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Cryptocurrency Regulations Wanted: Iterative, Flexible, and Pro-Competitive Preferred

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CRYPTOCURRENCY REGULATIONS WANTED: ITERATIVE, FLEXIBLE, AND PRO-COMPETITIVE PREFERRED

Abstract: Since the creation of Bitcoin in 2009, the market for virtual currency has exploded with thousands of cryptocurrencies and trillions of dollars invested in cryptocurrency startups. Because of cryptocurrency's popularity and potential to disrupt existing financial systems, the U.S. government understandably wants to regulate it. Overlapping federal and state regulatory approaches, however, created a mess of confusing and hard-to-follow rules for cryptocurrency entrepreneurs. If executed correctly, regulation can have a pro-competitive and beneficial effect on fledgling industries. Regulation D in the venture capital industry and the Digital Millennium Copyright Act safe harbors for Internet Service Providers offer two models of well-executed regulatory schemes. This Note argues that federal regulators must work together to create a straightforward and flexible regulatory scheme reminiscent of Regulation D and the safe harbors. Otherwise, the United States will continue to lose valuable innovation and economic benefits to countries with more streamlined cryptocurrency frameworks.

INTRODUCTION

Imagine a world in which one hundred percent of a deposited check's funds become available almost immediately, with no third-party fees.[1] Imagine a world in which an individual can pay an incredibly small amount of money, say, a hundredth of a penny, in order to read an online newspaper article without irritating banner ads or the need to pay a subscription fee.[2] Finally, imagine a world in which inboxes are free from pesky spam emails.[3] Cryptocurrency

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[1] Kevin V. Tu & Michael W. Meredith, *Rethinking Virtual Currency Regulation in the Bitcoin Age*, 90 WASH. L. REV. 271, 282 (2015). Currently, stock trades take two to three days to settle and bank loans average around twenty-three days. DON TAPSCOTT & ALEX TAPSCOTT, BITCOIN REVOLUTION: HOW THE TECHNOLOGY BEHIND BITCOIN IS CHANGING MONEY, BUSINESS, AND THE WORLD 59 (2016). Transactions handled through the Bitcoin network typically take less than ten minutes. *Id.* Payment systems often charge 2–3% fees to facilitate a transaction between parties. Marc Andreessen, *Why Bitcoin Matters*, N.Y. TIMES (Jan. 21, 2014), https://dealbook.nytimes.com/2014/01/21/why-bitcoin-matters/?searchResultPosition=1 [https://perma.cc/F84P-75KS].

[2] Andreessen, *supra* note 1. With Bitcoin, content creators like the *New York Times* could charge minimal amounts of money so that users could access just one article, video, section, or news alert of their choosing, without having to buy a monthly subscription. *Id.*

[3] *Id.* Micropayments small enough to be trivial to the sender but significant enough to large-scale spammers could be required for an inbox to accept an incoming message, thereby deterring spammers and keeping inboxes clear. *Id.*

can make this world possible, but only if supported by a specifically tailored regulatory scheme.[4]

Cryptocurrencies are electronic forms of currency that lack ties to a traditional system like a government or financial institution.[5] They can be used to buy goods or services from any merchant that accepts them as forms of payment.[6] Ownership and transfer of cryptocurrency is verified and secured through an encrypted process involving both a private and public key, safely eliminating the need for third-party processing or fees.[7]

Investment in cryptocurrency startups exploded much like the dot-com craze in the 1990s, with more than one billion dollars invested in 2014 and 2015.[8] There are currently over twenty-seven thousand cryptocurrencies on the market, with more added every single day.[9] Even large online retailers like Overstock.com have begun to accept cryptocurrency as a form of payment, which many regard as a significant step towards establishing Bitcoin as a universally accepted virtual currency.[10]

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[4] *See* Tu & Meredith, *supra* note 1, at 282 (describing Bitcoin as a reasonable alternative to traditional currency); Andreessen, *supra* note 1 (positing various revolutionary real-world uses for cryptocurrency).

[5] *See* Tu & Meredith, *supra* note 1, at 277 (describing Bitcoin as a type of virtual currency and comparing it to traditional forms of currency).

[6] *Id.*

[7] TAPSCOTT & TAPSCOTT, *supra* note 1, at 6; *see* Omri Marian, *A Conceptual Framework for the Regulation of Cryptocurrencies*, 82 U. CHI. L. REV. ONLINE 53, 54–58 (2015), https://chicagounbound. uchicago.edu/cgi/viewcontent.cgi?article=1035&context=uclrev_online [https://perma.cc/NQ6Z-JUE2] (providing a broad overview of cryptocurrency). Each owner of cryptocurrency has a private key that aligns with the public blockchain and enables cryptocurrency transfer and sale. Dennis Chu, Note, *Broker-Dealers for Virtual Currency: Regulating Cryptocurrency Wallets and Exchanges*, 118 COL-UM. L. REV. 2323, 2326 (2018). The encryption prevents "double-spending," or the use of the same unit of cryptocurrency multiple times through illicit tactics, and ensures that only the owner of the cryptocurrency is able to transfer it. *Id.*

[8] TAPSCOTT & TAPSCOTT, *supra* note 1, at 9. There seem to be no signs of stopping the investment flow, which is close to doubling every year. *Id.*

[9] *See All Cryptocurrencies*, INVESTING, https://investing.com/crypto/currencies [https://perma.cc/DY5E-5PEW] (displaying a dynamic list of cryptocurrencies currently on the market). Bitcoin is by far the most popular form of cryptocurrency, but other high-growth cryptocurrencies include Ethereum, which was created to facilitate the use of "smart contracts," and Ripple's XRP, which is appealing to traditional financial institutions, like banks, that want to utilize its low-cost cross-border payment solutions. *See* Nathan Reiff, *The 10 Most Important Cryptocurrencies Other Than Bitcoin*, IN-VESTOPEDIA (Jan. 8, 2020), https://investopedia.com/tech/most-important-cryptocurrencies-other-than-bitcoin/ [https://perma.cc/DY8P-D7RH] (listing the ten most popular forms of cryptocurrency outside of Bitcoin); Martin Tillier, *What Is a Cryptocurrency?*, NASDAQ (Jan. 25, 2018), https://www.nasdaq.com/articles/what-cryptocurrency-2018-01-25 [https://perma.cc/L5HB-S9R6] (listing common cryptocurrencies).

[10] Tu & Meredith, *supra* note 1, at 288. The day of the announcement that it would start accepting Bitcoin as a payment method, Overstock.com received close to 4% of its daily revenue from Bitcoin sales, or approximately $124,000. *Id.* Many other retailers now accept Bitcoin as payment, including the 75,000+ merchants who utilize the Shopify point-of-sale platform that allows businesses to accept many different forms of payment across multiple channels. Mark Macdonald, *Cryptocurrency*,

Given cryptocurrency's potential to disrupt existing financial systems, governments understandably want to manage its impact.[11] Regulations typically fit into three broad categories of rationale—economic, social, and administrative—though many times these justifications overlap.[12] Innovators often bear the costs of administrative regulation both directly, in the form of licensing fees, and indirectly, by dedicating time and money to compliance.[13] Oftentimes, large commercial firms are able to bear the cost of increased regulations better than individual users.[14]

Cryptocurrency, in part due to its novelty, is currently subject to a complex and costly regulatory regime.[15] It is simultaneously considered a security, a commodity, and a unit of property depending on the regulatory agency handling it and the type of cryptocurrency being considered.[16] Cryptocurrency entrepreneurs warn that the United States is losing innovative startups to other countries with more established regulatory cryptocurrency schemes.[17] Inves-

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SHOPIFY, https://help.shopify.com/en/manual/payments/alternative-payments/cryptocurrency [https://perma.cc/YRM6-7HDS]; *Shopify Point of Sale*, SHOPIFY, https://www.shopify.com/pos [https://perma.cc/N559-EJJ8].

[11] *See* Daniela Sonderegger, Note, *A Regulatory and Economic Perplexity: Bitcoin Needs Just a Bit of Regulation*, 47 WASH. U. J.L. & POL'Y 175, 216 (2015) (noting the balance that governments must strike between regulating Bitcoin and giving innovators the freedom to self-regulate).

[12] ORG. FOR ECON. COOPERATION & DEV., FROM RED TAPE TO SMART TAPE: ADMINISTRATIVE SIMPLIFICATION IN OECD COUNTRIES 14 (2003) [hereinafter OECD REPORT]; Maria Manuel Leitão Marques & Leonor Bettencourt Nunes, *Deepening the Freedom of Services Through Pro-Competitive Regulation* 5–6 (Nov. 6, 2013) (unpublished manuscript), https://ssrn.com/abstract=2350701 [https://perma.cc/7JX5-GL3R]. Economic regulations moderate the free market through price adjustments or barriers to market entry; social regulations consider the public health and safety; and administrative regulations typically involve administrative protocols like paperwork that assists the government in information-gathering. OECD REPORT, *supra*, at 14.

[13] OECD REPORT, *supra* note 12, at 15. Should innovators be subject to a government enforcement action as a result of the failure to keep up with these requirements, it could be catastrophic depending on the legal and financial resources available to defend themselves. Andrew W. Torrance & Eric von Hippel, *The Right to Innovate*, 2015 MICH. ST. L. REV. 793, 798. Needless and burdensome regulatory hurdles that cost time and money are called "red tape." OECD REPORT, *supra* note 12, at 14. *See generally* Jerry L. Mashaw, *Reinventing Government and Regulatory Reform: Studies in the Neglect and Abuse of Administrative Law*, 57 U. PITT. L. REV. 405 (1996) (examining the goals of the legislative and executive branch that, when combined, may negatively affect the administrative state and increase red tape).

[14] Torrance & von Hippel, *supra* note 13, at 796. Large commercial firms may also lobby for more government regulation to protect their competitive advantage and prevent others from entering the market. *Id.*

[15] *See* Tu & Meredith, *supra* note 1, at 274–75 (positing that attempts to fit cryptocurrency into existing regulatory systems have been troublesome because they were not drafted for the unique qualities of virtual currency).

[16] Carol R. Goforth, *U.S. Law: Crypto Is Money, Property, a Commodity, and a Security, All at the Same Time*, 49 J. FIN. TRANSFORMATION 102, 103 (2019).

