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## What I Learned Trading Cryptocurrencies While Studying the Law

Joshua S. Morgan

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# WHAT I LEARNED TRADING CRYPTOCURRENCIES WHILE STUDYING THE LAW

*Joshua S. Morgan\**

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I.	INTRODUCTION	

*"The world's social media platforms and financial markets are abuzz about cryptocurrencies 'initial coin offerings' (ICOs). There are tales of fortunes made and dreamed to be made. We are hearing the familiar refrain, 'this time is different.'"*<sup>1</sup>

These are SEC Chairman Jay Clayton's opening remarks in his most recent<sup>2</sup> Public Statement on the SEC website regarding the phenomenon that is the Initial Coin Offering market.<sup>3</sup> By now, virtually everyone has heard of cryptocurrency and Bitcoin. In fact, I would venture to say that there is no hotter topic in the world; and, as of the time of this writing, Bitcoin is trading at a ratio of around \$10,863 USD/Bitcoin. (Notably, I expect this figure to change drastically, for better and worse, and include it merely as a time-capsule reminder to future readers of what was).<sup>4</sup> Nevertheless, while all the world's eyes watch Bitcoin, less attention and scrutiny has been cast on the "spin-off" market

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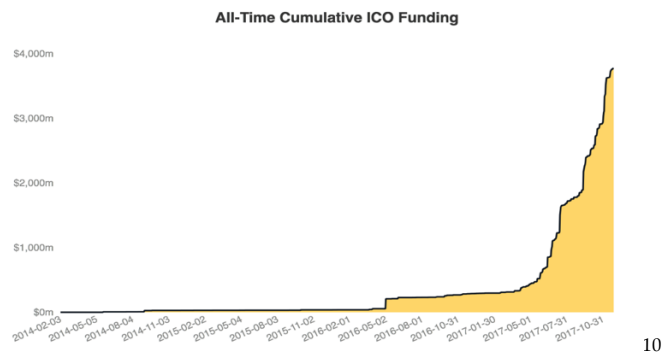
<sup>1</sup> See generally Jay Clayton, *Statement on Cryptocurrencies and Initial Coin Offerings*, U.S. SEC. & EXCH. COMM'N (Dec. 11, 2011), <https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11> [hereinafter Clayton].

<sup>2</sup> As of Dec. 11, 2017.

<sup>3</sup> Clayton, *supra* note 1.

<sup>4</sup> See *Cryptocurrency Market Capitalizations*, COINMARKETCAP (Jan. 9, 2018), <https://coinmarketcap.com/> [hereinafter *Cryptocurrency Market Capitalizations*].

for Alternate Coins (“Alt Coins”) and various “utility tokens.” Nearly \$4B<sup>5</sup> was raised through Initial Coin Offerings in 2017;<sup>6</sup> representing a substantial increase from the \$294.9M that had been raised between 2014 and 2016.<sup>7</sup> Moreover, only \$39M<sup>8</sup> of that \$4B was raised within the first three months of 2017, equating to \$3.961B raised through Initial Coin Offerings between April and the end of December.<sup>9</sup> Illustrated graphically, the trend looks as follows:



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Most interesting, however, is the staggering growth in cryptocurrency market capitalization and, more specifically, the money pumping through secondary markets for tokens: the total cryptocurrency market capitalization recently

<sup>5</sup> Matt Chwierut, *A Framework for ICO/Token Sale Self-Governance*, SMITH + CROWN (Dec. 29, 2017), <https://www.smithandcrown.com/framework-ico-token-sale-self-governance/>.

<sup>6</sup> CoinDesk, *CoinDesk ICO Tracker* (Nov. 26, 2017), <https://www.coindesk.com/ico-tracker/> [hereinafter Coindesk].

<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

peaked at over \$800B<sup>11</sup> and the twenty-four-hour trade volume in the cryptocurrency market recently surpassed \$50B, nearly the same daily volume as the New York Stock Exchange.<sup>12</sup>

With that in mind, this note aims to clarify and analyze the state of the token market, with the goal of educating the legal community on certain core concepts to help facilitate lively, progressive, and informed discussions. While Section I preliminarily sets the scene, Section II further addresses the current state of the market in order to provide greater context and perspective and to define the legal community's role. Building upon Section II, Section III explains the basics of blockchain, Bitcoin, Ethereum, smart contracts, and the method of raising capital known as the ICO. By explaining these concepts independently, I hope to eradicate many of the misconceptions that may be created by association. I feel that disassociation and proper understanding is important because blind investing and the conduct of a few bad players, in conjunction with a misinformed media narrative, has the ability to put unnecessary friction on a *potentially* meaningful and disruptive movement. In this respect, I am not alone. My concern has been echoed by other pundits and players in the market. For example, at the International Monetary Fund's ("IMF") Annual Meetings in Washington D.C.,<sup>13</sup> IMF Managing Director, Christine Lagarde, referred positively to

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<sup>11</sup> See generally *Global Charts: Total Market Capitalization*, CoinMarketCap, <https://coinmarketcap.com/charts/> (last visited Jan. 29, 2018).

<sup>12</sup> Oscar Williams-Grut, *The cryptocurrency market is now doing the same daily volume as the New York Stock Exchange*, BUS. INSIDER (Dec. 20, 2017), <http://www.businessinsider.com/daily-cryptocurrency-volumes-vs-stock-market-volumes-2017-12>.

<sup>13</sup> Which took place in October 2017.

the disruption set to take place, yet pulled back to state that in looking forward, “. . . we should . . . be aware of not categorizing anything that has to do with digital currencies in those speculation, ponzi-like schemes [because] [i]t's a lot more than that as well.”<sup>14</sup> In my opinion, Lagarde hinted that as we progress through 2018 and beyond, she expects many newly formed ICOs to fail, be exposed, or see their tokens tremendously decline in price, thereby condemning, by association, other companies with legitimate blockchain businesses; other businesses that used ICOs appropriately to fund legitimate projects; and the stable of mainstay cryptocurrencies primarily used to purchase tokens (whether through an ICO or on a secondary exchange).

After setting the scene and arming the reader with sufficient knowledge to understand cryptocurrencies and ICOs, Section IV of this note will then define some of the more troubling problems in the market, including how many companies are attempting to take advantage of grey areas in the securities laws and how those actions interplay with wildly speculative ICO pricing. Recently, Brad Garlinghouse, CEO of Ripple (XRP), a company who wants its platform to form the basis of cross-border exchange between financial institutions, commented:

“[m]any of the ICOs are more frauds than real businesses. The industry needs to work with regulators and not be in the shadows . . . ICOs are taking advantage of grey areas in securities

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<sup>14</sup> See generally Elizabeth Schulze, *'We are about to see massive disruptions': IMF chief on digital currency future*, CNBC (Oct. 13, 2017), <https://www.cnbc.com/2017/10/13/bitcoin-get-serious-about-digital-currency-imf-christine-lagarde-says.html>.

law. What worries me the most is some of the hype in the system.”<sup>15</sup>

Ripple (XRP) usually trades as a top-5 cryptocurrency by market cap<sup>16</sup> and “Chris Larsen, the cofounder, executive chairman, and former CEO, [briefly] became the world’s fifth wealthiest person [when] the price of Ripple soared past the \$3 mark this January.”<sup>17</sup>

In light of some of the confounding securities issues present in the market, Section V tracks and details the SEC’s approach in taking jurisdiction over tokens, with the goal of creating a baseline understanding of the factual context in which a token in today’s market may be considered a security or investment contract. After describing the SEC’s approach, Section VI explains the most logical niche for ICOs within the current securities framework, as well as details a potential problem with squeezing more token sales into the existing framework, before delving into approaches taken by regulators in other countries.

## II. THE CURRENT STATE OF THE MARKET

As alluded to, the coin market continues to heat up from a campfire, to what looks like will be a full-fledged, blue-flamed wildfire in 2018, as investors continue to seek unfathomable returns from tokens that many know or, better









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<sup>15</sup> Paul R. La Monica, *SEC Suspends Trading of Red-Hot Bitcoin Stock*, CNN MONEY (Dec. 19, 2017), [money.cnn.com/2017/12/19/investing/bitcoin-cryptocurrencies-sec-bubble/index.html](http://money.cnn.com/2017/12/19/investing/bitcoin-cryptocurrencies-sec-bubble/index.html).

<sup>16</sup> *Cryptocurrency Market Capitalizations*, *supra* note 4.

<sup>17</sup> Robert Hackett, *Ripple's Cofounder Is Now One of the World's Richest People*, FORTUNE (Jan. 5, 2018), <http://fortune.com/2018/01/04/ripple-price-google-bitcoin-cryptocurrency-rich/>.











yet, care to know, little to nothing about. While the narrative of the legendary spike in Bitcoin price captured the attention of anybody with a dollar to invest and a dream of one day cruising a mega yacht from Monaco down the French Riviera, the world, trying to catch the “next Bitcoin,” jumped all over what can only be described as newly created crypto lottery tickets, each believing/hoping that he or she will become the next crypto millionaire. (Significantly, as this note will illustrate, many of these “lottery tickets” have nothing to do with Bitcoin, directly or in concept). “Coin Mania,” as it can aptly be described, has thus driven insanely speculative valuations when capital has been raised through the issuance of tokens rather than through more traditional forms of fundraising.<sup>18</sup> This phenomenon, in large part, is due to investors’ cognitive associations of the terms “cryptocurrency” and “blockchain” to returns of thousands of percentage points in a single year.<sup>19</sup> To put this in perspective, just look at the top-30<sup>20</sup> tokens in terms of return on investment since their ICO date:

	NAME	% CHANGE (M)	ICO DATE	ICO PRICE	CURR. PRICE
	NXT <small>Buy tokens</small>	+7119840%	09/2013	0.000	1.196
	IOTA <small>Buy tokens</small>	+1159215%	10/4/15	0.000	5.037
	Ethereum <small>Buy tokens</small>	+255218%	07/2014	0.311	795.110
	Neo <small>Buy tokens</small>	+214060%	09/30/15	0.032	68.103
	Stratis <small>Buy tokens</small>	+173992%	06/19/16	0.007	12.661
	Spectrecoin <small>Buy tokens</small>	+156934%	1/1/16	0.001	1.275
	Ark <small>Buy tokens</small>	+77244%	1/06/16	0.010	7.659
	Link <small>Buy tokens</small>	+29383%	02/20/16	0.076	22.546

<sup>18</sup> See generally *List of ICO's Ranked by Return on Investment Since ICO Date*, ICO STATS, <https://icostats.com/roi-since-ico> (last visited Jan. 9, 2018) [hereinafter *List of ICO's*].

<sup>19</sup> *Id.*

<sup>20</sup> As of December 18, 2017.

	QTUM <small>Buy history</small>	+21770%	03/10/17	0.292	63.843
	Augur <small>Buy history</small>	+13616%	05/10/16	0.602	82.609
	Populous <small>Buy history</small>	+13473%	06/23/17	0.278	37.705
	Waves <small>Buy history</small>	+8497%	04/10/16	0.188	16.193
	Beyond the Void <small>Buy history</small>	+7907%	10/25/16	0.004	0.320
	OmiseGO <small>Buy history</small>	+6831%	07/14/17	0.244	16.920
	Colem <small>Buy history</small>	+6166%	10/10/16	0.010	0.657
	Metal <small>Buy history</small>	+5937%	02/28/17	USD Raised \$170,000 tokens sold: 3148,888	10.867
	DigixDAO <small>Buy history</small>	+5266%	02/29/16	3.235	173.621
	Edgeless <small>Buy history</small>	+4312%	02/27/17	0.039	1.729
	Storj <small>Buy history</small>	+4009%	07/13/16	0.009	0.371
	Etheroll <small>Buy history</small>	+3563%	02/12/17	0.069	2.532
	Swarm City <small>Buy history</small>	+3347%	10/31/16	0.088	3.045
	Wings <small>Buy history</small>	+3342%	10/10/16	0.028	0.952
	Aeternity Phase I <small>Buy history</small>	+3297%	04/02/17	USD Raised \$1,140,000,000 tokens sold: 100,000,000	1.451
	Bitcrystals <small>Buy history</small>	+3168%	07/28/16	0.020	0.650

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To emphasize, Jackson Palmer, developer of Dogecoin, a coin he initially founded as a parody, but which has since exploded to a \$1 Billion market cap, stated:

The fact that most conversations happening in the media and between peers focus on the investment potential is worrying, as it draws attention away from the underlying technology and goals this movement was based [on] . . .<sup>22</sup> I have a lot of faith in the Dogecoin Core development team to keep the software stable and secure, but I think it says a lot about the state of the cryptocurrency space in general

<sup>21</sup> List of ICO's *supra* note 18.

