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NOTE

*HOWEY* SHOULD BE DISTRIBUTING NEW CRYPTOCURRENCIES:  
APPLYING THE *HOWEY* TEST TO MINING, AIRDROPPING, FORKING,  
AND INITIAL COIN OFFERINGS<sup>†</sup>

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*The purpose of this Note is to determine which cryptocurrency initial distribution methods involve the offering of securities as regulated by the 1933 Securities Act. The primary legal issue is the Howey test. This test identifies whether an offering is an investment contract, and thus subject to regulation by the 1933 Securities Act, based on whether it involves an investment of money in a common enterprise, in which investors are led to expect profits from the efforts of a promoter or third party. The distribution methods discussed are mining, airdropping, forking, and initial coin offerings (“ICOs”). Mining, airdropping and forking are likely not investment contracts, but initial coin offerings likely are. However, regulators should make it clear that mining, airdropping and forking are acceptable practices. Furthermore, they should proceed with a light touch when regulating initial coin offerings, except in the case of fraud. In particular, the ICO community in partnership with government should instigate a system where ‘crypto-underwriters’ vet ICOs and the crypto-underwriters are regulated by the SEC.*

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## I. INTRODUCTION

The purpose of this Note is to consider the implications of American securities laws for the marketing of cryptocurrencies. Blockchain technology is an important issue for securities regulation. The market capitalization of cryptocurrencies has grown rapidly, exceeding \$140 billion in March 2019.<sup>1</sup> Many founders of cryptocurrencies have distributed and continue to distribute their products without complying with the 1933 Securities Act disclosure requirements. While not all cryptocurrencies are properly subject to securities regulations, it is likely that many are. To enable the cryptocurrency space to thrive, it is important that both regulators and entrepreneurs are clear about what practices are acceptable under American securities laws.

Part II of this Note first discusses blockchain technology and various types of cryptocurrencies, including their distribution methods. Part III describes United States securities laws, with a focus on the *Howey* test. The four-part *Howey* test asks whether: (1) a person has invested money; (2) in a common enterprise; and, (3) was led to expect profits; (4) from the efforts of the promoter.<sup>2</sup> Where all four parts of the test are answered affirmatively a security offering exists. In Part IV, the *Howey* test is applied to various types of cryptocurrency distribution methods. Part V provides recommendations for crypto-founders and regulators.

## II. BLOCKCHAIN

This Part first describes blockchain technology generally, including what it does and what its advantages are. It then explores the variety of distribution methods that have been employed for issuing and distributing cryptocurrencies. These distribution methods are the focus of the securities law analysis later in this Note.

### A. *The Technology*

Bitcoin is one application of blockchain technology. Blockchain is a form of distributed ledger technology. A blockchain can be set up as a permissioned blockchain or as a public blockchain.<sup>3</sup>

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1. *Top 100 Cryptocurrencies by Market Capitalization*, COINMARKETCAP, <https://coinmarketcap.com/> (last visited Apr. 6, 2019) [hereinafter *Cryptocurrencies Market Capitalization*].

2. Sec. & Exch. Comm'n v. W. J. Howey Co., 328 U.S. 293, 293 (1946).

3. Oliver Bussmann, *A Public or Private Blockchain? New Ethereum Project Could Mean Both*, AMERICAN BANKER (Mar. 1, 2017, 9:30 AM),

Permissioned blockchains are used to provide enterprise solutions.<sup>4</sup> Cryptocurrencies operate on public blockchains, and therefore public blockchains are the focus of this Part.

Blockchains are digital ledgers maintained by a network of computers.<sup>5</sup> Anybody with internet access can set up an account to use a public blockchain.<sup>6</sup> An account is comprised of a public key and a private key. A blockchain account can be analogized to an email account. The private key is analogous to the account password. The public key is analogous to the email address. Just like an email address can be shared to receive emails from other people, the public key can be shared to receive transactions or emails from other people. Like an email password, the private key is kept secret to ensure that only the account owner can send transactions from the corresponding public key. The blockchain public key/private key combination allows the owner to send and receive tokens (such as bitcoin) and other information.<sup>7</sup> Unlike email, all transactions made on most blockchains are public.<sup>8</sup>

Blockchains are a special type of database. In addition to public-private key cryptography, blockchains use peer-to-peer networking and a consensus mechanism to achieve some traits that are not available in conventional databases. Peer-to-peer networking means the database, also known as the blockchain, is stored on multiple computers at once. So long as one computer contains the blockchain it can be repropagated to the network participants. Effectively, this means that the blockchain cannot be erased unless *every* host computer is compromised. The consensus mechanism means that transactions recorded to the blockchain must be agreed upon by a majority of the network participants. Whenever a discrepancy is detected in the blockchain, the corrupted versions are updated to the consensus version of the blockchain. So long as the majority of

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<https://www.americanbanker.com/opinion/a-public-or-private-blockchain-new-ethereum-project-could-mean-both>.

4. *Id.*

5. ARVIND NARAYANAN, JOSEPH BONNEAU, EDWARD FELTEN, ANDREW MILLER & STEVEN GOLDFEDER, BITCOIN AND CRYPTOCURRENCY TECHNOLOGIES: A COMPREHENSIVE INTRODUCTION 15 (2016).

6. In contrast, permissioned blockchains restrict access to those sanctioned by the blockchain owner; Bussmann, *supra* note 3.

7. Narayanan, *supra* note 5, at 41.

8. *Id.* at 190. The transactions on most public blockchains are visible to the whole network. However, since public keys are not always directly linked to an identity a party can act pseudo-anonymously. Some blockchains purport to keep transactions completely private such as the ZCash blockchain. ZCASH, <https://z.cash/> (last visited Apr. 6, 2019).

the blockchain copies are uncorrupted, the network can continue uncompromised. For major cryptocurrencies, this means the data is maintained by thousands of computers. So long as half of the blockchains stored on these computers are uncorrupted the system will continue to function properly.<sup>9</sup> As a result, to forge or improperly delete an entry on the blockchain, the manipulator must control more than fifty percent of the network. In the community, this is known as a “51% attack.”<sup>10</sup>

The purpose of blockchain technology is to reliably store transactions without the use of a third party. Traditionally, financial transactions required a bank to settle the transfer. With blockchain, this is unnecessary. Instead of the bank acting as the trusted intermediary, the parties can rely on the algorithm. Essentially, the blockchain is an incorruptible public<sup>11</sup> ledger of transactions.<sup>12</sup>

A major barrier to creating a digital currency was how to prevent a unit of currency from being spent twice. Blockchain technology solved this ‘double spend’ problem.<sup>13</sup> By solving this problem, Blockchain enables users to treat Bitcoin, and other cryptocurrencies, as cash. Once sent, the payment cannot be revoked, and only one person ever has control of a given bitcoin. Of course, the blockchain solution unravels if a 51% attack is executed.<sup>14</sup> But, the cost of a 51% attack has been estimated at more than \$7 billion.<sup>15</sup>

A network of computers is needed to keep the blockchain secure and to process transactions. The computers that provide this service are called miners. Miners are compensated for their work in the blockchain’s native currency. In the case of the Bitcoin blockchain, the native currency is bitcoin. The more computational power devoted to mining, the more resilient the system becomes because it increases the cost of executing a 51% attack.

Transactions are grouped. Periodically the transactions in the group are posted to the blockchain. The group of transactions is called a block when posted. To post a block, the miners compete to solve a cryptographic puzzle. The difficulty of the puzzle scales with the amount of computing power on the network, keeping the time

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9. Narayanan, *supra* note 5, at 90.

10. *Id.* at 41.

11. Not all blockchains are public, as discussed above.

12. Incorruptible except for the 51% attack. Narayanan, *supra* note 5, at 248.

13. Narayanan, *supra* note 5, at 58.

14. ANDREW KIM ET AL., THE STATELESS CURRENCY AND THE STATE: AN EXAMINATION OF THE FEASIBILITY OF A STATE ATTACK ON BITCOIN (2014).

15. *Cost of a 51% Attack*, GOBITCOIN, <https://gobitcoin.io/tools/cost-51-attack/> (last visited Apr. 6, 2019).

between blocks relatively constant. This means that as the number of miners increases, the rate of coin production per miner drops, keeping the coin production at a predefined rate. The miner whose computer first solves the puzzle is rewarded with tokens. The block reward includes newly minted tokens, generated by the algorithm, and transaction fees skimmed off the transactions that are bundled into the block. The block is then appended to the chain of other blocks, forming the “blockchain.” Each subsequent block incorporates the hash<sup>16</sup> of the previous block. By incorporating the hash of the previous blocks into new blocks, it becomes exponentially more difficult to change previous transactions as more blocks are added. The miners make the blockchain trustworthy and are rewarded for their efforts.<sup>17</sup>

Cryptocurrencies such as Bitcoin or Ethereum use their own blockchains to store transactions. Others, like those based on the ERC20 standard,<sup>18</sup> use a host blockchain from another cryptocurrency to store transaction data. For example, tokens issued through the ERC20 standard store transaction data on the Ethereum blockchain.