[17] *See* Marshall Hayner, *The United States Is in the Middle of a Global Blockchain Race—And Is Losing*, NASDAQ (Nov. 9, 2018), https://nasdaq.com/article/the-united-states-is-in-the-middle-of-a-global-blockchain-race-and-is-losing-cm1053798/ [https://perma.cc/49HY-8V8Y] (arguing that countries like China and Japan are far ahead of the United States in effectively regulating cryptocurrency

tors want the certainty that government regulation can provide, but, paradoxically, the lack of cryptocurrency regulation—and the subsequent lack of taxes or oversight—is why many of them initially found cryptocurrency to be an attractive investment.[18] Either way, the regulatory uncertainty surrounding cryptocurrency is harmful to investors and entrepreneurs alike.[19]

When innovation accelerates at a rapid speed there are natural limits on the government's ability to adapt quickly to new technology.[20] Today, technology moves at a breakneck speed, often making it difficult for governments to comprehend and regulate its effects.[21] The current mismatched jumble of both state and federal cryptocurrency regulations and definitions is an unfortunate result of technology innovations outpacing regulatory capacity and competing regulatory entities.[22]

Regulation can have a pro-competitive impact if executed in a way that increases the number of players in the market.[23] Two examples of industries flourishing under pro-competitive regulatory schemes are venture capital and Internet Service Providers (ISPs).[24] In the technology and venture capital in-

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and collaborating with innovators in the space); Jeff Kauflin, *Crypto Startups Are Fleeing the U.S.— This Bill Is Trying to Stop Them*, FORBES (Jan. 10, 2019), https://forbes.com/sites/jeffkauflin/2019/01/ 10/crypto-startups-are-fleeing-the-usthis-bill-is-trying-to-stop-them/#25709a5c2267/ [https://perma. cc/6YT3-FUFP] (providing an example of an entrepreneur hinting that he might move his cryptocurrency startup to Switzerland because of a lack of trust in lawmakers' ability to regulate effectively); Laura Shin, *Crypto Industry Frustrated by Haphazard Regulation*, N.Y. TIMES (June 27, 2018), https:// www.nytimes.com/2018/06/27/business/dealbook/crypto-industry-regulation.html/ [https://perma.cc/ N4P9-U62E] (arguing that if good actors cannot comply with regulations due to the lack of clarity, they will likely consider steering clear of the United States).

[18] *See* Jay Adkisson, *Bitcoin, Cryptocurrency and the Government Regulation Paradox*, FORBES (Jan. 29, 2018), https://www.forbes.com/sites/jayadkisson/2018/01/29/bitcoin-cryptocurrency-and-the-government-regulation-paradox/#3751cea35313 [https://perma.cc/9QHD-DA7Q] (describing the friction between the need for cryptocurrency regulation to promote price stability and the attractiveness of few regulations to investors).

[19] James P. Brennan et al., *The Curious Case of Crypto*, 37 BANKING & FIN. SERVS. POL'Y REP. 8, 14 (2018); *see* Stephen J. Obie & Mark W. Rasmussen, *How Regulation Could Help Cryptocurrencies Grow*, HARV. BUS. REV. (July 17, 2018), https://www.hbr.org/2018/07/how-regulation-could-help-cryptocurrencies-grow [https://perma.cc/5QZK-4T3E] (positing that unclear cryptocurrency regulations curb innovation because entrepreneurs fear breaking the law and investors are unsure about true valuations).

[20] TAPSCOTT & TAPSCOTT, *supra* note 1, at 296. It is impossible for any government to regulate all aspects of the economy, as there are too many players and too much technology to manage. *Id.*

[21] *Id.* at 308; *see* Goforth, *supra* note 16, at 103 (describing the complex patchwork of cryptocurrency regulations).

[22] *See* TAPSCOTT & TAPSCOTT, *supra* note 1, at 308 (arguing that technology is evolving so quickly that it is difficult for regulatory institutions to manage them effectively); Goforth, *supra* note 16, at 103 (explaining that the overlapping cryptocurrency regulations are a result of different regulatory agencies trying to exert jurisdiction over the new technology).

[23] *See* Marques & Nunes, s*upra* note 12, at 5 (describing the possibility of regulation removing market barriers and encouraging competition).

[24] *See* Bruce Dravis, *Public Advertising of Private Investment Offerings: The Operation and Issues in Post-JOBS Act Regulation D*, 13 U.C. DAVIS BUS. L.J. 295, 301 (2013) (describing the ways in

dustry, Regulation D, through its iterative regulatory process, encouraged investment and facilitated frictionless fundraising for emerging growth companies.[25] In the realm of the Internet, the intentionally flexible safe harbor provisions of the Digital Millennium Copyright Act (DMCA) offered vital copyright protections to ISPs and websites hosting third-party content.[26] The market for cryptocurrency in the United States has thus far suffered from a lack of formal guidance, and Regulation D and the DMCA safe harbors serve as positive examples of how the government can effectively regulate transformative industries.[27] Federal and state regulatory agencies must work together to issue regulations that are both straightforward and flexible in order to allow the burgeoning cryptocurrency industry to flourish.[28]

Part I provides background on the passage and substance of Regulation D in 1982 and the DMCA safe harbors in 1998, as well as the current state of regulation in cryptocurrency.[29] Part II discusses the commentary from supporters and detractors about the effectiveness and desirability of Regulation D, the DMCA safe harbors, and cryptocurrency regulations as they currently stand.[30] Part III argues that, in order to support the fledgling cryptocurrency industry and reap the economic benefits that accompany it, Congress must pass pro-competitive, flexible, and straightforward regulations to give entrepreneurs certainty that the fruits of their innovation are safe and protected in the United States.[31]

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which Regulation D has affected small issuers and capital formation in general since its inception in 1982); Matthew Sag, *Internet Safe Harbors and the Transformation of Copyright Law*, 93 NOTRE DAME L. REV. 499, 504–05 (2017) (stating that the Digital Millennium Copyright Act safe harbors have proven to be a boon to the economy and the copyright system in the United States).

[25] *See* Dravis, *supra* note 24, at 301 (stating that the goal of the adoption of Regulation D was the encouragement of capital formation).

[26] *See* Sag, *supra* note 24, at 504–05 (elucidating the benefits of the safe harbors to copyright law for Internet Service Providers (ISPs) and the economy in general).

[27] *See* Dravis, *supra* note 24, at 301 (describing the billions of dollars that have been raised under the Regulation D exception); Sag, *supra* note 24, at 504–05 (claiming that the safe harbors promoted the explosion of social networking platforms); Stefan Stankovic, *State of Play: The SEC's Current Positions on Cryptocurrency*, CRYPTO BRIEFING (Aug. 16, 2018), https://www.cryptobriefing.com/state-of-play-the-secs-current-positions-on-cryptocurrency/ [https://perma.cc/8RNS-LVWL] (stating that regulatory uncertainty is the most relevant threat facing the cryptocurrency industry).

[28] *See* TAPSCOTT & TAPSCOTT, *supra* note 1, at 264 (arguing that there must be a stable regulatory approach to curtail uncertainty for both innovators and investors); Goforth, *supra* note 16, at 107 (quoting regulators that argue for a balance of regulatory oversight and innovation to allow new technologies to grow).

[29] *See infra* notes 32–134 and accompanying text.

[30] *See infra* notes 135–189 and accompanying text.

[31] *See infra* notes 190–225 and accompanying text.

I. REGULATION D, THE DIGITAL MILLENNIUM COPYRIGHT ACT SAFE
HARBORS, AND CRYPTOCURRENCY: AN UNLIKELY TRIO

In the United States, the history of government regulation of business is long, storied, and divisive.[32] Some consider regulation a pertinent tool to remove market barriers and bolster healthy competition.[33] Others argue that regulation and a well-functioning free market are mutually exclusive.[34] Either way, regulatory oversight has arguably been a part of the nation's fabric since 1887 with the formation of the Interstate Commerce Commission, created to regulate railroads, and is not likely to disappear anytime soon.[35]

Regulation D under the Securities Act of 1933 and the DMCA safe harbors for ISPs are examples of regulations that had a pro-competitive impact on their respective industries, as they provided much-needed stability and direction.[36] Regulation D created an inexpensive and frictionless avenue for small emerging companies to raise venture capital by exempting them from otherwise strict securities reporting requirements, spurring the growth of dot-com companies in the 1990s.[37] The DMCA safe harbors offered vital protection to ISPs from accusations of copyright infringement perpetuated by their users, allowing user-based websites like YouTube and Google to evolve into the powerhouses that they are today.[38]

Cryptocurrency, much like the emerging dot-com companies and ISPs of the 1990s, offers cutting-edge innovation that carries the potential to transform an entire industry.[39] Investors are flooding money into cryptocurrency compa-

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[32] *See* PEW RESEARCH CTR., LOW APPROVAL OF TRUMP'S TRANSITION BUT OUTLOOK FOR HIS PRESIDENCY IMPROVES 32 (2016), https://www.people-press.org/wp-content/uploads/sites/4/2016/12/12-08-16-December-political-release.pdf [https://perma.cc/5U44-98DJ] (describing a public research poll in which 45% of participants said that "regulation is necessary to protect the public interest" while 48% said that "government regulation of business usually does more harm than good"). Republicans and Democrats surveyed took opposite views, with Republicans viewing government regulations as more harmful than beneficial. *Id.*

[33] *See* Marques & Nunes, s*upra* note 12, at 2 (arguing that, in some economic sectors, regulation is the most effective, and oftentimes only, way to ensure fair competition).

[34] *Id. See generally* HENRY HAZLITT, ECONOMICS IN ONE LESSON: THE SHORTEST AND SUREST WAY TO UNDERSTAND BASIC ECONOMICS (Three Rivers Press 1979) (1946) (espousing the libertarian view of free market economics and the dangers of government intrusion).

[35] LAWRENCE M. FRIEDMAN, A HISTORY OF AMERICAN LAW 439 (2d ed. 1985).

[36] *See* Dravis, *supra* note 24, at 301 (stating that Regulation D offerings have become so popular that, by 2012, the dollar amount of security offerings under Rule 506 dwarfed that of other offerings requiring registration); Sag, *supra* note 24, at 504–05 (stating that the safe harbors were vital in encouraging the growth of Web 2.0 businesses and the economy itself).

[37] *See* Dravis, *supra* note 24, at 297–301 (providing a broad overview of Regulation D).

[38] *See* Sag, *supra* note 24, at 511–15 (providing a summary of the Digital Millennium Copyright Act (DMCA) safe harbors).