<sup>22</sup> Wolfie Zhao, *Dogecoin Market Cap Hits \$1 Billion, to Its Creator's Dismay*, COINDESK, (Jan. 5, 2018), <https://www.coindesk.com/dogecoin-market-cap-hits-1-billion-creators-dismay/>.

that a currency with a dog on it which hasn't released a software update in over 2 years has a \$1B+ market cap.<sup>23</sup>

And, if that is not enough, a cryptokitty recently sold for \$114,481.59.<sup>24</sup> There is just no doubt about it, in 2017, crypto players quite literally made it rain . . . cats and dogs.

#### A. PUNDITS AND PLAYERS OPINE

Despite some of the substantial returns to date, many legendary Wall Street Investors, economists, and financial analysts are not buying into the hype, and popularly liken this ICO boom to the Dot-Com bubble<sup>25</sup> or Tulip Mania.<sup>26</sup> In the words of Howard Marks, famed, value investor and co-chairman of Oaktree Capital who accurately forecasted the Dot-Com bubble:

"In my view, digital currencies are nothing but an unfounded fad (or perhaps even a pyramid scheme), based on a willingness to ascribe value to something that has little or none

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<sup>23</sup> *Id.*

<sup>24</sup> Evelyn Cheng, *Meet CryptoKitties, the \$100,000 digital beanie babies epitomizing the cryptocurrency mania*, CNBC, (Dec. 6, 2017), <https://www.cnbc.com/2017/12/06/meet-cryptokitties-the-new-digital-beanie-babies-selling-for-100k.html>.

<sup>25</sup> See Jim Edwards, *This is the tech bubble we have been waiting for*, BUS. INSIDER, (Nov. 21, 2017), [www.businessinsider.com/cryptocurrency-ico-bubble-2017-11](http://www.businessinsider.com/cryptocurrency-ico-bubble-2017-11).

<sup>26</sup> Howard Marks, *There They Go Again . . . Again*, OAKTREE CAPITAL MGMT., L.P. (July 26, 2017), [www.oaktreecapital.com/docs/default-source/memos/there-they-go-again-again.pdf](http://www.oaktreecapital.com/docs/default-source/memos/there-they-go-again-again.pdf) [hereinafter Marks].

beyond what people will pay for it. But this isn't the first time. The same description can be applied to the Tulip [M]ania that peaked in 1637, the South Sea Bubble (1720) and the Internet Bubble (1999-2000)."<sup>27</sup>

Many, like Marks<sup>28</sup> (and in at least some respects, SEC Chairman Jay Clayton, observing his cryptic "this time is different"),<sup>29</sup> believe, as Mark Twain once said, "[h]istory doesn't repeat itself, but it rhymes."<sup>30</sup>

Nonetheless, I personally believe that a comparison to Tulip Mania is unfair when speaking to the industry generally because such a comparison disparages some of the valuable, and disruptive ideas and technology associated with the movement. Briefly consider blockchain (which will be discussed later in detail). The use-cases for blockchain technology range far and wide, and expand far beyond digital currency. Imagine a world where art no longer required a certificate of authenticity, where a deed to a house no longer required title insurance, where someone could go to the supermarket and look beyond a label and into the true provenance of the food he or she purchases,<sup>31</sup> a world of transparent elections, self-auditing and verifying

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<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> Clayton, *supra* note 1.

<sup>30</sup> Marks, *supra* note 26.

<sup>31</sup> Alison DeNisco Rayome, *IBM taps blockchain to combat food contamination in global supply chain*, TechRepublic (2017), <https://www.techrepublic.com/article/ibm-taps-blockchain-to-combat-food-contamination-in-global-supply-chain/> (last visited Jan. 29, 2018).

accounting records,<sup>32</sup> or where a smart-agent could efficiently control a home's energy expenditures, assess its energy demands, and purchase electricity "in the most cost effective markets to meet [the home's] future demand."<sup>33</sup> All of this, and much more, can be made possible through tailored applications of the blockchain; and, most excitingly, the best ideas are yet to come.<sup>34</sup>

On the other hand, although I discourage comparisons to Tulip Mania, comparisons to the Dot-Com bubble feel more reasonable as a general statement. As briefly touched on in the preceding, I believe blockchain technology will play an integral role in facilitating various trust-based processes across many industries including finance, health-care, real estate, and supply-chain management, to name a few. I also believe that blockchain and cryptocurrencies (in some form) will survive as a major sector or asset class, regardless of a bubble burst. Therefore, while I tend to agree with Marks and Buffet<sup>35</sup> that this may "come to a bad ending"<sup>36</sup> for many investors, I also believe that we may see an "Amazon" or a "Microsoft" emerge from

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<sup>32</sup> See *Accounting Tools For Tokens*, Balanc3, <https://www.balanc3.net/#/> (last visited Jan. 29, 2018).

<sup>33</sup> E.g., *Grid+*, <https://gridplus.io/> (last visited Jan. 29, 2018).

<sup>34</sup> TechCrunch, *Decentralizing Everything with Ethereum's Vitalik Buterin*, YOUTUBE, (Sept. 18, 2017), [www.youtube.com/watch?v=WSN5BaCzsb0&t=467s](http://www.youtube.com/watch?v=WSN5BaCzsb0&t=467s) [hereinafter *Decentralizing Everthing*].

<sup>35</sup> See generally Akin Oyedele, *Warren Buffett says bitcoin 'definitely will come to a bad ending,'* BUSINESS INSIDER (Jan. 10, 2018), <http://www.businessinsider.com/warren-buffett-on-bitcoin-price-2018-1> [hereinafter Oyedele].

<sup>36</sup> *Id.*

this era (noting, that we are likely to see many more “pets.com”).<sup>37</sup>

#### B. LEGAL AND REGULATORY CONCERNS

Whether Marks, Buffet, and other prominent skeptics are correct in their respective assessments of Bitcoin and the crypto industry generally is yet to be determined. Nevertheless, due to the immense volume of money pumping through the relatively newly formed ICO and secondary token markets, “[a] number of concerns have been raised regarding the cryptocurrency and ICO markets including that, as they are currently operating, there is substantially less investor protection than in our traditional securities markets with correspondingly greater opportunities for fraud and manipulation[.]”<sup>38</sup> Crucially, while an ICO sounds like a fundraising mechanism merely for technologically-based, blockchain companies, in reality, this practice has touched nearly every industry imaginable.<sup>39</sup>

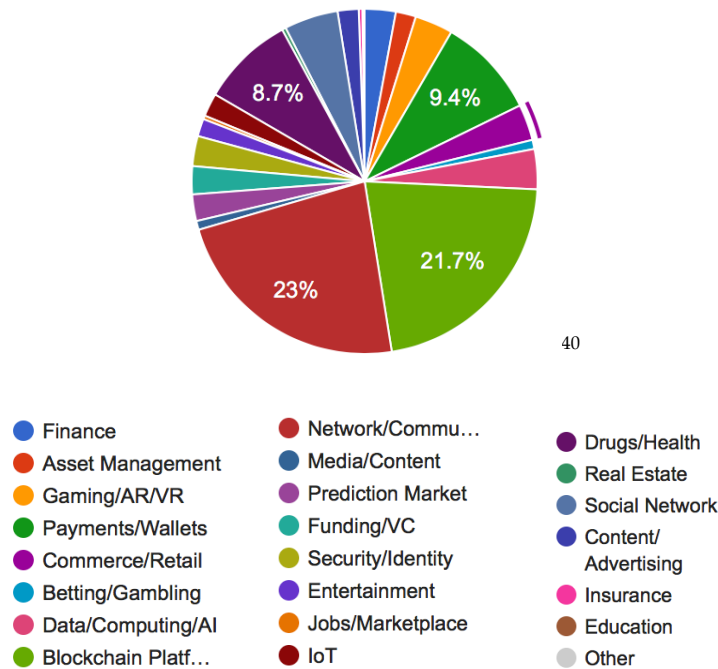
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<sup>37</sup> See David Goldman, *10 Big dot.com Flops*, CNNMoney, (Mar. 10, 2010), [http://money.cnn.com/galleries/2010/technology/1003/gallery.dot\\_com\\_busts/](http://money.cnn.com/galleries/2010/technology/1003/gallery.dot_com_busts/).

<sup>38</sup> Clayton, *supra* note 1.

<sup>39</sup> See Coindesk, *supra* note 6 (observing trend); see also *List of ICO's*, *supra* note 18.

Total USD Raised Per Category



With that in mind, the rapid rise of Coin Mania has made it difficult for a proper regulatory framework to develop around tokens, both in the U.S. and abroad. Chiefly, in the context of U.S. ICOs, the debate has boiled down to whether, and under what circumstances, a utility token may be considered a security or investment contract, thus requiring compliance with the Securities Act of 1933. That mentioned, “[a]s of December 11, 2017] no initial coin offerings [had] been registered with the SEC.”<sup>41</sup> Nonetheless,

<sup>40</sup> See *ICO Statistics - By Industry: Total USD Raised Per Category*, WATCH LIST, (Dec. 18, 2017), <https://icowatchlist.com/statistics/categories>.

<sup>41</sup> Clayton, *supra* note 1.

that is not to say that every, or even most, U.S. offerors have not erred on the side of caution by structuring their offerings as if selling a security or investment contract. Section 5 of the Securities Act of 1933 requires registration of non-exempt securities, and many ICOs have attempted to comply with some transaction exemption, usually Rule 506, a “safe harbor” under Section 4(a)(2) of the Securities Act, that assures a company’s offering is within the Section 4(a)(2) exemption by satisfying certain requirements.<sup>42</sup>

Filecoin, as an excellent example, appears to have executed its \$251M ICO as a Rule 506 offering. As such, the Filecoin offering was effected via a ‘Simple Agreement for Future Tokens’ (“SAFT”) and accompanying offering memorandum,<sup>43</sup> which limited the offering to accredited investors, prohibited resales before the expiration of the appropriate holding period, and detailed a lengthy list of risk factors associated with investing in the Filecoin project and blockchain technologies generally.<sup>44</sup> These compliances are particularly meaningful in combatting some of the more prevalent issues and dangers present in today’s ICO and secondary token markets (a thought that I will return to in Section VI).

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<sup>42</sup> *Fast Answers: Rule 506 of Regulation D*, U.S. SEC. & EXCH. COMM’N (2017), [www.sec.gov/fast-answers/answers-rule506htm.html](http://www.sec.gov/fast-answers/answers-rule506htm.html) (last visited Feb. 2, 2018).

<sup>43</sup> See generally *Confidential Private Placement Offering Memorandum: Purchase Rights for Tokens pursuant to Simple Agreement for Future Tokens*, PROTOCOL LABS, INC. (last visited January 9, 2018), [https://coinlist.co/assets/index/filecoin\\_index/Protocol%20Labs%20-%20SAFT%20-%20Private%20Placement%20Memorandum-bbd65da01fdc4a15219c49ad20fb9e28681adec9fae744c41cccd124545c4c73.pdf](https://coinlist.co/assets/index/filecoin_index/Protocol%20Labs%20-%20SAFT%20-%20Private%20Placement%20Memorandum-bbd65da01fdc4a15219c49ad20fb9e28681adec9fae744c41cccd124545c4c73.pdf) [hereinafter *Protocol Labs, Inc.*].

<sup>44</sup> *Id.*

### C. THE LEGAL COMMUNITY'S ROLE

Noting the ambiguity in the law and the struggle of global regulators to keep pace with cryptocurrencies and newly enabled methods of raising capital, the worldwide legal community, and not just those at the top, has a responsibility to properly push forward on these highly complicated issues to ensure the integrity of the financial systems, the safety of citizens, and the proper promotion of a transformative technology that may enable human progress much like the introduction of the internet in the early 1990s. As of today, many in the community have shied away from addressing or discussing the complex legal issues surrounding cryptocurrencies because they lack a foundational understanding of the underlying technology and core concepts that differentiate various use-cases.

In fact, I am hard-pressed to find people in the legal community to discuss the topic in any detail beyond the price of Bitcoin, Ethereum, or Litecoin.<sup>45</sup> As mentioned earlier, blockchain technology appears influential, and other ideas associated with cryptocurrencies may be equally as powerful; yet, without widespread understanding, blockchain technology and legitimate blockchain use-cases face unwarranted reputational risks due, in large part, to uneducated speculative investing and the potential for less

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<sup>45</sup> See *Coinbase*, <https://www.coinbase.com/?locale=en-US> (last visited Jan 29, 2018) (Coinbase is a common entry-level wallet available for download in the Apple App Store and for Android users, on Google Play. In addition to recently added Bitcoin Cash, Coinbase permits the purchase of Bitcoin, Ethereum, and Litecoin.).

than informed policy decisions that may be made in response.