Initially, with Bitcoin, blockchain technology was used only as a method of transferring and recording digital currencies. However, the technology has evolved since. Today, many different applications are possible. For instance, Ethereum enabled smart contracts. Smart contracts are computer programs which exist on, and interact with, the blockchain. This presents the possibility of

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16. A hash function reduces input data to a shorter form. The same input always results in the same output. The output of the hash function is called the hash. Hashes are useful for verifying that the input data has not changed since the output hash is always the same for the same input data.

17. Narayanan, *supra* note 5, at 62.

18. Ethereum users can issue tokens through Ethereum smart contracts. This process is guided by the ERC20 Token Standard. The standard requires a set of prescribed functions. Together these functions allow Ethereum tokens to have interoperability on Ethereum compatible wallets. If a wallet supports one ERC20 token, it supports them all. The standard functions are: `totalSupply` (get total supply of the token), `balanceOf` (get the balance of the token in a wallet), `transfer` (transfer the token between wallets), `transferFrom` (a function which allows a smart contract to transfer tokens between wallets), `approve` (a function which permits one address to withdraw from another), `allowance` (a function which shows how much has been approved), `transfer` (an event that creates a trigger for when funds are transferred), and `approval` (an event that creates a trigger that is activated by a second address and a key). These tokens rely on the Ethereum blockchain to store transaction data; Fabian Vogelsteller & Vitalik Buterin, *ERC-20 Token Standard*, GITHUB (Nov. 19, 2015), <https://github.com/ethereum/EIPs/blob/master/EIPS/eip-20.md>.

significant advances in online services. Many new cryptocurrencies have followed in Bitcoin's and Ethereum's footsteps.<sup>19</sup>

### B. Use Cases of Tokens

Cryptocurrencies can take on a variety of roles. Some may represent a fractional ownership in an income stream or a leasehold in cryptocurrency mining operations. Others may give the promise of exchangeability for cloud storage space. These tokens can be broken down into three main categories. Income tokens, store of value tokens, and utility tokens. The differences between these tokens is important for evaluating whether a security is offered.

Store of value tokens' main purpose is to store and transfer value. Bitcoin is an example. Store of value tokens are merely a technologically enabled means of accounting and exchange. Income tokens provide a revenue stream to the owners. These tokens are very similar to dividend paying stocks. For example, Trueflip tokens provide the owner with an income stream based on selling blockchain based lottery tickets.<sup>20</sup> Utility tokens enable the purchaser to use an online platform, similarly to an application programming interface ("API") key.<sup>21</sup> For example, Ethereum's tokens can be used to pay for computer operations executed on the Ethereum blockchain.<sup>22</sup> Filecoin tokens enable the owner to pay for and use a distributed data storage system through its blockchain.<sup>23</sup>

### C. Initial Distribution Methods

When founders launch a new cryptocurrency, they are usually seeking two things. They are seeking adoption of their token, and they are seeking funding. Funding is needed to meet the token's business and technical goals. Different launches vary significantly in terms of how developed the underlying business processes and technology systems are. Some have a complete working product and others just have an idea. When new tokens are released, the development team typically also releases a white paper describing

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19. There are more than 1500 different cryptocurrencies as of March 8, 2018. *Cryptocurrency Market Capitalization*, *supra* note 1.

20. *True Flip Token (TFL)*, TRUE FLIP, <https://tfl.trueflip.io/> (last visited Apr. 6, 2019).

21. An API key is an identifier that is passed into an API to identify who is calling the API. This can be used to force users to comply with terms of use, to prevent abusive use of the API, or even for billing purposes.

22. ETHEREUM, <https://www.ethereum.org/> (last visited Apr. 9, 2019); *Ether*, ETHERIUM, <https://www.ethereum.org/ether> (last visited Apr. 6, 2019).

23. FILECOIN, <https://filecoin.io/> (last visited Apr. 6, 2019).

the uses and technology of the new token. This white paper often forms the basis of the value proposition offered by the token.

Funding and adoption are sought in four main ways: mining, airdropping, forking, and initial coin offerings (“ICOs”). Sometimes these practices are combined. These practices can be used at the outset, when the product is launched, or throughout the product’s life. Some cryptocurrencies may switch between different adoption modes. These four practices are described below.

### 1. Mining

Mining was the first distribution method to be used. It is used by many cryptocurrencies including Bitcoin and Litecoin.<sup>24</sup> Miners use their computers to maintain the distributed ledger, and in return, they are compensated with block rewards. Blocks are the groups of transactions, which are bundled together before being posted to the blockchain. Block rewards are comprised of newly minted virtual currency and transaction fees from the transactions included in the block.<sup>25</sup> The size of the block rewards can vary over time according to the blockchain being maintained. For example, the bitcoin blockchain initially had rewards of 50 bitcoin per block, but now rewards only 12.5 bitcoin per block. This number will continue to decrease over time.<sup>26</sup>

Because the number of tokens mined per period varies, it is possible for a token which is distributed solely by mining to be pre-mined. Pre-mining is the practice where cryptocurrency founders obtain many tokens via mining before releasing the mining protocol to the public. To do this, the founders set up the distribution of tokens via mining to highly favored early miners. For example, consider a cryptocurrency in which the rewards for the first 10 blocks are 1000 tokens each, and the block reward drops to 50 tokens after that. This cryptocurrency is susceptible to pre-mining. The founders merely mine the first 10 blocks before releasing the mining algorithm to the public. Should the token gain traction, the founders have a

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24. BITCOIN, <https://bitcoin.org/en/> (last visited Apr. 6, 2019); *Money for the Internet Age*, LITECOIN, <https://litecoin.com/> (last visited Apr. 6, 2019).

25. New tokens are tokens which have no previous owner. The algorithm creates these new tokens and assigns them to the miner. Tokens are awarded as transactions costs come from the users. Whenever a party transfers tokens, a small fraction is diverted into the wallet of the miner who facilitated the recording of that transaction to the blockchain.

26. Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, BITCOIN, <https://bitcoin.org/bitcoin.pdf> (last visited Apr. 6, 2019).

large stockpile of tokens which they can later sell via exchanges or by other methods.

The process of maintaining a blockchain ledger necessarily requires a significant investment of resources on the part of the miner.<sup>27</sup> These costs include the maintenance, electricity, and equipment costs required for operating the computers. The protocol does not impose any direct costs on the miners to receive their block rewards.

All public blockchains require mining to maintain the ledger, but not all tokens have their own blockchains. Tokens which lack blockchains use other blockchains to record transactions.

## 2. Airdropping

For cryptocurrencies which are airdropped, some or all of the total token supply is initially controlled by the issuer. During the airdrop, the issuer gives these tokens away to the community through a variety of means. For example, the tokens could be given away to people who control bitcoin in proportion to their bitcoin holdings. Alternatively, the tokens may be given to anyone who registers his or her social media account with the issuers. Characteristically, airdropped tokens are provided free of charge. Issuers will employ this strategy to enlarge their user base. Often the issuer will retain a large stockpile of tokens to sell or distribute later. After the airdrop, the new token either uses another blockchain to record transactions, or additional tokens may be dispersed via mining post airdrop.

## 3. Forking

New cryptocurrencies can be created by forking from an existing blockchain.<sup>28</sup> For example, if a party wants to create a fork of bitcoin they would decide on a point in time at which the fork takes place. All the transactions from the bitcoin ledger up to that time are shared by the original blockchain and the new forked blockchain. After the fork occurs, the new blockchain records its own transactions, needs

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27. If it did not, a 51% attack would be easy to accomplish. The reliability of a public blockchain scales with the amount of computational power devoted to mining. Private blockchains do not require mining and instead rely on controlling permissions to maintain the blockchain security.

