-hewlett-packard-enterprise-intel-and-microsoft/> (“R3 also counts over 100 banks, insurance companies, financial institutions, regulators, trade associations and technology companies as members.”); Becky Peterson, *IBM want to use the technology that underlies bitcoin to help prevent major foodborne outbreaks like salmonella*, BUS. INSIDER (Aug. 22, 2017, 2:38 PM), <http://www.businessinsider.com/ibm-and-walmart-are-using-blockchain-in-the-food-supply-chain-2017-8>.

⁸ *Infra* Part I.

⁹ *Infra* Part I, Section C.

¹⁰ *Infra* Part I, Section D.

¹¹ *Infra* Part II.

¹² *Infra* Part II, Section C.

services industry.¹³

I. UNDERSTANDING INITIAL COIN OFFERINGS

An ICO is a sale of digital assets (“coins” or “tokens”) to the public¹⁴ by an entity seeking to raise capital.¹⁵ The sale is administered and recorded via “distributed ledger technology” on a blockchain, which is an immutable, decentralized ledger composed of a series (“chain”) of transactions (“blocks”) that network participants verify.¹⁶ The tokens, described on a company’s white paper,¹⁷ may be issued as either “utility tokens,” which grant the token holder access to some sort of application or future service in the entity,¹⁸ or as “security tokens,” which operate similar to traditional securities and grant the investor shares representing an equity or investment in a company.¹⁹ In most cases, token purchasers may resell their tokens in secondary markets, where the tokens will fluctuate in value.²⁰ The entities involved can be any organization or enterprise, however most of the early issuers have been tech startups looking to fundraise new projects or services.²¹ To understand ICOs requires an understanding of the reason they were created in the first place, followed by an understanding of the technological underpinnings they encompass.

A. So . . . Who Invented The Initial Coin Offering, And Why?

¹³ *Infra* Part II, Sections D & E.

¹⁴ Jin Enyi & Ngoc Dang Yen, *Regulating Initial Coin Offerings* (“crypto-crowdfunding”), J. INT’L BANKING & FIN. L. (U.K.) (2017) (stating that ICO “coins/tokens represent a digital security . . . offered or directed at the public”).

¹⁵ David J. Shakow, *The Tax Treatment of Tokens: What Does It Betoken?*, TAX ANALYSTS TAX NOTES WKLY, Sept. 11, 2017, at 1387.

¹⁶ See MELANIE SWAN, BLOCKCHAIN: BLUEPRINT FOR A NEW ECONOMY 19–20 (2015) (“The blockchain is the decentralized transaction ledger that is part of a larger computing infrastructure that must also include many other functions such as storage, communication, file serving, and archiving.”); Jorge Pesok, *SEC’s Blockchain Stance Will Likely Impact Exchanges*, LAW360 (Sept. 9, 2017, 2:10 PM), <https://www.law360.com/articles/952055/sec-s-blockchain-stance-will-likely-impact-exchanges>.

¹⁷ See generally Alex Lashkov, *How to Write a Good White Paper*, HACKERNOON (Oct. 23, 2017), <https://hackernoon.com/how-to-write-a-good-white-paper-for-ico-tips-and-examples-42d71c3fa4fe> (describing a White Paper as an offering memorandum that describes the services and products that will be offered by the company, as well as the token holders rights and interests).

¹⁸ Pesok, *supra* note 16.

¹⁹ Vigna, *supra* note 4, at B16.

²⁰ Joel S. Telpner & Thomas M. Ahmadifar, *ICOs, the DAO, and the Investment Company Act of 1940*, FACTIVA, Nov. 1, 2017, at 5.

²¹ Matthew Leising & Camila Russon, *U.S. Signals Clampdown on Red-Hot Digital Coin Offerings*, BLOOMBERG (July 25, 2017), <https://www.bloomberg.com/news/articles/2017-07-25/u-s-signals-clampdown-on-red-hot-digital-coin-offerings>.

In 2013 at the San Jose Bitcoin conference, J.R. Willett, a panelist, pitched an idea to a room full of mostly computer programming developers and interested “techies” looking to learn about the developing phenomenon of Bitcoin.²² At the time, little was known about Bitcoin other than that it was a form of digital cash that was traded anonymously by participants on a web-based network.²³ Willett began to explain his idea that anyone with the urge or plan to create a protocol layer on top of Bitcoin with new features and services could gather a group of developers and trusted individuals and, similar to the structure of Kickstarter,²⁴ provide an address in which people could help fund the idea or project by sending coins for a stake in the new protocol.²⁵

At the time of this event, Willett, a Seattle-based software engineer, had been developing this idea for more than a year.²⁶ Back in January of 2012, on the Bitcoin Talk forum, he published a white paper explaining:

We claim that the existing bitcoin network can be used as a protocol layer, on top of which new currency layers with new rules can be built . . . We further claim that the new protocol layers . . . will provide initial funds to hire developers to build software which implements the new protocol layers, and . . .

²² Laura Shin, *Here's the Man Who Created ICOs and Is The New Token He's Backing*, FORBES (Sept. 21, 2017), <https://www.forbes.com/sites/laurashin/2017/09/21/heres-the-man-who-created-icos-and-this-is-the-new-token-hes-backing/#206cd2611183>.

²³ See Nathaniel Popper, *Into the Bitcoin Mines*, N.Y. TIMES, Dec. 22, 2013, at BU1 (“Today, all of the machines dedicated to mining Bitcoin have a computing power about 4,500 times the capacity of the United States government’s mightiest supercomputer, the IBM Sequoia . . . The computing capacity of the Bitcoin network has grown by around 30,000 percent since the beginning of the year.”); see also Anthony Cuthbertson, *Bitcoin Mining on Track to Consume All of the World’s Energy by 2020*, NEWSWEEK (Dec. 11, 2017, 10:07 AM), <http://www.newsweek.com/bitcoin-mining-track-consume-worlds-energy-2020-744036> (stating that as of December 2017, the “Bitcoin Network” is estimated to consume as much energy as 159 individual countries, or the equivalent of the entire country of Denmark, which consumes 33 terawatts of electricity annually, according to the Bitcoin Energy Consumption Index. If Bitcoin continues on its current trajectory, the network will “consume as much energy as the U.S. by 2019, and . . . the entire world by the end of 2020,” according to Digiconomist).

²⁴ See generally *Pressroom*, Kickstarter, <https://www.kickstarter.com/press?ref=hello> (last visited May 24, 2018). Kickstarter is a funding platform for projects created by individuals who set funding goals and deadlines and open their platform up to the public to invest by pledging money to the project usually for some sort of reward in the project. If the project succeeds in reaching its funding goal, all investors credit cards are charged when time expires. If the project falls short of its funding goal, no one is charged. Funding on Kickstarter is “all-or-nothing.” See generally *Id.*

²⁵ Shin, *supra* note 22.

²⁶ *Id.*

will richly reward early adopters of the new protocol.²⁷

It would take five years before the idea in Willett's White Paper would become a trend that would result in over \$6 billion of capital raised in 2017 alone,²⁸ leaving venture capitalists and the rest of the private equity market scrambling to make sense of the what the future will hold for this new disruption in the market: the Initial Coin Offering.²⁹

B. Technological Underpinnings

ICOs rely on a blockchain or "blockchain technology" as the platform upon which they operate.³⁰ The blockchain is an immutable,³¹ distributed³² and decentralized³³ database that allows for peer-to-peer transfers of digital assets on a network without the need for an intermediary, such as a central governing authority or a bank.³⁴ The typical blockchain structure requires an entire network of participants to cooperate in order to make additions of new information to the blockchain.³⁵ Key characteristics of a blockchain include an ability to add, authenticate, and track transactions via member nodes³⁶ on a network, employ cryptographic techniques to prevent hackers from manipulating transactions,³⁷

²⁷ *Id.*

²⁸ Dima Zaitsev, *Cryptocurrency and ICO Market Overview for 2017*, MEDIUM (Jan. 3, 2018), <https://medium.com/icobox-io/cryptocurrency-and-ico-market-overview-for-2017-b82297996c22>.

²⁹ Shin, *supra* note 22.

³⁰ *What Is an ICO?*, BITCOIN MAG., <https://bitcoinmagazine.com/guides/what-ico/> (last visited May 24, 2018).

³¹ See Gideon Greenspan, *The Blockchain Immutability Myth*, MULTICHAIN (May 4, 2017), <https://www.multichain.com/blog/2017/05/blockchain-immutability-myth/> (describing "immutable" in the blockchain context as "the global log of transactions, which is created by consensus between the chain's participants.").

³² See *What is a Distributed Ledger?*, COINDESK, <https://www.coindesk.com/information/what-is-a-distributed-ledger/> (last visited May 24, 2018) (stating that "a distributed ledger is a database held and updated independently by each participant (or node) in a large network.").

³³ See MELANIE SWAN, *supra* note 16, at xii (2015) (analogizing decentralized and intermediary-free).

³⁴ Bernard Marr, *A Complete Beginner's Guide to Blockchain*, FORBES (Jan. 24, 2017, 12:37 AM), <https://www.forbes.com/sites/bernardmarr/2017/01/24/a-complete-beginners-guide-to-blockchain/#38260c4f6e60>.

³⁵ Telpner & Ahmadifar, *supra* note 20, at 5.

³⁶ See generally Michael D'Aliessi, *How Does the Blockchain Work*, MEDIUM (June 1, 2016), <https://medium.com/@micheledaliessi/how-does-the-blockchain-work-98c8cd01d2ae>. A "node" is a computer connected to the blockchain network. Each node, which can represent an individual or entity, maintains a copy of the blockchain. To add new information to a blockchain, the nodes must work independently to verify the proposed addition. See generally *Id.*

³⁷ See Kevin Werbach & Nicolas Cornell, *Contracts Ex Machina*, 67 DUKE L.J. 313, 328

and allow for many other applications apart from merely providing a platform to transfer digital currencies, or “cryptocurrencies.”³⁸ One of the most common use cases for the blockchain is to store records of digital currency transactions³⁹ on a digital wallet, which is a software program that stores both public and private keys,⁴⁰ and serves as an interface allowing “users [to] monitor their balance, send money and conduct [additional] operations.”⁴¹

Individuals and entities can also use blockchain technology as a means for conducting business to business transactions using smart contracts.⁴² Smart contracts are cryptographic “if/then” software programs, or “digital agreements” that rely on specific triggering mechanisms to automatically self-execute (*e.g.*, make a payment) when a certain condition is met.⁴³ Smart contracts consist of three key elements that allow them to work: [1] they are coded into a programming language, [2] they entail a system upon which contracting parties may connect to one another (*e.g.*, a blockchain), and [3] they rely on at least one third party source, or “oracle,” for performance.⁴⁴ An informative use case involving smart contracts is the Decentralized Autonomous Organization (“DAO” or “The DAO”) offering.⁴⁵

The DAO, an unincorporated “for-profit” organization that German Corpora-

(2017) (discussing monetary rewards for nodes that solve cryptographic puzzles making a new block, thus there is an incentive for growing the blockchain rather than hacking it).

³⁸ Jay G. Baris, *et al.*, *Digital Coin Offerings: New SEC Guidance on Registration of Blockchain Tokens as Securities*, STRAFFORD 11 (2017), <http://media.straffordpub.com/products/digital-coin-offerings-new-sec-guidance-on-registration-of-blockchain-tokens-as-securities-2017-10-03/presentation.pdf>.

³⁹ Reggie O’Shields, *Smart Contracts: Legal Agreements for the Blockchain*, 21 N.C. BANKING INST. 177, 179 (2017). Blockchain is used to transact in Bitcoin or Ether, the native currency of another digital currency platform, Ethereum. *See id.* (“Blockchain is the technology underlying the cryptocurrency, or electronic money, Bitcoin.”); Vigna, *supra* note 4, at B16; Ryan Surujnath, *Off the Chain: A Guide to Blockchain Derivatives Markets and the Implications on Systemic Risk*, 22 FORDHAM J. CORP. & FIN. L., 257, 263–64 (2017) (discussing blockchain design for electronic currencies).

⁴⁰ *See* Stephen Small, *Bitcoin: The Napster of Currency*, 37 HOUS. J. INT’L L. 581, 588 (2015) (comparing a public key to an email address and a private key to a pin number for a debit card, which are both stored in a digital wallet).

⁴¹ Ameer Rosic, *Cryptocurrency Wallet Guide: A Step-By-Step Tutorial*, BLOCKGEEKS (Jan. 26, 2018, 5:08 PM), <https://blockgeeks.com/guides/cryptocurrency-wallet-guide/>.

⁴² Andrea Tinianow & Caitlin Long, *Delaware Blockchain Initiative: Transforming the Foundational Infrastructure of Corporate Finance*, HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Mar. 16, 2017), <https://corpgov.law.harvard.edu/2017/03/16/delaware-blockchain-initiative-transforming-the-foundational-infrastructure-of-corporate-finance/>.

⁴³ *Id.*

⁴⁴ Telpner & Ahmadifar, *supra* note 20, at 5.

⁴⁵ Carla L. Reyes, *Moving Beyond Bitcoin to an Endogenous Theory of Decentralized Ledger Technology Regulation: An Initial Proposal*, 61 VILL. L. REV. 191, 201 (2016).

tion Slock.it and Slock.it's co-founders created, operated on the Ethereum blockchain and allowed investors to both launch their projects on a blockchain following DAO approval, and receive funding from The DAO through an exchange of The DAO's tokens for Ether.⁴⁶ The DAO's White Paper, or "offering memorandum," posited that The DAO "would use smart contracts . . . to solve governance issues inherent in traditional corporations" through a blockchain that "formalized, automated and enforced using software" with certain contractual terms.⁴⁷

In addition to those The DAO offering highlighted, smart contracts also offer other practical solutions.⁴⁸ For instance, rather than needing to maintain records of paper contracts, and periodically invoice customers for payments for certain services, smart contracts create code that provides instantaneous verification on a distributed computed platform, saving both money and time typically wasted on paying trusted intermediaries or unnecessary human interactions that often go awry.⁴⁹ In the process of an ICO, smart contracts may allow for the exchange of digital tokens for other forms of virtual currency.⁵⁰

Individuals and entities can also use blockchain technology for asset tracking and supply chain management, securities ledgers,⁵¹ and voting systems and prediction markets.⁵² Blockchains may also be used for applications in the financial services universe, in the real estate and healthcare markets, for insurance transactions, and beyond.⁵³

⁴⁶ Telpner & Ahmadifar, *supra* note 20, at 5 (recognizing that Ether is "the currency [used on the platform] Ethereum, [and] has emerged as the primary currency for ICOs due to Ethereum's popularity among developers.").

⁴⁷ SEC. & EXCH. COMM'N, NO. 81207, REPORT OF INVESTIGATION PURSUANT TO SECTION 21(A), OF THE SECURITIES EXCHANGE ACT RELEASE 3 (July 25, 2017), <https://www.sec.gov/litigation/investreport/34-81207.pdf> [hereinafter "SEC REPORT OF INVESTIGATION ON THE DAO"].

⁴⁸ O'Shields, *supra* note 39, at 181–82.

⁴⁹ Meredith Hobbs, *Once Shadowy Blockchain Is a New Practice for Morris Manning & Martin*, DAILY REP, Oct. 16, 2017, at 1.

⁵⁰ Aubrey K. Noonan, *Bitcoin or Bust: Can One Really "Trust" One's Digital Assets?*, 7 EST. PLAN. & CMTY PROP. L. J. 583, 593 (2015); Telpner & Ahmadifar, *supra* note 20, at 5.

⁵¹ *Governor Markell Launches Delaware Blockchain Initiative*, PRNEWswire (May 2, 2016, 9:30 AM), <http://www.prnewswire.com/news-releases/governor-markell-launches-delaware-blockchain-initiative-300260672.html>. Securities ledgers allow for securities to legally be used on a blockchain to track who owns certain shares. *See generally Id.* (initiating a record keeping program to identify blockchain owners).

⁵² Andrea Tinianow & Caitlin Long, *supra* note 42.

⁵³ Telpner & Ahmadifar, *supra* note 20, at 5; *see also* Garry Gabison, *Policy Considerations for the Blockchain Technology Public and Private Applications*, 19 SMU SCI. & TECH. L. REV. 327, 329 (2016); S.H. Spencer Compton & Diana Schottenstein, *Questions and Answers About Using Blockchain Technology in Real Estate Practice*, 33 PRAC. REAL EST. LAWYER 5, 7 (2017); Angela Walch, *The Path of the Blockchain Lexicon (and the Law)*, 36 REV. BANKING & FIN. L. 713, 737 (2017) (stating blockchain technology has potential to change the insurance industry due to ability to track things in a reliable and trustworthy way); Jeremy

Virtual currency, also referred to as “digital currency” or “cryptocurrency,” is the underlying form of money that individuals and entities use to support their transactions that take place on a blockchain.⁵⁴ There are well over a thousand cryptocurrencies; the two most popular being Bitcoin⁵⁵ and Ether.⁵⁶ Cryptocurrency is designed to be transferred securely and anonymously —thanks to the science of cryptography.⁵⁷ Cryptography secures legible information using algorithmic code and a peer-to-peer validation process wherein participants confirm the authenticity of transactions by signing a cryptographic key, which eliminates the possibility for third party attempts to hack the blockchain by impersonating one of the participants.⁵⁸ Once the participants sign the key, the only way for changes to be made to the transaction is if the participants digitally approve the changes via cryptographic signatures,⁵⁹ which authenticate both the participants’ identities as well as the content of their transaction.⁶⁰ Invalidated efforts by third parties attempting to amend the chain will be rejected.⁶¹ Participants can add multiple transactions onto blocks, which are chained to, and referenced by one another via their cryptographic signatures.⁶² This open process of previously-validating transactions on the blockchain both eliminates the need for an intermediary or third party auditor, and provides transparency to users through a chain of verified blocks confirming who owned what and when.⁶³

M. Sklaroff, *Smart Contracts and the Cost of Inflexibility*, 166 U. PA. L. REV. 263, 272 (2017); Elizabeth S. Ross, *Nobody Puts Blockchain in a Corner: The Disruptive Role of Blockchain Technology in the Financial Services Industry and Current Regulatory Issues*, 25 CATH. U. J. L. & TECH. 353, 370 (2017).