### III. CRYPTO 101

#### A. BLOCKCHAIN: BRIDGING THE TRUST GAP

The fundamental basis for understanding cryptocurrencies and the cryptomarket generally, is a grasp of the concept of blockchain. Currently, “blockchain is a term widely used to represent an entire new suite of technologies. [As such,] [t]here is substantial confusion around its definition because the technology is early-stage, and can be implemented in many ways depending on the objective.”<sup>46</sup> As described by IBM,

“[a] blockchain is a tamper-evident, shared digital ledger that records transactions in a public or private *peer-to-peer network*. Distributed to all member nodes in the network, the ledger permanently records, in a sequential chain of cryptographic hash-linked *blocks*, the history of asset exchanges that take place between the peers in the network.”<sup>47</sup>

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<sup>46</sup> Zach Church, *Blockchain, Explained*, MI SLOAN SCH. OF MGMT., (May 25, 2017), <http://mitsloan.mit.edu/newsroom/articles/blockchain-explained/> [hereinafter Church].

<sup>47</sup> Sloane Brakeville & Bhargav Perepa, *IBM Blockchain basics: Introduction to distributed ledgers*, INT’L BUS. MACH. CORP. (IBM) (Aug. 21, 2017), <https://www.ibm.com/developerworks/cloud/library/cl-blockchain-basics-intro-bluemix-trs/index.html> [hereinafter Brakeville & Perepa].

“All the confirmed and validated transaction blocks are linked and chained from the beginning of the chain to the most current block, hence the name *blockchain*. *The blockchain thus acts as a single source of truth*, and members in a blockchain network can view only those transactions that are relevant to them.”<sup>48</sup> [emphasis added].

Broadly speaking, blockchain technology enables direct peer-to-peer transactions and irreversible digital record keeping through a distributed ledger system as opposed to a centralized ledger system.<sup>49</sup> Blockchain is peer-to-peer because a transaction on the blockchain can occur directly between those transacting, without a third-party intermediary.<sup>50</sup> Blockchain is irreversible because once a block of transactions is verified, the underlying transactions can never be modified.<sup>51</sup> Blockchain is decentralized because blockchain ledgers are maintained by each member node of the ecosystem, as opposed to a single source.<sup>52</sup>

#### B. WHAT IS A “LEDGER?”

For anyone unfamiliar with the idea of a ledger, a ledger is merely a record of some data.<sup>53</sup> If each day Paul recorded how many times he made his bed, then Paul would

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<sup>48</sup> *Id.*

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> *Id.*

<sup>52</sup> *Id.*

<sup>53</sup> *General Ledger*, INVESTOPEDIA (2014), <https://www.investopedia.com/terms/g/generalledger.asp> (last visited Feb. 1, 2018).

be maintaining a ledger of how many nights he came home with the potential for a great night's sleep. As another example, a typical small-business ledger may look something like this:

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LEDGER					
ACCOUNT TYPE	CASH				
TRANSACTION DATE	TRANSACTION DETAIL	REFERENCE	DEBIT	CREDIT	BALANCE
1/1/16	Expenses for Jan	Ref#1	\$100.00		\$100.00
2/1/16	Tax withheld	Ref#2		\$110.00	(\$10.00)

C. Q: WHY A DECENTRALIZED LEDGER INSTEAD OF A CENTRALIZED LEDGER? A: TRUST.

Where the blockchain becomes a bit more interesting and novel, as the IBM comment notes, is in its creation of a decentralized ledger system. Today, most ledgers are centralized ledgers, and the fundamental distinction has very important consequences.

Centralized ledgers are ledgers that are created, controlled, and maintained by some central source. In the business context, problems with centralized ledgers . . . "stem from reliance on . . . *trust-based*, third-party systems, such as financial institutions, clearinghouses, and other mediators of existing institutional arrangements." (emphasis added).<sup>55</sup> In short, economies operating on a system of centralized ledgers are inherently slow, inefficient, costly, non-transparent, and subject to fraud and misuse because transactions in these systems usually rely on either blind trust or some combination of verification (due diligence) and insurance. As such, when centralized ledgers form the basis

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<sup>54</sup> Brakeville & Perepa, *supra* note 47.

<sup>55</sup> *Id.*

of an economy, transaction costs are high because “out-of-sync copies of business ledgers on each network participant’s own systems [can] lead to faulty business decisions made on temporary, incorrect data.”<sup>56</sup>

On the other hand, decentralized ledgers, also known as distributed ledgers, are not created, controlled, and maintained by a single, central source.<sup>57</sup> Instead, via the internet, decentralized ledgers are stored on many computers (“nodes”) owned by participants in the network.<sup>58</sup> In an economic system composed of decentralized ledgers, “[i]nstead of relying on a third party, such as a financial institution, to mediate transactions, member nodes in a blockchain network use a *consensus* protocol to agree on ledger content, and *cryptographic hashes* and *digital signatures* to ensure the integrity of transactions.”<sup>59</sup> For non-technical discussion, the most important of these key terms is consensus.

#### D. WHAT IS “CONSENSUS?”

Consensus ensures that “shared ledgers are exact copies, and lowers the risk of fraudulent transactions, because tampering would have to occur across many places at exactly the same time.”<sup>60</sup> To illustrate this concept, contemplate an example. Imagine there is a magical book, and anybody who wished to obtain a copy of the book merely had to snap their fingers. This book has no single

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<sup>56</sup> *Id.*

<sup>57</sup> *Id.*

<sup>58</sup> JOSIAS N. DEWEY ET AL., THE BLOCKCHAIN: A GUIDE FOR LEGAL PROFESSIONALS, 3 (2017).

<sup>59</sup> Brakeville & Perepa, *supra* note 47.

<sup>60</sup> *Id.*

author, but instead relies on the community of book owners to add lines of text to the story. Once a line of text is added by one author, that line appears in all of the other copies of the magical book. But, as with all magical items, there is a catch: all lines are permanent and the magical books make sure of it. By comparing texts every few seconds, the magical books come to a *consensus* on a true copy (the true copy being the copy that the majority of the books hold as record). As such, if someone attempted to erase a single, regrettable line from his or her own copy, the books would simply notice the discrepancy in that copy and place the original line right back underneath his or her eraser marks.<sup>61</sup>

Understanding the book example simplifies the concept behind consensus. Long story short, decentralized ledgers bridge the *trust gap* inherent in centralized ledger systems, thereby potentially reducing transaction costs. Said differently, “[b]ecause the blockchain verifies trustworthiness, you don’t have to. And the friction of the transaction is reduced, resulting in cost and time savings.”<sup>62</sup>

#### E. WHAT’S IN A NAME? BLOCKCHAIN.

*block + chain = blockchain.*

*For this explanation, assume that the blockchain we are describing is used as the underlying technology to facilitate the use of a digital currency. Therefore, transactions in the currency are*

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<sup>61</sup> See generally TEDx Talks, *The Value Revolution: How Blockchain Will Change Money & the World*, YOUTUBE (Apr. 3, 2017), <https://www.youtube.com/watch?v=Ft8dSvdH2ek> (mimicking Galia Benartzi’s analogy beginning at time 3:59).

<sup>62</sup> Church, *supra* note 46.

*the “data” being recorded on this blockchain. However, while reading this example, note that many other forms of data may be recorded using the same technology.*

A “block” is simply a convenient way to aggregate transactions into larger groups for processing purposes. “The transactions bundled up and included in a block do not necessarily have any relationship with each other (just as a batch of checks being processed by a bank may have no relationship to each other), other than a temporal relationship (i.e., they are all recent transactions not included in a prior block).”<sup>63</sup> In this scenario, a block might include a record of Jim paying Cynthia 10 “cryptos” in America, Dan in Norway paying 7 cryptos to Sergio in France, and Warren buying something online for 20 cryptos, as well as a couple other thousand transactions that may have taken place across the globe. Before moving forward, consider what each of the three listed pairs of payments really communicates. To do so, start by imagining the ledger containing each person’s account balance. Next, imagine what each transaction is really telling the broader network. To help you visualize, these steps have been illustrated below:

Jim	“Reduce my account by an amount of 10 cryptos and increase Cynthia’s account by an amount of 10 cryptos.”
Dan	“Reduce my account by an amount of 7 cryptos and increase Sergio’s account by an amount of 7 cryptos.”
Warren	“Reduce my account by an amount of 20 cryptos and increase Online Vendor’s account by an amount of 20 cryptos.”

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<sup>63</sup> DEWEY ET AL., *supra* note 58, at 5.

Jim	1,000.00
Cynthia	10,000.00
Dan	500.00
Sergio	1,200.00
Warren	8,300.00
Vendor	1,000,000.00

Jim	990.00
Cynthia	10,010.00
Dan	493.00
Sergio	1,207.00
Warren	8,280.00
Vendor	1,000,020.00

Importantly, on the blockchain, account balances are not actually held like in the example above. Instead, on the blockchain, funds are verified by reference links to previous transactions in the network, all of which have been permanently recorded on the general comprehensive ledgers maintained by the member nodes. So, for Jim to send Cynthia 10 cryptos, there must be some reference transactions (“inputs”) to Jim, at some point, having received at least 10 cryptos (which, he has not already spent). In this case, referring back to our pretend ledger, we know that Jim has transaction references that indicate he may transfer up to 1,000 cryptos (total amount Jim can transfer = [Jim’s inputs] - [Jim’s outputs]). Thus, through these reference links, ownership of cryptos is verified against and passed along *blocks in a chain*, ensuring that the validity of each transaction is entirely, mathematically contingent upon the history of all previous transactions in the network and that no coin can be spent twice.<sup>64</sup>

#### F. SUZY LEMONADE: CONCEPTS APPLIED.

*The following is a simplified example of how a transaction would differ in an ecosystem of centralized ledgers versus an*

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<sup>64</sup> CuriousInventor, *How Bitcoin Works Under The Hood*, YOUTUBE (July 14, 2013), <https://www.youtube.com/watch?v=Lx9zgZCMqXE>.

*ecosystem of decentralized ledgers run on blockchain. Although simplistic, I believe this example suffices for the purposes of grappling with legal concepts from a regulatory and policy perspective.*

### 1. SUZY LEMONADE: CENTRALIZED LEDGER

Suzy, a sophisticated and entrepreneurial 6-year-old, runs a lemonade stand. To properly run her business, Suzy maintains a ledger that shows how many lemons she has at the start of the day, how many lemonades she sells (and at what price), and how many lemons she has at the end of the day. As Suzy continues to run her business, she continually updates her ledger to reflect her daily operations. In this example, Suzy is maintaining a *centralized ledger* because Suzy is the only one who updates and has access to the ledger.

Enter Luke, Suzy's neighbor who acquired a small child's fortune selling cookies during recess and now wishes to acquire a complementary business to expand his empire. Luke is extremely interested in Suzy's lemonade stand as a potential acquisition; with his cookies and Suzy's secret lemonade recipe, Luke could gobble up the entire market for playground snacks. As any right-minded 6-year-old would do, Luke contacts Suzy, and asks for a copy of her ledger in order to determine a fair price. Suzy, looking to make enough money so she can launch her next venture, fudges the numbers to reflect selling more lemonade, making her lemonade stand more appealing to Luke. Unfortunately, Luke trusts Suzy and also has no way of verifying the record's authenticity. As such, Luke accepts the record as true and unfortunately overpays for Suzy's business.

## 2. SUZY LEMONADE: DECENTRALIZED LEDGER RUN ON BLOCKCHAIN

Reimagine the prior scenario, but in a decentralized ecosystem run on the blockchain. If Suzy operated her business using a decentralized ledger system run on blockchain, Suzy's operations and, consequently, the transaction would look quite different. In this world, each of Suzy's customers may have access to a pseudo-anonymous public record that continuously updates to show Suzy's sales in addition to a private record of his or her own transaction history with Suzy. Moreover, instead of recording the sales inputs herself, each time Suzy sold lemonade, for example, the sale would automatically be recorded, verified, and sealed.

Now again, enter Luke. Luke contacts Suzy to acquire her business. However, this time, rather than relying on Suzy's record, Luke can rely on a sealed, public ledger made available through the blockchain. Suzy can no longer manipulate her record because the distributed ledgers on the blockchain all communicate with one another in order to verify that each is an exact identical copy; or said otherwise, that there is consensus amongst all copies of the ledger.