[39] *See* Peter S. Menell, *Envisioning Copyright Law's Digital Future*, 46 N.Y.L. SCH. L. REV. 63, 66 (2002) (describing the effects of the creation of the World Wide Web on content flow and ISPs); Robert B. Thompson & Donald C. Langevoort, *Redrawing the Public-Private Boundaries in Entrepreneurial Capital Raising*, 98 CORNELL L. REV. 1573, 1611–12 (2013) (describing the revolutionary

nies as they did with dot-com companies in the 1990s.[40] Lack of regulation and rampant inflation of internet startup valuations helped to cause the dot-com crash, and many in the cryptocurrency industry are wary that its own bubble may similarly burst.[41] Much like the dot-com companies sought regulation to defend ISPs and improve the quality of internet services, there are now calls to protect the cryptocurrency industry and foster its development.[42] Regulation D and the DMCA safe harbors are examples of how the government has chosen to regulate transformative industries in the past, and they provide useful models for an effective cryptocurrency regulatory scheme.[43]

Section A of this Part will explore cryptocurrency and its current regulatory guidelines issued by various government agencies.[44] Section B of this Part provides an overview of the safe harbor provisions of the DMCA and their role in the rapid rise of ISPs like Google and YouTube.[45] Section C of this Part reviews Regulation D and its effects on the fundraising in the emerging company and venture capital industry.[46]

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policy shift towards allowing more individuals to be considered accredited investors based on their wealth, which would presumably increase investment flow for emerging companies from a variety of sources); Andreessen, *supra* note 1 (describing the parallels between the revolutionary effects of the Internet in 1993 and Bitcoin in 2014).

[40] *See* TAPSCOTT & TAPSCOTT, *supra* note 1, at 9 ("Venture capitalists are showing enthusiasm at a level that would make a 1990s dot-com investor blush.").

[41] *See* Kirill Bryanov, *Irrational Exuberance Revisited: Is Crypto the New Dot-Com Bubble?*, COINTELEGRAPH (Sep. 15, 2018), https://cointelegraph.com/news/irrational-exuberance-revisited-is-crypto-the-new-dot-com-bubble/ [https://perma.cc/44UD-5X4F] (drawing parallels between the dot-com crash and the hypothetical cryptocurrency bubble); Michael Patterson, *Crypto's 80% Plunge Is Now Worse Than the Dot-Com Crash*, BLOOMBERG (Sep. 12, 2018), https://www.bloomberg.com/news/articles/2018-09-12/crypto-s-crash-just-surpassed-dot-com-levels-as-losses-reach-80 [https://perma.cc/5RTK-MLLW] (comparing the dot-com crash with the decline in cryptocurrency value in late 2018 and describing the response from cryptocurrency proponents and opponents).

[42] *See* Menell, *supra* note 39, at 137 (describing the passage of the safe harbor provisions as a result of lobbying by ISPs concerned about liability for user copyright infringement perpetuated on their platforms); *see, e.g.*, Dan Robitzski, *Here's What One Judge's Decision Means for the Future of Cryptocurrencies*, FUTURISM (Sept. 12, 2018), https://www.futurism.com/cryptocurrencies-sec-ico [https://perma.cc/XE8J-9LS5] (quoting a cryptocurrency venture capitalist stating that "[t]he industry is begging for regulators to provide clarity in order to thrive").

[43] *See* Dravis, *supra* note 24, at 297, 301 (recounting the passage of Regulation D and its beneficial effects on the venture capital industry); Sag, *supra* note 24, at 506–12 (describing the development of the Internet and copyright law alongside the passage of the DMCA safe harbors); Tu & Meredith, *supra* note 1, at 296 (stating that cryptocurrency's increased popularity has caused regulators to evaluate its risks due to regulatory concerns).

[44] *See infra* notes 47–88 and accompanying text.

[45] *See infra* notes 89–115 and accompanying text.

[46] *See infra* notes 116–134 and accompanying text.

A. Cryptocurrencies and the Hodge Podge of Regulations Surrounding Them

1. Cryptocurrencies, Bitcoin, and Initial Coin Offerings

Cryptocurrencies are forms of digital assets exchanged in peer-to-peer transactions and recorded on public global ledgers—much like spreadsheets—known as blockchain.[47] Blockchain is a public log of all completed transactions, wherein information about new transactions can be added, but old transactions cannot be manipulated or edited due to cryptographic protections.[48] The blockchain is managed and updated collectively by each computer on the network rather than on a single central database.[49] Owners of cryptocurrency possess an encrypted private key used to access the network and transfer the assets.[50] After each transaction occurs, it is incorporated into the blockchain and documented on all computers in the network.[51] Lauded as a safer, quicker, and cheaper alternative to traditional payments systems like credit cards administered by a bank or other financial institutions, cryptocurrencies have exploded in growth.[52]

Of the thousands of cryptocurrencies created since 2009, Bitcoin is the most well-known and heavily capitalized, and has become interchangeable

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[47] TAPSCOTT & TAPSCOTT, *supra* note 1, at 6; Chu, *supra* note 7, at 2326. Peer-to-peer exchanges occur directly between market participants without the need for third-party intervention. Andrew Marshall, *P2P Cryptocurrency Exchanges, Explained*, COINTELEGRAPH (Apr. 7, 2017), https://www.coin telegraph.com/explained/p2p-cryptocurrency-exchanges-explained [https://perma.cc/E7WN-9NYB]. Not all ledgers are public and global. Computershare, Inc., Comment Letter on Transfer Agent Regulations, at 23 (Apr. 14, 2016), https://www.sec.gov/comments/s7-27-15/s72715-35.pdf [https://perma. cc/T622-G937] (distinguishing between "fully open" ledgers such as Bitcoin and "permissioned" distributed ledgers).

[48] Arthur Iinuma, *What Is Blockchain and What Can Businesses Benefit From It?*, FORBES, (Apr. 5, 2018), https://www.forbes.com/sites/forbesagencycouncil/2018/04/05/what-is-blockchain-and-what-can-businesses-benefit-from-it/#419db91e675f [https://perma.cc/CM6R-A6RJ].

[49] TAPSCOTT & TAPSCOTT, *supra* note 1, at 6; Chu, *supra* note 7, at 2326; *see* Brandon Ferrick, Note, *Modernizing the Stockholder Shield: How Blockchains and Distributed Ledgers Could Rescue the Appraisal Remedy*, 60 B.C. L. REV. 621, 649–55 (2019) (describing the function of blockchain technologies). The decentralized nature of cryptocurrency makes it difficult to hack because there is no central point of failure to attack. TAPSCOTT & TAPSCOTT, *supra* note 1, at 6.

[50] TAPSCOTT & TAPSCOTT, *supra* note 1, at 6; Sonderegger, *supra* note 11, at 181–82. In addition to the private key, each user has a public key that is visible to all others in the network. Sonderegger, *supra* note 11, at 181. The two-key system has been compared to the system used to retrieve a safety deposit box involving both a bank guard key and an individual owner key. TAPSCOTT & TAPSCOTT, *supra* note 1, at 6.

[51] Sonderegger, *supra* note 11, at 181.

[52] Andreessen, *supra* note 1; *see* Emerging Tech. from the arXiv, *The Cryptocurrency Market Is Growing Exponentially*, MIT TECH. REV. (May 29, 2017), https://www.technologyreview.com/s/607947/the-cryptocurrency-market-is-growing-exponentially/ [https://perma.cc/U3PQ-U57P] (estimating the market worth of cryptocurrency at $54 billion and stating that it is currently in a period of aggressive growth).

with cryptocurrency in the public conscience.[53] Bitcoin itself has zero intrinsic value because it is not supported by a central authority like a government or bank, but Bitcoin can be exchanged for goods or services by any merchant that recognizes it as a viable means of payment.[54] Bitcoin protects the privacy of users because it operates pseudonymously by assigning each individual a private key that matches with the public blockchain, rather than utilizing personally identifiable information.[55] It also protects merchants because transactions cannot be reversed.[56]

Bitcoin must be "mined" in order to verify transactions and safeguard the distributed ledger.[57] The process of mining produces Bitcoin and serves to add transactions to the blockchain in the form of "blocks."[58] Mining, in essence, is the process of computers on the Bitcoin network competing to solve a complex math problem.[59] The blockchain is updated and maintained because of the resources exerted by these miners, so the winner receives Bitcoin as a reward for

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[53] STANDING S. COMM. ON BANKING, TRADE, AND COMMERCE, DIGITAL CURRENCY: YOU CAN'T FLIP THIS COIN! 6, (Can. 2015), https://sencanada.ca/content/sen/Committee/412/banc/rep/rep12jun15-e.pdf [https://perma.cc/7W82-EQ25] [hereinafter CANADIAN SENATE REPORT]; Goforth, *supra* note 16, at 106; Sarah Jane Hughes & Stephen T. Middlebrook, *Advancing a Framework for Regulating Cryptocurrency Payments Intermediaries*, 32 YALE J. ON REG. 495, 505 (2015).

[54] Primavera de Filippi, *Bitcoin: A Regulatory Nightmare to a Libertarian Dream*, 3 INTERNET POL'Y REV., no. 2, 2014, at 2, https://policyreview.info/articles/analysis/bitcoin-regulatory-nightmare-libertarian-dream [https://perma.cc/8E6P-37DC]; Tu & Meredith, *supra* note 1, at 277. In contrast, a commodity-backed currency is one that is specifically exchangeable for a predetermined quantity of a good like gold or silver. de Filippi, *supra*, at 2. Similarly, legal tender, like the U.S. dollar, is a form of currency recognized by the government and required by law to be recognized by merchants. Tu & Meredith, *supra* note 1, at 278. Bitcoin is not currently considered legal tender, so no one is legally required to accept it as a form payment. *Id.*

[55] *See* Chu, *supra* note 7, at 2326 (describing the process by which the private key and public blockchain operate together without the involvement of any personally identifiable information).

[56] Tu & Meredith, *supra* note 1, at 283. Merchants lose money because customers fraudulently reverse transactions with their credit card companies and do not return the goods they purchased. *Id.* These merchants and credit card companies have no choice but to utilize very sensitive fraud detection programs that deny even minimally suspicious purchases, resulting in 5–10% of orders being turned away. Andreessen, *supra* note 1.

[57] *See* de Filippi, *supra* note 54, at 1 (describing the importance of the mining process). The process of mining was developed by the pseudonymous founder of Bitcoin, Satoshi Nakamoto, and was created in order to incentivize users to act as "auditors," thereby increasing the safety and security of the network. *See* Adam Hayes, *How Does Bitcoin Mining Work?*, INVESTOPEDIA (Nov. 21, 2019), https://www.investopedia.com/tech/how-does-bitcoin-mining-work [https://perma.cc/V7HK-UNPM] (describing the rationale behind rewarding miners with valuable Bitcoin for the work that they do).