⁵⁴ PAUL VIGNA & MICHAEL J. CASEY, *supra* note 1, at 219 (2015) (explaining that bitcoin is the virtual currency which legitimizes blockchain through transactions).

⁵⁵ Telpner & Ahmadifar, *supra* note 20, at 5; *see also* Lee A. Sheppard, *supra* note 1, at 1027 (describing bitcoin as most widely accepted by merchants and favored by bitcoin miners).

⁵⁶ Telpner & Ahmadifar, *supra* note 20, at 5; *Cryptocurrency Market Capitalizations*, COINMARKETCAP (Nov. 17, 2017), <https://coinmarketcap.com/all/views/all/>.

⁵⁷ Austin Elliott, *Collection of Cryptocurrency Customer-Information: Tax Enforcement Mechanism or Invasion of Privacy?*, 16 DUKE L. & TECH. REV. 1, 14–15 (2017); Laurie Law, Susan Sabett & Jerry Solinas, *How to Make a Mint: The Cryptography of Anonymous Electronic Cash*, 46 AM. U. L. REV. 1131, 1137 (1997).

⁵⁸ Kurt M. Saunders, *The Regulation of Internet Encryption Technologies: Separating the Wheat from the Chaff*, 17 J. COMPUTER & INFO. L. 945, 958 (1999).

⁵⁹ Mark J. Krone & Howard M. Bernstein, *Introduction to Bitcoin and Potential Insurance Coverage for Virtual Currencies*, 21 FIDELITY L. J. 143, 146 (2015).

⁶⁰ Saunders, *supra* note 58, at 948.

⁶¹ Alan Cohn, Travis West & Chelsea Parker, *Smart After All: Blockchain, Smart Contracts, Parametric Insurance, and Smart Energy Grids*, 1 GEO. L. TECH. REV. 273, 278 (2017); Krone & Bernstein, *supra* note 59, at 146.

⁶² Larissa Lee, *New Kids on the Blockchain: How Bitcoin’s Technology Could Reinvent the Stock Market*, 12 HASTINGS BUS. L. J. 81, 100–01 (2016).

⁶³ Ronald L. Chichester, *Wide Open Spaces*, 80 TEX. B.J. 228, 229 (2017).

A Bitcoin transaction, for example, is traceable all the way back to the point of its creation.⁶⁴ Participants can be ensured that their transactions will be verified because validators, or “miners”⁶⁵ will have confirmed the transactions for incentives, usually amounting to small financial rewards from outside resources unrelated to the underlying transaction.⁶⁶ The more miners the better, as they essentially act as the sole validation process of the blockchain structure by working in consensus to monitor the transactions.⁶⁷ Although only users who possess the cryptographic key underlying the transaction can transfer Bitcoins, there is still a reliance on the public nature of a community of network participants to act independently to monitor the blockchain by accepting only correct chains of transfers to put forward for any given block.⁶⁸

The Bitcoin blockchain, as well as Ethereum, which was created after the Bitcoin blockchain to standardize the coding for creating a token, are examples of open-consensus, public blockchains, where anyone with the applicable software is able to view the ledger.⁶⁹ These popular blockchains⁷⁰ offer a system that is both resilient and resistant to corruption or attacks on single or groups of nodes; by design, when one node is corrupted or hacked, the rest still work.⁷¹ While public blockchains are both large and now ubiquitous amongst cryptocurrency transactions taking place all over the world, certain companies also implement private, or closed-permission blockchains.⁷² Private blockchains use the

⁶⁴ Lorena Yashira Gely-Rojas, *Cryptocurrencies and the Uniform Commercial Code: The Curious Case of Bitcoin*, 8 U.P.R. BUS. L. J. 129, 131 (2017).

⁶⁵ Kelsey L. Penrose, *Banking on Bitcoin: Applying Anti-Money Laundering and Money Transmitter Laws*, 18 N.C. BANKING INST. 529, 531–33 (2014). Miners are often ordinary people who connect to the Bitcoin network from their computers via a mining software program. *Id.*

⁶⁶ Cohn, West & Parker, *supra* note 61, at 279; *See generally Bitcoin*, STACK EXCHANGE, <https://bitcoin.stackexchange.com/questions/64355/bitcoin-block-reward-for-a-tiny-transaction> (last visited May 24, 2018) (showing that the current reward for a successful completion of a block is 12.5 bitcoins).

⁶⁷ Shakow, *supra* note 15, at 1387. The Bitcoin blockchain is updated every ten minutes. *Id.*

⁶⁸ *Id.*

⁶⁹ Pesok, *supra* note 16.

⁷⁰ Bryant Nielson, *Review of the 6 Major Blockchain Protocols*, RICHTOPIA, <https://richtopia.com/emerging-technologies/review-6-major-blockchain-protocols> (last visited May 24, 2018). Other popular blockchains include: Ripple, which supports cryptocurrencies, fiat currency, commodity and other value units like mobile minutes or frequent flier miles, etc.; Hyperledger, which focuses on international business transactions; Corda, developed for recording, supervising and synchronizing financial agreements amongst regulated financial institutions; and Symbiont, created for institutional finance and contractual-based. *Id.*

⁷¹ Cohn, West, & Parker, *supra* note 61, at 279; Kiran Vaidya, *Decoding the Enigma of Bitcoin Mining*, MEDIUM (Dec. 14, 2016), <https://medium.com/all-things-ledger/decoding-the-enigma-of-bitcoin-mining-f8b2697bc4e2>.

⁷² Cohn, West, & Parker, *supra* note 61, at 279; R. Tyler Smith, *Public and Private Block-*

same technology as public blockchains, however, a single entity administers them.⁷³ This results in more control for the entity to restrict permission or allow access to only approved, or invited users.⁷⁴ Private blockchains are attractive because they require less computational power to maintain a given ledger and offer more privacy for transactions.⁷⁵ Private blockchains operate in a fully private space, such as a private server or cloud-based environment.⁷⁶

Both public and private blockchains offer promising technology for a wide range of industries seeking to develop and implement blockchains to support transactions that take place across various business structures.⁷⁷ As companies are beginning to realize such benefits, more are beginning to roll out blockchain networks into production, the impact of which is being felt in large part by the financial services industry in a very significant way.

C. Market Impact

Coin offerings had a significant impact on the 2017 market. Over the past year, 382 ICOs were successfully completed, and they raised more than \$6 billion.⁷⁸ This amounts to more than sixty times the roughly \$100 million raised in 2016.⁷⁹ With roughly \$2 billion raised in the third quarter and \$3.1 in the fourth quarter, the revenues ICOs have raised have quickly come to surpass traditional venture-capital (VC) and Private Equity (PE) fundraising.⁸⁰ The total market capitalization for cryptocurrencies increased by nearly \$600 billion – from \$17.7 billion to \$612.9 billion – over the past year, exceeding as much as \$650 billion

chains: Enemies or Allies? Why the Enterprise Ethereum Alliance will prove the latter, MEDIUM (Feb. 28, 2017), <https://medium.com/@rtylersmith/public-and-private-blockchains-enemies-or-allies-45f050c38fc0>.

⁷³ Cohn, West, & Parker, *supra* note 61, at 277.

⁷⁴ *Id.*; R. Tyler Smith, *supra* note 72.

⁷⁵ Praveen Jayachandran, *The difference between public and private blockchain*, BLOCKCHAIN UNLEASHED: IBM BLOCKCHAIN BLOG (May 31, 2017), <https://www.ibm.com/blogs/blockchain/2017/05/the-difference-between-public-and-private-blockchain/>.

⁷⁶ Alan Cohn, Travis West, & Chelsea Parker, *supra* note 61, at 275; Stephen J. Bigelow, *Private Cloud (internal cloud or corporate cloud)*, TECHTARGET, <http://searchcloudcomputing.techtarget.com/definition/private-cloud> (last updated Nov. 2017); *see also* Rajashekara V. Maiya, *Public, Private or Hybrid Blockchain: What does it mean?*, DATA QUEST INDIA (May 10, 2017), <http://www.dqindia.com/public-private-or-hybrid-blockchain-what-does-it-mean/> (describing how a combination of the characteristics of public and private blockchains produces the hybrid blockchain, which allows network members to decide whether transactions should remain public, or be restricted to a narrower group of members).

⁷⁷ Praveen Jayachandran, *supra* note 75.

⁷⁸ Zaitsev, *supra* note 28.

⁷⁹ *Id.*

⁸⁰ *Id.*; Vigna, *supra* note 4, at B16.

on December 21st.⁸¹ This aggregate value includes roughly 1,335 combined cryptocurrencies and results in a 2,700% increase over the year.⁸² By comparison, it has taken decades for the S&P 500 to deliver the same returns.⁸³ The increase in Bitcoin capitalization – including the trading of Bitcoin futures on various exchanges – from \$15.5 billion to \$236 billion heavily influenced this vigorous growth.⁸⁴ The remaining amount came from alternate coin, or “altcoin,” capitalization, which totaled \$376.2 billion, with a large concentration amongst the top ten valued cryptocurrencies.⁸⁵ Coin offerings will likely continue to surpass their VC and PE counterparts if they continue on their trajectory.⁸⁶

The largest individual fundraisings came from the startup company Protocol Labs, and the Hyundai Digital Asset Currency (Hdac) project.⁸⁷ Protocol Labs raised \$257 million in September 2017⁸⁸ for a computer-memory marketplace called Filecoin,⁸⁹ while the Hdac project raised \$258 million for a hybrid project that creates a continuous “developing information platform based on blockchain and the Internet of Things (IoT).”⁹⁰ Hdac, the most successfully completed ICO in 2017,

[O]ffers an ecosystem with public and private keys for interacting with the devices around us, the number of which will

⁸¹ Zaitsev, *supra* note 28.

⁸² Sean Williams, *Cryptocurrency Market Value Just Hit \$500 Billion – but Don’t Thank Bitcoin*, MOTLEY FOOL (Dec. 14, 2017), <https://www.fool.com/investing/2017/12/14/cryptocurrency-market-value-just-hit-500-billion-b.aspx>; Will Martin, *The global cryptocurrency market hit a new record high above \$700 billion*, BUS. INSIDER (Jan. 3, 2018, 5:57 AM), <http://www.businessinsider.com/bitcoin-price-global-cryptocurrency-market-capitalisation-january-3-2018-1>.

⁸³ Sean Williams, *supra* note 82; *S&P 500 Index - 90 Year Historical Chart*, MACRO-TRENDS, <http://www.macrotrends.net/2324/sp-500-historical-chart-data> (last updated Jan. 9, 2018).

⁸⁴ Dan Falvey, *Bitcoin Futures top \$18,000: Cryptocurrency spike causes CBOE stock exchange crash TWICE*, Express (Dec. 11, 2017), <https://www.express.co.uk/finance/city/890672/bitcoin-crash-cryptocurrency-cboe-stock-exchange-online-finance-market-investment>.

⁸⁵ Zaitsev, *supra* note 28.

⁸⁶ Seema Mody, *ICOs explained: How the controversial funding vehicles setting the VC world ablaze work*, CNBC (Oct. 6, 2017), <https://www.cnbc.com/2017/10/05/how-icos-setting-the-vc-world-ablaze-work.html>.

⁸⁷ Zaitsev, *supra* note 28.

⁸⁸ Vigna, *supra* note 4, at B16.

⁸⁹ Jay G. Baris, *et al.*, Speech at the Practising Law Institute SEC Webinar (Sept. 14, 2017). To offer guidance to future ICOs that want to be in compliance with securities laws, Protocol Labs is also producing the Simple Agreements for Future Tokens (SAFT), or promissory notes, which are convertible into either preferred stock of the issuer, tokens, or both. *Id.*

⁹⁰ Zaitsev, *supra* note 28.

continue to grow [e.g. smartphones, smart cars, televisions, refrigerators, etc.] . . . and creates a reliable, confidential, comprehensive, and controllable system of communications, which will make it possible to perform quick transactions, and increase the convenience of all types of payments: taxes, settlements with clients, investments, loans, etc.⁹¹

However, Dragon Corp., a Macau company formed to issue tokens used by VIP junket operators by offering credit on behalf of casino operators, and which aims to raise \$500 million in an ICO despite China's recent ban on cryptocurrencies, may rival these record numbers.⁹²

These offerings usually include exchanges of fiat currency (e.g. USD, Euro, Yen, Pound Sterling, etc.) or other tokens like Bitcoin, Ether or FileCoin that issuers privately pre-sell to select investors prior to an ICO.⁹³ An example of a private fundraising method includes the ICO of Metal Pay, a blockchain based app similar to Venmo that raised a \$3 million round of token sales limited to "accredited" investors who have personal relationships with the firm.⁹⁴ While some consider the addition of ICOs into the market economy as a healthy change of pace and a positive addition of free flow of capital, others are wary of the impact their involvement may soon have on the economy as a whole.⁹⁵ Take the hedge fund concept of "flipping," for example, which is when big name investors receive preferential treatment and large discounts by investing in a presale, and then cash out immediately after the ICO to realize a quick return.⁹⁶ While legal, this short-term, pre-purchasing strategy will most likely contribute to an "overwhelming amount of low grade ICOs,"⁹⁷ a result similar to what occurred

⁹¹ *Id.*

⁹² Akiko Fujita, *China banned new cryptocurrency sales, but a Macau company still aims to raise \$500 million in an ICO*, CNBC, <https://www.cnbc.com/2017/09/24/macau-company-aims-to-raise-500-million-in-ico-despite-china-ban.html> (last updated Sept. 26, 2017, 4:57 AM); *See generally* Baris, *et al.*, *supra* note 89.

⁹³ Baris, *et al.*, *supra* note 89.

⁹⁴ Evelyn Cheng, *This hot digital currency trend is minting millions, but US investors aren't allowed to play*, CNBC, <https://www.cnbc.com/2017/07/18/hot-digital-currency-trend-minting-millions-off-limits-to-us-investors.html> (last updated July 20, 2017, 5:17 PM).

⁹⁵ Olga Kharif, *Broward Daily Business Review, Hedge Funds Flip ICOs, Leaving Other Investors Holding the Bag*, BLOOMBERG, <https://www.bloomberg.com/news/articles/2017-10-03/hedge-funds-flip-icos-leaving-other-investors-holding-the-bag> (last updated Oct. 3, 2017); Gareth Jenkinson, *Investors Still Wary of Bitcoin*, COIN TELEGRAPH (Dec. 31, 2017), <https://cointelegraph.com/news/investors-still-wary-of-bitcoin>.

⁹⁶ Kharif, *supra* note 95; Ashour Ilesho, *Hedge Funds are Investing Big Sums into ICOs*, BITCOINIST (Oct. 5, 2017, 11:00 AM), <http://bitcoinist.com/hedge-funds-are-investing-big-sums-into-icos/>.

⁹⁷ Kharif, *supra* note 95; *Hedge Funds Investing Early in ICOs Is Abusive: Cryptocurrency Investor*, CCN (Oct. 9, 2017, 5:03 PM), <https://www.ccn.com/hedge-funds-investing->

to IPOs during the IPO boom in the 1990s.⁹⁸

The July 2017 offering by social messaging company Kik Interactive Inc. provides a concrete example of how hedge funds can benefit disproportionately by getting in early through a presale.⁹⁹ Although the company raised \$100 million from more than 10,000 contributors of 117 countries, three hedge funds - Blockchain Capital, Pantera Capital and Polychain Capital - together contributed \$50 million in a presale the summer before the actual ICO.¹⁰⁰ In doing so, these three hedge funds alone received a thirty percent discount on their Kin tokens,¹⁰¹ which could be used for commerce with Kik.¹⁰² Per the terms set out in the White Paper, Blockchain, Pantera and Polychain could sell up to fifty percent of their Kin at any time, granting them the benefit of profiting whether the price of Kin either suffered a large drop in value, or continued to rise.¹⁰³ Meanwhile, regular investors were unable to reap such benefits in the event of a cash out.¹⁰⁴

While ICOs clearly are impacting the market in many ways, so too is the blockchain technology that embodies them.¹⁰⁵ In many industries, large, well-established organizations have begun to consider incorporating blockchain into their business models, in addition to ICOs for fundraising for new ideas or projects.¹⁰⁶ Take the banking and financial services industries for instance, where in a period of a few months near the end of 2017, investment bank giant Goldman Sachs filed a patent application for a private blockchain for foreign exchange trading;¹⁰⁷ stock exchange operator Nasdaq filed a patent outlining a desire to store asset ownership data on a blockchain;¹⁰⁸ and credit card powerhouse Visa

early-in-icos-is-abusive-cryptocurrency-investor/.

⁹⁸ Kharif, *supra* note 95; Drew Singer, *IPO Boom Sparks '90s Nostalgia*, FORBES (Oct. 9, 2014, 12:17 PM), <https://www.forbes.com/sites/mergermarket/2014/10/09/ipo-boom-sparks-90s-nostalgia/#38ec78a53302>.

⁹⁹ Kharif, *supra* note 95; *Chat Service Kik to Launch \$125 Million Cryptocurrency Sale*, FORTUNE (Aug. 29, 2017), <http://fortune.com/2017/08/29/kik-cryptocurrency-sale/>.

¹⁰⁰ Kharif, *supra* note 95.

¹⁰¹ See *Kin*, TOKENMARKET, <https://tokenmarket.net/blockchain/ethereum/assets/kin/> (last visited May 24, 2018) (defining “Kin” the cryptocurrency offered by Kik Interactive to Investors and stating “Kin cryptocurrency will first power a digital economy inside of Kik, and then will serve as the basis of interoperability with other digital services in the Kin Ecosystem.”).

¹⁰² Kharif, *supra* note 95.