Therefore, even if Suzy somehow managed to change some numbers, within a few seconds, the ledgers would notice a discrepancy in Suzy's copy, and automatically correct it to reflect the original record maintained by every other ledger in the system. *Because there is a decentralized ledger system run on blockchain, Luke no longer has to rely on his trust in Suzy. Instead, Luke has a system in place that ensures that the ledger can be trusted.*

### 3. IS BLOCKCHAIN A PERFECT SYSTEM?

“... [P]ick any industry, and [blockchain] technology holds huge potential to disrupt it, creating a more prosperous world where people [can] participate in the value that they create.”<sup>65</sup> However, blockchain is far from a perfect system and the technology is still very early stage. Currently, the technology provides “us new opportunities to rethink how parts of our society work,”<sup>66</sup> particularly as we progress through our vision of an Internet of Things, when a blockchain settlement system may be necessary to “settle trillions of real-time transactions”<sup>67</sup> that banks may not be able to handle. That said, for now, the Suzy Lemonade example is more utopian than practical. As of today, blockchain seems to be a promising technology for maintaining data integrity over some records: for example, for physical supply-chains, blockchain may help prevent someone from fraudulently acquiring record ownership of an asset.

Nevertheless, the direction of blockchain is far from certain, and the effectiveness and rate of adoption will likely depend on the adoption of many new technologies across many industries; a process that will take some time. Moreover, although much of the preceding discussed cutting

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<sup>65</sup> Don Tapscott, *How Blockchains could Change the World*, MCKINSEY & COMPANY (2016), <https://www.mckinsey.com/industries/high-tech/our-insights/how-blockchains-could-change-the-world> (last visited Feb. 2, 2018) [hereinafter Tapscott].

<sup>66</sup> Mark Staples, *Blockchain is useful for a lot more than just Bitcoin*, THE CONVERSATION (2016), <https://theconversation.com/blockchain-is-useful-for-a-lot-more-than-just-bitcoin-58921> (last visited Feb. 2, 2018) [hereinafter Staples].

<sup>67</sup> Tapscott, *supra* note 65.

out middlemen and third-parties, one could also easily “. . . imagine the adoption of blockchain technologies creating opportunities for new kinds of trusted third-party organisations.”<sup>68</sup> Take Everledger, a company that uses a blockchain to record information about the provenance and ownership of individual diamonds and other valuables. “Everledger relies on major diamond certification companies to measure identifying information about individual diamonds.”<sup>69</sup> While “[t]hese measurements can be independently cross-checked,”<sup>70</sup> companies such as Everledger essentially become “trusted third-parties for blockchain-based systems.”<sup>71</sup> Therefore, when speaking to blockchain, my view mirrors Don Tapscott’s, who once said, “I’m not a futurist. I think the future’s not something to be predicted—it’s something to be achieved. What we’re arguing is that this technology is revolutionary and holds vast potential to change society.”<sup>72</sup>

## G. THE (CURRENT) MAJOR LEAGUE COINS

### 1. BITCOIN

*“[Blockchain] is to Bitcoin, what the internet is to email. A big electronic system, on top of which you can build applications. Currency is just one.”*<sup>73</sup>

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<sup>68</sup> Staples, *supra* note 66.

<sup>69</sup> *Id.*

<sup>70</sup> *Id.*

<sup>71</sup> *Id.*

<sup>72</sup> Tapscott, *supra* note 65.

<sup>73</sup> Sally Davies, *How bitcoin and its blockchain work*, FINANCIAL TIMES (2015), <https://www.ft.com/video/2be94381-66dc-3320-a292-6a1cde0a3d5f> (last visited Jan 29, 2018) (emphasis added).

Bitcoin (“BTC”) is simply one blockchain use-case, of which there are many. Bitcoin was first introduced to the world in 2008 when an anonymous person (or group of people) named Satoshi Nakamoto published a nine-page document titled “Bitcoin: A peer-to-peer electronic cash system,”<sup>74</sup> which described the world’s first completely decentralized digital currency. The idea behind Bitcoin, which many speculate arose in response to the financial crisis of 2007-2008, was to create a more secure and reliable global currency that operated peer-to-peer, under no central authority, and outside of the central banking system. Unlike fiat currency, no institution or group can expand or contract the Bitcoin money supply. Instead, mathematics determines when a new Bitcoin will be released. That mentioned, the Bitcoin algorithm permits only 21 million Bitcoin to ever come into existence; approximately 16.8 million of which are currently in circulation today.<sup>75</sup> Given the efficiencies of distributed ledger technology, that the currency survives with no single source of failure, that the currency has a finite supply, and that the network operates globally, peer-to-peer, Bitcoin became an intriguing option as a compliment or alternative to other, more traditional currencies, particularly for citizens in countries with historically unstable currencies and crippling financial regulations.

With that in mind, by 2009, Bitcoin was available to the public, and by 2010, Bitcoin received its first “valuation” when a man in Florida exchanged 10,000 BTC for two

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<sup>74</sup> See generally Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System* (Oct. 2008), <https://bitcoin.org/bitcoin.pdf>.

<sup>75</sup> *Bitcoins in circulation*, BLOCKCHAIN LUXENBOURG, <https://blockchain.info/charts/total-bitcoins> (last visited Jan. 7, 2018).

delivered Papa John's pizzas (talk about margins!).<sup>76</sup> While the idea for a peer-to-peer digital currency, or internet money, had floated around for some years, one problem always loomed large. Until Bitcoin, online transactions required a trusted third-party intermediary because of the potential for double spending. Borrowing an example, the double spending problem Bitcoin solved can be summarized as follows (this should help put the prior discussion on blockchain and ledgers into context):

“[prior to Bitcoin] if Alice wanted to send \$100 to Bob over the Internet, she would have had to rely on a third-party service like PayPal or MasterCard. Intermediaries like PayPal keep a ledger of account holders' balances. When Alice sends Bob \$100, PayPal deducts the amount from her account and adds it to Bob's account. Without such intermediaries, digital money could be spent twice. Imagine there are no intermediaries with ledgers, and digital cash is simply a computer file, just as digital documents are computer files. Alice could send \$100 to Bob by attaching a money file to a message. But just as with email, sending an attachment does not remove it from one's computer. Alice would retain a copy of the

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<sup>76</sup> Aaron Hankin, *Bitcoin Pizza Day: Celebrating the \$20 Million Pizza Order*, INVESTOPEDIA (May 22, 2017), <https://www.investopedia.com/news/bitcoin-pizza-day-celebrating-20-million-pizza-order/> (last visited Jan. 29, 2018).

money file after she had sent it. She could then easily send the *same* \$100 to Charlie."<sup>77</sup>

Bitcoin solved this double spending problem using blockchain and public and private key cryptography. The following describes how Bitcoin solved double-spend:

"When Alice decides to transfer bitcoins to Bob, she creates a message, called a 'transaction,' which contains Bob's public key, and she 'signs' it with her private key. By looking at Alice's public key, anyone can verify that the transaction was indeed signed with her private key, that it is an authentic exchange, and that Bob is the new owner of the funds. The transaction—and thus the transfer of ownership of the bitcoins—is recorded, time-stamped, and displayed in one 'block' of the block chain. Public-key cryptography ensures that all computers in the network have a constantly updated and *verified* record of all transactions within the Bitcoin network, which prevents double-spending and fraud."<sup>78</sup>

And yes, by now you have probably guessed, the verifying *anyone* referred to above is the world-renown community of Bitcoin miners, who are rewarded with Bitcoin for contributing computer power to help run the network by

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<sup>77</sup> JERRY BRITO & ANDREA CASTILLO, BITCOIN A PRIMER FOR POLICYMAKERS, Mercatus Ctr. George Mason University (2013), [https://www.mercatus.org/system/files/Brito\\_BitcoinPrimer.pdf](https://www.mercatus.org/system/files/Brito_BitcoinPrimer.pdf).

<sup>78</sup> *Id.*

authenticating transactions. In this sense, Bitcoin miners can be viewed as Bitcoin auditors who ensure that no Bitcoin is spent twice and that all transactions are true and accurate.

## 2. ETHEREUM

Around 2013, some people began to realize that blockchains could be used for much more than just peer-to-peer digital currencies like Bitcoin. One of the most capable and interested of these people was an ambitious teenager, 19 year-old, Vitalik Buterin. While Buterin realized a vast potential for blockchain use-cases, he also understood that it was impossible to predict all possible blockchain applications.<sup>79</sup> With that wisdom, Buterin, rather than building a specific application, instead decided to build a public blockchain, Ethereum. As described on the Ethereum website, Ethereum is a “decentralized platform that runs smart contracts: applications that run exactly as programmed without any possibility of downtime, censorship, or third-party interference,”<sup>80</sup> enabling “developers to create markets, store registries of debts or promises, move funds in accordance with instructions given long in the past (like a will or a futures contract) and many other things that have not been invented yet, all without a middleman or counterparty risk.”<sup>81</sup>

As Vitalik describes it, Ethereum operates very similarly to how we create and run applications on our smart phones (except that Ethereum has its own native

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<sup>79</sup> See generally *Decentralizing Everything*, *supra* footnote 34.

<sup>80</sup> See generally *Ethereum Project*, <https://www.ethereum.org/> (last visited Feb. 2, 2018) [hereinafter *Ethereum Project*].

<sup>81</sup> *Id.*

currency).<sup>82</sup> Most of our phones run on one of two mobile operating systems, iOS (developed by Apple) or Android (developed by Google).<sup>83</sup> As we are likely all aware, anybody can create, download, or run an app on iOS or Android. In this analogy, iOS or Android can be likened to the Ethereum blockchain because the Ethereum blockchain serves as a flexible, all-purpose blockchain for anybody that wishes to create or run a decentralized application or smart contract.<sup>84</sup> In addition to many other applications, Ethereum even allows users to create their own tradeable digital token or currency.<sup>85</sup>

#### H. WHAT IS A “SMART CONTRACT?”

A smart contract is a computer program that controls a digital asset.<sup>86</sup> In essence, smart contracts help exchange data, money, property, shares, or anything of value without the need for a third-party intermediary. According to Nick Szabo, the computer scientist credited with coining the term “smart contract,” the “primitive ancestor” of smart contracts

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<sup>82</sup> See *Decentralizing Everything*, *supra* note 34 (analogy starting at 4:10).

<sup>83</sup> See *Mobile OS market share 2017*, Statista, <https://www.statista.com/statistics/266136/global-market-share-held-by-smartphone-operating-systems/> (last visited Feb. 1, 2018); see also Laurence Goasduff & Amy Ann Forni, Gartner Says Worldwide Sales of Smartphones Grew 7 Percent in the Fourth Quarter of 2016, Gartner (2017), <https://www.gartner.com/newsroom/id/3609817> (last visited Feb. 1, 2018) (noting Android and iOS accounted for 99.6 percent of all smartphone sales in the fourth quarter of 2016).

<sup>84</sup> *Decentralizing Everything*, *supra* note 34 (analogy starting at 4:10).

<sup>85</sup> *Ethereum Project*, *supra* note 80.

<sup>86</sup> See *Decentralizing Everything*, *supra* note 34 (starting at 6:35).

is the . . . vending machine.<sup>87</sup> Szabo's logic asserted that a vending machine represented a contract embedded in a piece of hardware that provided ample security for the "profitable deployment of vending machines in a wide variety of areas."<sup>88</sup> With respect to a vending machine, the terms of the contract are simple. Assume a vending machine charges \$1.50 for a Coke. The terms of the contract are such that:

- 1) if you put in \$1.50, you will receive a Coke.
- 2) if you put in more than \$1.50, you will receive a Coke and change (the difference between the amount you put in and \$1.50).
- 3) if you do not put in \$1.50, you will not receive a Coke, unless you are willing to break the machine (and take the risk of bypassing the security) or unless the machine malfunctions, providing you with a free Coke.<sup>89</sup>

While the vending machine proved to be secure enough to serve as a profitable platform for the asset exchange of sodas, creating a secure mechanism for the transfer of more valuable digital assets with much more complex contractual clauses required an immensely greater level of sophistication and security. Accordingly, Buterin and others in the community realized that providing a safe and secure ecosystem to house these transactions is the key

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<sup>87</sup> See generally Nick Szabo, *The Idea of Smart Contracts*, (1997), <http://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/idea.html>.