28. A fork occurs when a party decided to change the algorithm which underlies a blockchain. After the change, the original algorithm continues, and the new algorithm also continues. The two blockchains share a history before the split and have separate transactions after the split. Narayanan, *supra* note 5, at 96.

its own miners, and is completely independent of the parent blockchain. Forking can be used as a distribution process for the new token. When the fork occurs, the underlying algorithm can be changed, altering the properties of the token. By necessity, the new token is issued in proportion to the tokens held on the original chain.<sup>29</sup> The token holders on the parent chain receive the new tokens free of charge when the fork occurs. The token holders on the parent chain have control of their new tokens by default. A short, somewhat technical task may be necessary for them to access and transfer the tokens. If the parent chain token holders do not assert control over the new tokens, no one else can, since the tokens are secured by the parent chain token holder's private keys. Pre-mining is not typically available to the issuers since the tokens are issued according to ownership levels on the parent blockchain.

#### 4. Initial Coin Offering

In an ICO, the issuer controls some or, more often, all of the total supply of tokens at the outset. The issuer then sells some portion of the tokens. The selling is usually executed in stages. Early investors are provided with more favorably priced tokens than later investors. The tokens can usually be purchased using well known cryptocurrencies such as Bitcoin or Ethereum. In many cases, the public can also use dollars to participate in the ICO. Most ICOs are advertised on forums and other popular haunts of cryptocurrency enthusiasts, as well as on the internet more generally.<sup>30</sup> The investors are gathered from the public and can often remain anonymous or pseudo-anonymous.

Issuers benefit from using an ICO instead of another method of distribution because ICOs can result in funding early in the product development cycle.<sup>31</sup> The level of development of the projects associated with ICOs varies considerably. Some have a working protocol; others merely market their tokens with promises of future

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29. This is a necessity because the two blockchains share a history, and hence the balances on the parent chain and the daughter chain must be equivalent at the time of forking.

30. However broad internet advertising is being curtailed with Google, Facebook, and others recently banning advertising by ICOs on their platform. Jillian D'Onfro, *Google will Ban all Cryptocurrency-Related Advertising*, CNBC (Mar. 14, 2018, 12:00 AM), <https://www.cnbc.com/2018/03/13/google-bans-crypto-ads.html>.

31. ICOs can be launched at any time in the product development cycle because creating and selling the token is easily accomplished using the Ethereum ERC20 standard.

functionality. ICOs do not require the founders to give any tokens away for free. The other distribution methods do. The low barriers to entry, due to the development of the ERC20<sup>32</sup> standard, and the ability to market the tokens before the service is functional make ICOs a ripe ground for abuse by founders.

Ethereum used a hybrid ICO model. From July to August 2014, Ethereum sold more than fifty million Ethereum tokens for over 25,000 BTC (about \$14 million at the time).<sup>33</sup> After this ICO, further Ethereum token generation has been accomplished through mining. During the ICO, Ethereum tokens were characterized as tokens with utility. The supposed utility was that they are necessary for using the Ethereum network for computations and for paying transaction fees. The Ethereum ICO included an incentive for early investors.<sup>34</sup> Ethereum has proven to be an important cryptocurrency with huge potential, and the case of Ethereum demonstrates the potential harm of over-regulating the cryptocurrency space. As of March 2019, Ethereum is the second-largest cryptocurrency by market capitalization.<sup>35</sup>

### III. SECURITIES LAW

The main statute governing securities regulation in the United States is the Securities Act of 1933. It has two main objectives. First, it requires that investors receive specific financial and other information about securities offered for sale. Second, it prohibits fraud and deceit in the sale of securities.<sup>36</sup> In effect, “the securities act of 1933 prohibits the offer as well as the sale of unregistered, non-exempt securities.”<sup>37</sup> The Securities Exchange Act of 1934 regulates the securities industry. More specifically, it regulates securities

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32. Vogelsteller & Buterin, *supra* note 18.

33. Vitalik Buterin, *Ether Sale: A Statistical Overview* (Aug. 8, 2014), <http://archive.is/eOpOg>; Historical Snapshot - August 03, 2014, COINMARKETCAP, <https://coinmarketcap.com/historical/20140803/> (last visited Apr. 6, 2019).

34. Buterin, *supra* note 33.

35. *Cryptocurrency Market Capitalization*, *supra* note 1.

36. Sec. & Exch. Comm’n v. Sunbeam Gold Mines Co., 95 F.2d 699, 700 (9th Cir. 1938).

37. Sec. & Exch. Comm’n v. W. J. Howey Co., 328 U.S. 293, 301 (1946); The registration of securities is defined in the Securities Act of 1933 and includes the submission of documentation to the Securities and Exchange Commission and the payment of fees. 15 U.S.C. § 77f (2018). Exemptions exist for secondary sales by people other than the issuer or dealer and transactions which do not involve a public offering. 15 U.S.C. § 77d (2018).

exchanges and prohibits certain types of conduct in the market.<sup>38</sup> The 1933 and 1934 Acts share a broad definition of securities:

The term “security” means any note, stock, treasury stock, security future, security-based swap, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly known as a “security,” or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing.<sup>39</sup>

This definition is broadened by the holding in *SEC v. W.J. Howey Co.*<sup>40</sup> *Howey* defines an investment contract as “a contract, transaction, or scheme whereby a person invests his money in a common enterprise and is led to expect profits solely from the efforts of the promoter or a third party . . . .”<sup>41</sup>

#### A. *Howey Investment Contracts*

At its core, the definition of a security “embodies a flexible rather than a static principle, one that is capable of adaptation to meet the countless and variable schemes devised by those who seek the use of the money of others on the promise of profits.”<sup>42</sup> To reach this goal, the prevailing test is the *Howey* test.

The *Howey* test can be broken down into four main components. First, there must be an investment of money. Second, that money must have been invested in a common enterprise. Third, the investors must have been led to expect profits. Fourth, those

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38. 15 U.S.C. § 78b (2018).

39. 15 U.S.C. § 77b (A)(1) (2018).

40. *See W.J. Howey Co.*, 328 U.S. at 293.

41. *Id.* at 294.

42. *Id.* at 299.

profits must be expected to come from the efforts of a promoter or third party.<sup>43</sup> This test has been refined by stating that the “efforts of others” includes the “entrepreneurial or managerial efforts of others.”<sup>44</sup> All four parts of the *Howey* test must be satisfied for an investment contract to exist. On April 4, 2019, the SEC issued *Framework for “Investment Contract” Analysis of Digital Assets*.<sup>45</sup> In this framework, the SEC provides a variety of factors for determining whether a crypto-asset is an investment contract under the *Howey* test.<sup>46</sup>

The following parts expand on each component of the *Howey* test and include some of the guidance provided by the SEC.

### 1. An Investment of Money

The standard applied to identify an investment of money includes any definable consideration.<sup>47</sup> In *Teamsters v. Daniel*, the Court established that “under the Securities Acts, the . . . investor . . . [must give] up some tangible and definable consideration in return for an interest that had substantially the characteristics of a security.”<sup>48</sup> An investment of money can be found whenever “the investor must commit his assets to the enterprise in such a manner as to subject himself to financial loss.”<sup>49</sup> The holding in *Gary Plastic* requires that the investor must actually risk loss of funds.<sup>50</sup> The expansive definition even considers investing time as an employee or trading goods and services in return for stock to be an investment.<sup>51</sup>

The SEC guidance provides that the value exchanged can include fiat “currency, another digital asset, or other type of consideration.”<sup>52</sup> Endnote nine specifies that bounty programs can

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43. *Id.* at 394.

44. *United Hous. Found., Inc. v. Forman*, 421 U.S. 837, 852 (1975).

45. U.S. Sec. & Exch. Comm’n, *Framework for “Investment Contract” Analysis of Digital Assets*, SEC (last visited June 10, 2019) <https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets>.

46. *Id.*

47. *Int’l Bhd. of Teamsters v. Daniel*, 439 U.S. 551, 560 (1979).

48. *Id.*

49. *Hector v. Wiens*, 533 F.2d 429, 432 (9th Cir. 1976).

50. *Gary Plastic Packaging Corp. v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 756 F.2d 230, 240 (2d Cir. 1985).

51. *Yoder v. Orthomolecular Nutrition Inst., Inc.*, 751 F.2d 555, 560 (2d Cir. 1985); *Useton v. Commercial Lovelace Motor Freight, Inc.*, 940 F.2d 564, 574 (10th Cir. 1991).

52. U.S. Sec. & Exch. Comm’n, *supra* note 45.

satisfy the money prong.<sup>53</sup> Curiously the SEC framework specifies that “the lack of monetary consideration for digital assets, such as those distributed via a so-called “air drop,” does not mean that the investment of money prong is not satisfied; therefore, an airdrop may constitute a sale or distribution of securities.”<sup>54</sup> The SEC also asserts that “a ‘bounty program’ constituted an offer and sale of securities because the issuer provided tokens to investors in exchange for services designed to advance the issuer’s economic interests and foster a trading market for its securities.”<sup>55</sup> This assertion is further analyzed in Part IV below.