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ Chance Barnett, *Inside the Meteoric Rise of ICOs*, FORBES (Sept. 23, 2017, 1:21 AM), <https://www.forbes.com/sites/chancebarnett/2017/09/23/inside-the-meteoric-rise-of-icos/#75297c9f5670>.

¹⁰⁶ *Id.*

¹⁰⁷ Sheppard, *supra* note 1, at 1027.

¹⁰⁸ Nikhilesh De, *Nasdaq Explores Storing Asset Data on Blockchain*, COINDESK (Nov. 17, 2017), <https://www.coindesk.com/nasdaq-contemplates-storing-asset-ownership-data-on-blockchain/>.

launched an initial phase of a business-to-business payments system using the blockchain startup “Chain.”¹⁰⁹ Additionally, the Australian Securities Exchange (ASX) announced on December 7, 2017 that it would replace its registry, clearing, and settlement system with blockchain technology Digital Asset Holding developed, a company Blythe Masters, a former J.P. Morgan banker, heads.¹¹⁰ According to Dominic Stevens, ASX Chief Executive and Managing Director, the move “will enable our customers to develop new services and reduce their costs . . . and put Australia at the forefront of innovation in financial markets.”¹¹¹

Over sixty companies – including Hewlett Packard Enterprise, Intel and Microsoft – are partners of the private R3 consortium building and operating distributed ledger applications for their businesses,¹¹² and now over twenty global banks are members of a Singapore and Hong Kong blockchain-based trade network that aims to digitalize trade finance and set “new global standards” for the industry.¹¹³ Other notable and similar industry players that have publicly announced plans to utilize blockchain-based technology in the month of November 2017 alone include credit card company Mastercard,¹¹⁴ investment bank Morgan Stanley,¹¹⁵ insurance giant Prudential,¹¹⁶ and one of the Big Four auditors KPMG.¹¹⁷

In the food industry, IBM, one of the world’s largest information technology companies, has sought to form a consortium with large food suppliers – including Walmart, the largest grocer in the United States, Nestlé, and Dole – to use

¹⁰⁹ *Id.*

¹¹⁰ Press Release, ASX, ASX selects distributed ledger technology to replace CHES 1 (Dec. 7, 2017), <https://www.asx.com.au/documents/asx-news/ASX-Selects-DLT-to-Replace-CHES-Media-Release-7December2017.pdf>.

¹¹¹ *Id.*

¹¹² See *R3’s Corda partner network grows to over 60 companies*, R3 (Nov. 13, 2017), <https://www.r3.com/blog/2017/11/13/r3s-corda-partner-network-grows-to-over-60-companies-including-hewlett-packard-enterprise-intel-and-microsoft/> (stating that R3 “counts over 100 banks, insurance companies, financial institutions, regulators, trade associations and technology companies as members.”).

¹¹³ Sujha Sundararajan, *Over 20 Banks Join Singapore-Hong Kong Blockchain Trade Network*, COINDESK (Nov. 17, 2017), <https://www.coindesk.com/over-20-banks-join-singapore-hong-kong-blockchain-trade-network/>.

¹¹⁴ Michael del Castillo, *American Express Opens First Blockchain Corridor With Ripple Tech*, COINDESK, (Nov. 16, 2017), <https://www.coindesk.com/american-express-opens-first-blockchain-corridor-ripple-tech/>.

¹¹⁵ Sujha Sundararajan, *Morgan Stanley CEO: Bitcoin Is ‘By Definition Speculative’*, COINDESK (Nov. 16, 2017), <https://www.coindesk.com/morgan-stanley-ceo-bitcoin-is-by-definition-speculative/>.

¹¹⁶ *Id.*

¹¹⁷ *Id.*

blockchain to create an audit trail for food safety.¹¹⁸ Even the entertainment industry has solicited the use of blockchain technology to modernize certain business structures.¹¹⁹ Telecom conglomerate Comcast filed for a patent in November 2017 that outlined a blockchain database that would store customer viewing and identifying data.¹²⁰ In Hollywood, Christopher Woodrow, who has financed and produced movies – including Oscar-winning *Birdman* – announced plans to launch a blockchain-based token called MovieCoin in early 2018.¹²¹ Woodrow explained that MovieCoin would appreciate based on the success of films financed from it, as well as be tradable in secondary markets.¹²² In explaining the company, Woodrow stated, “we’re in the process of putting together a slate of projects that will include A-list movie stars, top-tier directors, seasoned and established producers, and that will form the initial slate for MovieCoin.”¹²³ Further, celebrities including boxer Floyd Mayweather, heiress Paris Hilton, musician DJ Khaled,¹²⁴ and rapper The Game have each promoted particular ICOs,¹²⁵ ranging from a company aiming to transform the cannabis industry¹²⁶ to one claiming to offer predictions for sporting events, the stock market, and “even the weather.”¹²⁷ These celebrity endorsements have garnered enough attention for the Securities and Exchange Commission (“SEC” or the “Commission”) to step in and respond by issuing one of only a short list of cryptocurrency-related official statements on the matter.¹²⁸

¹¹⁸ Peterson, *supra* note 7.

¹¹⁹ Ryo Takahashi, *How can creative industries benefit from blockchain?*, MCKINSEY&COMPANY: MEDIA & ENTMT’T (Aug. 2017), <https://www.mckinsey.com/industries/media-and-entertainment/our-insights/how-can-creative-industries-benefit-from-blockchain>.

¹²⁰ Nikhilesh De, *Comcast’s Blockchain Patent Filing Highlights Data Use Case*, COINDESK (Nov. 10, 2017), <https://www.coindesk.com/comcast-files-for-blockchain-based-database-patent/>.

¹²¹ Camila Russo, *Hollywood Hitmaker Plans to Fund Next Blockbuster With Crypto*, BLOOMBERG TECH. (Nov. 17, 2017, 12:17 PM), <https://www.bloomberg.com/news/articles/2017-11-17/hollywood-hitmaker-plans-to-fund-next-blockbuster-with-crypto>.

¹²² *Id.*

¹²³ *Id.*

¹²⁴ Becky Peterson, *The cash- and car-loving 20-somethings who got DJ Khaled to promote their startup resigned weeks after it raised \$32 million*, BUS. INSIDER, (Nov. 7, 2017, 3:10 PM), <http://www.businessinsider.com/two-of-centras-founders-resigned-weeks-after-its-ico-2017-11>.

¹²⁵ Christian Everdell, *Wrangling the Wild West: SEC Steps in to Regulate Initial Coin Offerings*, N.Y. L. J. (Sept. 21, 2017).

¹²⁶ Frank Chaparro, *The Game is promoting the initial coin offering of a company owned by a former Miss Iowa who is looking to usher in the weed revolution*, BUS. INSIDER (Aug. 11, 2017, 5:14 PM), <http://www.businessinsider.com/rapper-the-game-promoting-weed-company-ico-2017-8>.

¹²⁷ Jeff John Roberts, *Why Celebrities Like Mayweather Could Face Trouble Over ICOs*, FORTUNE (Sept. 11, 2017) <http://fortune.com/2017/09/11/ico-bitcoin-celebrities/>.

¹²⁸ Press Release, U.S. Sec. & Exch. Comm’n, Statement on Potentially Unlawful Promotion of Initial Coin Offerings and Other Investments by Celebrities and Others (Nov. 1, 2017),

D. Regulators Are Cracking Down

Such marketplace ubiquity has caught the attention of U.S. regulatory authorities, central banks, and major financial institutions.¹²⁹ On October 17, 2017, the U.S. Commodity Futures Trading Commission (CFTC) released a primer on virtual currencies that explains the CFTC's anti-fraud and anti-manipulation jurisdiction over virtual currencies in interstate commerce that may involve commodity or futures interests, or derivatives contracts.¹³⁰ The primer addresses the CFTC's 2015 finding that Bitcoin and other virtual currencies (*e.g.* Ethereum) "are properly defined as commodities" (*e.g.* gold, silver, oil, or a currency which includes services, rights, and certain interests) as opposed to fiat currencies under Section 1(a)(9) of the Commodity Exchange Act (CEA).¹³¹

While the CFTC has taken at least four enforcement actions in this area, it has also permitted two competing Bitcoin futures Exchanges – Chicago Mercantile Exchange (CME) and CBOE Futures Exchange (CFE)¹³² – to self-certify contracts for Bitcoin futures products.¹³³ Additionally, the CFTC has permitted an-

<https://www.sec.gov/news/public-statement/statement-potentially-unlawful-promotion-icos>.

¹²⁹ *Id.*

¹³⁰ COMMODITY FUTURES TRADING COMM'N, A CFTC PRIMER ON VIRTUAL CURRENCIES 2 (Oct. 17, 2017), http://www.cftc.gov/idc/groups/public/documents/file/labcftc_primercurrencies100417.pdf; Kari Larsen & Michael Selig, *CFTC Releases Primer on Virtual Currencies*, REED SMITH LLP (Oct. 19, 2017), <https://www.fintechupdate.com/2017/10/cftc-releases-primer-on-virtual-currencies/>.

¹³¹ COMMODITY FUTURES TRADING COMM'N, A CFTC PRIMER ON VIRTUAL CURRENCIES 2 (Oct. 17, 2017), http://www.cftc.gov/idc/groups/public/documents/file/labcftc_primercurrencies100417.pdf; see *In re Coinflip, Inc.*, CFTC No. 15-29, 2015 WL 5535736 (Sept. 17, 2015); see also *Commodity Futures Trading Comm'n v. McDonnell*, 287 F. Supp. 3d 213, 223–29 (E.D.N.Y. 2018) (affirming, for the first time in a federal court in a case involving a "cash commodity contract," the CFTC's authority to bring an action involving cryptocurrency as a "commodity").

¹³² *Bitcoin futures contracts at CME and Cboe*, REUTERS (Dec. 15, 2017, 2:10 PM), <https://www.reuters.com/article/uk-bitcoin-futures-contracts/bitcoin-futures-contracts-at-cme-and-cboe-idUSKBN1E92K9>. Trading on CFE began on December 10, 2017, carries a contract equal to one bitcoin, and is priced off a daily auction at 4 p.m. eastern time on the cryptocurrency exchange Gemini. CME trading began on December 18, 2017, carries a contract equal to five bitcoins, and is priced off an index of prices from four cryptocurrency exchanges (not including Gemini). *Id.* The CFTC forced the futures contracts to be margined at over forty percent, meaning that investors will need to offer up roughly half the cost of the contract, significantly higher than the single digit margins required by most futures exchange contracts. *Futures Fundamentals: Characteristics*, INVESTOPEDIA (Dec. 1, 2017), <https://www.investopedia.com/university/futures/futures4.asp> (explaining that the margins are typically 5% to 15%).

¹³³ Press Release, U.S. Commodity Futures Trading Comm'n, CFTC Statement on Self-Certification of Bitcoin Products by CME, CFE and Cantor Exchange (Dec. 1, 2017), <http://www.cftc.gov/PressRoom/PressReleases/pr7654-17>.

other Bitcoin Exchange, The Cantor Exchange, to self-certify a contract for binary options.¹³⁴ This will allow all three Exchanges to list for trading Bitcoin derivatives,¹³⁵ and is subsequent to prior approvals for a Swap Execution Facility (SEF) and North American Derivatives Exchange Inc. (NADEX), a designated contract market (DCM), to offer swaps and Bitcoin binary options, respectively.¹³⁶ While the primer poses potential risks (operational, speculative, cyber-security, and fraud and manipulation) of virtual currency, it also includes language on potential benefits that Chairman Chris Giancarlo may have influenced from a statement in the spring of 2016 that blockchain and distributed ledger technology “has the potential to link networks of legal record-keeping the same way the Internet connects networks of data and information.”¹³⁷ Giancarlo announced on January 4, 2017 that the CFTC’s Market Risk Advisory Committee will hold future meetings to consider further the self-certification process of new products and operational rules proposed by DCMs under both the CEA and CFTC regulations.¹³⁸

Lastly, while the CFTC classifies foreign exchanges and currencies as “commodities,” under Section 1(a)(9), it has refrained from classifying cryptocurrencies as foreign exchanges and currencies, falling in line with other regulators – like FinCen and the IRS – in treating cryptocurrencies like commodities or other assets, rather than foreign currencies.¹³⁹ In an enforcement action against Bitfinex, a Hong-Kong based Bitcoin exchange, the CFTC brought the action under the “retail commodity” provisions of the CEA rather than the “retail foreign exchange” provisions, which has a significantly longer delivery period (twenty-eight days versus two days) for commodities that are not foreign exchanges and currencies.¹⁴⁰ The CFTC’s authority over certain types of foreign exchange transactions is addressed in the “Treasury Amendment,” which was added to the

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ COMMODITY FUTURES TRADING COMM’N, A CFTC PRIMER ON VIRTUAL CURRENCIES 2 (Oct. 17, 2017), http://www.cftc.gov/idc/groups/public/documents/file/labcftc_primercurrencies100417.pdf.

¹³⁷ Arina Shugla, *Blockchain: Recordkeeping in the 21st Century*, BUS. L. POST. (Oct. 21, 2017), <http://www.businesslawpost.com/2017/10/blockchain-recordkeeping-in-21st-century.html>.

¹³⁸ Press Release, U.S. Commodity Futures Trading Comm’n, CFTC Also Releases Backgrounder on Oversight of and Approach to Virtual Currency Futures Markets (Jan. 4, 2018), <http://www.cftc.gov/PressRoom/SpeechesTestimony/giancarlostatement010418>.

¹³⁹ *Infra* Part II, Section D.

¹⁴⁰ Press Release, U.S. Commodity Futures Trading Comm’n, CFTC Statement on Self-Certification of Bitcoin Products by CME, CFE and Cantor Exchange (Dec. 1, 2017), <http://www.cftc.gov/PressRoom/PressReleases/pr7654-17>; Yvette D. Valdez, *et al.*, *Latham & Watkins Discusses CFTC’s Enforcement Action Against Online Cryptocurrency Exchange*, COLUM. L. SCH. BLUE SKY BLOG 1 (July 13, 2016), <http://clsbluesky.law.columbia.edu/2016/07/13/latham-watkins-discusses-cftcs-enforcement-action-against-online-cryptocurrency-exchange/>.

Commodity Exchange Act in 1974 when the CFTC was created.¹⁴¹

High-ranking members of the U.S. Federal Reserve (the “Fed”) also made public statements on the impact that cryptocurrencies will have on the central banking system. Chairwoman Janet Yellen remarked in an appearance on Capitol Hill that the U.S. Central Bank expects cryptocurrencies and blockchain technology to impact significantly future payments and banking systems.¹⁴² Randal Quarles, the Fed’s vice chair for supervision, hinted that central banks are far from embracing cryptocurrencies as a legitimate means for paying for things, noting potential dangers to the financial system because of a lack of institutional support, vulnerability to hackers, and abuse from money launderers and terrorist groups.¹⁴³

Regarding tax-related matters, the IRS relies on its March 2014 issuance of Notice 2014-21, which holds that tokens issued from ICOs are to be treated as property, as opposed to a form of currency, for federal tax purposes because they generate revenue when sold.¹⁴⁴ If companies use tokens for compensation of employees or other service providers, the IRS deems the tokens taxable income.¹⁴⁵ Many blockchain-based companies settle in tax havens such as the British Virgin Islands for this reason.¹⁴⁶ Further, the IRS requires investors to report all transactions made on cryptocurrency exchanges, and to pay taxes on all capital gains acquired through such trading.¹⁴⁷ Even though Section 1031 of the Internal Revenue Code (IRC) allows taxpayers to exchange, rather than sell, real

¹⁴¹ *Dunn v. CFTC*, 519 U.S. 465 (1997). Congress has amended the Treasury Amendment and CEA several times during the last nearly thirty years to expand and clarify the CFTC’s authority over certain types of foreign exchange transactions (rolling spot, FX options, FX NDFs, FX Swaps, etc.). *Id.*

¹⁴² Stan Higgins, *US Central Bank Chair: Blockchain Could Have ‘Significant’ Impact*, COINDESK (Sept. 28, 2016), <https://www.coindesk.com/us-fed-yellen-blockchain-impact/>.

¹⁴³ Jesse Hamilton, *Fed’s Randal Quarles Says Bitcoin Could be Dangerous for the Financial System*, BLOOMBERG, <https://www.bloomberg.com/news/articles/2017-11-30/guess-who-s-not-joining-bitcoin-revolution-fed-s-bank-watchdog> (last updated Nov. 30, 2017, 1:20 PM); Eric Lam, *What the World’s Central Banks Are Saying About Bitcoin*, BLOOMBERG, <https://www.bloomberg.com/news/articles/2017-12-15/what-the-world-s-central-banks-are-saying-about-cryptocurrencies> (last updated Jan. 29, 2018, 12:16 AM).

¹⁴⁴ I.R.S. Notice 2014-21.

¹⁴⁵ See Meredith Hobbs, *supra* note 49, at 1 (noting the IRS considers that money, which is taxable income, a securities offering because it considers tokens and other cryptocurrencies as property that generates revenue when sold); Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO, Exchange Release No. 81207 (July 25, 2017).

¹⁴⁶ Meredith Hobbs, *supra* note 49, at 1; see C.R.S., *Tax Havens: International Tax Avoidance & Evasion*, 2015 WL 333185, at *4 (identifying the British Virgin Islands as a commonly known tax haven).