<sup>88</sup> *Id.*

<sup>89</sup> See *Decentralizing Everything*, *supra* note 34 (analogy starting at 6:35).

to implementing smart contracts on a greater scale.<sup>90</sup> Currently, in the “world of cryptography” as Buterin explains, “. . . even individuals are capable of having . . . cryptographic defenses that are strong enough to . . . sometimes ward off state level actors.”<sup>91</sup> Hence, as cryptography continues to progress, a greater array of smart contract transactions will likely become available.<sup>92</sup>

### I. INITIAL COIN OFFERING (ICO)

*“An ICO is a fundraising event, effected using distributed ledger technology, in which a ‘token’ or ‘coin’ is offered to a participant in return for either cash (fiat currency) or cryptocurrency, such as Ether or Bitcoin. A token entitles its holders to various rights, which typically include the right to use a service to be developed and offered by the issuer. The proceeds of the token sale are used to fund a venture or a project undertaken by the ICO sponsors.*

*Similar to equity securities, however, tokens sold in ICOs may also confer profit rights, may appreciate in value, and can be traded. ICO tokens do not represent an ownership interest in a venture.”<sup>93</sup> (emphasis added).*

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<sup>90</sup> *Id.*

<sup>91</sup> *Id.* at 7:10.

<sup>92</sup> *Id.*

<sup>93</sup> Steve Gatti, Megan Gordon & Daniel Silver, *SEC Enforcement Against Initial Coin Offering*, CLIFFORD CHANCE LLP (Oct. 2017) [hereinafter Gatti, Gordon & Silver].

*By now, I am ready to make the big reveal, the secret to understanding this concept is pizza!*

The year is 2017. The place is San Jose, California. The brain trust behind a company known as Duck E. Cheese just had a brilliant idea to create an establishment that serves pizza and other menu items, complemented by arcade, games, amusement rides, and animatronic displays as a focus of entertainment for the entire family. Revolutionary! But, the group has one problem, it has no money to lease a space, buy the arcade games, or hire a chef to come up with a proprietary secret recipe for pizza. The group needed some investors. Luckily, Jeff, the group behavioral economist (and, the cleverest of them all) comes up with an idea. "Hey guys," Jeff said, "remember that token thing I mentioned? How everything inside of our establishment would be priced and paid for in Duck E. Cheese money? You know, that customers could acquire using, and exchange for, real dollars?" Naturally, the group looked confused, they needed money to fund the project, and all Jeff could talk about was his funny money. "Well," said Jeff, "what if we make every Duck E. Cheese token worth 25 cents right now, and sell them to some future customers in order to get our project started."

Immediately, Dan interjects, "who would want tokens to a place that doesn't even exist yet? And what makes them worth 25 cents anyway?" "Dan, you're missing the point," Jeff replied, "if we issued only a limited supply, and these were the only tokens that Duck E. Cheese would accept to use our facilities, and Duck E. Cheese became a huge hit that everybody wanted to bring their kids to, we could sell these same coins for 50 cents one day, or a dollar, or more, who knows!" "So, it would be a discount to future customers" Brian interjected. "Well, you could say that, or maybe if

Duck E. Cheese is a huge success, and how could it not be, our customers could sell the token that they acquired to other customers who want to come and enjoy the fun, games, and Pizza at Duck E. Cheese, at a huge profit! You know that whole supply and demand thing.” The group markets their “utility tokens” (tokens that can be utilized to play games and buy pizza at Duck E. Cheese) promising that Duck E. Cheese will disrupt the entertainment industry. Bewildered by such a fascinating entertainment concept, people all around the world who hear about the Duck E. Cheese offering fight ruthlessly to get their hands on tokens to ‘hodl,”<sup>94</sup> hoping that once Duck E. Cheese becomes a global franchise, the value of the tokens will go “to the moon!”<sup>95</sup> The tokens sell out in record time, and the group raises \$10M for a project that is really nothing more than an idea.

Now imagine this same scenario, but instead, Duck E. Cheese had already set up their first location. How about their first 100? Through life experience, we know (or at least we think we know) that we are not buying securities or investment contracts<sup>96</sup> when purchasing credits at a place like Dave & Busters, gift cards at Starbucks, or tokens at the

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<sup>94</sup> The term “hodl” rose to fame when someone on a Bitcoin Forum message board misspelled hold. Hodl has since become a slang term used in the crypto community to describe holding onto a coin rather than selling it. Given that cryptocurrency has proven to be extremely volatile, the term is now frequently used as a humorous backronym for the phrase “hold on for dear life.”

<sup>95</sup> “To the moon” is a phrase often used in the crypto community to describe an astronomically dramatic increase, or hope for such an increase, in the price of a token.

<sup>96</sup> See generally *S.E.C. v. W.J. Howey Co.*, 328 U.S. 293 (1946) (defining “investment contract”) [hereinafter *Howey*].

local arcade. In these familiar transactions, we do not expect to hold onto these credits or tokens, thinking one day they may be more valuable. To the contrary, we are usually in a rush to spend them. Moreover, there is generally no secondary market of exchange for these tokens. As such, if we have leftover credits, we usually save our cards or tokens for another day. Nevertheless, the aforementioned Duck E. Cheese offering essentially offered tokens with similar characteristics, yet the public perception for some reason felt different. In fact, acquirers had very different expectations when buying the Duck E. Cheese tokens as opposed to when purchasing credits at Dave & Busters, gift cards at Starbucks, or tokens at another arcade. In essence, this example and line of reasoning sums up the utility token debate that has securities lawyers and regulators attempting to reconcile the line between a true “utility token,” and an investment contract by another name.<sup>97</sup>

#### J. BANKING THE UNBANKED

Another concept I briefly want to touch on is the potential for digital currencies to help bank the unbanked. As early as 2015, approximately 93%<sup>98</sup> of U.S. households

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<sup>97</sup> 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/> (last visited Feb 1, 2018) (noting that “[f]undamentally, the concept is that a token with ‘utility’ should carry an expectation of use, not an expectation of profits, under the *Howey* test for investment contracts.”).

<sup>98</sup> Remarks by Martin J. Gruenberg, Chairman, Federal Deposit Insurance Corporation to the FDIC 16th Annual Bank Research Conference; Arlington,

had access to banking services. Nevertheless, 2B<sup>99</sup> of the approximately 7.6B<sup>100</sup> people on this planet, “do not have a bank account or access to a financial institution via a mobile phone, or any other device.”<sup>101</sup> Unfortunately for those left without traditional banking services, the chances of improving their own socio-economic status, the chances of their societies seeing significant improvements in living conditions, and the chances of their societies seeing significant reductions in poverty, are tremendously low relative to the banked world. In short, as most of us are likely aware, “. . . bank accounts have an important part to play in the founding and expanding of businesses, [in] making transactions more efficient, secure and transparent[,] and [in] managing savings.”<sup>102</sup> The following map, created by the *Center for Financial Inclusion*, displays the percentage of people by country aged 15 and older who have an account at a formal financial institution:

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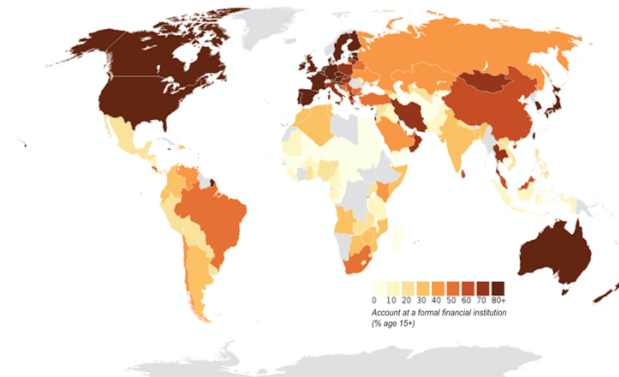
VA, FED. DEPOSIT INS. CORP. (Sept. 2016), <https://fdic.gov/news/news/speeches/spsep0816.html>.

<sup>99</sup> Camilla Hodgson, *The world's 2 billion unbanked, in 6 charts*, BUS. INSIDER (Aug. 30, 2017), <http://www.businessinsider.com/the-worlds-unbanked-population-in-6-charts-2017-8> (last visited Jan. 7, 2018) [hereinafter Hodgson].

<sup>100</sup> Current World Population Tracker, WORLDOMETERS, <http://www.worldometers.info/world-population/> (last visited Jan. 9, 2018).

<sup>101</sup> Hodgson, *supra* note 99.

<sup>102</sup> *Id.*



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Many central banks overseeing regions where much of the population is unbanked, impose restrictive regulations that make it nearly impossible for businesses to expand and compete internationally, such as limits on the amount of foreign currency a citizen can control.<sup>104</sup> Furthermore, without a bank, the cost of remittances<sup>105</sup> is tremendously high. The average immigrant supports more than 12 people from his or her home country.<sup>106</sup> Nevertheless, despite a willingness to help those at home, those immigrants'

<sup>103</sup> See generally *Mapping the Invisible Market*, CENTER FOR FINANCIAL INCLUSION, <http://www.centerforfinancialinclusion.org/fi2020/mapping-the-invisible-market> (last visited January 9, 2018).

<sup>104</sup> See Paul Vigna & Michael J. Casey, *Bitcoin for the Unbanked: Cryptocurrencies That Go Where Big Banks Won't*, FOREIGN AFFAIRS (Oct. 25, 2017), <https://www.foreignaffairs.com/sponsored/bitcoin-unbanked>.

<sup>105</sup> A remittance is a sum of money sent from a foreign worker back to an individual in his or her own country.

<sup>106</sup> Henry O'Mad, *Andreas Antonopoulos What Bitcoin Means for Unbanked Economies*, YOUTUBE (Jan. 18, 2017), <https://www.youtube.com/watch?v=LLPvEP6BSGE&t=20s> (Andreas Antonopoulos 0:14-1:06).

sending money to unbanked friends or relatives lose more than 30% of the total funds they transfer: \$175B of the approximately \$550B sent through foreign remittances gets lost each year to fees.<sup>107</sup>

Bitcoin, other Alt Coins, or other digital currency projects may help reduce transaction costs, bring greater financial resources to frontier and emerging markets, and greater fairness to currency markets, by making banking more competitive and by opening up a truly global marketplace.

#### IV. THE LEGAL CLIMATE OF ICOs

##### A. PERVASIVE PROBLEMS IN THE ICO MARKET

*In broad strokes, the following are the most pressing and prevalent problems I have observed in the ICO market:*

##### 1. PUMP AND DUMP

“One way fraudsters seek to profit is by engaging in market manipulation, such as by spreading false and misleading information about a company (typically microcap stocks) to affect the stock’s share price. They may spread stock rumors in different ways, including on company websites, press releases, email spam, and posts on social media, online bulletin boards, and chat rooms. The false or misleading rumors may be positive or negative. For example, pump-and-dump

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<sup>107</sup> *Id.*

schemes often occur on the Internet where it is common to see messages posted that urge readers to buy a stock quickly or to sell before the price goes down, or a promoter will call using the same sort of pitch. In reality, the author of the messages may be a company insider or paid promoter who stands to gain by selling their shares after the stock price is 'pumped' up by the buying frenzy they create."<sup>108</sup>

With more money pouring into Alt Coins with lower market caps and lesser track records, market manipulation for fraudsters, promoters, and company insiders has become substantially easier. When trading in coins of lower market capitalizations, the influx of capital necessary to manipulate the price of a coin can be substantially lower than for a coin of a much higher market capitalization. Consider that as of the time of this writing, Bitcoin (BTC), the cryptocurrency with the largest market capitalization, had a market capitalization of \$182,595,352,275, while IOTA (MIOTA), the tenth largest, had a market capitalization of \$7,421,345,855.61. However, Gnosis (GNO), the one-hundredth largest coin by market capitalization, had a market capitalization of only \$218,311,167.60, while Lykke, the two-hundredth largest coin by market capitalization, had a market capitalization of less than one-third of that at

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<sup>108</sup> *Investor Alert: Public Companies Making ICO-Related Claims*, U.S. SEC. & EXCH. COMM'N (2017), [https://www.sec.gov/oiea/investor-alerts-and-bulletins/ia\\_ico-related-claims](https://www.sec.gov/oiea/investor-alerts-and-bulletins/ia_ico-related-claims) (last visited Jan. 29, 2018) [hereinafter *Investor Alert*].

\$69,166,836.70.<sup>109</sup> The following demonstrates the pricing consequences of a \$300,000,000 infusion of capital into each of the aforementioned coins.