## 2. In a Common Enterprise

There are three tests to determine if a common enterprise exists.<sup>56</sup> The three tests are horizontal commonality, broad vertical commonality, and strict vertical commonality.<sup>57</sup>

Horizontal commonality involves “the tying of each individual investor's fortunes to the fortunes of the other investors by the pooling of assets, usually combined with the pro-rata distribution of profits.”<sup>58</sup> For horizontal commonality to be achieved, there must be a pooling of interests not only between the investors and the promoters but also between the investors and each other.<sup>59</sup> The key to finding a common enterprise with horizontal commonality is whether the “fortunes of each investor depend upon the profitability of the enterprise as a whole.”<sup>60</sup> Finding horizontal commonality also requires a sharing or pooling of funds.<sup>61</sup>

Vertical commonality does not require that investors’ fortunes “rise and fall together.”<sup>62</sup> Instead, vertical commonality focuses only on the relationship between the promoter and the pack of investors.<sup>63</sup> To satisfy strict vertical commonality, the “fortunes of the

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53. U.S. Sec. & Exch. Comm’n, *supra* note 45, endnote 9.

54. U.S. Sec. & Exch. Comm’n, *supra* note 45, endnote 9.

55. U.S. Sec. & Exch. Comm’n, *supra* note 45, endnote 9.

56. *Revak v. SEC Realty Corp.*, 18 F.3d 81, 88 (2d Cir. 1994); *Marini v. Adamo*, 812 F. Supp. 2d 243, 255 (E.D.N.Y. 2011).

57. *Revak*, 18 F.3d at 88.

58. *Revak*, 18 F.3d at 89; *Marini*, 812 F. Supp. 2d at 255; *Steinhardt Grp. v. Citicorp*, 126 F.3d 144, 151 (3d Cir. 1997).

59. *Wals v. Fox Hills Dev. Corp.*, 24 F.3d 1016, 1018 (7th Cir. 1994).

60. *Revak*, 18 F.3d at 87; *Citicorp*, 126 F.3d at 151; *Wals*, 24 F.3d at 1018; *Deckebach v. La Vida Charters, Inc.*, 867 F.2d 278, 282 (6th Cir. 1989).

61. *Hart v. Pulte Homes of Michigan Corp.*, 735 F.2d 1001, 1004 (6th Cir. 1984).

62. *Revak*, 18 F.3d at 87.

63. *Id.*

investors need to be linked only to the *efforts* of the promoter.”<sup>64</sup> To satisfy broad vertical commonality, the “fortunes of investors [must] be tied to the *fortunes* of the promoter.”<sup>65</sup>

The circuit courts are divided on the definition of a “common enterprise.”<sup>66</sup> The Third, Sixth, and Seventh Circuits require horizontal commonality.<sup>67</sup> The Fifth and Eleventh Circuits use broad vertical commonality.<sup>68</sup> The First, Fourth, and D.C. Circuits accept horizontal commonality, but have not rejected vertical commonality.<sup>69</sup> The Second Circuit accepts horizontal commonality, has rejected broad vertical commonality, but has not rejected strict vertical commonality.<sup>70</sup> The Tenth Circuit uses the “economic reality” test.<sup>71</sup> In many circumstances, the results of these different tests of common enterprise are the same.

SEC guidance indicates that “[i]n evaluating digital assets, [the SEC has] found that a ‘common enterprise’ typically exists.”<sup>72</sup> This assertion is based on the premise that “the fortunes of digital asset purchasers have been linked to each other or to the success of the promoter’s efforts.”<sup>73</sup>

### 3. Led to Expect Profits

Showing that an investor was led to expect profits requires “(1) that the opportunity provided to offerees tended to induce purchases by emphasizing the possibility of profits, [and] (2) that the profits are offered in the form of capital appreciation or participation in earnings within the meaning of *Howey* and *Forman*.”<sup>74</sup>

Profits, as defined under *Howey* and *Forman* can be characterized as “either capital appreciation resulting from the development of the initial investment, or a participation in earnings resulting from the use of investors’ funds.”<sup>75</sup> An example of capital appreciation from developing an initial investment is the “sale of oil leases conditioned on [the] promoters’ agreement to drill [an]

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64. *Id.* at 88.

65. *Id.*

66. James D. Gordon III, *Defining a Common Enterprise in Investment Contracts*, 72 OHIO ST. L.J. 59, 68 (2011).

67. *Id.*

68. *Id.*

69. *Id.*

70. *Id.*

71. *Id.*

72. U.S. Sec. & Exch. Comm’n, *supra* note 45.

73. U.S. Sec. & Exch. Comm’n, *supra* note 45, endnote 11.

74. *Teague v. Bakker*, 35 F.3d 978, 987 (4th Cir. 1994).

75. *United Hous. Found., Inc. v. Forman*, 421 U.S. 837, 852 (1975).

exploratory well.”<sup>76</sup> An example of participation in earnings is receiving dividends.<sup>77</sup> If the buyer is not motivated by profits, but by a “desire to use or consume the item purchased,” this prong is not satisfied.<sup>78</sup>

The possibility of profits was emphasized in *Tcherepnin*, where the promoters were “constantly seeking investors through advertising.”<sup>79</sup> In *Andrews v. Emerald Green Pension Fund*, recruiting through misrepresentations of the potential for “enormous returns” was sufficient to lead investors to expect profits.<sup>80</sup>

The SEC framework provides several characteristics<sup>81</sup> which the SEC deems to increase the chances that there is a reasonable expectation of profit.<sup>82</sup>

#### 4. Solely from the Efforts of a Promoter or Third Party

“Solely” as used in the *Howey* test has been expanded such that “the word ‘solely’ should not be read as a strict or literal limitation

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76. *Id.* (citing Sec. & Exch. Comm’n v. C. M. Joiner Leasing Corp., 320 U.S. 344, 345 (1943)).

77. *Id.* (citing *Tcherepnin v. Knight*, 389 U.S. 332, 335 (1967)).

78. *Id.*

79. *Id.* at 558.

80. *Andrews v. Emerald Green Pension Fund*, CIVIL NO. 98-436-P-H, 2000 U.S. Dist. LEXIS 14545, at \*25 (D. Me. Sept. 27, 2000).

81. These include rights to enterprise income, profits, dividends; capital appreciation of the asset; broadly offering the asset to potential purchasers as compared to targeted offering only to expected users of the goods, services or network; the digital asset being offered and purchased in quantities indicative of investment intent instead of quantities indicative of a user of the network; lack of correlation between the price of the digital asset and the market price of the goods or services that can be acquired in exchange for the digital asset; lack of correlation between quantities the digital asset typically traded and the typical amount of the underlying goods or services a consumer would purchase for use; funds raised by sales exceed what may be needed to establish the network or digital asset; the promoter continues to use raised funds to enhance the functionality or value of the digital asset; marketing efforts use: expertise of a promoter, or ability to grow the value of the digital asset; the digital asset is marketed in terms that indicate it is an investment; solicited holders are investors; raised funds are intended to develop the network or digital asset; the future functionality of the network or digital asset is a marketing point; future functionality/purpose is promised as opposed to currently available; the transferability of the digital asset is a selling feature; potential profitability or appreciation of the digital asset, is emphasized in marketing; the availability of a trading market for the digital asset. U.S. Sec. & Exch. Comm’n, *supra* note 45.

82. U.S. Sec. & Exch. Comm’n, *supra* note 45.

on the definition of an investment contract.”<sup>83</sup> Instead, “solely” suggests only “to a large degree” or “primarily.” Furthermore, the term “efforts” does not distinguish between pre-purchase and post-purchase activities of a promoter; either can satisfy the efforts requirement.<sup>84</sup>

Here, the SEC framework provides additional guidance with various factors for determining whether a purchaser is relying on the efforts of others.<sup>85</sup>

### 5. The Investor Must Risk Loss

For an investment opportunity to be a security offering, there must be an actual chance that the investor can lose their invested money.<sup>86</sup> For example, an investment that is protected by FDIC is not a security, because the investor is insured against any loss by the federal government.<sup>87</sup> The Court’s reasoning is that the securities laws exist to protect investors from risk. When there is no risk of loss, the 1933 Act does not apply.<sup>88</sup> Following a similar line of reasoning, if an offering would otherwise be a security offering, but the issuer can guarantee that the investors will not lose their money, then no security has been offered.

### 6. Security to One, Security to All

Since the offering of an unregistered, non-exempt security is illegal, it is immaterial whether to some investors the product is a security, and to others it is not. It is sufficient to form a violation if

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83. Sec. & Exch. Comm’n v. Glenn W. Turner Enters., Inc., 474 F.2d 476, 482 (9th Cir. 1973).