¹⁴⁷ Robert A. Green, *Cryptocurrency Traders Risk IRS Trouble With Like-Kind Exchanges*, FORBES (Aug. 15, 2017, 11:28 AM), <https://www.forbes.com/sites/greatspeculations/2017/08/15/cryptocurrency-traders-risk-irs-trouble-with-like-kind-exchanges>; *Investor*

and personal property, like virtual currency, with one another in a tax-free exchange if the exchange is “like-kind” and includes a transfer of “one business of investment asset for another,” the taxpayers must still report the exchange on an IRS Form 8824, regardless of whether or not the taxpayers recognize any gain on the exchange.¹⁴⁸ Many crypto-investors incorrectly rely on Section 1031 to be exempt from having to report crypto-exchanges, thinking that exchanges involving different cryptocurrencies (*e.g.* Bitcoin for Ethereum, or vice versa) qualifies as a 1031 exchange of like-kind property and thus is tax-free.¹⁴⁹ However, the IRS has not clarified this yet and thus relying on such logic may be ill-advised.¹⁵⁰ In November 2016, a federal judge issued a summons to Coinbase Inc., a cryptocurrency exchange database, to identify all U.S. customers who transferred cryptocurrency from 2013 to 2015 to allow the IRS to make cryptocurrency owners report the value of their cryptocurrency wallets to the federal government.¹⁵¹ Investors who make transactions on these exchanges must report any short-term or long-term capital gains or losses on a Form 1099 that the IRS would ultimately review.¹⁵²

The Consumer Financial Protection Bureau (CFPB) chimed in when it released a set of consumer protection principles on October 18, 2017 to address the issues of protecting consumers’ financial data that financial institutions and companies participating in ICOs sometime share.¹⁵³ In the private-public sector, the Financial Industry Regulatory Authority (FINRA) released an Investor Alert

Alert: Bitcoin and Other Virtual Currency-Related Investments, SEC.GOV (May 7, 2014), https://www.sec.gov/oiea/investor-alerts-bulletins/investoralertsia_bitcoin.html.

¹⁴⁸ I.R.C. § 1031 (2017); Robert W. Wood, *Tax Bills Doom Tax-Free 1031 Exchanges of Cryptocurrency*, FORBES (Nov. 27, 2017, 8:51 AM), <https://www.forbes.com/sites/robertwood/2017/11/27/tax-bills-doom-tax-free-1031-exchanges-of-cryptocurrency/#11f43f89f58f>.

¹⁴⁹ I.R.C. § 1031 (2017); Robert W. Wood, *supra* note 148.

¹⁵⁰ Robert W. Wood, *supra* note 148.

¹⁵¹ *United States v. Coinbase, Inc.*, No.17-cv-01431-JSC, 2017 WL 3035164, at *2 (N.D. Cal. July 18, 2017); Craig W. Smalley, *The Classification of Bitcoin and Cryptocurrency by the IRS*, CPA PRACTICE ADVISOR (Nov. 12, 2017), <http://www.cpapracticeadvisor.com/news/12380583/the-classification-of-bitcoin-and-cryptocurrency-by-the-irs>.

¹⁵² *Investor Alert: Bitcoin and Other Virtual Currency-Related Investments*, *supra* note 147; Sarah O’Brien, *Bitcoin investors beware: The IRS wants its cut and you may not know it*, CNBC (Nov. 30, 2017, 11:06 AM), <https://www.cnbc.com/2017/11/30/bitcoin-investors-beware-the-irs-wants-its-cut-and-you-may-not-know-it.html>.

¹⁵³ *Consumer Protection Principles: Consumer-Authorized Financial Data Sharing and Aggregation*, CONSUMER FIN. PROT. BUREAU (Oct. 18, 2017); Maria B. Earley & Paul Bond, *Banks, Fintechs and Consumer Data: The CFPB Weighs in*, REED SMITH LLP (Oct 25, 2017), <https://www.financialregulatoryreport.com/cfpbupdates/banks-fintechs-and-consumer-data-the-cfpb-weighs-in/>.

in August 2017 that aimed to inform investors about the potential risks of participating in ICOs.¹⁵⁴

However, the SEC offered the most impactful guidance to the crypto-community in its Report of Investigation issued on July 25, 2017.¹⁵⁵ In the Report, the SEC took a stance for the first time on ICOs regarding the Spring 2016 coin offering by The DAO, a for-profit entity that sponsored digital start-up projects by creating and holding assets by selling “DAO Tokens” to investors through ICOs.¹⁵⁶ The DAO proposed to use the tokens to fund “projects” from which investors receive earnings as a return on their investment.¹⁵⁷ DAO representatives known as “curators” would oversee the projects and shepherd them through an evaluation and selection process.¹⁵⁸ Investors could then re-sell their DAO Tokens to realize profits in a secondary market that supported the trading of DAO Tokens.¹⁵⁹ The SEC caught wind of the matter when issues arose after a cyber attack diverted roughly \$150 million of total Ether from The DAO offering to an Ethereum blockchain address the cyber attacker controlled.¹⁶⁰ In its Report, the SEC applied the *Howey* test, and determined that DAO Tokens were securities and therefore within the agency’s purview.¹⁶¹ The United States Supreme Court previously articulated the *Howey* test in *SEC v. W.J. Howey Co.*, when it determined whether a particular instrument is an “investment contract,” and therefore, a “security” subject to the Securities Act of 1933 (“1933 Act”).¹⁶²

The *Howey* test sets out the following four elements that must be present for an asset to be a security: (1) an investment of money (2) in a common enterprise (3) with a reasonable expectation of profits (4) to be derived from the entrepreneurial or managerial efforts of others.¹⁶³ The SEC analyzed the offering and

¹⁵⁴ *Initial Coin Offerings: Know Before You Invest*, FINRA, <http://www.finra.org/investors/alerts/initial-coin-offerings-know-before-you-invest> (last updated Aug. 31, 2017).

¹⁵⁵ Press Release, U.S. Sec. & Exch. Comm’n, SEC Issues Investigative Report Concluding DAO Tokens, a Digital Asset, Were Securities (July 25, 2017), <https://www.sec.gov/news/press-release/2017-131> [hereinafter “SEC Issues Investigative Report on DAO Tokens”].

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ Telpner & Ahmadifar, *supra* note 20, at 5; SEC REPORT OF INVESTIGATION ON THE DAO, *supra* note 47, at 7.

¹⁵⁹ Telpner & Ahmadifar, *supra* note 20, at 5; SEC REPORT OF INVESTIGATION ON THE DAO, *supra* note 47, at 7–8.

¹⁶⁰ Telpner & Ahmadifar, *supra* note 20, at 5; SEC REPORT OF INVESTIGATION ON THE DAO, *supra* note 47, at 2–3.

¹⁶¹ Press Release, U.S. Sec. & Exch. Comm’n, SEC Issues DAO Investigative Report, *supra* note 155.

¹⁶² See *SEC v. W.J. Howey Co.*, 328 U.S. 293, 298–99 (1946) (articulating the four factors of an investment contract); Press Release, U.S. Sec. & Exch. Comm’n, SEC Issues Investigative Report on DAO Tokens, *supra* note 155.

¹⁶³ *Howey*, 328 U.S. at 298–99.

determined the following:

The DAO, an unincorporated organization, was an issuer of securities, and information about The DAO was ‘crucial’ to the DAO Token holders’ investment decision . . . The DAO was ‘responsible for the success or failure of the enterprise,’ and accordingly was the entity about which the investors needed information material to their investment decision.¹⁶⁴

Joel S. Telpner and Thomas M. Ahmadifar of the law firm Sullivan & Worcester LLP broke down this analysis differently by applying the facts of the DAO offering to the *Howey* factors:

The DAO Tokens fulfilled the test for an investment contract because the investors invested money in The DAO in the form of Ether, with a reasonable expectation of profits in the form of dividends from projects paid for with pooled money, and because the investors relied on the efforts of The DAO’s Curators to select projects for investment.¹⁶⁵

The application of the fourth factor caused confusion because the investors voted on what projects to fund, leaving many legal practitioners to question whether it was solely an effort by the investors that resulted in an expectation of profits, or if “the managerial efforts of others” also played a role.¹⁶⁶ The SEC reasoned that the voting rights afforded investors “did not provide them with meaningful control over the enterprise” because the investors did not have a clear ability to vote for contracts, and they were so geographically scattered that their ability to communicate with one another was limited.¹⁶⁷

Although the SEC clarified in the DAO Report that a security is still a security regardless of whether it may entail some innovative, technological characteristics, the SEC’s guidance only applied to the DAO Token, which clearly met the first three elements of *Howey*, and albeit more questionably, the fourth element as well.¹⁶⁸ Thus, the SEC did not answer the question of whether *all* tokens are

¹⁶⁴ Press Release, U.S. Sec. & Exch. Comm’n, SEC Issues Investigative Report on DAO Tokens, *supra* note 155.

¹⁶⁵ Telpner & Ahmadifar, *supra* note 20, at 5.

¹⁶⁶ *E.g.*, SEC REPORT OF INVESTIGATION ON THE DAO, *supra* note 47, at 11; Everdell, *supra* note 125 (discussing the SEC’s application of the four *Howey* factors to DOA tokens).

¹⁶⁷ *See generally* Press Release, U.S. Sec. & Exch. Comm’n, SEC Issues Investigative Report on DAO Tokens, *supra* note 155.

¹⁶⁸ *Howey*, 328 U.S. at 298–99; SEC REPORT OF INVESTIGATION ON THE DAO, *supra* note 47, at 11–17.

securities, and suggested a seemingly vague “facts-and-circumstances” test for future investigations.¹⁶⁹ This lack of clarity has left the market in an uncomfortable position of only being able to speculate as to what the SEC will do next following its warning.¹⁷⁰ It is fair to assume that most financial market players will await major regulatory enforcement actions to provide more guidance, which the market got a taste of in the SEC’s first enforcement action against two companies - REcoin Group and DRC World - and their founder, Maksim Zaslavskiy, for violating anti-fraud and registration provisions of securities law for offering tokens that were backed by non-existent assets.¹⁷¹ Zaslavskiy allegedly solicited money from investors in exchange for tokens in his companies.¹⁷² In doing so, he purportedly tied the tokens to investments in diamonds and real estate that would supposedly appreciate in value.¹⁷³ The SEC alleged that both schemes were completely fraudulent with no real investments or supporting infrastructure backing the assets.¹⁷⁴

Following these actions taken, the Commission attempted to clear up another potential loophole by issuing a statement on November 1, 2017 regarding the many celebrities (and other individuals) who have touted certain ICOs and virtual tokens.¹⁷⁵ The Commission stated that “[A]ny celebrity or other individual who promotes a virtual token or coin that is a security must disclose the nature, scope, and amount of compensation received in exchange for the promotion,” and that a failure to do so violates the anti-touting provisions and, potentially, the anti-fraud provisions of the federal securities laws.¹⁷⁶ The SEC warned investors that paid promotions may influence celebrity endorsements, and that individuals who seek to invest in celebrity-touted ICOs should conduct research

¹⁶⁹ Press Release, U.S. Sec. & Exch. Comm’n, SEC Issues Investigative Report on DAO Tokens, *supra* note 155.

¹⁷⁰ Everdell, *supra* note 125.

¹⁷¹ Lewis McLellan, *The crypto market is growing up*, GLOBAL CAPITAL EUROWEEK (Oct. 3, 2017); Frank Chaparro, *The SEC comes down on 2 cryptocurrency-based fundraising schemes*, BUS. INSIDER (Sept. 29, 2017), <http://www.businessinsider.com/recoin-group-foundation-drc-world-ico-sec-fraud-charges-cryptocurrency-2017-9>.

¹⁷² McLellan, *supra* note 171.

¹⁷³ Jeffrey L. Robins, *et al.*, *Cadwalader Attorneys Examine Enforcement Actions Against ICOs*, MONDAQ (Oct. 20, 2017), <http://www.mondaq.com/united-states/x/639148/fin+tech/Cadwalader+Attorneys+Examine+Enforcement+Actions+Against+ICOs>.

¹⁷⁴ *Id.*; *Investor Alert: Bitcoin and Other Virtual Currency-Related Investments*, *supra* note 147.

¹⁷⁵ See Press Release, U.S. Sec. & Exch. Comm’n, SEC Statement Urging Caution Around Celebrity Backed ICOs

(Nov. 1, 2017), <https://www.sec.gov/news/public-statement/statement-potentially-unlawful-promotion-icos> (discussing the lawfulness of celebrities using social media to publicly endorse the purchase of stocks or investment opportunities).

¹⁷⁶ *Id.*

about the relationship between a company and its promoter before making such an investment.¹⁷⁷

Moreover, the SEC Division of Enforcement, in conjunction with its new Cyber Unit¹⁷⁸ issued a cease and desist order against Munchee Inc., a California-based company that sold tokens to investors to fund its blockchain-based food review service after the SEC found that its conduct constituted an unregistered offering of securities.¹⁷⁹ Halting Munchee Inc.'s ICO, the SEC argued that the "MUN tokens" Munchee Inc. offered constituted "securities," and were thus within its purview because Munchee Inc. falsely led investors to believe that "efforts by the company and others would lead to an increase in value of the tokens" that would eventually be available to trade on secondary markets and capable of generating a return on investment.¹⁸⁰ This statement came nearly a week after the SEC filed a similar fraud suit against the organizer of PlexCoin, another token sale involving U.S. investors.¹⁸¹

These actions should give legal practitioners, companies contemplating ICOs, and investors an idea that the SEC is not taking this new way of raising capital lightly, and that the regulatory measures that surround ICOs will seemingly continue to become more defined.¹⁸² However, there is still much to be seen about just how defined such measures will be. For instance, one can only imagine that the recent statement by the CFTC – indicating that tokens are commodities and thus within their purview – will likely entail official language on a potential partnership between the SEC and the CFTC in pursuing enforcement matters surrounding ICOs.¹⁸³ Further, the SEC made a firm and somewhat surprising

¹⁷⁷ *Id.*

¹⁷⁸ *See id.* (stating that the creation of the Cyber Unit complements SEC Chairman Jay Clayton's "initiatives to implement an internal cybersecurity risk profile and create a cybersecurity working group to coordinate information sharing, risk monitoring, and incident response efforts throughout the agency.").

¹⁷⁹ Press Release, U.S. Sec. & Exch. Comm'n, Company Halts ICO After SEC Raises Registration Concerns (Dec. 11, 2017), <https://www.sec.gov/news/press-release/2017-227>.

¹⁸⁰ *Id.*

¹⁸¹ Stan Higgins, *SEC Halts Multimillion-Dollar 'Munchee' ICO for Securities Violations*, COINDESK (Dec. 11, 2017, 4:40 PM), <https://www.coindesk.com/sec-halts-multimillion-dollar-munchee-ico-securities-violations/>; Complaint at 1-2, U.S. Sec. & Exch. Comm'n v. Plex-Corps (E.D.N.Y. 2017) (No. 17-7007); Press Release, U.S. Sec. & Exch. Comm'n, SEC Emergency Action Halts ICO Scam (Dec. 4, 2017), <https://www.sec.gov/news/press-release/2017-219>.

¹⁸² Cadwalader Wickersham & Taft LLP, *Wild West No Longer: the SEC Brings Enforcement Actions Against Two Initial Coin Offerings*, LEXOLOGY (Oct. 12, 2017), <https://www.lexology.com/library/detail.aspx?g=19286dd8-108b-4f2b-9ee5-0a75e13f5a7b>; Press Release, U.S. Sec. & Exch. Comm'n, SEC Chairman Jay Clayton Statement on Cryptocurrencies and Initial Coin Offerings (Dec. 11, 2017), <https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11>.

¹⁸³ Cadwalader Wickersham & Taft LLP, *supra* note 182; *see In re Coinflip, Inc.*, CFTC No. 15-29, 2015 WL 5535736 (Sept. 17, 2015).

statement regarding cryptocurrencies when it rejected on similar grounds two Bitcoin ETFs in March 2017:¹⁸⁴ the Winklevoss Bitcoin Trust (COIN ETF) on March 10,¹⁸⁵ and the SolidX Bitcoin Trust on March 28.¹⁸⁶ The basis of the SEC's rejection was that the ETFs lacked both regulatory oversight and "surveillance-sharing" agreements available for the SEC to enter into in order to monitor potential market manipulation.¹⁸⁷ In its analysis, the SEC pointed out that with respect to previously approved commodity-trust exchange traded products (ETP), such as ETFs listed for trading, there have always been "regulated markets for trading futures on the underlying commodity . . . and the ETP-listing exchange has entered into surveillance-sharing agreements with . . . those markets"¹⁸⁸ to prevent potential manipulation. In other words, the SEC is seemingly announcing that there may be higher chance for an ETF of this kind to get SEC approval with a futures contract on Bitcoin listed on a CFTC-regulated exchange.¹⁸⁹

It is important to note that the SEC agreed in its Disapproval Order that Bitcoin is a commodity.¹⁹⁰ While most ETFs, like COIN and SolidX, are registered under the 1933 Act and the Securities Exchange Act 1934 ("1934 Act"), most are also registered under the Investment Company Act of 1940 ("1940 Act"), which applies to pooled investment vehicles primarily engaged in investing, reinvesting and holding securities.¹⁹¹ COIN and SolidX were not registered

¹⁸⁴ Press Release, U.S. Sec. & Exch. Comm'n, SEC Chairman Jay Clayton Statement on Cryptocurrencies and Initial Coin Offerings, *supra* note 182 ("The SEC also has not to date approved for listing and trading any exchange-traded products (such as ETFs) holding cryptocurrencies or other assets related to cryptocurrencies.") (footnote omitted); *see generally Exchange-Traded Fund*, INVESTOPEDIA, <https://www.investopedia.com/terms/e/etf.asp> (last visited May 24, 2018) (defining an exchange-traded fund as "a marketable security that tracks an index, a commodity, bonds, or a basket of assets like an index fund . . . and trades like a common stock exchange.").

¹⁸⁵ Bats BZX Exch., Exchange Act Release No. 34-80206, at 2–3, 6 (Mar. 10, 2017). The Trust was set up to have its shares track the price of bitcoins, the Trust's only asset, on the Gemini Exchange, a separately owned and operated exchange. *Id.*

¹⁸⁶ NYSE Arca, Exchange Act Release No. 34-80319, at 2, 44 (Mar. 28, 2017). The Trust was set up to have its shares track the price of bitcoins, its primary asset, as measured by the TradeBlock XBX Index. *Id.*

¹⁸⁷ Nathan Popper, *S.E.C. Rejects Winklevoss Brothers' Bid to Create Bitcoin E.T.F.*, N.Y. TIMES (Mar. 10, 2017), <https://www.nytimes.com/2017/03/10/business/dealbook/winklevoss-brothers-bid-to-create-a-bitcoin-etf-is-rejected.html>; Adam Jeffery, *US SEC Denies a Second Application to List Bitcoin Product*, CNBC (Mar. 29, 2017, 6:49 AM), <https://www.cnbc.com/2017/03/29/us-sec-denies-a-second-application-to-list-bitcoin-product.html>.