[58] Tu & Meredith, *supra* note 1, at 283; Sonderegger, *supra* note 11, at 182.

[59] de Filippi, *supra* note 54, at 1; Hughes & Middlebrook, *supra* note 53, at 505; L.S., *How Bitcoin Mining Works*, THE ECONOMIST (Jan. 20, 2015), https://www.economist.com/the-economist-explains/2015/01/20/how-bitcoin-mining-works [https://perma.cc/TM3W-KQYG]. Bitcoin miners are so numerous that they now have 13,000 times the computing power of the world's top 500 supercomputers. L.S., *supra*.

solving the problem.[60] After the miners verify the solution, the block is then added to the ledger and linked to its predecessor, creating the so-called blockchain.[61] The difficulty of the problem increases each time and a new block is created about every ten minutes.[62] The maximum amount of Bitcoin allowed on the market is twenty-one million coins, and seventeen million have already been mined.[63]

A new development in the cryptocurrency world involves initial coin offerings (ICOs).[64] Just as an initial public offering (IPO) involves raising money in capital markets, ICOs are mechanisms for companies to raise funds from investors in exchange for units of the company's own cryptocurrency.[65] Essentially, the purchase of cryptocurrency in an ICO allows holders to engage in the market or product that the startup issuing it is trying to create.[66] ICOs often occur before a product has been created or becomes functional, making them a fairly risky investment because the true value and potential success of the company or product is unclear.[67]

Bitcoin was designed with the anticipation that it would not be regulated and after inception it functioned largely absent any regulatory engagement—its

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[60] Arjun Kharpal, *Everything You Need to Know About the Blockchain*, CNBC (June 18, 2018), https://www.cnbc.com/2018/06/18/blockchain-what-is-it-and-how-does-it-work.html [https://perma.cc/UL2T-7WE3].

[61] TAPSCOTT & TAPSCOTT, *supra* note 1, at 7; Hughes & Middlebrook, *supra* note 53, at 505; Tu & Meredith, *supra* note 1, at 284.

[62] TAPSCOTT & TAPSCOTT, *supra* note 1, at 7; Tu & Meredith, *supra* note 1, at 284.

[63] Hughes & Middlebrook, *supra* note 53, at 505; Evelyn Cheng, *There Are Now 17 Million Bitcoins in Existence—Only 4 Million Left to 'Mine,'* CNBC (Apr. 26, 2018), https://www.cnbc.com/2018/04/26/there-are-now-17-million-bitcoins-in-existence—only-4-million-left-to-mine.html [https://perma.cc/N23Y-Q2Y4]. Bitcoins, however, are not likely to run out soon as it is estimated that the remaining four million will take 122 years to mine. Cheng, *supra*. This is due to the increasing difficulty—and therefore time—of mining each successive Bitcoin. *Id.* Some have argued that this very limit is what makes Bitcoin appealing, because it prevents governments from flooding the market with Bitcoin and minimizes inflation. Sonderegger, *supra* note 11, at 184. The twenty-one million Bitcoin limit was set by the Bitcoin founder and it is unclear why that number was chosen. Kai Sedgwick, *Proposal to Increase Bitcoin's 21 Million Supply Sparks Debate*, BITCOIN.COM (Feb. 8, 2019), https://news.bitcoin.com/proposal-to-increase-bitcoins-21-million-supply-sparks-debate/ [https://perma.cc/8SKA-F7EW].

[64] Tamara Chuang, *When Cryptocurrency and Regulators Collide, Blockchain Startups Just Want Clarity*, DENVER POST (June 7, 2018), https://www.denverpost.com/2018/06/07/cryptocurrency-regulation-blockchain-startups/ [https://perma.cc/N6GH-76B6]; *What Is an ICO?*, BITCOIN MAG., https://bitcoinmagazine.com/guides/what-ico [https://perma.cc/9K46-AAJC] (describing the first significant initial coin offerings (ICOs) that occurred in 2013, four years after the inception of the Bitcoin network).

[65] BITCOIN MAG., *supra* note 64. These new units of cryptocurrency can be exchanged for fiat currency, like dollars, or other more established cryptocurrency like Bitcoin. *Id.*

[66] Jay Preston, Note, *Initial Coin Offerings: Innovation, Democratization, and the SEC*, 16 DUKE L. & TECH. REV. 318, 320 (2018).

[67] *Id.* at 323; BITCOIN MAG., *supra* note 64.

small user base likely factored into its ability to escape attention.[68] But as Bitcoin's popularity and the development of other cryptocurrencies have rocketed it to the forefront of the public consciousness, its sudden visibility has compelled international and domestic regulators to evaluate its risks and benefits.[69]

2. Regulations from the IRS, FinCEN, CFTC, SEC, and the States

Many U.S. government agencies have tried to classify cryptocurrency so that it fits into their own regulatory sphere, resulting in an overlapping and often contradictory patchwork of regulations.[70] The first federal regulatory agency that issued guidance was the U.S. Department of the Treasury's Financial Crimes Enforcement Network (FinCEN), which is tasked with monitoring financial flows to deter illicit uses such as funding terrorism and money laundering.[71] In March 2013, FinCEN clarified requirements under the federal Bank Secrecy Act for parties in cryptocurrency transactions, defining virtual currency as a medium of exchange that "either has an equivalent value in real currency, or acts as a substitute for real currency."[72] FinCEN declared that anyone facilitating the exchange of such an asset would be considered a "money transmitter" required to report to the agency and adhere to FinCEN Bank Se-

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[68] Tu & Meredith, *supra* note 1, at 296; *see* Rip Empson, *Bitcoin: How an Unregulated, Decentralized Virtual Currency Just Became a Billion Dollar Market*, TECHCRUNCH (Mar. 29, 2013), https://techcrunch.com/2013/03/28/bitcoin-how-an-unregulated-decentralized-virtual-currency-just-became-a-billion-dollar-market/ [https://perma.cc/KT2N-264E] (positing that the lack of government control over cryptocurrency made it an attractive choice for non-traditional investors).

[69] Tu & Meredith, *supra* note 1, at 296; *see* Saheli Roy Choudhury, *Governments Want to Control Cryptocurrencies—But There's a Danger to Too Many Rules*, CNBC (Sep. 12, 2017), https://www.cnbc.com/2017/09/12/regulators-are-turning-their-attention-to-cryptocurrencies.html [https://perma.cc/LG9J-PP52] (describing the renewed regulatory interest in cryptocurrency due to increased ICO activity in the United States, Singapore, Japan, and China).

[70] Goforth, *supra* note 16, at 2. This complicated regulatory scheme is due in part to the fact that cryptocurrency does not legally conform to the existing definitions of "money" or "currency," so there is much uncertainty over who will regulate it and what it means. Susan Alkadri, Note, *Defining and Regulating Cryptocurrency: Fake Internet Money or Legitimate Medium of Exchange?*, 17 DUKE L. & TECH. REV. 71, 76 (2018).

[71] Goforth, *supra* note 16, at 103. This is accomplished by requiring financial institutions to adhere to a broad set of reporting and record-keeping requirements. *Id.*

[72] FIN. CRIMES ENF'T NETWORK, DEP'T OF THE TREASURY, FINA-2013-G001, GUIDANCE: APPLICATION OF FINCEN'S REGULATIONS TO PERSONS ADMINISTERING, EXCHANGING, OR USING VIRTUAL CURRENCIES 1 (Mar. 18, 2013), https://www.fincen.gov/resources/statutes-regulations/guidance/application-fincens-regulations-persons-administering/ [https://perma.cc/KE2C-59TS]; Hughes & Middlebrook, *supra* note 53, at 507.

crecy Act requirements.[73] The agency did not indicate how cryptocurrency itself should be classified, but did stress that it lacks the status of legal tender.[74]

    The Internal Revenue Service (IRS) issued a notice in April of 2014 that it would treat cryptocurrency as property, not currency as FinCEN had claimed.[75] As a result, the receipt of cryptocurrency through mining and gains or losses attributable to its sale must be reported to the IRS and will be treated as a capital gain or loss for taxation purposes.[76] Anyone participating in transactions involving cryptocurrency also must adhere to the reporting and record-keeping practices required of stock traders.[77] The IRS has proven to be aggressive in monitoring these trades and recently won a ruling to require Coinbase, a popular cryptocurrency exchange platform, to hand over information about fourteen thousand accounts in order to investigate whether the participants properly paid taxes on cryptocurrency profits.[78]

    The Commodity Futures Trading Commission (CFTC), the agency responsible for the regulation of commodities, futures, and derivatives, released a cryptocurrency "primer" in 2017 in which it utilized the IRS definition of virtual currency.[79] If a unit of cryptocurrency aligns with that definition, the CFTC considers it a commodity, and therefore regulable by the agency.[80]

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[73] Goforth, *supra* note 16, at 103. This decision had the effect of potentially imposing federal regulatory reporting rules designed for actual money transmitters on cryptocurrency issuers who may never have intended for their assets to be considered currencies. *Id.*

[74] Alkadri, *supra* note 70, at 76; Sonderegger, *supra* note 11, at 189–90; *see* Tu & Meredith, *supra* note 1, at 278 (defining legal tender as a form of currency recognized by the U.S. government and required to be accepted as payment by law).

[75] I.R.S. Notice 2014-21, 2014-16 I.R.B. 938, https://www.irs.gov/pub/irs-irbs/irb14-16.pdf [https://perma.cc/8VF4-9UJK]; de Filippi, *supra* note 54, at 7; Goforth, *supra* note 16, at 104.

[76] Brennan et al., *supra* note 19, at 13; de Filippi, *supra* note 54, at 7; Hughes & Middlebrook, *supra* note 53, at 500.

[77] Goforth, *supra* note 16, at 104. This classification also preempted taxpayers from claiming the favorable tax treatment available for foreign currency gains or losses in the context of cryptocurrency. Hughes & Middlebrook, *supra* note 53, at 500.