84. Arnold v. Life Partners, Inc., 416 S.W.3d 577, 587 (Tex. App. 2013).

85. Promoter is responsible for the development, improvement, operation, governance or promotion of the network or asset; promoter expected to perform tasks necessary for the network or asset to achieve its purpose; promoter completes essential tasks rather than these tasks being completed by a decentralized” network of participants; promoter creates or supports a market for, or the price of, the digital asset (controls issuance, buybacks, or burning); promoter makes managerial decisions, such capital deployment from sales of the digital asset; promoter has an interest in the value of the digital asset; promoter compensation is tied to the price of the digital asset in the secondary market. U.S. Sec. & Exch. Comm’n, *supra* note 45.

86. Gary Plastic Packaging Corp. v. Merrill Lynch, Pierce, Fenner & Smith, Inc., 756 F.2d 230, 240 (2d Cir. 1985).

87. *Id.*

88. *Id.*

the promoter “merely offer[s] the essential ingredients of an investment contract” to anyone.<sup>89</sup>

*B. Purpose of the 1933 Securities Act*

When Franklin D. Roosevelt proposed the 1933 Securities Act to Congress, he attached a letter which Congress reproduced in its House Report. The letter makes clear that the 1933 Act was meant to address the situation where “alluring promises of easy wealth were freely made” and many investors lost huge sums of money because “little or no attempt to bring to the investor’s attention those facts essential to estimating the worth of any security” was made.<sup>90</sup> The House believed that “the irresponsibility which fostered this tragic distribution of securities derived in the main from the abnormal profits possible from the business of selling securities.”<sup>91</sup>

Congress thought the Act would remedy the situation by putting “the burden of telling the whole truth on the seller.”<sup>92</sup> At the same time, Congress recognized that the suggested regulation should “protect the public with the least possible interference to honest business.”<sup>93</sup> These quotations from the 1933 House Report on Federal Supervision Of Traffic In Investment Securities In Interstate Commerce ring true when applied to some cryptocurrencies. In keeping with the purpose of the 1933 Act, the application of the 1933 Securities Act to cryptocurrencies should be measured to protect investors with minimal business interference.

IV. APPLICATION OF THE *HOWEY* TEST TO CRYPTOCURRENCIES

Applying the *Howey* test to cryptocurrencies is a two-step process. One must analyze what is being offered and how it is being offered. First, each of the initial distribution methods has significant differences and must be analyzed independently. For those methods which implicate the 1933 Securities Act, the specific tokens being sold should be analyzed. The assets being offered may be income interest tokens, transfer of value tokens, or utility tokens. Depending on the type of token, the results of the *Howey* analysis may vary.

This Part will first apply the *Howey* test to the different token distribution methods. Then for distribution methods which likely require regulation under the 1933 Securities Act, the different token

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89. Sec. & Exch. Comm’n v. W.J. Howey Co., 328 U.S. 293, 297 (1946).

90. H.R. Rep. No. 73-85, at \*2 (1933).

91. *Id.* at 3.

92. *Id.* at 2.

93. *Id.*

types will be analyzed. The final Part combines the two analyses to better understand the *Howey* test's application to cryptocurrencies.

*A. Application of the Howey Test to Distribution Methods*

1. Mining – Not an Investment Contract

a. An Investment of Money

When mining, an investment of money is made by the miner since the equipment and electricity necessary to run a mining operation are substantial and proportional to the rate of bitcoin production achievable by the miner.<sup>94</sup> The mining activities maintain the blockchain at a cost to the miner and result in the miner being rewarded with tokens. Since an investment of money is defined very broadly, including any definable consideration and even labor,<sup>95</sup> mining activities would likely constitute an investment of money.

b. In a Common Enterprise

Horizontal commonality probably does not exist even though all miners who pursue the same cryptocurrency will be subject to the same changes in the market prices. The only pro-rata distribution of profits is pro-rata distribution based on the various miner's hash rates. No pro-rata distribution based on invested dollars exists. This is like gold miners. Gold miners are all subject to the same market price changes, but they too have different cost bases. Furthermore, the miners do not pool their funds. Horizontal commonality probably does not exist.

Vertical commonality requires that investor's funds rise and fall together. For miners this is not the case since miners have different fixed costs and independently choose when to start and stop mining. Still, miners' fortunes are linked to the efforts and fortunes of the promoters since improvements in code or business methods benefit miners. However, this effect is attenuated because, as the value of a token increases, more people become miners, and hence the rate of coin production per miner drops. This means that the link between miners' fortunes and the fortunes or efforts of the promoters is attenuated. No common enterprise is likely to be found.

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94. JOSHUA A. KROLL, ET AL., *THE ECONOMICS OF BITCOIN MINING, OR BITCOIN IN THE PRESENCE OF ADVERSARIES* 7 (2013).

95. *Int'l Bhd. of Teamsters v. Daniel*, 439 U.S. 551, 560 (1979).

c. Investor Led to Expect Profits

This investigation could be somewhat case-specific, but generally there is not substantial marketing activity to recruit miners. Miners themselves tend to investigate different mineable assets to determine which ones are most profitable to mine. Indeed, miners will switch between different mineable cryptocurrencies to maximize profits. Their mining equipment is generally not specific to a single cryptocurrency.

Turning to the SEC framework, there are numerous characteristics present which cut in favor of finding a security offering. Mining of cryptocurrencies is typically focused on digital assets that are traded on or through a secondary market. At least some miners may hold cryptocurrencies long enough to benefit from capital appreciation. Many miners mine solely for profit, with no intent to be ‘users’ of the services offered by the network. In some cases, miners will have been solicited to mine a coin for profit. However, miners will typically have expertise in the field, especially for newer cryptocurrencies which have a less established knowledge base on the internet.

Typically, the only benefit that the promoter receives from the miners is that the network continues to function. The promoters do not get funds from the miners to use to develop network functionality. In totality, the analysis of expectation of profits does not clearly cut in either direction.

d. Solely from the Efforts of a Promoter or Third Party

The miners themselves put in the work to do the mining. They do the work of setting up the mining rigs. Furthermore, they are the ones who decide to continue mining at any given moment. Moreover, the functioning of the blockchain relies on the miners. They reap the benefits of their own labor and do not rely solely on the efforts of the promoter or a third party. Supporting this view is that, as noted above, a miner’s equipment is not tied to a single cryptocurrency. Hence, while the profits of miners are tied to the cryptocurrency market generally, they are not tied to the performance of any single cryptocurrency. Miners do not make their profits from the efforts of a third party; they make the profits from their own efforts.

Looking to the guidance provided by the SEC, in some cases the miner may expect to rely on the efforts of the promoter (if they hold onto the token for a long time), but in most cases no such reliance is necessary as the miner typically sells the token soon after it is

mined. In many cases a promoter may have control of the underlying algorithm and network. However, the miner always has control of their equipment. Their equipment can be used to mine a variety of cryptocurrencies. Therefore, while the miners are providing a service to the promoter's network, the miners are not reliant on the promoter. The miner does not rely solely, primarily, or even significantly on the promoter since there are many options for using their mining rigs.

Perhaps the best way to illustrate this is with the following scenario. Imagine a miner who buys equipment and mines cryptocurrency A1. The miner sells the cryptocurrency as he goes to cover expenses. Now imagine that promoter A2 who controls A1 changes the algorithm such that A1 becomes less valuable. The miner can now switch to cryptocurrency B1 with little friction, or anticipating that other miners will switch, can keep mining A1.<sup>96</sup> It is a judgement call of the miner to determine what is more economical given their equipment and their local energy costs. The continued profitability of the miner is not determined by the promoter. Instead, it is determined by the business decisions of the miner and the overall market conditions within the cryptocurrency space.

#### e. Conclusion and Caveats

A caveat to this analysis is that while the distribution of tokens by mining may not involve issuing a security, significant pre-mining<sup>97</sup> followed by a promoted sale might. The sale of these pre-mined tokens would involve an investment of money in a common enterprise. The conclusion would turn on whether the investors were led to expect profits or not. If the tokens were advertised, this prong may be satisfied. However, if the tokens merely got listed on an exchange, not run by the founder, and the founder then decided to sell their stake, there would be no leading of the investor to expect profits.

Overall, the practice of distributing tokens through mining, as Bitcoin has done, does not likely lead to an investment contract as described in *Howey* because no common enterprise exists. This conclusion is supported by the Commodity Futures Trading

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96. If the total volume of mining on a coin declines, then the rate of return for the remaining miners increases assuming the exchange rate of the token remains the same.