¹⁸⁸ NYSE Arca, Exchange Act Release No. 34-80319, *supra* note 186, at 26–27.

¹⁸⁹ Jerry Brito, Houman Shadab, & Andrew Castillo, *Bitcoin Financial Regulation: Securities, Derivatives, Prediction Markets, and Gambling*, 16 COLUM. SCI. & TECH. L. REV. 144, 177 (2014).

¹⁹⁰ NYSE Arca, Exchange Act Release No. 34-80319, *supra* note 186, at 6.

¹⁹¹ INVESTMENT COMPANY ACT OF 1940, 15 U.S.C. § 3(c)((E)(10)(B) (2012); *What is an*

under the 1940 Act because they, like other commodity-based ETFs, did not purport to invest or reinvest and hold securities, instead planning to list and trade commodities like gold, silver, oil and natural gas.¹⁹² The SEC, in abstaining from contesting the distinction between both ETFs being commodity-based ETFs rather than security-based ETFs, portrayed that it does not view Bitcoin as a “security.”¹⁹³ This approach indicates that the SEC views Bitcoin as a “commodity,” which likely means that the SEC will view other major cryptocurrencies (*e.g.* Litecoin, Ripple, Ether, etc.) as commodities.¹⁹⁴

The SEC agreed to consider a “petition for review” of Bats (BZX) Exchange, the operator of the Winklevoss Exchange on which the ETF would trade, filed in March 2017.¹⁹⁵ While this may provide some hope to would-be investors looking to access Bitcoin on a regulated and transparent exchange, the Disapproval Order hinged on the underlying Bitcoin market structure itself as opposed to any specific detail of the ETF design.¹⁹⁶ Therefore, it offers a high bar for future approval because it is ultimately the unregulated structure of the Bitcoin market that separates it and makes it alluring to investors; if the structure changed, Bitcoin might lose its appeal.¹⁹⁷ In the meantime, both investors and issuers alike are left only to guess as to when the SEC will either approve an ETF holding cryptocurrencies or register an ICO.¹⁹⁸

ETF?, INV. CO. INST., http://www.icifactbook.org/ch3/17_fb_ch3 (last visited May 24, 2018).

¹⁹² Bats BZX Exch., Exchange Act Release No. 34-80206, *supra* note 185, at 5, 19, 24; NYSE Arca, Exchange Act Release No. 34-80319, *supra* note 186, at 23, 26; *see also* Securities Exchange Act of 1934, 15 U.S.C. § 6(b)(5) (2012) (explaining the Exchange Act is intended “to remove impediments to and perfect the mechanism of a free and open market . . . to protect investors and the public interest.”).

¹⁹³ Press Release, U.S. Sec. & Exch. Comm’n, SEC Chairman Jay Clayton Statement on Cryptocurrencies and Initial Coin Offerings, *supra* note 182.

¹⁹⁴ *See* Christopher Burke, *Bitcoin: Breaking Bad or Breaking Barriers?*, 18 N.C. J.L. & TECH. ON. 244, 262, 266-67 (explaining how “CFTC simply seeks to apply its regulation to Bitcoin the same way it does to any futures instrument, whether or not the underlying product is a commodity or a security.”).

¹⁹⁵ Bats BZX Exch., Exchange Act Release No. 34-80206, *supra* note 185, at 2; Sumit Roy, *Bitcoin Flying as ETF Gets Second Shot*, CNBC (May 25, 2017), <https://www.cnbc.com/2017/05/25/bitcoin-flying-as-etf-gets-second-shot.html>; *see also* Kevin Helms, *SEC Approves Petition to Review Bitcoin ETF Rejection*, BITCOIN (Apr. 25, 2017), <https://news.bitcoin.com/sec-approves-petition-review-bitcoin-etf-rejection/> (noting that NYSE Arca, SolidX’s exchange operator, did not petition for review).

¹⁹⁶ Roy, *supra* note 195.

¹⁹⁷ *Id.*

¹⁹⁸ *See* Christopher Burks, *supra* note 194, at 263–65 (expressing that the SEC denied registration to “well-known investors” whose “fund was tied to the price of Bitcoin” because the exchange of Bitcoin is unregulated); *see also* Nathan Martinez, *ICO Market Watching: What’s Happening with Regulation?*, MEDIUM (Oct. 27, 2017), <https://medium.com/@blockchainate/icos-not-all-tokens-are-created-equal-1969ca105358> (stating that some regulatory agencies, such as the U.S. Commodity Futures Trading Commission, “have taken a forward-thinking approach” to ICOs).

Part II of this Note will examine the types of tokens that may fall outside the scope of federal securities laws, and whether or not they will soon be regulated.¹⁹⁹ Part II will further analyze the secondary markets that trade digital currencies, and provide a recommended legal framework for companies issuing ICOs to follow.²⁰⁰ Part II will then summarize the various stances taken by foreign jurisdictions, and discuss what the future may hold for ICOs.²⁰¹

II. UTILITY TOKENS v. SECURITY TOKENS

Not only did J.R. Willet invent the idea behind an ICO, but he also completed the first ICO in July 2013, raising over \$600,000 from investors²⁰² to fund the creation of a new digital currency called Mastercoin.²⁰³ Although a majority of the earliest ICOs created alternative digital currencies to compete with Bitcoin, Mastercoin built new protocol layers – including a network of currencies, commodities and securities – on top of the Bitcoin platform.²⁰⁴ This meant that Mastercoin would benefit from Bitcoin’s popularity and large network of users that offered both a high degree of security and a high level of mining power.²⁰⁵ Investors participated in Mastercoin by sending their Bitcoins to a special address.²⁰⁶ In return for sending the Bitcoins, the investors received a certain amount of Mastercoins that they hoped would become more valuable in the future, at which point they would sell their Mastercoins to realize a return.²⁰⁷

In recent years, this idea has evolved and has become far more complex in the process.²⁰⁸ Developers have been focusing less on creating alternative digital currencies and more on creating either decentralized applications that offer investors digital goods or services in a company that can be paid for with “utility tokens,”²⁰⁹ or structuring their ICOs so similar to that of an IPO that the tokens

¹⁹⁹ *Infra* Part II, Sections A & B.

²⁰⁰ *Infra* Part II, Section C & D.

²⁰¹ *Infra* Part II, Section E & F.

²⁰² Everdell, *supra* note 125.

²⁰³ See generally Vitalik Buterin, *Mastercoin: A Second-Generation Protocol on the Bitcoin Blockchain*, BITCOIN MAG. (Nov. 4, 2013), <https://bitcoinmagazine.com/articles/mastercoin-a-second-generation-protocol-on-the-bitcoin-blockchain-1383603310/> (explaining the structure of Mastercoin “seeks to create an entirely new network of currencies, commodities, and securities” by storing Bitcoin in every transaction).

²⁰⁴ *Id.*

²⁰⁵ *Id.* (explaining how other cryptocurrencies “run on other protocols layered on top of the blockchain.”).

²⁰⁶ *Id.*

²⁰⁷ *Id.*

²⁰⁸ See Olaf Carlson-Wee, *The Future is a Decentralized Internet*, TECHCRUNCH (Jan. 28, 2017), <https://techcrunch.com/2017/01/08/the-future-is-a-decentralized-internet/>.

²⁰⁹ Everdell, *supra* note 125.

offered are “security tokens.”²¹⁰

Conventionally described on a white paper on the issuer’s website, tokens provide investors with an opportunity to have some form of stake in the company.²¹¹ When the token possesses features similar to traditional investment contracts, it is then likely that the token will meet the *Howey* factors and the court will deem it a security, and the issuing company offering the token(s) to the public will have to register the token(s) with the SEC.²¹² Conversely, if the token does not require the issuing company to cede any ownership in the entity to the purchasers, then it is likely that the token will not be a security, and therefore federal securities laws will exempt it.²¹³ Issuing companies thus need to go into great detail when structuring their offerings if they wish to remain exempt from federal securities laws.²¹⁴

A. Utility Tokens

As a way to side-step potentially difficult transactional costs and allow for innovation and faster development of products and services in the market, many developers often scramble to keep their tokens from conforming to the definition of a “security” and thus remain decentralized and exempt from registering with

²¹⁰ See Carlson-Wee, *supra* note 208 (stating application tokens are “used in the network to participate.”). *But see* Daniel Roberts, *Be Aware: An ICO is not like an IPO*, YAHOO (Dec. 28, 2017), <https://finance.yahoo.com/news/initial-coin-offering-ico-not-like-ipo-201452536.html> (explaining how investors do not receive equity in the company, voting rights, or ownership when they buy tokens in an ICO).

²¹¹ Shakow, *supra* note 15, at 1387.

²¹² Press Release, U.S. Sec. & Exch. Comm’n, SEC Chairman Jay Clayton Statement on Cryptocurrencies and Initial Coin Offerings, *supra* note 182; *see* SEC v. W. J. Howey Co., 328 U.S. 293, 299 (1946) (stating the *Howey* test is “a person invests money in a common enterprise and is led to expect profits solely from the efforts of the promoter or a third party.”).

²¹³ Jeff John Roberts, *Why Tech Investors Love ICOs – Lawyers Don’t*, FORTUNE (June 26, 2017), <http://fortune.com/2017/06/26/ico-initial-coin-offering-investing/> (explaining how “removing the expectation of profit” would not deem a token to be a security); *see also* Securities Exchange Act of 1934, 15 U.S.C. §§1–39, §3(a)(10) (2012) (stating a security means “certificate of interest or participation in any profit-sharing agreement” or “any certificate of interest or participation in, temporary or interim certificate for,” indicating that a token that does not require ownership of a company may not include an interest or participation in a “profit-sharing agreement.”).

²¹⁴ David M. Otto & Andrea K. Louie, *Navigating the Crypto Equity Capital Markets: The Intersection of Securities Law and Cryptocurrency Financing*, MARTINDAVIS LLC (Sept. 2017), https://docs.wixstatic.com/ugd/e826f9_7ab627596ce64ee9a2187a62f1d5400b.pdf (structuring the sale of a token in a way “the SEC is less likely to conclude” a token is a security by “(i) validat[ing] the blockchain network and vot[ing] on the [company’s] issues, and (ii) convert[ing] [the] tokens and deploy[ing] these tokens on the [company’s] blockchain after it goes live.”); Press Release, U.S. Sec. & Exch. Comm’n, SEC Chairman Jay Clayton Statement on Cryptocurrencies and Initial Coin Offerings, *supra* note 182.

the SEC prior to an offering.²¹⁵ Such developers maintain that their organization is offering “utility tokens” or tokens more akin to tradable gift cards, software licenses or donation initiatives rather than traditional securities.²¹⁶ “Utility tokens” can be thought of as application-specific tokens that have a primary technical function of offering only services in their company.²¹⁷ A key distinction between utility tokens and other tokens, like digital currencies that possess features and characteristics of debt or equity interest denominated in tokens, is that utility tokens have a “non-incident utility” with respect to the issuing platform or system.²¹⁸ This distinction keeps them from falling into the category of “securities.”²¹⁹ Some additional features that utility token issuers must refrain from implementing include offering tokens that either bear a coupon or grant investors a right to participate in other investment opportunities.²²⁰

An example of a utility token that serves only as a means of exchange inside an application is the Basic Attention Token (BAT), which is a proprietary token Brave, a web browser that automatically blocks ads and trackers, uses.²²¹ If users want to use Brave’s ad-free services, they must pay for them on a blockchain

²¹⁵ Lukas Schor, *8 Important Things to Know about Security Tokens/ Token Regulation*, MEDIUM (Nov. 22, 2017), <https://medium.com/@argongroup/8-important-things-to-know-about-security-tokens-token-regulation-3d548a1a6367>; *see also* Securities Exchange Act of 1934, 15 U.S.C. §§1–39, §3(a)(10) (2012) (inferring a token is not a security because it is not, “in general, any instrument commonly known as a security.”); Danton Byans, *Bitcoin and Money Laundering: Mining for an Effective Solution*, 89 IND. L.J. 441, 454 (2014) (explaining how “the lack of . . . action by the U.S. government indicates that it . . . tolerates Bitcoin as an unregulated virtual currency.”).

²¹⁶ Lindsay Lin, *Why ICOs Should Want to Be Securities*, YAHOO (Oct. 2, 2017), <https://finance.yahoo.com/news/why-icos-want-securities-120529301.html>.

²¹⁷ Micha Benoliel, *Understanding the Difference between Coins, Utility Tokens and Tokenized Securities: How The Blockchain Disruption is Shaking Status Quo*, MEDIUM (Jan. 31, 2015, 11:00 PM), <https://medium.com/startup-grind/understanding-the-difference-between-coins-utility-tokens-and-tokenized-securities-a6522655fb91>.

²¹⁸ Jay G. Baris, *et al.*, *supra* note 38, at 11. Such “non-incident utility” include rights of obtaining future services strictly within the platform or system offering the token, at a favorable rate. These rights may include the ability to sell products, vote on features and functionality, contribute labor or effort, develop or create features, mine tokens, or access or license the system, and charge a respective toll. *Id.*

²¹⁹ *Id.*

²²⁰ *Id.* (stating tokens that are redeemable for net revenues, or that “grant holders a pro rata portion of a percentage of revenues from contracts entered into on the platform” may also cause them to be deemed securities).

²²¹ Everdell, *supra* note 125; Jon Russell, *Former Mozilla CEO Raises \$35M in Under 30 Seconds for his Browser Startup Brave*, TECHCRUNCH (June 1, 2017), <https://techcrunch.com/2017/06/01/brave-ico-35-million-30-seconds-brendan-eich/>.

platform with BATs.²²² Brave's ICO raised over \$35 million in Ether from investors who received BATs in return.²²³ The Ether provided Brave with capital early on in its developing stage, helping it develop its product while offering investors BATs to either use for the company's services or hold on to and resell in a secondary market if the demand, and therefore price, go up.²²⁴

Companies that intend to offer utility tokens must assure investors that their tokens are not an investment in the company, and there are no profits, income, or economic gains that investors should expect when purchasing such tokens in an ICO.²²⁵ Rather, investors should expect only non-incidental utility rights to the company issuing the token.²²⁶ Practitioners have analogized utility tokens as being the fuel that powers limitless, decentralized services and technical applications pursuant to an issuing company.²²⁷ By pre-selling access to a specific service or an application, companies see the potential to generate a large network of dedicated users.²²⁸ If the token issuer does not raise its target amount of money, the issuer may promise to refund the money as a way of instilling trust in the investor.²²⁹

B. Security Tokens

Alternatively, token issuers may not have to worry about exemptions at all,

²²² BRAVE SOFTWARE, BASIC ATTENTION TOKEN (BAT): BLOCKCHAIN BASED DIGITAL ADVERTISING 19 (2018), <https://basicattentiontoken.org/BasicAttentionTokenWhitePaper-4.pdf>; Everdell, *supra* note 125.

²²³ Everdell, *supra* note 125; Mo Marshall, *Ad-blocking Browser Brave Courts New Users with Free Crypto Tokens*, VENTUREBEAT.COM (Dec. 6, 2017, 8:00 AM), <https://venturebeat.com/2017/12/06/ad-blocking-browser-brave-courts-new-users-with-free-crypto-tokens/>.

²²⁴ BRAVE SOFTWARE, BASIC ATTENTION TOKEN (BAT): BLOCKCHAIN BASED DIGITAL ADVERTISING 19 (2018), <https://basicattentiontoken.org/BasicAttentionTokenWhitePaper-4.pdf>; Everdell, *supra* note 125.

²²⁵ Jay G. Baris, *et al.*, *supra* note 38, at 12; Gary J. Ross, *Munchee and its Repercussions in the ICO World*, BLOOMBERG BNA (Dec. 28, 2017), <https://www.bna.com/munchee-repercussions-ico-n73014473729/>.

²²⁶ Jay G. Baris, *et al.*, *supra* note 38, at 11; COINBASE, A SECURITIES LAW FRAMEWORK FOR BLOCKCHAIN TOKENS 10 (2016), <https://www.coinbase.com/legal/securities-law-framework.pdf>.

²²⁷ Jay G. Baris, *et al.*, *supra* note 38, at 8; *see* FEDERAL SECURITIES LAW REPORTS 2810, FED. SEC. L. REP. 4 (2018) (providing the SEC has taken the position that the utility token has more capability than merely the proposed closed system).

²²⁸ *See Basic Attention Token (BAT): Blockchain Based Digital Advertising*, BRAVE SOFTWARE 18 (Jan. 7, 2018), <https://basicattentiontoken.org/BasicAttentionTokenWhitePaper-4.pdf> (noting also that some platforms such as Brave, intended to offer users other various services to incentivize them to continue to use its platform).