[78] United States v. Coinbase, Inc., No. 17-cv-01431-JSC, 2017 WL 5890052, at *8 (N.D. Cal. Nov. 28, 2017); Robert Anello, *Bitcoin Buyers Beware: The IRS Has Your Number*, FORBES (Jan. 10, 2018), https://www.forbes.com/sites/insider/2018/01/10/bitcoin-buyers-beware-the-irs-has-your-number/ [https://perma.cc/FX3Y-34HJ]. The Internal Revenue Service (IRS) initiated the litigation after discovering that each year from 2013 to 2015, fewer than nine hundred individuals reported losses or gains from cryptocurrency transactions on their tax returns despite the virtual currency exploding in value. Anello, *supra.*

[79] COMMODITY FUTURES TRADING COMM'N, A CFTC PRIMER ON VIRTUAL CURRENCIES 4 (2017), https://www.cftc.gov/sites/default/files/idc/groups/public/documents/file/labcftc_primer currencies100417.pdf [https://perma.cc/GX74-GRXX]; Goforth, *supra* note 16, at 105; Weizhen Tan, *Cryptocurrency Regulation Requires a 'Do No Harm' Approach, US Regulator Says*, CNBC (Sept. 14, 2018), https://www.cnbc.com/2018/09/14/do-no-harm-in-regulating-cryptocurrencies-but-be-vigilant-cftc.html [https://perma.cc/SK2W-9NUQ]; *see* I.R.S. Notice 2014-21, *supra* note 75, at 938 (defining virtual currency as "a digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value" that may operate like real currency but is not technically legal tender). The IRS treats cryptocurrency as property for tax purposes but considers it a form of virtual

The Securities and Exchange Commission (SEC), the agency responsible for regulating the U.S. securities market, considers an asset to be a security under its jurisdiction if, inter alia, it is sold as an "investment contract."[81] In *SEC v. Howey Co.*, the Supreme Court set out a four-factor test used to determine whether a transaction can be classified as an investment contract and thus needs to be registered with the SEC: whether there was 1) an investment of money, 2) in a common enterprise, 3) with an expectation of profits, 4) to come solely from the efforts of others.[82] The SEC has concluded that the issuance of any new cryptocurrencies in an ICO will be considered a sale of securities, but Bitcoin itself is not considered a security.[83]

States also regulate cryptocurrency, but have taken different approaches.[84] This can be harmful to cryptocurrency businesses whose online customers hail from many different places because they are subject to multiple different state regulatory approaches, in addition to the federal regulatory oversight.[85]

Various nations with differing systems of government—ranging from authoritarian regimes like Russia to democratic countries like Argentina—have banned or aggressively limited cryptocurrency, though some are reconsidering

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currency and elucidates a definition of such in an IRS Notice to the public published in 2014. I.R.S. Notice 2014-21, *supra* note 75, at 938.

[80] Goforth, *supra* note 16, at 105; Tan, *supra* note 79. The Chairman of the Commodity Futures Trading Commission (CFTC) has expressed concern over potential manipulation and fraud in the market for cryptocurrency, which may explain its adherence to the broad definition perpetuated by the IRS. Tan, *supra* note 79. Some cryptocurrencies have been found to fit within this definition, and in 2018 a federal judge backed CFTC oversight of a supposed commodity when the judge allowed the regulatory agency to charge a cryptocurrency company with misappropriation of investor funds. Marin Marinov, *Some Cryptocurrencies Are Commodities Under CFTC Oversight, US Judge Rules*, CRYPTOVEST (Sept. 28, 2018), https://cryptovest.com/news/some-cryptocurrencies-are-commodities-under-cftc-oversight-us-judge-rules/ [https://perma.cc/8SPD-Y6SZ].

[81] Goforth, *supra* note 16, at 106; *see* Stankovic, *supra* note 27 (describing the role of the Securities and Exchange Commission (SEC)).

[82] 328 U.S. 293, 301 (1946); Goforth, *supra* note 16, at 106; Stankovic, *supra* note 27.

[83] Goforth, *supra* note 16, at 106; Kate Rooney, *SEC Chief Says Agency Won't Change Securities Laws to Cater to Cryptocurrencies*, CNBC (June 6, 2018), https://www.cnbc.com/2018/06/06/sec-chairman-clayton-says-agency-wont-change-definition-of-a-security.html [https://perma.cc/Z24Z-8MAG]. Chairman of the SEC, Jay Clayton, affirmed this conclusion in a comment on cryptocurrencies, stating, "if it's a security, we're regulating it." Rooney, *supra*. Bitcoin is not considered a security because it is so popular and widespread that the market controls its profitability rather than some third party that an investor relies upon to generate financial gains. Goforth, *supra* note 16, at 106.

[84] Stankovic, *supra* note 27. For example, New York uses the transfer value of Bitcoin in determining how to tax it while California uses the list price of the cryptocurrency. Emma Beyer, *Bitcoin Tax Laws Virtually Nonexistent in States*, BLOOMBERG L. (Sept. 12, 2018), https://news.bloomberglaw.com/tech-and-telecom-law/bitcoin-tax-laws-virtually-nonexistent-in-states [https://perma.cc/PVF4-QY98].

[85] Goforth, *supra* note 16, at 103–04; *see* Jennifer L. Moffitt, *The Fifty U.S. States and Cryptocurrency Regulations*, COIN ATM RADAR (July 27, 2018), https://www.coinatmradar.com/blog/the-fifty-u-s-states-and-cryptocurrency-regulations/ [https://perma.cc/2JBB-RR48] (outlining a comprehensive guide of the different state cryptocurrency regulations).

the restrictive regulations due to cryptocurrency's increasing popularity.[86] Other Western countries, including the United States and Canada, are making efforts to regulate it more productively.[87] For example, in 2015, a committee formed by the Canadian Senate released a comprehensive report detailing the positive effects of blockchain technology and recommending that the government exercise caution in enacting regulations surrounding it.[88]

B. Regulation D: The Savior of Venture Capitalists and Emerging Companies Alike

Any sale or offering of securities in the United States must be registered with the SEC, unless it meets a statutory registration exemption.[89] A registered public offering can be undesirable for small businesses due to intensive financial, temporal, and reporting requirements post-registration.[90] One registration exemption, the private placement, by contrast, minimizes reporting requirements and allows companies of all sizes to fundraise from a variety of investors.[91] As a result, most small businesses that want to participate in early stage financings try to qualify for a private placement exemption.[92]

During the Reagan Administration, in 1982, the SEC renewed its focus on removing burdensome restraints on small business capital formation while retaining vital investor protections.[93] As a significant part of these efforts, Regu-

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[86] TAPSCOTT & TAPSCOTT, *supra* note 1, at 9; Andrey Ostroukh & Jack Stubbs, *Russia Ready to Regulate, Not Ban Cryptocurrencies*, REUTERS (Jan. 25, 2018), https://www.reuters.com/article/us-russia-cryptocurrencies-bill/russia-ready-to-regulate-not-ban-cryptocurrencies-idUSKBN1FE0Y0 [https://perma.cc/DEF5-Y6D7].

[87] TAPSCOTT & TAPSCOTT, *supra* note 1, at 9.

[88] *See* CANADIAN SENATE REPORT, *supra* note 53, at 7–8 (cautioning that additional regulations could stifle the future positive benefits of cryptocurrency and acknowledging that the rapid development of cryptocurrency could make the challenges identified within it obsolete in a matter of years).

[89] Securities Act of 1933 § 5, 15 U.S.C. § 77e (2018). A security is defined as "any note, stock, treasury stock, security future, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement." *Id.* § 80a-2(a)(36).

[90] *See* Stuart R. Cohn & Gregory C. Yadley, *Capital Offense: The SEC's Continuing Failure to Address Small Business Financing Concerns*, 4 N.Y.U. J.L. & BUS. 1, 7–10 (2007) (detailing the many factors that make it impractical for small businesses to initiate a registered securities offering). Preparation expenses often total more than 10% of the offering. *Id.* at 8. Such expansive costs involve the utilization of multiple professionals including attorneys, underwriters, and accountants. *Id.* Ideally, an offering would take six months, but there is no guarantee of a quick preparation period or SEC review. *Id.* After going public, the company is required to participate in ongoing reporting in compliance with the Sarbanes-Oxley Act of 2002, requiring even more audit and advisory expenses. *Id.* at 9.

[91] *See* Ilon Oliveira, Comment, *Regulation of Rule 506 Private Placements: The Teetering Balance Between Investor Protection and Capital Formation*, 45 GOLDEN GATE U. L. REV. 287, 290–91 (2015) (giving a general overview of private placements).

[92] Cohn & Yadley, *supra* note 90, at 10.

[93] *See* Mark A. Sargent, *The New Regulation D: Deregulation, Federalism and the Dynamics of Regulatory Reform*, 68 WASH. U. L.Q. 225, 238–39 (1990) (attributing the emergence of Regulation D to the SEC's increased focus on the ability of small businesses to raise capital during the conservative

lation D was adopted to promote capital formation and allow smaller issuers to avoid the prohibitive cost and effort of SEC registration.[94]

The federal government now dominates securities regulation through the SEC, but state regulation of securities through "blue sky" laws stems back to 1911.[95] Historically, any securities offering was required to be registered with each state in which it was conducted in unless it fit within a state's blue sky law exemption.[96] State exemptions varied and were different from federal exemptions, making it costly, burdensome, and highly undesirable to register with each state.[97] As a result, Congress was continuously criticized by small companies for allowing state regulators to eviscerate the beneficial effect of federal regulations on capital formulation.[98] In response to this pressure, Congress passed the National Securities Markets Improvement Act of 1996 (NSMIA), which preempted blue sky registration requirements in Regulation D offerings, specifically through the Rule 506 exemption.[99]

In its original form, Regulation D consisted of three rules—Rule 504, Rule 505, and Rule 506—all of which create exemptions for reporting.[100] The Rule 505 exemption was phased out in 2017 and incorporated into Rule 504.[101]

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presidency of Ronald Reagan); Thompson & Langevoort, *supra* note 39, at 1611–12 (describing the "Reagan-era deregulatory impulse" that cast the old statutory protections for venture capital funding as meddlesome and needless).

[94] Dravis, *supra* note 24, at 301; Oliveira, *supra* note 89, at 293; *see* Proposed Revision of Certain Exemptions from the Registration Provisions of the Securities Act of 1933 for Transactions Involving Limited Offers and Sales, Securities Act Release No. 6339, 23 SEC Docket 446 (Aug. 7, 1981) ("In response to some of those concerns, the Commission has taken a number of actions that are designed to assist small business capital formation and reduce the burdens imposed by the federal securities laws as applied to small businesses.").