97. Pre-mining is the practice where the founders accrue a large stockpile of tokens, under favorable conditions, before opening the mining up to the public.

Commission (“CFTC”). Bitcoin is the quintessential example of a mined token, and the CFTC found, in 2015, that Bitcoin meets the definition of a commodity under the Commodity Exchange Act.<sup>98</sup>

## 2. Airdropping and Forking – Not an Investment Contract

In 2017, airdrops distributed around \$44 billion worth of tokens, while ICOs only distributed around \$5 billion.<sup>99</sup> Despite this drastic difference, neither the CFTC nor the SEC mentioned forks and airdrops in the recent Senate hearing.<sup>100</sup> ICOs have received much more focus than airdropping. Perhaps because ICOs allow the founders to raise money directly from the public. The most significant difference between airdrops/forks and ICOs with respect to the *Howey* test is the investment of money prong.

### a. An Investment of Money

A fundamental aspect of airdropping and forking is that the tokens are given away completely free of charge. Some activity is required by the user, such as signing up for a newsletter, registering a social media account, or proving ownership of bitcoin. While committing labor in exchange for tokens can be an investment of money, in this case the time required is vanishingly small and therefore no investment of money is likely to be found.<sup>101</sup> Furthermore, no loss of money is possible, and therefore, according to *Gary Plastic* there is no investment contract.<sup>102</sup> This prong alone seems to show that the practices of airdropping and forking do not implicate securities laws.

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98. U.S. Commodity Futures Trading Comm’n, *Written Testimony of J. Christopher Giancarlo Chairman, Commodity Futures Trading Commission Before the Senate Banking Committee*, CFTC (Mar. 9, 2019), <https://www.cftc.gov/PressRoom/SpeechesTestimony/opagiancarlo37>.

99. *State of Blockchain 2018*, COINDESK, <https://www.coindesk.com/research/state-blockchain-2018?slide=100> (last visited Mar. 9, 2019).

100. *Giancarlo*, *supra* note 98; U.S. Securities & Exchange Comm’n, *Testimony on “Virtual Currencies: The Oversight Role of the U.S. Securities and Exchange Commission and the U.S. Commodity Futures Trading Commission*, SEC (Mar. 9, 2019), <https://www.sec.gov/news/testimony/testimony-virtual-currencies-oversight-role-us-securities-and-exchange-commission> [hereinafter *Virtual Currencies*].

101. *Yoder v. Orthomolecular Nutrition Inst., Inc.*, 751 F.2d 555, 560 (2d Cir. 1985); *Useton v. Commercial Lovelace Motor Freight, Inc.*, 940 F.2d 564, 574 (10th Cir. 1991).

102. *Gary Plastic Packaging Corp. v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 756 F.2d 230, 240 (2d Cir. 1985).

However, in the SEC framework, the agency noted that the “the lack of monetary consideration for digital assets, such as those distributed via a so-called ‘air drop,’ does not mean that the investment of money prong is not satisfied; therefore, an airdrop may constitute a sale or distribution of securities.”<sup>103</sup>

This passage potentially indicates that the SEC considers the “promot[ion] [of] its circulation” to be sufficient to form “an investment of money.”<sup>104</sup> This would be strange, because this reading would render the investment of money prong of the *Howey* test empty. All for-profit businesses take actions out of some, if attenuated, self-interest. This reading would suggest the SEC believes generating interest in your product by giving it away for free constitutes an investment of money. If the SEC does take this reading, it is still unlikely that airdropping or forking would be an investment contract since there is no risk of loss. Having your bitcoin fork does not affect future forks and is not an opt-in process. The investor’s only loss is the small amount of time required to claim the tokens. In many cases, collecting the tokens could take just a few clicks. Claiming tokens allocated from one fork or airdrop does not affect a person’s ability to claim tokens from another.

Another reading of endnote 9 could be that the SEC is merely rehashing the concept that if a token is a security offering to anyone then the token is a security. For example, if the primary distribution method is airdropping, but the promoters also have a bounty program, or sell the tokens, then the tokens may indeed be securities. In other words, the use of an airdrop does not foreclose the token from being a security if other distributive activities by the promoter would implicate securities regulations.

It seems that if the token is distributed purely through either airdropping or forking that the 1933 Securities Act should not be implicated since no consideration, monetary or otherwise, was given. The promotion of circulation is not sufficient as consideration since the receivers of the tokens are under no obligation whatsoever to use or transfer the tokens.

#### b. In a Common Enterprise

The value of the tokens for a given cryptocurrency rise and fall together. Furthermore, the value of the underlying system is reflected in the value of the tokens. A court may find common

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103. U.S. Sec. & Exch. Comm’n, *supra* note 45, endnote 9.

104. U.S. Sec. & Exch. Comm’n, *supra* note 45, endnote 9.

enterprise except that no pooling of funds exists – since no funds were invested. Therefore, it is likely no common enterprise can be found.

c. Investor Led to Expect Profits

Airdrops and forks are often widely publicized, and people often procure the tokens with the intent to sell them later. A profit is guaranteed if they can sell them, since they were free to procure. Therefore, it is likely that the investors were led to expect profits.

d. Solely from the Efforts of a Promoter or Third Party

People who receive tokens from airdrops or tokens from a fork have often done nothing to aid the new cryptocurrency except to increase its adoption. Many receivers do not mine or use their skills to help the project in any way. The value of the tokens that they received depends completely on the market and the efforts of the promoter or founder of the cryptocurrency.

e. Conclusion and Caveats

The same caveat about pre-mining that applies to mining applies to airdropping.<sup>105</sup> Regulators should treat pre-mining combined with airdropping more favorably than ICOs because the functionality of the tokens can be verified by users without any investment. Furthermore, the issuer does not have strong control over the price because a market already exists for the airdropped tokens.

Overall, the practice of distributing tokens through airdropping and forking, as Bitcoin Cash<sup>106</sup> has done, does not likely lead to an investment contract as described in *Howey*. Still, when airdropping is combined with other practices, an investment contract might be found.

3. Initial Coin Offering – An Investment Contract

a. An Investment of Money

When an investor buys into an ICO, they usually contribute funds in the form of cryptocurrency. The tokens awarded by the

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105. It does not apply to forking because when a blockchain is forked, there is no pre-mining.

106. Bitcoin Cash is a cryptocurrency which was forked off the main Bitcoin blockchain on August 1, 2017. *What is Hard Fork?*, COINTELEGRAPH, <http://archive.is/nUuB9>. (last visited Apr. 1, 2019).

ICO to the investors are typically based on the equivalent dollar value of the invested tokens. Usually the tokens accepted by the promoters are popular tokens such as Bitcoin or Ethereum. These popular tokens are traded on a range of online exchanges and have a well-defined, though volatile, price at any given moment.<sup>107</sup> These established tokens are assets. You can buy them, sell them, and must pay capital gains tax on them as well. Once exchanged for the ICO token, the invested value is at risk. If the ICO token's value decreases, the investor loses money. The investment of money prong of the *Howey* test is satisfied by ICOs. Many ICOs also accept traditional currencies like dollars – which would clearly be an investment of money.

b. In a Common Enterprise

When investing in an ICO the investors contribute their funds to the promoter. All the funds are pooled with the promoter. Furthermore, the profits are distributed on a pro rata basis. This is very clear for tokens which pay a dividend, since such a dividend would typically be distributed on a per token basis. Furthermore, if profits are only realized by an increased value of the ICO tokens, then the holders of the tokens still make pro rata gains.

This pro rata distribution is disturbed by the bonuses given to early investors. However, the bonuses are distributed to cohorts, and those cohorts receive pro rata shares of the profits. The fortunes of investors rise and fall all at once whether from dividend payments or from capital appreciation.

The value of the tokens will also generally be tied to the promoter's efforts. This is true where the promoters are also the developers. In cases where the software development is community driven, the tie may be weaker.

For most ICOs, both horizontal and vertical commonality exist. This is especially true because the promoter will almost always retain a significant portion of the issued tokens for themselves and hence are directly benefited by any profits made by token holders generally. They retain this portion to raise money in the future. Even in projects that purport to distribute all the tokens, it is possible for the promoters to participate in their own funding event, thus retaining both the issued tokens and the contributed tokens.

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107. *Bitcoin Markets*, COINMARKETCAP, <https://coinmarketcap.com/currencies/bitcoin/#markets> (last visited Mar. 9, 2019); *Ethereum Markets*, COINMARKETCAP, <https://coinmarketcap.com/currencies/ethereum/#markets> (last visited Mar. 9, 2019).