²²⁹ *See* Comm'r of Internal Revenue v. Brooklyn Union Gas Co., 62 F.2d 505, 506 (2d Cir. 1933) (holding that money received under a claim of right is income); Shakow, *supra* note 15, at 1387.

and instead intend to offer “security tokens” that entail the features of “utility tokens.”²³⁰ Some practitioners have taken contrary positions to pro-utility token developers and disagree with the notion that ICOs having their tokens categorized as securities is a negative thing, instead taking the stance that token issuers should “not only accept but embrace” the classification.²³¹ Lindsay Lin, a counsel and program manager at Lightyear.io, a company that leverages the open source Stellar protocol to build digital payments infrastructure and services, contends that “[i]ssuing security tokens under regulatory frameworks such as Regulation D, Regulation S, Regulation A+, and Regulation Crowdfunding is significantly cheaper and faster than conducting an [IPO], and it can significantly reduce legal risk.”²³² Ms. Lin explains that the potential risk of costly defense litigation against seemingly inevitable SEC action down the road is not worth the attempt to sidestep regulatory measures early on by attempting to offer utility tokens.²³³

Not only does an organization intending to offer only utility tokens need to worry about federal securities laws and unlikely exemptions, it must also consider parallel state laws and potential suits brought by investors.²³⁴ Investors may initiate litigation pursuant to Section 12(a)(1) of the Securities Act to obtain monetary damages or contract rescission if the price of the token falls short of the original price of the ICO.²³⁵ Further, private investors also have in their arsenal Rule 10b-5 of the Securities Act, which offers relief from misleading sales tactics or other fraudulent activity.²³⁶ In general, the argument for security tokens

²³⁰ See generally, Joseph Young, *US Commodity Futures Trading Commission: ICOs Could Transform into Commodities*, BTCMANAGER.COM, <https://btcmanager.com/us-commodity-futures-trading-commission-icos-transform-commodities/> (last visited May 24, 2018) (“[Digital currencies] may start their life as a security from a capital-raising perspective but then at some point — maybe possibly quickly or even immediately — turn into a commodity.”) (quoting CFTC Commissioner Brian Quintenz).

²³¹ Lin, *supra* note 216.

²³² *Id.*

²³³ *Id.*

²³⁴ *Blue Sky Laws*, SEC.GOV, <https://www.sec.gov/fast-answers/answers-blueskyhtm.html> (last modified Oct. 14, 2014). Every state has a set of Blue Sky Laws, which vary from state to state and “are designed to protect investors against fraudulent sales practices and activities.” *Id.*; see also *Reves v. Ernst & Young*, 494 U.S. 56, 63–64 (1990) (providing that states use the “family resemblance test” to determine whether a type of instrument is a security subject to regulation); Evan Jensen, Joe Wallin & Jordan Rood, *Token Sales & The Risk Capital Test*, THE STARTUP L. BLOG (Aug. 2, 2017), <http://thestartuplawblog.com/token-sales-risk-capital-test/> (stating that some states apply the risk capital test, which is arguably more expansive than the SEC’s *Howey* test, to “determine whether in a particular transaction the instrument offered is a security.”).

²³⁵ *In re MobileMedia Sec. Litig.*, 28 F. Supp. 2d 901, 923 (D.N.J. 1998); Lin, *supra* note 216.

²³⁶ See *In re MobileMedia Sec. Litig.*, 28 F. Supp. 2d at 934 (providing that a plaintiff must establish the defendant knowingly made a misrepresentation of a material fact, the plaintiff reasonably relied on the misrepresentation which was a loss to plaintiff); Lin, *supra* note

as opposed to utility tokens is the former better protect investors who may not be able to afford to lose money on high-risk investments by clarifying expectations and rights, and offering recourse in the case of dishonest issuing companies.²³⁷

C. A Comprehensive Legal Framework for Companies to Follow

Once a company has decided on whether it intends to offer a utility token or a security token, whether the platform it will use will be an exchange, and whether the company will be an investment company, there are some key implications to consider. On a “Practising Law Institute” Webinar, four legal practitioners summed up a theoretical legal framework for companies considering ICOs to follow.²³⁸

The practitioners began by stating that the issuer must structure both its token and offering accordingly during presale analysis, analysis of the actual sale, and in a post sale analysis of whether there will be resale opportunities for holders or reporting by the issuer.²³⁹ The issuer must also consider any other laws that may apply during these periods.²⁴⁰ In analyzing the token, the offering company should apply the *Howey* test, which may not be as easy as it seems at first glance. When considering the first element, “an investment of money,” some key questions may arise, including whether the price is variable and its potential significance.²⁴¹ Consider the floating price in the DAO offering.²⁴² First you must consider if the SEC took action, and whether that means that a price must then be fixed to pass this test.²⁴³ In regards to the second element, “common enterprise,” issuing companies should consider whether or not there is vertical commonality amongst tokens or platforms, as the value of the token may cause the value of the company go up.²⁴⁴

216.

²³⁷ See Salvatore Scanio & Jason W. Glasgow, *Payment Card Fraud, Data Breaches, and Emerging Payment Technologies*, 21 FIDELITY L.J. 59, 92 (2015) (describing that primary purpose of security tokens are to secure and protect data in an electronic payment transaction).

²³⁸ Baris, *et al.*, *supra* note 38, at 17.

²³⁹ *Id.*

²⁴⁰ See John Biggs, *How to Run a Token Sale*, TECHCRUNCH (Sept. 22, 2017), <https://techcrunch.com/2017/09/22/how-to-run-a-token-sale/> (stating that one of the means to provide investors knowledge on a token sale is to distribute a white paper that describes the financial plan and a description of the token).

²⁴¹ Baris, *et al.*, *supra* note 38, at 17.

²⁴² Press Release, U.S. Sec. & Exch. Comm’n, SEC Issues Investigative Report on DAO Tokens, *supra* note 155.

²⁴³ See Ryan C. Farha, *SEC v. Edwards: An Opportunity to Knock on the Viability of the Howey Test as the Gatekeeper for the Federal Securities Laws*, 31 OKLA. CITY U. L. REV. 161, 168 (2006) (noting that the *Howey* Test is to be applied flexibly).

²⁴⁴ *Id.*

When analyzing the third element, “expectation of profits,” issuers should ask themselves if prospective buyers will use the tokens to actually buy into the token or platform along with the services it will offer, or if they will look at this offering speculatively for the potential resale value.²⁴⁵ Lastly, the fourth and most controversial element, “the efforts of others,” raises the seminal question of whether voting rights decide if a token will be a security. Many companies and practitioners think that this element does in fact boil down to voting rights, however, this is not necessarily true.²⁴⁶ Consider the recent Snap IPO, where Snap sold more than 200 million shares to the public and offered no voting rights, but met the fourth element seemingly without question.²⁴⁷

After evaluating the application of *Howey*, the company must then consider the specific jurisdiction it is in, and whether or not there are “risk mitigants” or other areas of law that apply.²⁴⁸ After considering these factors and consulting with a legal specialist, a company should have a fairly decent understanding of whether it is offering a security. If it is a security that the issuing company offers, the company can either register with the SEC or risk relying on exemptions.²⁴⁹

For utility token sales, disclosure of risks and transparency to investors explaining why the token the company is offering is not a security are important.²⁵⁰

²⁴⁵ Maura K. Monaghan, *An Uncommon State of Confusion: The Common Enterprise Element of Investment Contract Analysis*, 63 *FORDHAM L. REV.* 2135, 2168 (1995).

²⁴⁶ *See id.* at 2151–52 (acknowledging that the courts may focus on the degree of control the investor has over the investment).

²⁴⁷ Caitlin Huston, *Snap IPO: Six things to know about Snapchat parent company as it goes public*, *MKT. WATCH* (Mar. 3, 2017, 8:40 AM), <https://www.marketwatch.com/story/snap-ipo-six-things-we-now-know-about-snapchat-parent-company-2017-02-02?mg=prod/accounts-mw>.

²⁴⁸ *See In re Lehman Bros. Sec. & ERISA Litig.*, 799 F. Supp. 2d 258, 305 (S.D.N.Y. 2011) (arguing that a plaintiff may be able to hold a defendant liable for losses for failure to have risk mitigation policies in place).

²⁴⁹ *See generally* Jor Law, *Don't Panic! US Securities Exemptions for Initial Coin Offerings*, *CROWD FUND INSIDER* (Aug. 21, 2017, 8:00 AM), <https://www.crowdfundinsider.com/2017/08/120850-dont-panic-us-securities-exemptions-initial-coin-offerings> (illustrating Common exemptions relied upon for token offerings are Regulation D if offering to accredited investors, Regulation S for offshore offerings, Rule 701 for usage of tokens as compensation, Rule 4(a)(2) for general exemptions, Regulation (c)(f) for crowdfunding, and the non-profit exemption under the 1933 and 1934 Acts for token issuers that are foundations without shareholders, typically require a 501(c)(3) exemption. Additionally, once a token has been sold, issuers need to include Rule 144 compliance information regarding the 12-month holding period compliance for token purchasers, as well as Section 12(g) requiring registration under the 1934 Act if a token is an equity token, and Rule 12g3-2(b) for foreign private issuers).

²⁵⁰ *See* Andrew D. Ledbetter & Trenton C. Dykes, *SEC eats away at Munchee “utility tokens”*: guidance for ICOs, *DLA PIPER* (Dec. 14, 2017), <https://www.dlapiper.com/en/us/insights/publications/2017/12/sec-eats-away-at-munchee-utility-tokens-guidance-for-icos/> (noting that usually utility tokens as opposed to security tokens do not create an expectation of profits from use).

Additionally, a company should consult with third party experts to test the vulnerability and security of their platforms, remembering the reason the SEC's DAO Report became a notorious use case was because of its smart contract vulnerability in which hackers broke into the code to remove \$50 million in digital currency.²⁵¹ Lastly, companies should consider the 1940 Act, which may apply when issuers intending to offer utility tokens may inadvertently subject themselves to relevant security laws by pooling assets together.²⁵²

D. Secondary Markets

As the ICO and blockchain communities continue to wrestle with the decision of either playing it safe and registering their offerings with the SEC, or risking potential enforcement actions from regulators by tip-toeing around compliance measures and attempting to offer unregulated, "utility tokens," legal experts warn of enforcement measures that could be on the horizon that will target not only the ICO, but also token exchanges on the secondary market.²⁵³

Hours after the SEC ruling that the DAO exchange constituted an unregistered security and was thus subject to regulatory penalties, the Department of Justice (DOJ) and the Financial Crimes Enforcement Network (FinCEN) imposed a \$110 million penalty against BTC-e, a digital currency trading platform, for an alleged international money laundering scheme and laundering funds.²⁵⁴ While speaking at a blockchain industry conference in Washington, D.C., Carol Van Cleef, a FinTech attorney, noted that these two events were not isolated, and that the SEC wanted its enforcement action to send a message to third party exchanges that they, too, are not exempt from securities regulations so long as they allow the trading of "security tokens."²⁵⁵ Van Cleef spoke to the notion that criminal statutes will always apply to exchanges that act as money service businesses.²⁵⁶ If the business does not have a license or registration with FinCEN as

²⁵¹ Press Release, U.S. Sec. & Exch. Comm'n, SEC Issues Investigative Report on DAO Tokens, *supra* note 155.

²⁵² See 15 U.S.C. § 3(c)(10)(B) (2012) (describing that pooled funds have the same meaning as proscribed in the Internal Revenue Code).

²⁵³ SEC and CFTC Issue Statements on Cryptocurrencies and Initial Coin Offerings, PRAC. L. FIN. (2017), Westlaw 012-4123; Aaron Stanley, *Legal Experts Warn of Coming Crackdown on Token Exchanges*, COINDESK <https://www.coindesk.com/legal-experts-warn-of-coming-crackdown-on-token-exchanges/> (last updated July 31, 2017, 11:41 AM).

²⁵⁴ Press Release, U.S. Dept. of Treas., FinCEN Fines BTC-e Virtual Currency Exchange \$110 Million for Facilitating Ransomware, Dark Net Drug Sales (July 26, 2017), <https://www.fincen.gov/sites/default/files/2017-07/BTC-e%20July%2026%20Press%20Release%20FINAL1.pdf>; Stanley, *supra* note 253.

²⁵⁵ Stanley, *supra* note 253.

²⁵⁶ See FIN. CRIMES ENF'T NETWORK, DEP'T OF THE TREASURY, FIN-2013-G001, APPLICATION OF FINCEN'S REGULATIONS TO PERSONS ADMINISTERING, EXCHANGING, OR USING VIRTUAL CURRENCIES 1 (Mar. 18, 2013), <https://www.fincen.gov/sites/default/files/shared/FIN->

a money transmitter, then proper regulations and enforcement will follow.²⁵⁷ The following SEC Rules are ones that apply directly to secondary exchanges: Section 5 and Section 3(a)(1) of the 1934 Act,²⁵⁸ and Rule 3b-16(a) of the 1934 Act.²⁵⁹

E. Foreign Jurisdictions

While the United States is certainly taking an initiative to set out a framework for issuers considering ICOs, many countries have seemed to follow the SEC's stance on ICO regulation. On August 24, 2017, a staff notice from the Canada Securities Administrators set out a list of guidelines and rules determining that many ICOs appear to fall within the country's securities definition and are therefore subject to regulation.²⁶⁰ Singapore's Monetary Authority, while holding that virtual currencies are neither "money" nor "currency," published a consultation paper on November 21, 2017 proposing legislation to expand its scope of regulation of virtual currencies.²⁶¹ Hong Kong's financial regulating agency issued a statement on September 5, 2017 warning of applicable securities laws that may extend past ICOs to the exchanges that are actually trading the digital tokens.²⁶² Similarly, Malaysia's Securities Commission issued a statement on November 6, 2017 stating that the Commission is actively considering regulations and guidelines regarding cryptocurrencies;²⁶³ this occurred after issuing a warning on

2013-G001.pdf (distinguishing "virtual currency" and "real currency" by stating that while real currency is legal tender that is used and accepted as a "medium of exchange in the country of issuance," virtual currency lacks similar legal tender status in any jurisdiction).

²⁵⁷ Stanley, *supra* note 253.

²⁵⁸ See Securities Act of 1934, 15 U.S.C. § 78(c)(a)(1) (2012) (defining what constitutes an exchange).

²⁵⁹ *Id.*; see 17 C.F.R. 240.36b-16(a) (defining terms in the Exchange Act) (2012). *But see* SEC REPORT OF INVESTIGATION ON THE DAO, *supra* note 47, at 17 (concluding "[t]he Platforms that traded DAO Tokens appear to have satisfied the criteria of Rule 3b-16(a) and do not appear to have been excluded from Rule 3b-16(b)").

²⁶⁰ CAN. SEC. ADMIN., CSA Staff Notice 46-307 Cryptocurrency Offerings (Aug. 24, 2017), http://www.osc.gov.on.ca/documents/en/Securities-Category4/csa_20170824_crypto-currency-offerings.pdf; see also *In re* Token Funder Inc. (2017) (Can. Ont. Sec. Com.), http://www.osc.gov.on.ca/en/SecuritiesLaw_ord_20171023_token.htm (noting that the Ontario Securities Commission allowed Ontario's first regulated ICO on November 2, 2017).

²⁶¹ MAS Launches Second Consultation on New Regulatory Framework for Payments, MONETARY AUTH. OF SINGAPORE (Nov. 21, 2017), <http://www.mas.gov.sg/News-and-Publications/Media-Releases/2017/MAS-Launches-Second-Consultation-on-New-Regulatory-Framework-for-Payments.aspx>.

²⁶² Statement on initial coin offerings, H.K. SEC. & FUTURES COMM'N (Sept. 5, 2017), <http://www.sfc.hk/web/EN/news-and-announcements/policy-statements-and-announcements/statement-on-initial-coin-offerings.html>.

²⁶³ Tan Sri Ranjit Ajit Singh, Chairman, Sec. Comm'n. Malay., Opening Address at Synergistic Collaborations by SC at the Digital Finance Conference (Nov. 6, 2017),

September 7, 2017 that ICOs may be unregulated and potentially expose investors to risks involving fraudulent activity.²⁶⁴ While Germany allows ICOs, its Federal Financial Authority released a statement on November 15, 2017 warning investors of the risks associated with ICOs.²⁶⁵ In Australia, digital currencies will face registration and regulatory guidelines in mid-2018, after the Parliament's December 7, 2017 amendments to the Anti-Money Laundering and Counter-Terrorism Financing Act of 2006 take effect.²⁶⁶

The European Union's Securities and Markets Authority (ESMA) issued two statements on November 13, 2017 about the risks to investors of ICOs and the rules applicable to firms involved in ICOs.²⁶⁷ In its alert, ESMA highlighted potential risks to investors of ICOs including fraud or illicit activities, a lack of exit options and extreme price volatilities, and inadequate information.²⁶⁸ ESMA also addressed firms issuing ICOs and the relevant legislation with which they must comply upon an offering.²⁶⁹ Other notable countries that have taken stances in line with the U.S. are Chile, Gibraltar, and Taiwan.²⁷⁰

https://www.sc.com.my/post_archive/opening-remarks-by-tan-sri-ranjit-ajit-singh-chairman-of-securities-commission-malaysia-at-synergistic-collaborations-by-sc-scxs-digital-finance-conference-2017-in-kuala-lumpur-on-6-november-2.

²⁶⁴ Press Release, Sec. Comm'n. Malay., Media Statement on Initial Coin Offerings, (Sept. 7, 2017), https://www.sc.com.my/post_archive/media-statement-on-initial-coin-offerings.

²⁶⁵ *Initial coin offerings: High risks for consumers*, BAFIN FED. FIN. SUPERVISORY AUTH. (Nov. 15, 2017), <https://www.bafin.de/dok/10202490>.

²⁶⁶ Anti-Money Laundering and Counter-Terrorism Financing Amendment Bill 2017 (Cth) sch 1 item 2 (Austl).

²⁶⁷ Press Release ESMA50-157-828, Eur. Sec. & Mkt. Auth., ESMA alerts firms involved in *Initial Coin Offerings* (ICOs) to the need to meet relevant regulatory requirements 1 (Nov. 13, 2017), https://www.esma.europa.eu/sites/default/files/library/esma50-157-828_ico_statement_firms.pdf.

²⁶⁸ Roger Aitken, *EU Regulator Follows U.S. SEC With Stark 'ICO Risk' Warnings*, FORBES (Nov. 13, 2017, 9:55 PM), <https://www.forbes.com/sites/rogeraitken/2017/11/13/eu-regulator-follows-u-s-sec-with-stark-ico-risk-warnings/#65fdace75ead>.