[95] Elisabeth Keller & Gregory A. Gehlmann, *Introductory Comment: A Historical Introduction to the Securities Act of 1933 and the Securities Exchange Act of 1934*, 49 OHIO ST. L.J. 329, 331 (1988). Kansas enacted the first state securities law in 1911. *Id.* at n.14. Blue sky laws were aptly named because lawmakers were concerned that "if securities legislation was not passed, financial pirates would sell citizens everything in [the] state *but* the blue sky." *Id.* at 331.

[96] William K. Sjostrom, Jr., *Rebalancing Private Placement Regulation*, 36 SEATTLE U. L. REV. 1143, 1152 (2013).

[97] Cohn & Yadley, *supra* note 90, at 13; Sjostrom, *supra* note 96, at 1152.

[98] *See, e.g.*, Rutheford B. Campbell, Jr., *The SEC's Inglorious Role in Limiting Small Business's Access to Capital*, 9 ENGAGE: J. FEDERALIST SOC'Y PRAC. GROUPS 28, 28 (2008) (describing how smaller-scale innovators are damaged by capital formation regulation and overlooked by the regulators that devise such regulations). When there are minimal prospective purchasers in a state, issuers may choose not to seek registration in the state due to the high cost of investigating qualification standards, which is harmful not only to entrepreneurs but to the economic growth of the state itself. Cohn & Yadley, *supra* note 90, at 13.

[99] Pub. L. No. 104-290, 110 Stat. 3416 (1996).

[100] 17 C.F.R §§ 230.501–.506 (1982).

[101] *See* Wendy Gerwick Couture, *Rest in Peace, Rule 505*, 45 SEC. REG. L.J. 133, 138 (2017) (describing the reasoning behind and the aftermath of the Rule 505 phase-out). Rule 505 phased out largely because issuers exhibited preferences for Rules 506 and 504. *Id.* From 2009 to 2014, Rule 505 made up only 1.5% of offerings, compared to 87.8% under Rule 506 and 10.7% under Rule 504. *Id.* at

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Issuers that meet the criteria of any of the Regulation D exemptions need not register with the SEC, but must file an aptly-named "Form D" after their first sale of securities.[102]

Rule 504 provides safe harbors for small public offerings, allowing issuers to offer up to five million dollars of securities within a twelve-month period, and does not require any specific disclosure to investors or verification that purchasers are qualified.[103] The rule also does not cap the number of investors allowed to participate in the offering; however, it is still subject to state securities laws, which is why the option is not as popular as its counterpart, Rule 506.[104]

In an iterative regulatory process, the Jumpstart Our Business Startups Act of 2012 (JOBS Act) revised Rule 506 to provide for two exemptions from federal registration for private offerings, 506(b) and 506(c), which are distinguished based on the ability of issuers to use general solicitation and advertising.[105] All securities offered under Rule 506 are considered "restricted," mean-

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140. A state securities regulator once remarked that, "If someone calls and tells me that they're planning a 505 offering, I know that they don't know what they're doing." *Id.*

[102] *Fast Answers: Regulation D Offerings*, SEC. & EXCH. COMM'N, https://www.sec.gov/fast-answers/answers-regdhtm.html [https://perma.cc/GMK7-59SS]. A Form D must be filed with the SEC online within fifteen days after a security is sold and there is no filing fee associated with the form. *Filing a Form D Notice*, SEC. & EXCH. COMM'N, https://www.sec.gov/smallbusiness/exemptofferings/formd [https://perma.cc/3KQJ-BQXD].

[103] 17 C.F.R § 230.504 (2017). The offering limit of Rule 504 increased from $1 million to $5 million to eliminate any remaining need for Rule 505, whose only benefit was the higher monetary offering. Allan Grauberd & Anna Vasiliou Steele, *The Revised Regulation D Rule 504 Exemption—Bigger and Better*, MOSES & SINGER (Dec. 15, 2016), https://s3.amazonaws.com/documents.lexology.com/ab393e1e-7b1c-4b33-9299-f4fb382b95a8.pdf [https://perma.cc/WL5L-WZJE]. Rule 504 is desirable to those businesses that want to sell a smaller amount of securities or that would have difficulties meeting the costly and lengthy disclosure requirements of other securities offerings. Robert Wernli, Jr. & Elizabeth Chase, *Rule 504 Becomes Useful Tool for Smaller Capital Raising and M&A Transactions*, SHEPPARD MULLIN: CORP. & SEC. L. BLOG (Nov. 28, 2016), https://www.corporatesecuritieslawblog.com/2016/11/rule-504-becomes-useful-tool-for-smaller-capital-raising-and-ma-transactions [https://perma.cc/AZ8W-35QG].

[104] *See* 17 C.F.R § 230.504 (allowing an unlimited amount of investors so long as each is considered accredited); Rutheford B. Campbell, Jr., *The SEC's Regulation A+: Small Business Goes Under the Bus Again*, 104 KY. L.J. 325, 342 (2015) ("Data show that approximately 80% of Regulation D offerings of $1 million or less are made as Rule 506 offerings."). State securities laws can be cost-prohibitive because they vary significantly, though most require issuers to file reporting documents and some create limits on the type and extent of the offering itself. James J. Cronin III, Comment, *Access to Capital: Rethinking Local Crowdfunding*, 38 CAMPBELL L. REV. 365, 396 (2016).

[105] 17 C.F.R. § 230.502(c) (banning general solicitation and advertising in all offerings except for §§ 230.506(b)(1) and 230.506(c)). The Jumpstart Our Business Startups Act of 2012 (JOBS Act) more generally expanded the opportunities for securities issuers to raise money and in turn decreased disclosure obligations. Dravis, *supra* note 24, at 296–97. General solicitation and advertising is not explicitly defined in Rule 506, but Rule 502(c) sets forth examples such as "[a]ny advertisement, article, notice or other communication published in any newspaper, magazine, or similar media or broadcast over television or radio." 17 C.F.R. § 230.502(c)(1). The JOBS Act § 201(a)(1) directed the SEC to allow general advertising and solicitation under Rule 506 so long as all investors are accredited and the issuer takes steps to verify the identity of said investors. SEC. & EXCH. COMM'N, ELIMINATING THE PROHIBITION AGAINST GENERAL SOLICITATION AND GENERAL ADVERTISING IN RULE 506 AND RULE

ing that unlike shares of stock purchased on the open market, they may not be sold for six months or a year without losing their exemption from federal registration.[106]

In Rule 506(b) offerings, issuers of securities cannot use general advertising or solicitation, but they can sell securities to an unlimited number of accredited investors for an unlimited amount of money.[107] Should issuers decide to sell to non-accredited investors, they are limited to thirty-five individuals and are required to be available to answer prospective purchaser questions and to provide them with disclosure documents and financial statements.[108]

In a radical departure from precedent, and partly in response to the advancements in modern communications technologies, Rule 506(c) allows a company to solicit and advertise their securities offerings.[109] This change served to increase exposure to possible investors and minimize uncertainty about regulatory compliance for companies seeking to raise capital.[110] To take advantage of this Rule, issuers must ensure that the investors who participate are all accredited, and they have an affirmative duty to take "reasonable steps" to verify that said purchasers are in fact accredited.[111] In the first seven months of Rule 506(c)'s publication, close to nine hundred offerings were coordinated

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144A OFFERINGS 4–5 (2013), https://www.sec.gov/rules/final/2013/33-9415.pdf [https://perma.cc/5ZCJ-A9WN].

[106] *See* 17 C.F.R. § 230.144 (listing the definition of and holding period for restricted securities).

[107] *Id.* § 230.506(b). At an institutional level, accredited investors include banks and registered investment advisors. *Id.* § 230.501(a). At an individual level, a person (or a person and his or her spouse) must have a net worth greater than $1 million or an annual income of more than $200,000 for the past two years (or $300,000 with a spouse) to qualify as an accredited investor. *Id.* Presumably, accredited investors possess enough resources to be knowledgeable about securities transactions without any legislative protection. Dravis, *supra* note 24, at 299.

[108] 17 C.F.R. § 230.506(b).

[109] *See id.* § 230.502(c) (allowing general solicitation and advertising in § 230.506(c)); Cohn & Yadley, *supra* note 90, at 6. Rule 506(c) uniquely allows market forces to guide how much and what kind of information is necessary to offer to the public in order to drive investment in securities offerings. *See* Cheryl Conner, *A Trillion Dollar Source of New Funding? The SEC's New 'Reg D'*, FORBES (July 13, 2013), https://www.forbes.com/sites/cherylsnappconner/2013/07/13/a-trillion-dollar-source-of-new-funding-the-secs-new-reg-d/ [https://perma.cc/8KCB-XCXN] (explaining that because companies are now able to solicit investments publicly, the amount of available information about their offerings will likely be determined by the requests of potential investors).

[110] Elan W. Silver, Comment, *Reaching the Right Investors: Comparing Investor Solicitation in the Private-Placement Regimes of the United States and the European Union*, 89 TUL. L. REV. 719, 721 (2015) (discussing the consequences of passage of Rule 506(c)).

[111] 17 C.F.R. § 230.506(c). Rule 506(c) describes reasonable steps taken using a principles-based approach and could involve reviewing financial statements like W-2 forms or bank statements. *Id.*; *KEEPING CURRENT: SEC Staff Issues Guidance on Verifying Accredited Investor Status,* AM. BAR ASS'N (Aug. 14, 2014), https://americanbar.org/groups/business_law/publications/blt/2014/08/keeping_current/ [https://perma.cc/B9YK-GQU7].

in dependence on the new rule, resulting in the sale of over ten billion dollars in securities.[112]

Regulation D proved to be a boon to the emerging company and venture capital industry.[113] Since its adoption, the great majority of companies raising private capital have relied on Regulation D because of its inexpensive and less restrictive nature.[114] As a result of the subsequent amendments to Regulation D, trillions of dollars of transactions have flowed through these exemptions, with no signs of stopping in the future.[115]

C. Digital Millennium Copyright Act Safe Harbors: Protecting the Internet and Its Service Providers

The deployment of the World Wide Web in the early 1990s created a new medium for content creation and sharing, and, in turn, increased opportunities for infringing copyrights.[116] Copyrights are "original works of authorship fixed in any tangible medium of expression" and include, for example, musical works, motion pictures, and sound recordings.[117] Early ISPs like Yahoo and American Online (AOL) expressed concern that copyright infringement accusations could stagnate the growth of the Internet by making it impossible for their forums to permit third-party content uploads without fear of notoriously

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[112] AM. BAR ASS'N, *supra* note 111. During the same seven months, 9,200 offerings utilized the classic Rule 506(b) exemption, resulting in $233 billion of sales. *Id.* The Director of the SEC's Division of Corporate Finance, Keith Higgins, attributed this discrepancy to a hesitancy surrounding the new rules regarding verification of accredited investors. *Id.* Subsequently, the SEC Staff issued more guidance on the meaning of "reasonable steps." *Id.*; *see Securities Act Rules*, SEC. & EXCH. COMM'N, https://www.sec.gov/divisions/corpfin/guidance/securitiesactrules-interps.htm [https://perma.cc/KS3R-N7CW] (answering questions 260.35–260.38 regarding the meaning of "reasonable steps").