## c. Investor Led to Expect Profits

To show that the investor was led to expect profits, “it must be shown (1) that the opportunity provided to offerees tended to induce purchases by emphasizing the possibility of profits, and (2) that the profits are offered in the form of capital appreciation or participation in earnings within the meaning of *Howey* and *Forman*.”<sup>108</sup>

However, if the buyer is not motivated by profits, but instead plans to use or consume the token, then this prong of the *Howey* test is not satisfied.<sup>109</sup> Another way to think about this is as follows: if the product is promoted and purchased on the premise that investors will make money, then this part of the test is likely satisfied. If purchasers obtained the product to use or consume it, then this part of the test is probably not satisfied.<sup>110</sup> The SEC provides a variety of factors for determining if the tokens are sold for use or consumption.<sup>111</sup>

This prong is certainly met by some, but potentially not all token sales. First, most ICOs do offer profits as described in *Howey* and *Forman*. The tokens themselves may appreciate, and many tokens also provide a dividend right. Furthermore, many tokens are marketed on the promise of profits. These ICOs would satisfy this prong.

Not all tokens offer the possibility of profits. For example, tokens which are never likely to be worth anything, or those that are already worth something, but whose value is not likely to change and which do not produce dividends, are unlikely to satisfy the profits prong. A token that has fixed value could be one which is pegged to the dollar.

Some tokens may try to avoid this part of the *Howey* test by not speaking about profits at all. However, even in these cases, profits might be implied. Providing bonuses to early investors may imply

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108. *Teague v. Bakker*, 35 F.3d 978, 987 (4th Cir. 1994); *United Hous. Found., Inc. v. Forman*, 421 U.S. 837, 852 (1975).

109. *Id.*

110. U.S. Sec. & Exch. Comm’n, *supra* note 45.

111. The distributed ledger network and digital asset are fully operational or usable; the digital assets’ creation and structure is designed and implemented to meet the needs of its users, rather than to feed speculation as to its value or development of its network; prospects for appreciation in the value of the digital asset are limited; the digital asset can immediately be used to make payments in a wide variety of contexts, operates as a store of value, can be directly exchanged for platform goods or services; digital asset is available in increments that correlate with a consumptive intent; economic benefit is incidental to intended function; asset is marketed with emphasis on functionality. U.S. Sec. & Exch. Comm’n, *supra* note 45.

that early investors will make money compared to later investors. This is a likely implication since, if the ICO goes to completion, then the early investors know that later investors paid more per token than they did. This implies that by the time the ICO is complete, the early investors have already seen some appreciation, and this appreciation had been implicitly offered by the issuers who promoted the bonus for early investors.

Furthermore, for ICOs where no product has been developed, the investors are contributing money based on a promising future valuation, which will be delivered when the protocol is completed. This applies even to utility tokens, since the buyer may be thinking that the value of the tokens will go up when the product is completed. Hence for an ICO which is selling tokens to support an unfinished product, the “led to expect profits” prong is almost certainly fulfilled.

Tokens that can be used for a specific purpose, such as paying for storage space may have some protection from this prong. However, some people may still buy it as an investment and hence the question once again becomes one of determining whether they were induced to buy the product on the promise of profits.

d. Solely from the Efforts of a Promoter or Third Party

The value of the tokens being purchased relies on the value of the underlying system, and hence the purchasers are relying on the developer/promoter’s efforts. Furthermore, any token which produces dividends will do so from the operation of the service by the issuers. In many cases this prong will be satisfied, but perhaps not in all cases as discussed below.

e. Conclusion and Caveats

As a general matter, the majority of ICOs are likely to be considered investment contracts. However, there may be special cases where the ICO is not an investment contract. This is likely to be the case when there is not an expectation of profit. There may be no expectation of profit when the price of the token is fixed by some factor largely uncontrolled or uninfluenced by the promoters or issuers, or in cases where the token is unlikely to appreciate.

For example, consider a token that is sold for one dollar per unit during the ICO, and after the ICO, the issuer continues to sell additional tokens for one dollar. Assuming the token does not pay dividends, such a token could not be a security since there could be no expectation of profit. Or consider a token which can be

exchanged for a fixed amount of gold. The value of this gold-linked token would be primarily driven by the price of gold—which is not controlled by the promoter.

The conclusion that most ICOs are securities is supported by the SEC Commissioner, Mr. Jay Clayton, who stated in a recent Senate hearing that “by and large, the structures of ICOs that I have seen involve the offer and sale of securities and directly implicate the securities registration requirements and other investor protection provisions of our federal securities laws.”<sup>112</sup> This view is also supported by the SEC framework.<sup>113</sup>

The purpose of the 1933 Act is to protect the public from investing in non-reputable securities without stifling innovation. Adopted shortly after many investors lost a lot of money because of unscrupulous promoters, it requires certain disclosures to protect investors from investing in securities blindly. ICOs today are like the securities of the 1920s. Many people may be investing without knowing what they are buying. While some ICOs represent legitimate businesses, there are many that are merely schemes to gather funds from hopeful investors. ICOs represent precisely the type of investment scheme that the 1933 Act was meant to target. Still, the government and the SEC should tread carefully until the difference between ICOs and traditional securities offerings is better understood.

Some tokens may have sufficient utility to avoid securities regulation. A court is likely to consider whether the ICO in question is more about using the underlying technology, or if it has generally been purchased for investment purposes. The SEC has provided guidance on how this analysis may be conducted.<sup>114</sup> In cases where people are buying tokens disproportionate to their needs, the token is probably more likely to be considered a security.

### *B. Application of the Howey Test to Token Types*

The results of the *Howey* test applied to ICOs depend on the characteristics of the tokens being sold to the public.

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112. *Virtual Currencies*, *supra* note 100, at 6. Interestingly, this would include Ethereum, which was originally offered in an ICO-like sale.

113. U.S. Sec. & Exch. Comm’n, *supra* note 45.

114. U.S. Sec. & Exch. Comm’n, *supra* note 45.

## 1. Store of Value Tokens

Examples of store of value tokens include Bitcoin<sup>115</sup> and Litecoin.<sup>116</sup> The common feature of this type of token is that its main purpose is to store and transfer value. The value of these tokens is either pegged to some benchmark or is determined solely by the market. For example, Tether<sup>117</sup> is pegged to the United States dollar, and its value is very stable.<sup>118</sup> On the other hand, the value of bitcoin varies wildly according to market sentiment. For tokens whose value is fixed, there can be no expectation of profits, and the risk of loss is minimal. Therefore, any sale of such a fixed value store of value token cannot satisfy the *Howey* test and is not regulated by the 1933 Securities Act.

For tokens whose value varies according to the market, the issue is whether the value is primarily a function of the efforts of the promoter or not. For example, if the token is sold by the issuer with a promise that additional functionality, speed, or capacity will be added later by the issuer, then the investors have likely been led to expect profits based on the efforts of the promoter. On the other hand, if the protocol is complete when the token is first offered, or if future updates are driven by open source collaboration by the wider community and are not directed by the issuers, then any value increase will not be based on the efforts of the issuers. Instead any value increase comes from either the open source collaboration which improves the software or through pure market forces. Such a token is unlikely to satisfy the *Howey* test. Of course, if the promoters hire programmers, promote or manage the open source community, or advertise to drive adoption of the token, then the profits are probably based on the efforts of the promoters.

## 2. Income Interest Tokens

Tokens whose value proposition is that they provide an income to the token holders are very likely tokens which, if offered for sale, would constitute a security offering. There is a clear expectation of profits from the income stream. This income is from the efforts of others since the issuers either arranged the payment scheme or will

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115. BITCOIN, <https://bitcoin.org/en/> (last visited Mar. 9, 2019).

116. *Money for the Internet Age*, LITECOIN, <https://litecoin.com/> (last visited Mar. 9, 2019).

117. *Digital Money for a Digital Age*, TETHER, <https://tether.to/> (last visited Mar. 9, 2019).

118. *Tether Charts*, COINMARKETCAP, <https://coinmarketcap.com/currencies/tether/> (last visited Mar. 9, 2019).

arrange it. This result is intuitive since tokens which generate an income are very similar to traditional dividend stocks.

Potentially, if the token was marketed without any pretense of income and the community later created an income generating scheme without the direction of the promoters, then it might not be a security offering.