²⁶⁹ Press Release ESMA50-157-828, Eur. Sec. & Mkt. Auth., ESMA alerts firms involved in *Initial Coin Offerings* (ICOs) to the need to meet relevant regulatory requirements, *supra* note 267, at 1–2.

²⁷⁰ See generally Andrew Nelson, *Cryptocurrency Regulation in 2018: Where the World Stands Right Now*, BITCOIN MAG. (Feb. 1, 2018, 2:42 PM), <https://bitcoinmagazine.com/articles/cryptocurrency-regulation-2018-where-world-stands-right-now> (summarizing the current policies and laws of many countries); Eduardo Thomson, *Cryptomania is Alive in Chile With Virtual Green Beans Jumping 70,000%*, BLOOMBERG TECH. (Dec. 22, 2017, 11:15 AM), <https://www.bloomberg.com/news/articles/2017-12-22/cryptomania-sprouts-in-chile-as-virtual-greenbeans-jump-70-000>; Lubomir Tassev, *Gibraltar Launches Regulation to Protect Cryptocurrency Value and Reputation*, BITCOIN.COM (Jan. 2, 2018), <https://news.bitcoin.com/gibraltar-launches-regulation-to-protect-value-and-reputation>; Samuel Haig, *Taiwan's FSC Chairman Opposes Heavy-Handed Cryptocurrency Regulations*, BITCOIN.COM (Oct. 7, 2017), <https://news.bitcoin.com/taiwans-fsc-chairman-opposes-heavy-handed-cryptocurrency-regulations>.

On the other hand, some countries have taken different approaches. On September 12, 2017, the United Kingdom's Financial Conduct Authority took a broad wait-and-see approach to ICO regulation in a published paper on cryptocurrencies, which held that tokens are a "private currency" and issuers operating ICOs may do so on their own interpretation of the law.²⁷¹ Switzerland, a nation that is very welcoming to FinTech and cryptocurrencies and therefore a destination hub for issuers looking to avoid their own country's regulatory measures, deemed that cryptocurrencies are assets rather than securities and token issuers do not require any special approval or license per the Swiss Financial Market Supervisory Authority (FINMA).²⁷² However, in a report on the regulatory treatment of ICOs issued on September 29, 2017, FINMA noted that it would take a closer look at regulatory measures regarding ICOs.²⁷³

In early September 2017, Russia's Central Bank warned that trading tokens via ICOs poses significant risks to investors and issuing companies alike, and stated that it is temporarily disallowing the trading of cryptocurrencies on official exchanges, as well as the use of crypto technology for clearing and settlement structure.²⁷⁴ In October, the Bank's First Deputy Chairperson, Sergei Shvetsov, backed moves to block Bitcoin websites,²⁷⁵ and in November, Shvetsov declared that the Central bank and government should regulate ICOs like they do IPOs, but in a facilitated mode, also noting that the country should ensure that legislation is passed which would both the tax and ensure registration amongst cryptocurrency miners.²⁷⁶ In December, Russia's Ministry of Finance

²⁷¹ *Initial Coin Offerings*, FIN. CONDUCT AUTH. (Dec. 9, 2017), <https://www.fca.org.uk/news/statements/initial-coin-offerings>; see also DISCUSSION PAPER ON DISTRIBUTED LEDGER TECHNOLOGY, FIN. CONDUCT AUTH. 2 (Apr. 2017), <https://www.fca.org.uk/publication/discussion/dp17-03.pdf> (diagramming policy outlines for how the UK will handle cryptocurrencies). The Financial Conduct Authority will continue to review and assess whether amendments to existing regulations may be required. Moreover, proposed amendments would bring exchange platforms and wallet providers under the arm of existing legislation. *Id.*

²⁷² *FINMA is investigating ICO procedures*, FINMA (Sept. 29, 2017), <https://www.finma.ch/en/news/2017/09/20170929-mm-ico>.

²⁷³ *Id.*

²⁷⁴ Press Release, Cent. Bank of the Russ. Fed'n, On the use of private "virtual currencies" (crypto currency) (Sept. 4, 2017), https://www.cbr.ru/press/pr/?file=04092017_183512if2017-09-04T18_31_05.htm.

²⁷⁵ Rachel Rose O'Leary, *Coindesk, Russia's Central Bank Backs Move to Block Bitcoin Websites*, COINDESK, <https://www.coindesk.com/russias-central-bank-backs-move-to-block-bitcoin-websites> (last updated Oct. 10, 2017, 11:21 AM); *Russian central bank plans to ban websites that offer bitcoins*, CNBC (Oct. 10, 2017, 6:20 AM), <https://www.cnn.com/2017/10/10/russian-central-bank-plans-to-ban-websites-that-offer-bitcoins.html>.

²⁷⁶ *The Central Bank called for the regulation of the ICO by analogy with the IPO*, 5HOTNEWS.COM (Nov. 14, 2017), <https://5hotnews.com/2017/11/14/the-central-bank-called-for-the-regulation-of-the-ico-by-analogy-with-the-ipo/>.

prepared a bill that limits ICOs to raising 1 billion rubles, or about \$17.3 million USD, and limits unqualified investors to investing 50,000 rubles, or about \$864 USD.²⁷⁷ Russian president Vladimir Putin has called for the development of a new cryptocurrency, the “cryptoruble,” which could be used as legal tender throughout the Russian federation,²⁷⁸ further indicating that he may move to hold an ICO of his own.²⁷⁹

China took perhaps the most drastically different approach on August 28, 2017, when the communist state put a moratorium on ICOs and additionally required mandatory repayment of all proceeds from completed offerings.²⁸⁰ The government committee, which China’s Central Bank leads, issued a list of sixty exchanges that it will investigate, although some have already halted their ICO trades.²⁸¹ South Korea followed China’s lead less than a month later after the country’s Financial Services Commission stated that anyone who issues ICOs in the country will face “stern penalties.”²⁸²

While the many stances of these countries may differ slightly, they all seem to have issued guidance after recognizing token issuers may be operating outside

²⁷⁷ Francine McKenna, *Here’s how the U.S. and the world regulate bitcoin and other cryptocurrencies*, MARKETWATCH (Dec. 28, 2017, 11:19 AM), <https://www.marketwatch.com/story/heres-how-the-us-and-the-world-are-regulating-bitcoin-and-cryptocurrency-2017-12-18>; Kevin Helms, *Russian Cryptocurrency Bill Is Ready—Regulators Share Details*, BITCOIN.COM (Dec. 29, 2017), <https://news.bitcoin.com/russian-cryptocurrency-bill-ready>.

²⁷⁸ Frank Holmes, *Are ICOs Replacing IPOs?*, FORBES (Oct. 23, 2017), <https://www.forbes.com/sites/greatspeculations/2017/10/23/are-icos-replacing-ipo/#721525d1104a>; Stan Higgins, *Vladimir Putin Mandates New Rules for Cryptocurrencies and ICOs*, COINDESK, <https://www.coindesk.com/vladimir-putin-mandates-new-rules-cryptocurrencies-icos> (last updated Mar. 23, 2018, 10:07 AM).

²⁷⁹ Sujha Sundararajan, *Putin Investigating ‘Cryptoruble’ as Way to Avoid Western Sanctions*, COINDESK (Jan. 2, 2018), <https://www.coindesk.com/putin-investigating-cryptoruble-as-way-to-avoid-western-sanctions>; Jon Buck, *Russia Issuing ‘CryptoRuble’*, COINDESK (Oct. 15, 2017), <https://coindesk.com/news/breaking-russia-issuing-cryptoruble>.

²⁸⁰ Kenneth Rapoza, *Cryptocurrency Exchanges Officially Dead in China*, FORBES (Nov. 2, 2017), <https://www.forbes.com/sites/kenrapoza/2017/11/02/cryptocurrency-exchanges-officially-dead-in-china/#71d3f3c72a83>; *China Is Shutting Down All of Beijing’s Bitcoin and Cryptocurrency Exchanges*, FORTUNE, <http://fortune.com/2017/09/15/china-shutting-down-beijing-bitcoin-cryptocurrency-exchanges> (last updated Sept. 15, 2017, 8:21 AM).

²⁸¹ Saheli Roy Choudhury, *China bans companies from raising money through ICOs, asks local regulators to inspect 60 major platforms*, CNBC (Sept. 4, 2017), <https://www.cnbc.com/2017/09/04/chinese-icos-china-bans-fundraising-through-initial-coin-offerings-report-says.html>; Jon Russell, *China has banned ICOs*, TECHCRUNCH (Sept. 4, 2017), <https://techcrunch.com/2017/09/04/chinas-central-bank-has-banned-icos>.

²⁸² Aatif Sulleyman, *Bitcoin Latest: South Korea Will Not Ban Cryptocurrency Trading, Finance Minister Says After New Rules Send Price Crashing*, INDEP. (Jan. 21, 2018), <http://www.independent.co.uk/life-style/gadgets-and-tech/news/bitcoin-latest-updates-south-korea-trading-ban-finance-minister-cryptocurrency-a8186831.html>; Rachel England, *South Korea will regulate, not ban, cryptocurrency trading*, ENGADGET (Jan. 31, 2018), <https://www.engadget.com/2018/01/31/south-korea-will-regulate-not-ban-cryptocurrency-trading>.

the country in safe havens like Switzerland, which could result in the subjection of foreign laws or regulations on enforcement actions.

F. The Future of ICOS

There is a growing tendency to compare the fast-moving market of ICOs to that of the dotcom craze in the late 1990s, when a combination of pure speculation and overconfidence in the new technology market of internet-based companies led to “fad-based” and reckless investing, and an eventual bubble that could not withstand the pressure of the trillions of dollars that poured into it.²⁸³ Various financial institutions and sophisticated investors are quick to note a string of commonalities of the dotcom days to the present ICO days, with some going as far as to guarantee similar results in the near future.²⁸⁴

Bitcoin alone has experienced extreme volatility in its price since its emergence in 2011.²⁸⁵ Peaking at \$32 a share in 2011 to nearly \$8,000 in November 2017 to an excess of \$20,000 a share in December 2017,²⁸⁶ Bitcoin has experienced price swings of more than 700% since the start of 2017.²⁸⁷ This is in large part due to intermittent government crackdowns and a multitude of hacks in companies that have been exchanging the virtual currency since its inception.²⁸⁸ Some see the price volatility combined with the lack of regulatory oversight and asset backing as reason to keep a safe distance from investing in cryptocurrencies such as Bitcoin.²⁸⁹

²⁸³ Leon Gaban, *How the Cryptocurrency boom is the same and different than the early internet boom*, MEDIUM (Sept. 25, 2017), <https://medium.com/cryptocurrency-citizen/how-cryptocurrency-boom-is-the-same-and-different-than-the-early-internet-boom-400d59bddfaa>; Ari Paul, *It's 1994 in Cryptocurrency*, FORBES (Nov. 27, 2017), <https://medium.com/cryptocurrency-citizen/how-cryptocurrency-boom-is-the-same-and-different-than-the-early-internet-boom-400d59bddfaa>.

²⁸⁴ Gaban, *supra* note 283; Paul, *supra* note 283.

²⁸⁵ Timothy B. Lee, *An Illustrated History of Bitcoin Crashes*, FORBES (Apr. 11, 2013), <https://www.forbes.com/sites/timothylee/2013/04/11/an-illustrated-history-of-bitcoin-crashes/#26cc90ab4039>; Jonathan Todd Barker, *Why is Bitcoin's value so volatile?*, INVESTOPEDIA (Dec. 27, 2017), <https://www.investopedia.com/articles/investing/052014/why-bitcoins-value-so-volatile.asp>.

²⁸⁶ Lee, *supra* note 285; Zaitsev, *supra* note 28.

²⁸⁷ Steven Russolillo, *Bitcoin Erases Losses, Snaps Back to Nearly \$8,000*, WALL ST. J. (Nov. 17, 2017, 6:59 AM), <https://www.wsj.com/articles/bitcoin-erases-losses-snaps-back-to-nearly-8-000-1510919504>.

²⁸⁸ Jeff John Roberts, *5 Big Bitcoin Crashes: What We Learned*, FORTUNE (Sept. 18, 2017), <http://fortune.com/2017/09/18/bitcoin-crash-history/>.

²⁸⁹ *Investor Alerts: Bitcoin: More than a Bit Risky*, FINRA, <http://www.finra.org/investors/alerts/bitcoin-more-bit-risky> (last visited May 24, 2018).

In the banking world, Tidjane Thiam, Credit Suisse Group AG Chief Executive, called Bitcoin “the very definition of a bubble;”²⁹⁰ J.P. Morgan Chase & Co. Chief Executive Jamie Dimon called Bitcoin a “fraud” while threatening to fire any JP Morgan employee who decided to trade Bitcoin for being “stupid.”²⁹¹ Goldman Sachs Group Inc. Chief Executive, Lloyd Blankfein, told a CNBC reporter that “maybe bitcoin is kind of a bubble,” after his company publicly entertained the idea of setting up a trading operation for digital currencies a month earlier.²⁹² Non-bankers have also voiced their concerns. Billionaire investor and Saudi prince, Alwaleed bin Talal, slammed Bitcoin as being “Enron in the making” and expressed that Bitcoin will implode because of its lack of regulation and control.²⁹³ Even former penny stock broker and international fraudster, Jordan Belfort, better known as the “Wolf of Wall Street” called ICOs “the biggest scam ever” that will “blow up in so many peoples’ faces,” adding that they are far worse than anything he was involved with.²⁹⁴

Recent developments of two potentially groundbreaking class-action civil suits arising from one of 2017’s largest and most successful ICOs, a \$232 million token sale by Tezos, has produced more opinions and reasons to shun this new and highly debated development in finance.²⁹⁵ The first civil suit, which included a proposed class of approximately 30,000 people and was filed on October 25, 2017, came after a management feud among the leadership of Tezos went public and resulted in a halting of most of the trading of Tezos coins for an infinite amount of time.²⁹⁶ The delay caused the value of the futures for the digital coin, called “Tezzies,” to tank by nearly half, to the detriment of investors.²⁹⁷ The

²⁹⁰ Jan-Henrik Foerster, *Bitcoin is the ‘Very Definition’ of a Bubble, Credit Suisse CEO Says*, BLOOMBERG (Nov. 2, 2017), <https://www.bloomberg.com/news/articles/2017-11-02/bitcoin-is-very-definition-of-a-bubble-credit-suisse-ceo-says>; see also McLellan, *supra* note 171 (“From what we can identify, the only reason today to buy or sell bitcoin is to make money, which is the very definition of speculation and the very definition of a bubble.”).

²⁹¹ Foerster, *supra* note 290; McLellan, *supra* note 171.

²⁹² Steven Russolillo, *Bitcoin: The World’s Most Dramatic Bubble Ever?*, WALL ST. J. (Nov. 10, 2017, 3:38 AM), <https://www.wsj.com/articles/bitcoin-the-worlds-most-dramatic-bubble-ever-1510303095>.

²⁹³ *Bitcoin is ‘Enron in the making’, Saudi Prince Alwaleed says*, REUTERS (Oct. 23, 2017, 8:25 AM), <https://www.reuters.com/article/us-saudi-kingdom-holding-bitcoin/bitcoin-is-enron-in-the-making-saudi-prince-alwaleed-says-idUSKBN1CS1L9>.

²⁹⁴ Sujha Sundararajan, *The ‘Wolf of Wall Street’ Thinks ICOs Are a Scam*, COINDESK (Oct. 25, 2017), <https://www.coindesk.com/wolf-wall-street-thinks-icos-scam/>.

²⁹⁵ Anna Irrera & Steve Stecklow, *Tezos organizers sued in California over cryptocurrency project*, REUTERS (Nov. 3, 2017, 2:14 PM), <https://www.reuters.com/article/us-bitcoin-tezos-battles/tezos-organizers-sued-in-california-over-crypto-currency-project-idUSKBN1D325A>.

²⁹⁶ Complaint at 1, *Baker v. Dynamic Ledger Solutions, Inc.*, 2018 WL 656012 (Nov. 20, 2017) (No. CGC-17-562144); Paul Vigna, *Feud Hits a Hot Initial Coin Offering*, WALL ST. J., Oct. 20, 2017 at B10.

²⁹⁷ Complaint at 5, 15, *Baker v. Dynamic Ledger Solutions, Inc.*, 2018 WL 656012 (Nov.

complaint alleged that “defendants did not register these Tezzies with the SEC, and many of the representations defendants made regarding the status of the Tezos project in the run-up to the ICO were either exaggerations or outright lies.”²⁹⁸ The suit cited the July 25, 2017 DAO Report to claim that Tezos violated securities laws by issuing what amounted to an unregistered security, and that the “safe harbor” securities laws – usually granted to forward-looking statements issuers make – do not protect the defendants.²⁹⁹

The founders of the Tezos project were hit by a second class action suit less than three weeks later.³⁰⁰ The second suit accuses the Tezos financiers of being “profit-seeking investors in a security” promoted and conducted by the defendants through an unregistered security offering rather than a charitable fundraiser as defendants are claiming.³⁰¹ The suit alleges that the defendants deceptively sold the securities in violation of both state and federal law by issuing the Tezzies as charitable contributions, thereafter pocketing millions of dollars for themselves.³⁰² The complaint further reads, “due to the many misrepresentations, factual omissions and unlawful activities engaged by the defendants – it appears [participants in the ICO] cannot, and potentially will not, see any return on their investments.”³⁰³ Arthur and Kathleen Breitman – founders of Tezos and two of four named defendants in the case – attempted to skirt securities laws and allege an offering of mere utility tokens.³⁰⁴ The “purported terms” of the offering characterized the purchase of Tezzies as a “non-refundable donation” and not a speculative investment.³⁰⁵ However, the plaintiff in the first suit alleged to have never been shown these terms at any stage during the ICO process.³⁰⁶ This example sheds light into some of the potential drawbacks of ICOs, including a lack of transparency into both the credibility and decision-making of management, as

20, 2017) (No. CGC-17-562144); Ben Hancock, *Blockchain Startup Tezos Faces Class Action Over \$232 M ICO*, RECORDER (Nov. 2, 2017), <https://www.law.com/therecorder/sites/therecorder/2017/11/02/blockchain-startup-tezos-faces-class-action-over-232m-ico/>.