17-Jan-18	Coins in Circulation	Price per Coin (start)	Price per Coin after \$300M Infusion	Percentage Increase
Bitcoin (BTC)	16,808,925	\$10,863.30	\$10,880.85	0.16%
IOTA (MIOTA)	2,779,530,283	\$2.67	\$2.78	4%
Gnosis (GNO)	1,104,590	\$197.64	\$469.23	137%
Lykke (LKK)	266,026,295	\$0.26	\$1.39	434%

Noting that investors struggle to differentiate between coins, use-cases, and unique projects, and that returns of 5x, 10x, or more seem rather mundane in this climate,<sup>110</sup> this basic idea has serious consequences. Typically, a security or asset pumping 50% or 2x overnight would likely make the security or asset appear somewhat expensive. At the very least, most would feel like there was a missed opportunity. In the world of crypto, however, such a jump has appeared to signal to investors that the stove is hot, causing those investors flock to the token. Importantly, while securities generally have some intrinsic value based on an actual, operating business, many of these newly formed tokens are used to support platforms that do not yet have any substantial operations, historical data, or even

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<sup>109</sup> *Cryptocurrency Market Capitalizations*, *supra* note 4.

<sup>110</sup> E.g., Arjun Kharpal, *Ethereum hits a fresh record high and is up over 13,000% in a year*, CNBC (Jan. 10, 2018), <https://www.cnbc.com/2018/01/10/ethereum-price-hits-record-high-above-1400-up-17000-percent-in-a-year.html> (noting that “Steven Nerayoff, a co-creator of [E]thereum, said it could ‘easily’ double or triple this year.”); see also Arjun Kharpal, *Forget bitcoin, one of its cryptocurrency rivals is up nearly 5,800 percent this year*, CNBC (Dec. 12, 2017), <https://www.cnbc.com/2017/12/12/litecoin-price-hits-record-high-up-nearly-5800-percent-this-year.html>.

sometimes, a stream of revenue, making the issue all the more concerning.<sup>111</sup>

## 2. EXPOSURE OF HIGHLY SENSITIVE INFORMATION

Many of the exchanges require sensitive information in order to permit higher trading limits. Most higher limit exchanges require a submission of a passport, often times forcing investors to send this sensitive information overseas. Without making any allegations or pointing to a specific exchange, this appears to be information that is unnecessary to the transaction, yet could easily be distributed to other parties relatively anonymously if exchanged for some form of cryptocurrency, since many of the currencies themselves are anonymous or pseudo-anonymous.

## 3. WILDLY SPECULATIVE TOKEN PRICING

Not all tokens are inappropriately valued and not all ICOs are initiated to take advantage of securities laws or to rapidly accumulate capital for an idea that otherwise, through more traditional forms of fundraising, could not acquire such capital so quickly. Nevertheless, many newly formed ICOs have sprung up in response to investor demand, rather than the merit of tokenizing some process.<sup>112</sup> In the words of Vitalik Buterin:

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<sup>111</sup> Camila Russo & Olga Kharif, *The Hottest ICOs Are the Ones That Have Done the Least Amount of Work*, BLOOMBERG TECHNOLOGY (Dec. 11, 2017), <https://www.bloomberg.com/news/articles/2017-12-12/want-to-issue-a-red-hot-ico-rule-no-1-is-do-very-little-work>.

<sup>112</sup> See generally Nathan Reiff, *Ethereum Founder on ICOs: "We Are in a Bubble, A Lot of Projects Will Fail,"* INVESTOPEDIA (Sept. 12, 2017),

“[i]t would be a mistake to underestimate the value of ICOs or to say that they are a bad thing. ICOs are interesting because they enable monetization for open source projects...what we are seeing lately is that people are taking this idea too far, and there are projects that issue a coin not because it makes sense to issue a coin but because they have a product they can sell and [use to] raise money. Without a coin there is no business model. This creates the imbalance of incentives in the community at the moment.”<sup>113</sup>

With investors struggling to differentiate use-cases, and hoping for lottery-like returns, wildly speculative pricing has crept into the token space, particularly for newly created tokens. As Buterin continued,

“I indeed think that we are in a bubble because all the cryptocurrencies are rising and people have a feeling that they will always continue to rise. A lot of projects are raising more money than what they would be able to in the normal VC market, and sometimes there is no match between the necessity and usefulness of the project and its ability to raise money. Additionally, this market is still young and people still don't know how to differentiate

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<https://www.investopedia.com/news/ethereum-founder-cautions-ico-bubble-vitalek-buterin/>.

<sup>113</sup> *Id.*

between projects that will exist in the long term and those that won't."<sup>114</sup>

In short, as Buterin and others have noted, many investors are playing a very risky game by gambling in a highly inflated space without truly understanding their investments.

#### B. THE SEC'S APPROACH

The following paints a picture of the SEC's approach in taking jurisdiction over tokens by labeling such tokens as securities or investment contracts as well as the SEC's demeanor towards the token market. In order for a token to be considered a security or investment contract, the characteristics of the token must satisfy the *Howey* test, a case-by-case factual analysis that identifies an investment contract as a "transaction or scheme whereby a person invests his money in a common enterprise and is led to expect profits solely from the efforts of the promoter or a third party."<sup>115</sup> For those participating in token sales, whether as a buyer, seller, promoter, issuer, regulator, or someone active in discussion, the following references should help clarify the SEC's posture with respect to such sales and the factual context in which a token may be considered a security or investment contract as opposed to a pure utility token.

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<sup>114</sup> *Id.*

<sup>115</sup> *Howey*, supra note 96 at 299.

## C. THE DAO DEBACLE

*“The people who created the DAO saw it as a decentralized investment fund. Instead of leaving decisions to a few partners, anyone who invested would have a say in which companies to fund. The more you contributed, the more weight your vote carried. And the distributed structure meant no one could run off with the money.”<sup>116</sup>*

The DAO was a digital decentralized autonomous organization in the form of an investor-directed venture capital fund and served as an experiment in corporate governance.<sup>117</sup> Run on the blockchain, the DAO differed from traditional investment funds by enforcing formalized governance rules through smart contracts and allowing all participants to maintain direct, real-time control over their money.<sup>118</sup> “From April 30, 2016 through May 28, 2016, the DAO offered and sold approximately 1.15 billion DAO Tokens in exchange for approximately 12 million Ether (“ETH”). At the time the offering closed, the ETH raised by the DAO equated to approximately \$150 million.<sup>119</sup> Given that the DAO was run on the Ethereum blockchain, ETH

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<sup>116</sup> Klint Finley, *A \$50 Million Hack Just Showed that the DAO was All too Human*, WIRED (June 18, 2016, 4:30 AM), <https://www.wired.com/2016/06/50-million-hack-just-showed-dao-human/>.

<sup>117</sup> See *Report of Investigation Pursuant to 21(a) of the Sec. & Exch. Act of 1934: The DAO*, Sec. Exch. Act of 1934 Release No. 81207 (July 25, 2017), <https://www.sec.gov/litigation/investreport/34-81207.pdf> [hereinafter *Investigation Report*].

<sup>118</sup> *Id.*

<sup>119</sup> *Id.*

was needed as fuel to run the company, thus the company soliciting ETH.<sup>120</sup> In exchange for ETH, the DAO's code created tokens. The tokens granted their holders voting rights and were distributed in proportion to each member's sum of ETH contributed.<sup>121</sup> Ergo, the more tokens a member held, the more weight his or her vote carried. Importantly, for this discussion, as the SEC report notes, the founders of the DAO likened this process to "buying shares in a company . . . ." <sup>122</sup>

Under the rules of The DAO, in order for a project to be considered for funding, the project "contractor"<sup>123</sup> first had to submit a proposal to The DAO entity by: 1) writing a smart contract and deploying and publishing it on the Ethereum blockchain; and 2) posting details about the proposal on the DAO website. The project would then be reviewed by the DAO "Curators," who served as a filter for DAO considered projects, deciding which proposals would get put up for vote<sup>124</sup>. If a majority vote of the token holders supported a selected project, then the ETH raised by the DAO would be contributed to fund the project, with DAO investors hoping to make a return on their investment.<sup>125</sup> "In late May 2016, just prior to the expiration of the Offering Period, concerns about the safety and security of The DAO's funds began to surface due to vulnerabilities in The DAO's code."<sup>126</sup> The concerns proved valid, as an attacker effectively stole 3.6M ETH from the DAO entity.

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<sup>120</sup> *Id.*

<sup>121</sup> *Id.*

<sup>122</sup> *Id.*

<sup>123</sup> *Id.*

<sup>124</sup> *Id.*

<sup>125</sup> *Id.*

<sup>126</sup> *Id.*

Section 21(a) of the Securities Exchange Act of 1934 authorizes the Commission to investigate violations of the federal securities laws and, in its discretion, to “publish information concerning any such violations.”<sup>127</sup> In July of 2017, the SEC used its powers under Section 21(a) and issued a report of investigation into the DAO.<sup>128</sup> In the DAO Report, the SEC analyzed tokens issued by the DAO by the “facts and circumstances” test established by the Supreme Court in *Howey*.<sup>129</sup> Pursuant to this test, the SEC analyzed whether: (1) purchasers of the ICO invested money or valuable goods or services; (2) purchasers of the ICO were investing in a common enterprise; (3) purchasers of the ICO had a reasonable expectation of earning profits; and (4) any profits earned from the ICO were to be derived from the efforts of others. Using this test, the SEC determined that the elements of the *Howey* test were met because: (1) the purchasers’ payments in ETH were an investment of money; (2) the ETH was invested in a common enterprise; (3) investors had a reasonable expectation of profit; and (4) investors relied on the efforts of others because of the key role played by the founders and “Curators” of the DAO.<sup>130</sup>

Significantly, in the Report, the SEC stressed that not all ICOs would be considered securities, and emphasized that the analysis would continue to remain highly contingent upon the facts of a particular token offering, which were to be analyzed under *Howey*.<sup>131</sup>

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<sup>127</sup> *Id.* at Footnote 2.

<sup>128</sup> *Id.*

<sup>129</sup> *Howey*, *supra* note 96.

<sup>130</sup> *Investigation Report*, *supra* note 117.

<sup>131</sup> *Id.*

D. SEC SUSPENDS TRADING IN THREE PUBLIC COMPANIES  
LIKELY TO ENGAGE IN AN ICO

Pursuant to Section 12(k) of the Securities Act of 1934, the SEC temporarily suspended trading in the securities of First Bitcoin Capital Corp., CIAO Group, Strategic Global, and Sunshine Capital,<sup>132</sup> three public companies that had indicated they were *likely to engage in* an ICO.<sup>133</sup> As noted in SEC Release No. 81474, the Commission “temporarily suspended trading in the securities of BITCF because of concerns regarding the accuracy and adequacy of publicly available information about the company including, among other things, the value of BITCF’s assets and its capital structure.”<sup>134</sup> Following the enforcement actions, the SEC issued an “Investor Alert” on August 28, 2017, indicating, in part, “[c]ircumstances that might lead to a trading suspension,” which included:

- A lack of current, accurate, or adequate information about the company – for example, when a company has not filed any periodic reports for an extended period;
- Questions about the accuracy of publicly available information, including in company press releases and reports, about the company’s current operational status and financial condition; or

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<sup>132</sup> Gatti, Gordon & Silver, *supra* note 93.

<sup>133</sup> *Id.*

<sup>134</sup> SEC. & EXCH. COMM’N Release No. 81474 (Aug. 23, 2017), <https://www.sec.gov/litigation/suspensions/2017/34-81474.pdf>.

- Questions about trading in the stock, including trading by insiders, potential market manipulation, and the ability to clear and settle transactions in the stock.<sup>135</sup>

In the Investor Alert, the SEC focused on warning investors about pump and dump schemes and market manipulations and showed a willingness to suspend trading in securities of publicly traded companies who merely appear likely to raise additional capital through an ICO.

#### E. SEC INTRODUCES CYBER UNIT AND RETAIL STRATEGY INITIATIVES AND TAKES ENFORCEMENT ACTION AGAINST AN ICO

##### 1. SEC CYBER UNIT AND RETAIL STRATEGY INITIATIVES INTRODUCED

On September 25, 2017, the SEC announced two new initiatives to build upon the Enforcement Division's efforts to battle cyber-based threats and protect retail investors: "[t]he creation of a Cyber Unit . . . focus[ed] on targeting cyber-related misconduct and the establishment of a retail strategy task force . . . [to] implement initiatives that directly affect retail investors reflect[ing] SEC Chairman Jay Clayton's priorities in these important areas."<sup>136</sup>

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<sup>135</sup> *Investor Alert*, *supra* note 108.