### 3. Utility Tokens

Utility tokens are distributed either before the protocol is complete or after it is completed. If the protocol is complete, then it is possible that a court would find that the token purchaser acted out of a “desire to use or consume the item purchased.” If this is true, then the purchaser was not led to expect profits.<sup>119</sup> Consider a situation where the token is exchangeable for a fixed amount of cloud storage. If the protocol is complete, then anyone who buys the token can only expect profits if the cost of cloud storage increases. This expectation of profits from an increase in the cost of cloud storage would not rely on the efforts of the promoters; instead it would rely on the market forces affecting the price of cloud storage. A caveat to this example is the situation where the tokens are initially sold significantly below the market value of cloud storage. In this case investors may be relying on the promoters to gain traction in the marketplace and cause tokens to increase in value as users become aware of the service.

If the protocol is not complete when the tokens are distributed, then a security is likely offered. Investors would be speculating on the tokens increasing in value once the protocol is complete and would therefore be relying on the efforts of the promoters to make a profit.

#### *C. Combined Howey Analysis*

For mining, since there is no pooling of funds and the miners expect a profit based on their own efforts and not the efforts of others, it is probable that no security is offered to miners. Airdropping and forking do not involve an investment of money, and therefore no security is offered. The results for mining, airdropping, and forking are independent of the nature of the tokens being issued. On the other hand, ICOs always involve an investment

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119. U.S. Sec. & Exch. Comm’n, *supra* note 45 (describing factors the SEC considers important to determining whether a purchase is for consumption/use or investment).

of money and the analysis turns on the specific characteristics of the tokens sold.

If the tokens offer dividends, the advertising emphasizes profits, or the tokens are still under heavy development when offered, then a security offering is likely to be found. On the other hand, if the token has some specific utility, or is merely a store of value and the development is largely completed by the time the token is offered for sale, or any development will be community driven, then in some cases it may be found that no security was offered when the ICO was conducted.<sup>120</sup>

## V. RECOMMENDATIONS

### A. *For Cryptocurrency Issuers*

If cryptocurrency founders want to avoid violating securities regulations, they should use mining, airdropping, or forking to distribute their new tokens. These methods should not be mixed with an ICO. If the founder insists that an ICO is necessary, they should be careful not to advertise based on the prospect of profits. Furthermore, they should completely avoid paying dividends through the tokens and should only host their ICO when most or all of the underlying software development is complete.

While many ICO founders are legitimately drawn to ICOs because they offer the ability to gather funding early in product development, this model is risky from a securities law perspective. Instead, founders could use airdropping, forking, or mining with pre-mining instead. If the community values the protocol, the token will have value on exchanges, and the founders can sell their pre-mined stockpile to obtain funding.

### B. *For Regulators*

First and foremost, regulators should act quickly. The cryptocurrency world is evolving and enlarging rapidly. Already some ICOs are avoiding American customers because of frightening and unclear regulations. Regulators need to decide what their goals are and then affirmatively tell the industry how it needs to act to avoid prosecution. Additionally, regulators need to tell past infringers what they can expect and how they can avoid prosecution – if at all.

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120. U.S. Sec. & Exch. Comm'n, *supra* note 45.

The goals of regulators are to protect investors and to not stifle innovation.<sup>121</sup> The key question is how to balance these competing aims. Requiring disclosures like those required by securities laws is likely to move many crypto-innovators to market and work outside of the United States. On the other hand, the current system is likely to lead to many investors being tricked into bad investments.<sup>122</sup>

As an initial matter, regulators in the U.S. should make it clear that tokens distributed by mining, airdropping and forking are not securities. These practices, which are widespread, are an important part of the ecosystem already, and such an endorsement would make them even more popular. This would reduce any problems stemming from ICOs since the market would likely gravitate toward the other distribution methods, especially with an endorsement from regulators. Furthermore, regulators could explicitly state that selling pre-mined tokens on exchanges without advertising is acceptable.

Regulators should be harsh with those employing fraudulent practices. This would benefit both investors and the whole industry. It will improve the overall quality of offerings while protecting investors.

Regulators should remember that Ethereum was launched as an ICO and turned out to be important in the cryptocurrency world. Any regulation which would have prevented Ethereum from being launched should be eyed with suspicion. ICOs are an important funding mechanism for this emerging field, and their well-reasoned regulation should be a priority for the SEC and the government more broadly.

### *C. Self-Insurance to Avoid Securities Regulation*

The crypto-community should partner with government to enable protection of investors while keeping costs for founders low. One way to do this would be the creation and regulation of ‘crypto-underwriters.’ Crypto-underwriters would serve a similar function as underwriters do in initial public offerings, and the government could regulate them.

If investors suffered damages, the crypto-underwriters would be liable instead of, or in addition, to the founders. This liability shift would make investors safer when investing because they would have a regulated entity which they can sue in the event of fraud or other improper activities. One important function of regulation would be compelling the crypto-underwriters to maintain reserve capital to

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121. *Virtual Currencies*, *supra* note 100, at 10.

122. *Virtual Currencies*, *supra* note 100, at 9.

indemnify investors and therefore afford some protection to investors. This would give the crypto-underwriters an incentive to properly vet ICOs to avoid taking on excessive risk.

Regulation would provide a baseline of requirements for the vetting process. Four main requirements should be included at a minimum. First, it should require a working product. ICOs which launch before any working product is available are simply too prone to marketing through exaggeration and will very likely lead to investor disappointment and loss. Additionally, ICOs which are sold before a product is complete are more likely to be fraudulent. Second, the code of both the product and the ICO itself should be vetted by an independent third party. These third parties should be held to at least a negligence standard when reviewing the code. The formation of an organization to certify these third-party verifiers would be an asset to the community. Third, the real identities of the founders should be released and verified by an independent third party. Fourth, the ICO should be required to sell a number of tokens, at a specific price, that is amenable to the crypto-underwriter's assessment of funds required by the founders. Furthermore, the later distributions would need to be defined so that the crypto-underwriter's total liability exposure can be known. Additionally, fraud will be reduced by forcing ICOs to justify how much money they want to raise and how many tokens they seek to retain.

A downside of this model is the centralization of ICO approval. However, this centralization would not be complete since the crypto-underwriter organizations could be numerous. Furthermore, approval happens at the crypto-underwriter level instead of at the SEC level. The SEC merely ensures that the crypto-underwriters are following best practices.

If the crypto-underwriters were effective at determining which ICOs to approve, this model would promote lean innovation while protecting investors. Approval by the crypto-underwriters would be an added way for investors to evaluate ICOs. ICO issuers may enjoy a credibility boost once they get approved.

Founders would pay the crypto-underwriters in tokens. This practice would put the cost of regulation on the investors and would reduce the dampening effect of regulation on innovation. Crypto-underwriters would diversify in many ICOs to reduce their risk.

If the U.S. government were not interested in backing this scheme, corporations could do it independent of government. This would provide investors with the security of a baseline vetting process. It would not, however, protect the founders from violating

SEC regulation. For this reason, it would be preferable if the government provided a scheme, like the one above, for regulating the ICO industry. This regulation arrangement could serve the dual purposes of fostering American innovation and protecting American investors.

#### *D. ICO Registration Speculators*

Private actors with substantial financial resources could provide another solution. Speculative investors could agree to fund ICO issuers to bring them into full compliance with the SEC. Essentially, the ICO founders would pay investors in tokens, and the investors would then pay dollars to bring the ICOs into compliance. The investors would essentially be wagering that their ICO tokens will become sufficiently valuable to make their early investment in registration worthwhile. The ICO founders would get the opportunity to be compliant without spending any money. The ICO registration speculators could diversify among a range of forthcoming ICOs to reduce their risk.

## VI. CONCLUSION

This Note applied the *Howey* test to various methods of distributing cryptocurrencies. According to the *Howey* test, it is likely that mining, airdropping, and forking are not investment contracts, but initial coin offerings are. Miners are not led to expect profits from third parties. Airdrops and forks do not require an investment of money. Initial coin offerings require an investment of funds, which are pooled for a common enterprise, and those funds are supplied by investors for the express purpose that they would be used by a third party to either generate a profit or make a better system.

To determine if any particular ICO is an investment contract, a court would need to look at the specific characteristics of the tokens being sold. The SEC has provided guidance for making this determination.<sup>123</sup> If the tokens sold offer dividends, use advertising which emphasizes profits, or the tokens are still under development, then the court will probably find an investment contract exists. On the other hand, if the token has some specific utility, or is merely a store of value and the protocol is complete at the time of sale, then a court is unlikely to see an investment contract.

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123. U.S. Sec. & Exch. Comm'n, *supra* note 45.

Regulators should make it clear that mining, airdropping, and forking are acceptable practices. Furthermore, regulators should proceed with a light touch when regulating initial coin offerings. Regulation could be applied at the crypto-underwriter level to promote innovation while protecting the investing public.