²⁹⁸ Complaint at 8, *Baker v. Dynamic Ledger Solutions, Inc.*, 2018 WL 656012 (Nov. 20, 2017) (No. CGC-17-562144).

²⁹⁹ *Id.* at 28.

³⁰⁰ Complaint at 1, *Gaviria v. Dynamic Ledger Solutions, Inc.*, No. 6:17-cv-01959, 2017 (M.D. Fla. Nov. 13, 2017).

³⁰¹ *Id.* at 3.

³⁰² *Id.*

³⁰³ *Id.*

³⁰⁴ *Id.*

³⁰⁵ *Id.* at 11. Allegedly, Kathleen Breitman compared the purchases of Tezzies to donating to a public television station and receiving a “tote bag” in return. *Id.*

³⁰⁶ *Id.* at 11–12; *see also* Vigna, *supra* note 296, at B10 (stating that during the litigation, the money that deal raised sat with the Switzerland-based foundation company in a bank account awaiting to be converted from Bitcoin and Ethereum into government-backed securities).

well as opaque structures that may not be suitable to handle large sums of money.³⁰⁷ The case also has potential to set groundbreaking legal precedent and force the SEC to outline an official stance on whether all tokens ICOs issue are indeed securities, which could have ramifications extending far beyond the Tezos case.³⁰⁸

According to some practitioners CoinDesk³⁰⁹ surveyed, the Tezos suits may give more lawyers and litigants much needed confidence to finally press the issue of suing companies after issuing faux utility tokens in ICOs.³¹⁰ Sara Hanks, co-founder and CEO of CrowdCheck, a consultancy that offers compliance, disclosure, and due diligence assistance for crowdfunding campaigns, said in an interview, “we know a number of plaintiffs’ lawyers around the country who are just basically collecting lists of ICOs and going ‘Hmm, I’m going to sue these people.’”³¹¹ This interest also seems to be coming from lawyers in similar technology-based facets of the economy that entail lax regulation and deceptive practices from bad actors.³¹² Jaspar Ward, a partner at a Louisville-based law firm, which has filed numerous class actions against fantasy sports services, stated, “[W]e see this as the next area where consumers could get harmed by some bad actors taking advantage of the lack of oversight or by pushing the envelope.”³¹³ Tezos may just be the prototypical defendant for such a lawsuit because the company has clear ties to the U.S. and has attracted a large number

³⁰⁷ Vigna, *supra* note 296, at B10.

³⁰⁸ Mark D. Powers, *et al.*, *The SEC and Securities Plaintiffs’ Bar Take Aim at Initial Coin Offerings*, FED. SEC. L. REP., Jan. 4, 2018 at 1, 15, 2018 WL 272897.

³⁰⁹ *About CoinDesk, Inc.*, COINDESK, <https://www.coindesk.com/about/> (last visited May 24, 2018). CoinDesk is a popular web provider on cryptocurrency and blockchain technology news. According to its website, “CoinDesk reaches over 10 million unique visitors who come back 50 million times a month,” and has over 600,000 followers across Twitter, LinkedIn and Facebook. *Id.*

³¹⁰ Aaron Stanley, *The Beginning? Tezos Could Open Doors for ICO Litigation*, COINDESK (Nov. 17, 2017, 9:00 AM), <https://www.coindesk.com/just-beginning-tezos-lawsuits-mean-ico-litigation/>; see Mark Powers *et al.*, *The SEC and Securities Plaintiffs’ Bar Take Aim at Initial Coin Offerings*, 2806 FED. SEC. L. REP. 11, 11-16 (2018) (discussing the possibility of increased amounts of plaintiffs lawsuits against issuers of ICOs based on SEC report 21(a) which was used in the *Tezos* case to allege improper issuance of “securities”); see also Complaint at 33, *Leidel v. Coinbase, Inc.* 2017 WL 2374269 (S.D. Fla. June 1, 2017) (No. 9:16CV81992).

³¹¹ Stanley, *supra* note 310.

³¹² Jennifer Bennett, *Initial Coin Offerings Attract New Audience: Trial Lawyers*, BLOOMBERG (Jan. 9, 2018), <https://biglawbusiness.com/initial-coin-offerings-attract-new-audience-trial-lawyers/>.

³¹³ Stanley, *supra* note 310; see Jennifer Bennett, *supra* note 312 (stating that the Plaintiff’s bar has increasingly sought to file class-action lawsuits against entities offering ICOs); Powers, *et al.*, *supra* note 308, at 1, 15 (“It should also be noted that the cryptocurrency industry’s lack of regulation and consistency make it especially vulnerable to plaintiff’s law firms that are constantly looking for any reason to bring a class action.”).

of investors to its offering.³¹⁴ Joe Fleming, an attorney at Block & Leviton, a law firm, which launched an investigation of its own into Tezos, explained in an interview:

[t]he ICO most appealing to a plaintiff lawyer would be large in terms of total money raised, have a strong U.S. nexus, would have promoters and participants in the ICO who are U.S.-based, and the tokens that it would issue would reflect a claim on the share of the company's future revenue . . . [and] Tezos certainly checks a lot of those boxes.³¹⁵

For ICO issuers with similar structure schemes looking to reconsider their token offerings to shield themselves from liability, it may be too late. A company with substantial U.S. involvement, or U.S. entities that participate in the sale of unregistered securities, like Tezos, may already be potentially liable for probable attacks from likeminded law firms.³¹⁶ David Silver, the lawyer who brought the second Tezos civil suit and believes his case could serve as a springboard for future ICO litigation, stated, “[T]his is a leak in a dam that is about to come falling down.”³¹⁷ However, an important safeguard for companies offering ICOs may be to shelter themselves in safe haven jurisdictions that traditionally offer lax regulations such as Delaware, or overseas or foreign jurisdictions such as Switzerland.³¹⁸ Also, ICOs raising money in Bitcoin and Ether rather than fiat currency renders collectability an issue.³¹⁹ Class-action lawsuits require finding enough dissatisfied token holders seeking to pursue legal recourse, something that is never an easy task.³²⁰

On the other end of the spectrum, some people like prominent financial analyst Max Keiser, and Fundstrat founder, Tom Lee, continue to look past potential setbacks and view Bitcoin in the broader picture as both a secure asset and long-

³¹⁴ Powers, *et al.*, *supra* note 308, at 1, 15 (stating that the cryptocurrency industry as a whole remains less vulnerable than domestic issuers of cryptocurrency because most of the industry is located overseas and would be beyond the reach of U.S. federal courts).

³¹⁵ Stanley, *supra* note 310.

³¹⁶ *Id.*; *How Initial Coin Offerings (“ICOs”) Are Regarded or Regulated in Other Countries*, CNPLAW, <http://www.singaporelawwatch.com/slw/attachments/113135/1712-01%20Initial%20Coin%20Offerings.pdf>. (last visited May 24, 2018).

³¹⁷ Stanley, *supra* note 310.

³¹⁸ Noonan, *supra* note 50, at 595.

³¹⁹ Edward Dartley, *et al.*, *Initial Coin Offerings: Key Considerations You Absolutely, Positively Need to Know About Before Launching an ICO*, NAT'L L. REV. (Nov. 8, 2017), <https://www.natlawreview.com/article/initial-coin-offerings-key-considerations-you-absolutely-positively-need-to-know>.

³²⁰ Sumit Agarwal, *Bitcoin Transactions: A Bit of Financial Privacy*, CARDOZO ARTS & ENT. L.J. 153, 157 (2016).

term investment for interested consumers, traders and investors alike.³²¹ On his eponymously named financial program broadcast, Keiser noted, “[A]ll key Bitcoin metrics, including price, zooming higher. \$7,000 will soon fall. \$10,000 is a fait accompli,” while Lee, a well known Wall Street strategist, explained in an interview with Business Insider a theory that Bitcoin trading is evolving as a market that allows a main store of value that will rival the gold market.³²² In the interview Lee stated that Bitcoin “represents a store of value because it is an encrypted database, that for seven years has not been hacked,” also adding, “that is a way to store value. And if personal information is our gold, Bitcoin is our digital gold.”³²³ Additionally, exchange operator CME Group Inc. shifted trader focus after it announced plans to offer a Bitcoin futures contract, which would allow Wall Street traders to bet on Bitcoin prices and hedge against volatility.³²⁴

While the CFTC reviews the exchange’s plans, such steps as this may be crucial to Bitcoin’s emergence into institutional and retail markets.³²⁵ Bitcoin futures are “the perfect product for an institutional investor who does not want to hold bitcoin but wants to trade it” said Arthur Hayes, founder and chief executive of BitMEX, a Bitcoin-derivatives exchange in Hong-Kong.³²⁶ Thus, while some market participants would consider that Bitcoin has had five separate declines in 2017 of more than 20% off recent highs as a reason to avoid trading the cryptocurrency completely, folks akin to Mr. Hayes, also a former market maker at Citigroup, see no reason to stray.³²⁷ “Money has rushed back into bitcoin,” said Hayes, adding, “[W]e’re back from where we started a week ago.”³²⁸ Even though federal regulators have offered guidance to startups and their sponsors issuing ICOs, more guidance may be necessary to clear up many questions and give investors and issuers alike the confidence to remain in United States jurisdictions when offering ICOs.³²⁹ For instance, some foreseeable issues may be the

³²¹ Reuben Grinberg, *Bitcoin: An Innovative Alternative Digital Currency*, 4 HASTINGS SCI. & TECH. L.J. 159, 178 (2012); Joseph Young, *Max Keiser Expects Bitcoin Price to Reach \$10,000 Once \$7,000 Is Broken*, NEWS BTC (Oct. 22, 2017), <http://www.news-btc.com/2017/10/22/max-keiser-expects-bitcoin-price-reach-10000-7000-broken/>.

³²² Grinberg, *supra* note 321, at 173; Young, *supra* note 321.

³²³ Young, *supra* note 321.

³²⁴ Agarwal, *supra* note 320, at 162; Russolillo, *supra* note 292.

³²⁵ E-MONEY LAUNDERING, 13 BUS. & COM. LITIG. FED. CTS. § 133:34 (4th ed.); Agarwal, *supra* note 320, at 155.

³²⁶ Grinberg, *supra* note 321, at 165; Russolillo, *supra* note 292.

³²⁷ Grinberg, *supra* note 321, at 198; Russolillo, *supra* note 292 (demonstrating an exchange operator willing to extend offers for bitcoin future contracts despite the growing concern for a bubble-like future).

³²⁸ Russolillo, *supra* note 292.

³²⁹ Press Release, U.S. Sec. & Exch. Comm’n, SEC Chairman Jay Clayton Statement on Cryptocurrencies and Initial Coin Offerings, *supra* note 182; Daniel N. Budofsky, *et al.*, *Initial Coin Offerings (ICOs): The Current State of Play*, PILLSBURY WINTHROP SHAW PITTMAN LLP (Nov. 3, 2017), <https://www.pillsburylaw.com/en/news-and-insights/icos-current-state.html>.

extent to which tax laws apply to the revenue generated from ICOs,³³⁰ and whether state consumer protection laws apply to misleading statements in company white papers.³³¹ Further, issues regarding unfair federal advertising laws and anti-money laundering laws that require registration with federal bank regulators and ‘know your customer’ compliance programs, may arise.³³²

An additional concern related to the fast moving market of issuing and exchanging cryptocurrencies is that it has become an attractive target for cyber-criminals to pursue new and unprecedented ways to monetize from malicious activity.³³³ The SEC recognized this vulnerability and subsequently created the Cyber Unit Enforcement Division to pin down cyber-related misconduct affecting blockchain and ICO companies, primarily focusing on illegal market manipulation schemes, hacking, cyber-related threats, and other securities violations due to fraudulent activity.³³⁴ Kaspersky Lab, an antivirus and internet security software company, also reacted to threats facing the crypto-community.³³⁵ Kaspersky stated that it protected 1.65 million users from malicious cryptocurrency miners that often used ransomware techniques that encrypted files and required victims to pay a ransom in cryptocurrency to recover them.³³⁶ Kaspersky predicts that 2018 will bring even more advanced money-making schemes.³³⁷ This includes web-mining and increased ransomware attacks that will correlate with the rise of miners.³³⁸ Kaspersky also believes the ICO hysteria will decline next year due to a series of company failures to create funded products, which will lead to more careful scrutiny of investment products and negatively affect

³³⁰ Agarwal, *supra* note 320, at 162; Budofsky, *et al.*, *supra* note 329.

³³¹ Agarwal, *supra* note 320, at 162; Budofsky, *et al.*, *supra* note 329.

³³² Agarwal, *supra* note 320, at 162; Budofsky, *et al.*, *supra* note 329.

³³³ Agarwal, *supra* note 320, at 156; *Threat Predictions for Connected Life in 2018*, SECURELIST (Nov. 21, 2017, 10:00 AM), <https://securelist.com/ksb-threat-predictions-for-connected-life-in-2018/83265/>.

³³⁴ Press Release, U.S. Sec. & Exch. Comm’n, SEC Announces Enforcement Initiatives to Combat Cyber-Based Threats and Protect Retail Investors (Sept. 25, 2017), <https://www.sec.gov/news/press-release/2017-176>; Press Release, U.S. Sec. & Exch. Comm’n, SEC Exposes Two Initial Coin Offerings Purportedly Backed by Real Estate and Diamonds (Sept. 29, 2017), <https://www.sec.gov/news/press-release/2017-185-0>.

³³⁵ *Threat Predictions for Connected Life in 2018*, *supra* note 333; “Mining” Botnets Are Back- Infecting Thousands of PCs, Generating Hundreds of Thousands of Dollars for Criminals, KASPERSKY LAB (Sept. 27, 2017), https://www.kaspersky.com/about/press-releases/2017_mining-botnets-are-back-infecting-thousands-of-pcs.

³³⁶ *Threat Predictions for Connected Life in 2018*, *supra* note 333; “Mining” Botnets Are Back- Infecting Thousands of PCs, Generating Hundreds of Thousands of Dollars for Criminals, *supra* note 335.

³³⁷ *Threat Predictions for Connected Life in 2018*, *supra* note 333.

³³⁸ *Id.*

the exchange rate of cryptocurrencies.³³⁹ Kapersky believes, “[w]e will see a decrease in the absolute number of phishing and hacking attacks targeting ICO, smart contracts and wallets.”³⁴⁰

Whatever the case may be, the ever-growing concern of cyber security as it applies to ICOs will simultaneously spark an increase in developments among companies to attempt to combat cyber risks, creating somewhat of a war against opportunistic hackers.³⁴¹ One example of a company getting ahead of the curve is Fujitsu Laboratories Ltd., a research and development company in the field of information technology that developed “ConnectionChain,” a security technology that safely connects blockchains by enhancing the capability of smart contracts used on exchanges.³⁴² With the technology currently available, one would be hard pressed to not believe that more companies will follow this lead.

III. CONCLUSION

ICOs continue to saturate the financial market economies of the world, pouring billions

of dollars into various industries.³⁴³ As they, along with their accompanying technology, blockchain, move full steam ahead in both the primary and secondary financial markets, the common course of business is changing and governments are reacting by adjusting rules and regulations to accommodate their emergence.³⁴⁴ There is still a legal gray area over what exactly cryptocurrencies are and how regulators and businesses alike should handle the issuance and trading of them. The proposed rules, regulations, and eventual laws surrounding cryptocurrencies will most likely need to form around rather than against them, because ICOs offer too many benefits to markets across the globe.³⁴⁵ Additionally, for the United States to remain a seminal hub for technological innovation and economic health, the country should continue its due diligence by fully examining ICOs and setting precedent for other countries to follow.³⁴⁶ Because

³³⁹ *Id.*

³⁴⁰ *Id.*

³⁴¹ James Gatto & Elsa S. Broeker, *Bitcoin and Beyond: Current and Future Regulation of Virtual Currencies*, 9 OHIO ST. ENTREPREN. BUS. L.J. 429, 446 (2015).

³⁴² *Fujitsu Develops Security Technology to Safely Connect Blockchains*, FUJITSU (Nov. 15, 2017), <http://www.fujitsu.com/global/about/resources/news/press-releases/2017/1115-01.html>.

³⁴³ *ICOs Banking on Advertising: the Basic Attention Token and Adbank*, EMPRESA-J. (Jan. 1, 2018), <https://empresa-journal.com/2018/01/15/icos-banking-advertising-basic-attention-token-adbank/>.

³⁴⁴ Gatto & Broeker, *supra* note 341, at 450.

³⁴⁵ Kia Kokalitcheva, *ICOs Face Regulatory Scrutiny in a Growing Number of Countries*, AXIOS (Sept. 6, 2017), <https://www.axios.com/icos-face-regulatory-scrutiny-in-growing-number-of-countries-2481942973.html>.

³⁴⁶ Brendan Pierson, *Virtual currencies are commodities*, U.S. Judge Rules, REUTERS

ICOs are still in an emerging state, it would be wise to consider that the buzz surrounding them will not go away anytime soon, even if the financial markets are “getting more bubbly” than ever before.³⁴⁷

(Mar. 6, 2018, 6:11 PM), <https://www.reuters.com/article/us-usa-cftc-bitcoin/virtual-currencies-are-commodities-u-s-judge-rules-idUSKCN1GI32C>. The United States Congress has yet to pass a law directly addressing the regulation of cryptocurrencies or ICOs. *Id.*

³⁴⁷ Russolillo, *supra* note 292; Fred Dopfel, *Bitcoin Bubble May Be Sign of Cryptocurrency Investment Trouble*, NORTH BAY BUS. J., (Jan. 22, 2018), <http://www.northbaybusiness-journal.com/opinion/7840122-181/bitcoin-cryptocurrency-investment>.