<sup>136</sup> *SEC Announces Enforcement Initiatives to Combat Cyber-Based Threats and Protect Retail Investors*, U.S. SEC. & EXCH. COMM'N (2017), <https://www.sec.gov/news/press-release/2017-176> (last visited Jan 29, 2018).

According to a press release on the SEC website, the Cyber Unit will target cyber-related misconduct including: 1) market manipulation schemes involving false information spread through electronic and social media; 2) hacking to obtain material nonpublic information; 3) violations involving distributed ledger technology and initial coin offerings; 4) misconduct perpetrated using the dark web; 5) intrusions into retail brokerage accounts; and 6) cyber-related threats to trading platforms and other critical market infrastructure.<sup>137</sup>

Describing the prevalence and risk of cyber-related misconduct, Stephanie Avakian, Co-Director of the SEC's Enforcement Division, stated '[c]yber-related threats and misconduct are among the greatest risks facing investors and the securities industry . . . .'<sup>138</sup> These comments and actions appear to indicate that the SEC intends to be substantially more aware of and aggressive with those people and companies involved in the token market.

#### 1. SPEED AND THE PRESUMPTION THAT A TOKEN IS A SECURITY

On September 29, 2017, The Securities and Exchange Commission charged Maksim Zaslavskiy and two companies (REcoin Group Foundation, LLC and DRC World, Inc.) with defrauding investors in a pair of initial coin offerings purportedly backed by investments in real estate and diamonds.<sup>139</sup> With respect to REcoin, Zaslavskiy

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<sup>137</sup> *Id.*

<sup>138</sup> *Id.*

<sup>139</sup> See generally *U.S. Sec. & Exch. Comm'n v. REcoin Group Found., LLC*, No. 1:17-cv-05725, 2017 BL, (E.D.N.Y. Sept. 29, 2017).

touted the venture as “The First Ever Cryptocurrency Backed by Real Estate.”<sup>140</sup> The complaint alleges, in part, that:

“The stated purpose of each ICO was to convert ‘fiat currency,’ or ‘digital currency’ obtained using fiat currency, into ‘tokenized’ currency that would be backed by investments in certain assets (real estate in the case of REcoin and diamonds in the case of Diamond) that would generate returns for investors stemming from: (i) the appreciation in value of the investments Defendants would make, in the case of REcoin, in real estate assets, or, in the case of Diamond, in diamonds; (ii) the appreciation in value of the REcoin and Diamond tokens as the Companies’ businesses grew due to the managerial efforts of teams of ‘experts;’ and (iii) the supposed increase in demand for the tokens.”<sup>141</sup>

Notably, the complaint alleges that Zaslavskiy fraudulently raised \$300,000 from “hundreds of investors, through various material misrepresentations and deceptive acts . . . .”<sup>142</sup> Specifically, in this regard, the complaint alleges that investors were induced into purchasing coins (of which, allegedly, there were none), that REcoin claimed to “‘ha[ve]

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<sup>140</sup> SEC Exposes Two Initial Coin Offerings Purportedly Backed by Real Estate and Diamonds, U.S. SEC. & EXCH. COMM’N (Sept. 29, 2017), <https://www.sec.gov/news/press-release/2017-185-0>.

<sup>141</sup> U.S. Sec. & Exch. Comm’n v. REcoin Group Found., LLC. No. 1:17-cv-05725, 2017 BL, (E.D.N.Y. Sept. 29, 2017) (Comp. ¶ 4.).

<sup>142</sup> *Id.*

a team of lawyers, professionals, brokers, and accountants that would invest REcoin's ICO proceeds into real estate and that Diamond had 'experts' to select the best diamonds" (although allegedly, none of the aforementioned professionals or experts had been hired), and that investors in the REcoin ICO could expect to make profits from REcoin's real estate investments and 10-15% returns from Diamond's operations (though neither had any real operations).<sup>143</sup>

Unfortunately, the Zaslavskiy action appears shrouded in so many bad facts that it is unlikely to bring significant clarity to the regulatory framework of ICOs. Nevertheless, [t]he Zaslavskiy enforcement action, which targeted what is in essence a fraud scheme, is notable for [several] reasons:

"1. Speed. Zaslavskiy only started soliciting investments in REcoin in July 2017; the SEC began its investigation in August 2017.

2. Securities Presumption. It appears that the SEC will classify ICO tokens as securities unless the tokens are proven otherwise, in essence shifting the burden to operators of ICOs to show that the tokens being offered are not securities."<sup>144</sup>

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<sup>143</sup> *Id.*

<sup>144</sup> Gatti, Gordon & Silver, *supra* note 93.

## 2. SEC WARNS CELEBRITIES AND PROMOTERS

In November, the SEC warned against celebrity and promoter endorsements,<sup>145</sup> stating:

“Any 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. A failure to disclose this information is a violation of the anti-touting provisions of the federal securities laws. Persons making these endorsements may also be liable for potential violations of the anti-fraud provisions of the federal securities laws, for participating in an unregistered offer and sale of securities, and for acting as unregistered brokers.”<sup>146</sup>

Importantly, and in conjunction other SEC interpretation read broadly, this statement appears to extend to those who carry significant social clout or influence, including through an internet presence, such as a YouTube channel or podcast, for example.

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<sup>145</sup> Notably, class action litigation is currently pending in the Southern District of Florida against a Centra Tech, Inc. offering promoted by Floyd Mayweather. *Rensel v. Centra Tech, Inc.*, Docket No. 1:17-cv-24500 (S.D. Fla. Dec. 13, 2017).

<sup>146</sup> *Statement on Potentially Unlawful Promotion of Initial Coin Offerings and Other Investments by Celebrities and Others*, U.S. SEC. & EXCH. COMM’N (2017), <https://www.sec.gov/news/public-statement/statement-potentially-unlawful-promotion-icos> (last visited Jan. 29, 2018).

F. MUNCHEE ACTION PROVIDES THE BASELINE FOR THE  
UTILITY TOKEN DEBATE

Munchee, Inc. (“Munchee”) sought to “disrupt review sites such as Yelp, FourSquare, Google Places, and Zagat, by introducing an immutable and verifiable blockchain-based user review process that [was] based around a crypto-token to incentivize ecosystem participants.”<sup>147</sup> Marketed as the “Instagram for food,” Munchee planned on issuing a finite supply of 500,000,000 MUN, (tokens used to pay for goods and services on the Munchee platform or to reward content creators).<sup>148</sup> “In October and November of 2017, Munchee conducted an offering of “MUN tokens to raise about \$15 million in capital so that it could improve its existing app and recruit users to eventually buy advertisements, write reviews, sell food, and conduct other transactions using MUN.” Purchasers of MUN tokens in the earlier stages of the offering were offered “discounts of 15% and 10% on the offering price.”<sup>149</sup> Notably, “while Munchee told potential purchasers that they would be able to use MUN tokens to buy goods or services in the future after Munchee created an ‘ecosystem,’ no one was able to buy any good or service with

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<sup>147</sup> Richard Kastelein, *Munchee Announces The First Decentralized Food Review And Social Platform*, BLOCKCHAINNEWS (Sept. 27, 2017), <http://www.the-blockchain.com/2017/09/27/munchee-announces-first-decentralized-food-review-social-platform/>.

<sup>148</sup> Dr. Sanjeev Verma, Nghi Bui and Chelsea Lam, *Munchee Token: A decentralized Blockchain based food review/rating social media platform*, (Oct. 16, 2017), <https://s3.amazonaws.com/munchee-docs/Munchee+White+Paper.pdf>.

<sup>149</sup> Securities and Exchange Act of 1934 Release No. 10445 (Dec. 11, 2017), <https://www.sec.gov/litigation/admin/2017/33-10445.pdf> [hereinafter Release No. 10445].

MUN throughout the relevant period.”<sup>150</sup> Moreover, Munchee also expressly stated that it intended and would ensure that MUN tokens would trade in secondary markets on a number of exchanges in various jurisdictions.<sup>151</sup>

On December 11, 2017, pursuant to Section 8A of the Securities Act of 1933, the SEC initiated cease-and-desist proceedings against Munchee Inc., to prevent Munchee from “committing or causing any violations and any future violations of Section 5(a) and (c) of the Securities Act.”<sup>152</sup> The SEC noted that the MUN tokens were securities, in part, because MUN purchasers had a “reasonable expectation of obtaining a future profit.”<sup>153</sup> To this point, the SEC noted several specific examples to support its conclusion. One such example was a Munchee Facebook post created on or about October 25, 2017, which “linked to a third-party YouTube video, and wrote ‘199% GAINS on MUN token at ICO price! Sign up for PRE-SALE NOW!’”<sup>154</sup> Moreover, the SEC commented that “Munchee and its agents targeted the marketing of the MUN tokens offering to people with an interest in tokens or other digital assets that have in recent years created profits for early investors in ICOs.”<sup>155</sup>

The SEC also pointed to several specific examples to support its conclusion that MUN token purchasers reasonably expected to profit solely or primarily from the efforts of Munchee and its agents.<sup>156</sup> First, the SEC noted “in the MUN White Paper and elsewhere, Munchee highlighted

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<sup>150</sup> *Id.*

<sup>151</sup> *Id.*

<sup>152</sup> *Id.*

<sup>153</sup> *Id.*

<sup>154</sup> *Id.*

<sup>155</sup> *Id.*

<sup>156</sup> *Id.*

that its founders had worked at prominent technology companies and highlighted their skills running businesses and creating software.”<sup>157</sup> Somewhat more interestingly, however, was the SEC’s notice of a specific example of a person who posted a YouTube video that described and endorsed the MUN token offering.<sup>158</sup> This person’s YouTube channel had approximately 15,000 followers<sup>159</sup> and, in the video review, the person discussed how MUN token purchasers would profit only after Munchee did years of work . . . .”<sup>160</sup> Strangely, the SEC did not assert that this person was affiliated with Munchee or why this person’s opinion was representative of what a MUN token purchaser reasonably expected.<sup>161</sup>

That said, the most significant portion of this somewhat puzzling SEC order was paragraph 35, which stated:

“Even if MUN tokens had a practical use at the time of the offering, it would not preclude the token from being a security. Determining whether a transaction involves a security does not turn on labelling – such as characterizing an ICO as involving a ‘utility token’ – but instead requires an assessment of ‘the economic realities underlying a transaction.’ Forman, 421 U.S. at 849. All of the relevant

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<sup>157</sup> *Id.*

<sup>158</sup> *Id.*

<sup>159</sup> In comparison to other YouTube channels, the 15,000 subscribers appear relatively non-influential, given that many YouTube channels have millions of subscribers.

<sup>160</sup> *Release No. 10445, supra* note 149.

<sup>161</sup> *Id.*

facts and circumstances are considered in making that determination. See Forman, 421 U.S. at 849 (purchases of 'stock' solely for purpose of obtaining housing not purchase of 'investment contract'); see also SEC v. C.M. Joiner Leasing Corp., 320 U.S. 344, 352-53 (1943) (indicating the 'test . . . is what character the instrument is given in commerce by the terms of the offer, the plan of distribution, and the economic inducements held out to the prospect')."<sup>162</sup>

Although the line remains unclear, according to this comment, merely having actual utility does not preclude a token from being deemed a security. While in this case there was no actual utility for the token, and while on the other end of the spectrum exists our Dave & Busters credits, or Starbucks gift cards, it will be interesting to see how much more aggressive the SEC becomes in taking jurisdiction over tokens with real, practical utility, and more so, where on the spectrum of utility those tokens fall. Given the SEC's reference to the language "economic realities underlying a transaction" and to *SEC v. C.M. Joiner*,<sup>163</sup> it will also be intriguing to see the degree of precaution token issuers must take given the frenzied climate of exchange in secondary markets.

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<sup>162</sup> *Id.*

<sup>163</sup> See *S.E.C. v. C.M. Joiner Leasing Corp.*, 320 U.S. 344 (1943).

G. WILL MORE STRINGENT U.S. REGULATION REALLY AFFORD  
MORE PROTECTION TO U.S. INVESTORS?

At the beginning of this note, I mentioned that many U.S. ICOs appear to be structured under Rule 506, as this seems to be the most logical niche within the securities framework for this method of raising capital. In the earlier example, I discussed Filecoin, an offering that was effected via a Simple Agreement for Future Tokens (SAFT) and accompanying offering memorandum,<sup>164</sup> which limited the offering to accredited investors, prohibited resales before the expiration of the appropriate holding period, and detailed a lengthy list of risk factors associated with investing in the Filecoin project and blockchain technologies generally.<sup>165</sup> As mentioned, these protections in particular appeared meaningful in combatting some of the more prevalent issues and dangers present in today's ICO and secondary markets. Now that there is a baseline of understanding, I can expand upon this prior thought in greater detail and highlight a potential problem with squeezing more ICOs into the existing regulatory framework.