[113] Conner, *supra* note 109; Ryan Feit, *New Regulations for Startup Capital Raising*, INC. (Oct. 6, 2015), https://www.inc.com/ryan-feit/new-regulations-for-startup-capital-raising.html [https://perma.cc/F4MG-YFVL].

[114] Feit, *supra* note 113.

[115] *See* SCOTT BAUGUESS ET AL., CAPITAL RAISING IN THE U.S.: AN ANALYSIS OF THE MARKET FOR UNREGISTERED SECURITIES OFFERINGS, 2009–2014, at 2 (2015), https://www.sec.gov/files/unregistered-offering10-2015.pdf [https://perma.cc/3Q5E-WLL8] (reporting that $1.3 trillion was raised through 33,429 Regulation D offerings in 2014).

[116] Menell, *supra* note 39, at 66; *see* Sag, *supra* note 24, at 521 (asserting that the advent of the World Wide Web and the subsequent interconnectedness of people made it easy for near-perfect copies of songs to be exchanged between anyone with an Internet connection). In the age of analog devices like VCRs and tape players, multiple iterations of copying resulted in substandard quality and copyright enforcement actions mostly focused on large-scale pirating. Sag, *supra* note 24, at 521. With the advent of digital technology, copies are almost identical to the original and every person who owns a computer or smartphone may be able to perpetrate copyright infringement. *Id.*

[117] The Copyright Act of 1976 § 102, 17 U.S.C. § 102 (2018). In order to prove copyright infringement, a plaintiff must demonstrate that they own a work and that the alleged infringer copied the protected elements of that work. Pasillas v. McDonald's Corp., 927 F.2d 440, 442 (9th Cir. 1991).

high copyright infringement damages.[118] A third-party user's copyright infringing uploads on the ISP's platform could result in vicarious liability for the ISP.[119] Congress responded by enacting the DMCA in 1998.[120]

The DMCA contains five flexibly drafted safe harbors that put the onus on copyright owners to police infringement of their properties, and requires ISPs only to remove the material once the owners notify them of the infringement.[121] These safe harbors protect both personal blogs and large companies such as Google; without them, copyright holders could sue the companies any time a third-party user uploaded infringing material onto their sites.[122] Although the safe harbors do not force platforms to act, the threat of losing protection from liability provides a strong enticement for ISPs to comply with the copyright notice-and-takedown regime envisioned by the DMCA.[123] Almost all websites that contain third-party content try to fit into the safe harbor guidelines to avoid liability and accusations of breach of corporate fiduciary duty.[124]

The DMCA protects the conduct of ISPs through four main safe harbor provisions: first, for companies that transmit, route, or connect infringing material, like through the provision of internet access (the transmission safe harbor); second, for companies that cache or temporarily store infringing material (the caching safe harbor); third, for companies that passively host or store infringing user material (the storage safe harbor); and fourth, for companies like Google that link or refer users to infringing material (the search engine safe

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[118] Menell, *supra* note 39, at 137; *see* John Blevins, *Uncertainty as Enforcement Mechanism: The New Expansion of Secondary Copyright Liability to Internet Platforms*, 34 CARDOZO L. REV. 1821, 1829 (2013) (elaborating on the consequences of uncertain legal standards for ISPs, including the high cost of litigation and the likelihood of damages).

[119] *See* Christian C.M. Beams, *The Copyright Dilemma Involving Online Service Providers: Problem Solved . . . For Now*, 51 FED. COMM. L.J. 823, 826 (1999) (dividing the broad definition of copyright infringement into three categories and giving an overview of how they have shaped copyright law). The ISP could be liable for the acts of the infringer even if they were unaware of and did not participate in the infringement because of the ISP's ability to supervise the acts of the infringer on their own platform. *Id.*

[120] Digital Millennium Copyright Act of 1998, 17 U.S.C. § 1201 (2000); Menell, *supra* note 39, at 137. Congress explicitly stated that they enacted the DMCA to further the development of the technology industry and improve the quality and variety of Internet services. S. REP. NO. 105-190, at 2 (1998). They also acknowledged that copyright owners might be disinclined to contribute content to the Internet without guarantees of protection against piracy. *Id.* at 8.

[121] 17 U.S.C. § 512 (code section containing the five safe harbors); Sag, *supra* note 24, at 503; Brandon Brown, Note, *Fortifying the Safe Harbors: Reevaluating the DMCA in a Web 2.0 World*, 23 BERKELEY TECH. L.J. 437, 438 (2008).

[122] Hillary A. Henderson, *The Evolution of the Digital Millennium Copyright Act: Changing Interpretations of the DMCA and Future Implications for Digital Copyright Holders*, 42 AIPLA Q.J. 245, 255 (2014); Sag, *supra* note 24, at 511. The business model utilized by websites like YouTube, Facebook, and Instagram is coined "Web 2.0," meaning they are built almost entirely on content produced and uploaded by users. Brown, *supra* note 121, at 437.

[123] Sag, *supra* note 24, at 512.

[124] Edward Lee, *Decoding the DMCA Safe Harbors*, 32 COLUM. J.L. & ARTS 233, 234 (2009).

harbor), with special requirements for each.[125] If a website engages in multiple practices, it can qualify for all applicable safe harbors.[126]

The initial requirements of the caching, storage, and search engine safe harbors are the same.[127] The ISP must designate someone to whom copyright claims be addressed on their website and register them with the Copyright Office.[128] The ISP also must adopt, publicize, and reasonably implement both a repeat infringer policy and a notice-and-takedown process.[129] The notice-and-takedown process consists of two parts.[130] The first involves an ISP "expeditiously" either removing or blocking access to the allegedly infringing content upon receipt of a DMCA-compliant notice of infringement.[131] The second phase involves a set of procedures enumerated in the statute that gives users the opportunity to contest the takedown and have their content restored.[132] Should the ISP fail to meet these requirements, they are not automatically liable as a result of their user's copyright infringement because ISPs may still use other copyright defenses such as fair use.[133]

The flexible yet straightforward nature of the DMCA safe harbors provided vital protections to the modern Internet in its rapid growth period in the 1990s, and they have since propelled the explosion of social networking sites

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[125] 17 U.S.C. § 512(a)–(d); Lee, *supra* note 124, at 235. The fifth safe harbor provides a limitation on liability for higher education institutions, so it is not relevant for ISPs. 17 U.S.C. § 512(e).

[126] 17 U.S.C. § 512(n); Lee, *supra* note 124, at 235.

[127] 17 U.S.C. § 512(b)–(d). The transmission safe harbor requires that the user initiate and select the transmitted material and the ISP must not modify the content. *Id.* § 512(a). The caching safe harbor additionally requires that the material be stored through an automated process as well as made available and transmitted by someone other than the ISP. *Id.* § 512(b). The storage and search engine safe harbors additionally require that the ISP not receive a financial benefit from the infringement when it has the ability to control the user's activity in addition to having a lack of knowledge or awareness of the infringement or red flags. *Id.* § 512(c), (d).

[128] *Id.* § 512(c)(2).

[129] *Id.* § 512(c)(1)(C), (i)(1)(A). A repeat infringer policy must provide for termination of users that perpetrate copyright infringement more than once. *Id.* § 512(i)(1)(A).

[130] *Id.* § 512(c).

[131] *Id.* Some criticize this phase as an encroachment of First Amendment rights because the ISP must immediately take down the content without investigating the accuracy of the infringement claim in order to maintain safe harbor protection. Henderson, *supra* note 122, at 257–58; David Kravets, *10 Years Later, Misunderstood DMCA Is the Law That Saved the Web*, WIRED (Oct. 27, 2008), https://www.wired.com/2008/10/ten-years-later/ [https://perma.cc/859F-4TCY]. In 2008, a high profile takedown involved then-presidential candidate John McCain, whose team complained after the removal of some of his campaign videos using old news clips from YouTube. Kravets, *supra*. In a written response to Senator McCain, YouTube attorney Zahavah Levine explained, "[w]ithout this safe harbor, sites like YouTube could not exist," adding, "[w]e hope that as a content uploader, you have gained a sense of some of the challenges we face every day in operating YouTube." *Id.*

[132] 17 U.S.C. § 512(g).

[133] Henderson, *supra* note 122, at 257.

that would have otherwise been crushed under the weight of copyright litigation.[134]

II. REGULATION D AND DMCA SAFE HARBORS: CONTROVERSIAL THOUGH ULTIMATELY PRO-COMPETITIVE

Any regulation of cryptocurrencies is unlikely to achieve universal support as the controversy surrounding Regulation D and the DMCA safe harbors proves.[135] Despite receiving criticism, however, both of these regulations represent successfully pro-competitive regulatory regimes of emerging areas that can be analogized to the growing cryptocurrency industry.[136] Section A of this Part reviews the controversy surrounding the Regulation D clash with blue sky laws and subsequent allowance of general advertising and solicitation.[137] Section B of this Part provides an explanation of the support and criticism over the intentional vagueness in the drafting of the DMCA safe harbors.[138] Section C of this Part explores the current arguments for and against cryptocurrency regulation.[139]

A. Regulation D: Blue Sky Laws and General Solicitation Issues

Supporters lauded—and critics harangued—Regulation D both before and after its inclusion in the amendments to the 2012 JOBS Act.[140] Ultimately, the changes to the exemption addressed perceived shortcomings in the law, further contributing to the pro-competitive impact that the regulation had on the venture capital industry.[141]

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[134] Sag, *supra* note 24, at 504–05; *see* Kravets, *supra* note 131 ("If you're wondering whom to thank for the Web 2.0 explosion in interactive websites, consider sending a bouquet to Congress.").