At first glance, Rule 506 seems to eliminate many of the concerns surrounding the ICO and secondary markets (particularly when noting that even exempt securities are subject to the securities laws anti-fraud provisions, including Rule 10b),<sup>166</sup> without putting too much strain on raising capital because Rule 506 allows a company to raise up to an unlimited dollar amount. First, Rule 506 requires that in order for general solicitation or advertising to be permitted,

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<sup>164</sup> Protocol Labs, Inc., *supra* note 43.

<sup>165</sup> *Id.*

<sup>166</sup> See 17 CFR 240.10b.

an issuer must “take reasonable steps to verify that purchasers of the securities are accredited investors using such methods as determined by the Commission.”<sup>167</sup> To that point, the SEC has stated that issuers should consider the following factors to meet the reasonable verification requirement under Rule 506(c):

- the nature of the purchaser and the type of accredited investor that the purchaser claims to be;
- the amount and type of information that the issuer has about the purchaser; and
- the nature of the offering, such as the manner in which the purchaser was solicited to participate in the offering, and the terms of the offering, such as a minimum investment amount.<sup>168</sup>

By limiting the offerings to accredited investors, the Rule inherently imposes a greater degree of investor protection. The law surrounding Regulation D rebuttably presumes that accredited investors are sophisticated and can “fend for themselves.”<sup>169</sup> At the very least, accredited investors have relatively more wealth than non-accredited investors, and therefore the opportunity to diversify their

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<sup>167</sup> See 17 CFR 230.506.

<sup>168</sup> *Eliminating the Prohibition Against General Solicitation and General Advertising in Rule 506 and Rule 144A Offerings*, U.S. SEC. & EXCH. COMM’N (Dec. 11, 2011), <https://www.sec.gov/news/public-statement/statement-potentially-unlawful-promotion-icos> [hereinafter *Eliminating the Prohibition*].

<sup>169</sup> See *SEC v. Ralston Purina*, 346 U.S. 119 (1953).

portfolios in a manner sufficient to mitigate associated risks or to hire someone to do so and perform due diligence on their behalf. Moreover, accredited investors, particularly when pooled together, have greater resources to exact information (and for this reason, Regulation D generally assumes that accredited investors have the type of information that would necessarily be found in a registration statement).<sup>170</sup> Additionally, the third bullet listed above, “nature of the offering,” appears to give the SEC sufficient precedent to treat ICOs differently, should the SEC feel that ICOs require unique treatment given their inherent characteristics (e.g., that capital is being raised, often times, through the exchange of pseudo-anonymous currency).<sup>171</sup> Moreover, “using such methods as determined by the Commission” also appears to provide room for the SEC to create a more precise and unique framework for Initial Coin Offerings.<sup>172</sup>

However, maybe most importantly, securities issued under Regulation D are “restricted securities.”<sup>173</sup> Before someone may sell any restricted security in the marketplace, he or she must hold that security for a certain period of time.<sup>174</sup> Furthermore, to specifically comply with Rule 506,

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<sup>170</sup> See generally *Report on the Review of the Definition of “Accredited Investor,”* U.S. Securities and Exchange Commission (2015), <https://www.sec.gov/files/review-definition-of-accredited-investor-12-18-2015.pdf>.

<sup>171</sup> Adam Y., *Crypto and anonymity*, Medium (2017), <https://medium.com/cybertrustbank/crypto-and-anonymity-c35c2053ae7a> (last visited Feb. 2, 2018).

<sup>172</sup> *Eliminating the Prohibition*, *supra* note 168.

<sup>173</sup> *Rule 144: Selling Restricted and Control Securities*, U.S. SEC. & EXCH. COMM’N (Jan. 16, 2013), <https://www.sec.gov/reportspubs/investor-publications/investorpubsrule144htm.html>.

<sup>174</sup> *Id.*

the issuer must take certain actions to guard against resales, such as obtaining purchaser investment letters that commit to the restrictions.<sup>175</sup> Currently, the most pervasive problem in the ICO market can be summed up as the combination of the fear of missing out (“FOMO”), the pressure to act quickly, and the lack of clear regulation that has thus far placed lesser scrutiny on how offerings are marketed and, most importantly, the disclosures that some offerings provide (after all, the thrust of the securities laws is disclosure). This combination, in conjunction with wildly volatile pricing and exuberant demand, has led those on secondary exchanges to purchase first and ask questions later; unfortunately, once later comes around, investors are also likely left with less robust information to sift through than would likely be available in more traditional securities markets. Hence, some investors have been incentivized to participate in the ICO market not for the merit of the investment or some intrinsic value, but merely for what I dub the “hype premium” or the amount a token can be immediately sold for on the secondary market purely based on rumors, excitement, speculation, and, in some cases, pumping. Rule 502<sup>176</sup> asserts:

“Securities acquired in a transaction under Regulation D shall have the status of securities acquired in a transaction under section 4(a)(2) of the Act and cannot be resold without registration under the Act or an exemption therefrom. The issuer shall exercise reasonable care to assure that the purchasers of the

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<sup>175</sup> See Rule 17 CFR 230.502(d).

<sup>176</sup> See Rule 17 CFR 230.502.

securities are not underwriters within the meaning of section 2(a)(11) of the Act, which reasonable care may be demonstrated by the following:

- (1) Reasonable inquiry to determine if the purchaser is acquiring the securities for himself or for other persons;
- (2) Written disclosure to each purchaser prior to sale that the securities have not been registered under the Act and, therefore, cannot be resold unless they are registered under the Act or unless an exemption from registration is available; and
- (3) Placement of a legend on the certificate or other document that evidences the securities stating that the securities have not been registered under the Act and setting forth or referring to the restrictions on transferability and sale of the securities."<sup>177</sup>

Section 2(a)(11) of the Exchange Act of 1933 defines an underwriter broadly as "any person who has purchased from an issuer with a view to . . ." distribute any security.<sup>178</sup> Under SEC "safe harbor" Rule 144, "a minimum of one year must elapse between the later of the date of the acquisition of the securities from the issuer, or from an affiliate of the issuer . . ." before resale.<sup>179</sup> Having such resale restrictions would allow for a cool down period and provide for greater time for due diligence.

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<sup>177</sup> See Rule 17 CFR 230.502.

<sup>178</sup> Sec. & Exch. Act § 2(a)(11).

<sup>179</sup> See 17 CFR 230.144.

That mentioned, when considering imposing greater regulatory scrutiny on ICOs, we must also consider the potential unintended consequences that squeezing more token sales into the securities framework may have on the U.S. ICO market and U.S. investors generally. While Rule 506 places no restrictions on the total amount of capital a company may raise,<sup>180</sup> capital may stop flowing into U.S. based ICOs and instead from U.S. investors to companies in other countries with less robust securities frameworks as investors, in the short-run, continue to pursue the hype premium (in the long-run, I expect normalization). Consequently, this process may push the needle in a direction that opens the door for more accredited, and more relevantly, non-accredited investors to send money overseas, thereby affording such persons less protection, rather than more protection.

Noting this difficult reality, the regulatory regimes in other countries should be at the forefront of discussion when considering how to handle ICOs and the secondary markets domestically. For comparison, the following briefly summarizes the approaches taken by the four largest countries by GDP (other than the U.S.), Israel, Dubai and Switzerland (given their prominence in financial world), and South Korea (given its prominence in the world of tokens):

CHINA: Beijing banned the sale of cryptocurrencies and tokens outright in September [of 2017], saying in a statement ICOs have disrupted the economic and financial order. Any individuals or organizations that have completed fund-raising through a coin offering

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<sup>180</sup> See 17 CFR 230.506.

should make arrangements to return the funds, and ensure that the legitimate rights and interests of the investors are protected.<sup>181</sup>

JAPAN: Japan's Financial Services Agency . . . issued a warning in late October about the risks of investing in ICOs. Although Japan has no specific laws on ICOs, they may be regulated by two existing laws: the Payment Services Act and the Financial Instruments and Exchange Act.<sup>182</sup>

GERMANY: Germany has no specific regulations for ICOs, but expect ICOs to adhere to existing regulations including those encapsulated in the Banking Act, Investment Act, Securities Trading Act, Payment Services Supervision Act, and Prospectus Act. However, the Federal Financial Supervisory Authority has issued a warning regarding the risks of ICO investments. Per the statement, "Due to the lack of legal requirements and transparency rules, consumers are left on their own when it comes to verifying the identity, reputability, and credit standing of the token provider and understanding and assessing the investment on offer. It can also not be

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<sup>181</sup> Gertrude Chavez-Dreyfuss, Angela Moon & Tomasz Janowski, *Factbox: National regulators' views on initial coin offerings*, REUTERS (Nov. 28, 2017), <https://www.reuters.com/article/us-blockchain-regulation-tokens-factbox/factbox-national-regulators-views-on-initial-coin-offerings-idUSKBN1DS0FW> [hereinafter Chavez-Dreyfuss et al.].

<sup>182</sup> *Id.*

guaranteed that personal data will be protected in accordance with German standards.”<sup>183</sup>

UNITED KINGDOM: The Financial Conduct Authority warned in September that coins issued in public offering were subject to extreme volatility, often carried little or no investor protection, and were high-risk given their unregulated nature and early stage of many projects. It is now considering whether to introduce specific regulations on digital coin sales.<sup>184</sup>

ISRAEL: The Israel Securities Authority (ISA) has announced a plan to form a panel to regulate initial coin offerings and consider to what extent securities regulations would apply to coin sales.<sup>185</sup>

DUBAI: The Dubai Financial Services Authority has issued a warning on ICOs in September, but in an emailed response to Reuters it said it needed to review the types of ICOs and their potential impact on investors and markets, before formulating its views on any need for action.<sup>186</sup>

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<sup>183</sup> See generally Frederick Reese, *ICO Regulations by Country*, BITCOIN MKT. JOURNAL (Dec. 18, 2017), <https://www.bitcoinmarketjournal.com/ico-regulations/> (last visited Jan 9, 2018).

<sup>184</sup> Chavez-Dreyfuss et al., *supra* note 181.

<sup>185</sup> *Id.*

<sup>186</sup> *Id.*

SWITZERLAND: While its Financial Market Supervisory Authority does not have rules designed specifically for ICOs, some parts of the procedure may be covered by existing regulations depending on how such an offering is structured, the regulator has said. The authority said in September that it had started to investigate a number of ICOs for possible breaches of Swiss law.<sup>187</sup>

SOUTH KOREA: The nation's financial regulator in September prohibited domestic companies and startups from participating in ICOs and said that those involved would face 'stern penalties.'<sup>188</sup>

## V. CONCLUSION

Blockchain technology and cryptocurrencies have the potential to reshape many trust-based systems, creating a more global economy, and engendering a more efficient economy for maximizing the potential of leveraging certain internet connected assets. However, "[u]nlike the Internet, which has a sophisticated governance ecosystem, the whole world of blockchain and digital currencies is the Wild West."<sup>189</sup> As such, and to bring this note full circle, "[a] number of concerns have been raised regarding the cryptocurrency and ICO markets, including that, as they are currently operating,

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<sup>187</sup> *Id.*

<sup>188</sup> *Id.*

<sup>189</sup> Tapscott, *supra* note 65.

there is substantially less investor protection than in our traditional securities markets, with correspondingly greater opportunities for fraud and manipulation[.]”<sup>190</sup>

Unfortunately, in the short-term, I believe many, if not most, people will devote more resources to taking advantage of the economic and regulatory climate than promoting truly disruptive use-cases of blockchain and cryptocurrencies. Ultimately, as noted by Buffet, this perspective and approach may lead to “. . . a bad ending”<sup>191</sup> for many speculative investors, and, for this reason, I expect cryptocurrencies and ICOs to be a tremendously hot and fluid legal topic throughout 2018 and beyond. While much of this note focused on the SEC’s approach, and touched on some cases in the U.S. court system, cryptocurrency and ICOs are truly a global phenomenon. When considering these topics, I urge those in the legal community, domestically and abroad, to approach these innovations with an open-mind, and to really attempt to understand, in order to help promote truly informed policy decisions as opposed to those made in response to poor or irrational investment decisions.

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<sup>190</sup> Clayton, *supra* note 1.

<sup>191</sup> Oyedele, *supra* note 35.