[135] *See* Cohn & Yadley, *supra* note 90, at 4 (critiquing Regulation D for its lack of attention to the plight of small businesses raising capital); Lee, *supra* note 124, at 262 (critiquing the DMCA safe harbors for potentially offering a misleading promise of legal immunity to ISPs); Thompson & Langevoort, *supra* note 39, at 1619 (expressing understanding regarding the removal of a ban on general advertising in Regulation D but suggesting other changes).

[136] *See* Alexis A. Geeza, Comment, *Put Your Money Where Your Mind Is: Protecting the Markets in the Age of Post-JOBS Act Rule 506 Offerings*, 45 SETON HALL L. REV. 581, 587 (2015) (noting that allowing general solicitation and advertising has the pro-competitive impact of encouraging securities issuers to compete for potential investors); Kravets, *supra* note 131 (attributing the explosion of the modern Internet to the passage of the DMCA).

[137] *See infra* notes 140–163 and accompanying text.

[138] *See infra* notes 164–180 and accompanying text.

[139] *See infra* notes 181–189 and accompanying text.

[140] *See* Cohn & Yadley, *supra* note 90, at 4 (critiquing the SEC's lack of attention towards the trials of small businesses in raising capital); Thompson & Langevoort, *supra* note 39, at 1619 (expressing sympathy for the logic of removing a ban on general advertising but positing different changes that Congress should make to the regulation); Manning Gilbert Warren III, *The False Promise of Publicly Offered Private Placements*, 68 SMU L. REV. 899, 911 (2015) (arguing that the new Rule 506(c) exemption did not significantly change the way that capital is raised).

[141] *See* KEVIN A. HASSETT & ROBERT J. SHAPIRO, REGULATION AND INVESTMENT: A NOTE ON POLICY EVALUATION UNDER UNCERTAINTY, WITH AN APPLICATION TO FCC TITLE II REGULATION OF

Even before the 2012 JOBS Act, regulators revised Regulation D to deal with perceived challenges to capital raising from state blue sky laws with NSMIA in 1996.[142] The passage of NSMIA eliminated the cumbersome state registration requirements for thousands of issuers, contributing to the increased flow of investment over the past twenty years.[143] Critics still lament the lack of coordination between federal and state authorities and its harmful effects on small business growth, similar to the criticism that has been mounted against the disjointed state and federal cryptocurrency regulations.[144] Others argue that the Rule 506 exemption from state blue sky laws does not go far enough because the other exemptions are still subject to blue sky law registration provisions, which limit the ability of small businesses to raise capital.[145] The iterative passage of NSMIA, however, undoubtedly increased the overall efficiency of the regulatory scheme by lowering the transaction costs of raising capital.[146]

One of the most controversial JOBS Act changes to Rule 506 is the allowance of solicitation and advertising under Rule 506(c).[147] Academic and political support for the change was strong because of the seemingly contradictory nature of the rule prior to the change.[148] Because accredited investors are presumed to be sophisticated enough to manage their investments without legislative protection, it seemed to be antithetical for the SEC to prohibit issuers

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THE INTERNET 4 (2015), https://pdfs.semanticscholar.org/f72b/a5de23329f5a81aca04f1d59c41a5494458f.pdf?_ga=2.257317576.257878755.1581987307-1432409253.1581987307 [https://perma.cc/C8WK-V4N7] (describing the process by which regulators propose new rules to solve problems associated with old regulations). In other cases, regulators may propose rules so different from the current rule that opponents lack any evidence to cite in order to oppose the change. *Id.*

[142] Pub. L. No. 104-290, 110 Stat. 3416 (1996); Sjostrom, *supra* note 96, at 1152.

[143] *See* Rutheford B. Campbell, Jr., *The Role of Blue Sky Laws After NSMIA and the JOBS Act*, 66 DUKE L.J. 605, 620 (2016) (discussing the importance of the National Securities Markets Improvement Act of 1996 (NSMIA) and its preemptive effects on state authority over Regulation D offerings).

[144] *See, e.g.*, Cohn & Yadley, *supra* note 90, at 13; Alkadri, *supra* note 70, at 89 (arguing that both cryptocurrency businesses and federal regulators are impacted by the disparities in state regulations). When a company is considering where to conduct the capital-raising process, the necessity of investigating state qualifications adds time and costs that may outweigh the benefits of conducting a small private offering in that state. Cohn & Yadley, *supra* note 90, at 13. Regulators have also expressed concern that the patchwork of overlapping state regulations contributes to a lack of transparency and may negatively affect consumer protection. Alkadri, *supra* note 70, at 89.

[145] Rutheford B. Campbell, Jr., *The Wreck of Regulation D: The Unintended (and Bad) Outcomes for the SEC's Crown Jewel Exemptions*, 66 BUS. LAW. 919, 933 (2011).

[146] Campbell, *supra* note 143, at 628.

[147] *See* 17 C.F.R § 230.502(c) (2017) (allowing general solicitation and advertising in § 230.506(c)); Cohn & Yadley, *supra* note 90, at 36 (arguing that the greatest detriment to capital raising by small companies was the ban on general solicitation and advertising). Due to the change in the Rule 506(c) exemption, issuers can solicit advertisers and market their securities through many different media including Facebook, billboards, television ads, radio, or solicitation letters. Campbell, *supra* note 98, at 30; Warren, *supra* note 140, at 900–01.

[148] Thompson & Langevoort, *supra* note 39, at 1615.

from directly seeking these investors through marketing.[149] The SEC's assumption that some non-accredited investors would be vulnerable to fraud as a result of an issuer's publicity campaign seemed overblown, especially in tandem with the requirements for issuers to take reasonable steps to ensure that only accredited investors are part of the offering.[150] Additionally, advancements in modern communications technologies increased awareness about the need for change in securities regulation.[151] Much as regulators struggle to keep up with the rapid advancements in financial technology, securities regulation has been slow to adapt to the innovative ways in which issuers and potential investors now communicate.[152]

Critics of the regulatory change strongly cautioned against allowing general solicitation due to the potential for abuse.[153] In 2011, the SEC, in conjunction with state regulators, filed over three hundred disciplinary actions related to Rule 506 offerings, demonstrating its potential for fraudulent activities even before the allowance of general solicitation.[154] While acknowledging the potential benefit to startups and small businesses seeking funding, detractors argue that it would be naïve to expect fraudulent promoters not to utilize general advertising for harmful purposes, especially with vulnerable groups like wealthy senior citizens who would in fact qualify as accredited investors under the rule.[155] Should Rule 506(c) solicitation and advertising become synony-

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[149] *Id.*; *see* Cohn & Yadley, *supra* note 90, at 42 (asking why an issuer must have a prior relationship with a potential investor if that investor is able to evaluate the investment and has been given sufficient information about it).

[150] Thompson & Langevoort, *supra* note 39, at 1615.

[151] Cohn & Yadley, *supra* note 90, at 6. The Internet now provides potential investors nearly instantaneous, unlimited information regarding investments and gives issuers the ability to communicate their value to many different audiences. *Id.*

[152] TAPSCOTT & TAPSCOTT, *supra* note 1, at 308; Cohn & Yadley, *supra* note 90, at 6.

[153] *See, e.g.*, Public Statement, Comm'r Luis A. Aguilar, Sec. & Exch. Comm'n, *Investor Protection is Needed for True Capital Formation: Views on the JOBS Act* (Mar. 16, 2012), https://www.sec.gov/news/public-statement/2012-spch031612laahtm [https://perma.cc/X7WY-HB2E] (stating concern that the provision "would be a boon to boiler room operators, Ponzi schemers, bucket shops, and garden variety fraudsters, by enabling them to cast a wider net, and making securities law enforcement much more difficult").

[154] *See* Luis A. Aguilar, Comm'r, Sec. & Exch. Comm'n, Address at the North American Securities Administrators Association, Annual NASSA/SEC 19(d) Conference, Washington, D.C.: Outmanned and Outgunned: Fighting on Behalf of Investors Despite Efforts to Weaken Investor Protections (Apr. 16, 2013), https://www.sec.gov/news/speech/2013-spch041613laahtm [https://perma.cc/WW7M-SL4G] (discussing the concern that the potential allowance of general solicitation would subject potential investors to a higher risk of fraud than the existing rule).

[155] *See* Dravis, *supra* note 24, at 307 (positing that it would be naïve to expect fraudsters not to "fish in the broader pond of potential victims"); Geeza, *supra* note 136, at 599 (calling out wealthy senior citizens as a representative group of people that may be considered accredited investors under the statute but are not necessarily sophisticated in their investment strategies).

mous with fraud, it could have the detrimental effect of discouraging investment in startups and small businesses.[156]

In reality, the changes to Rule 506(c) did not dramatically change the methods that issuers use to raise capital.[157] The great majority of issuers still choose to use the Rule 506(b) filing.[158] Among other reasons for this, startup founders or small business owners already have adequate capital available to them without general solicitation and lawyers are more familiar with Rule 506(b).[159] Former SEC Chairman Mary Jo White admitted in 2016 that the agency had not observed any prevalent fraud in the market as many had warned would occur.[160] Overall, the amendment resulted in even more choices for potential issuers and likely improved the public understanding of private placement investment options.[161] Additionally, more frequent and public solicitations in the marketplace as a result of the regulatory amendment serve to increase competition between emerging companies by forcing them to develop new strategies to attract investors.[162] Regulators ultimately recognized the detrimental effects of both overlapping blue sky laws and the ban on general solicitation—successfully amending Regulation D over time to meet modern needs.[163]

B. Ambiguity in the DMCA Safe Harbors

Because Congress intentionally drafted the DMCA safe harbors to be flexible in nature, they have engendered a fair amount of litigation.[164] Despite

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[156] Dravis, *supra* note 24, at 307.

[157] Warren, *supra* note 140, at 902–03.

[158] *Id.* During the first eighteen months of the new exemption, Rule 506(c) accounted for only 7.71% of filings under Rule 506. *Id.* at 903.

[159] *Id.* at 905–06. Other relevant factors include a hesitancy to allow accredited strangers to invest rather than known parties, uncertainties regarding the requirement to verify third parties, and a desire to circumvent the increased regulatory scrutiny that the SEC promised to adhere to with Rule 506(c) offerings. *Id.* at 906.

[160] *See* Melanie Waddell, *SEC Has 'Open Investigations' of Private Offerings to Accredited Investors*, THINKADVISOR (Feb. 10, 2016), https://www.thinkadvisor.com/2016/02/10/sec-has-open-investigations-of-private-offerings-t/ [https://perma.cc/6KXC-BJLK] (quoting Chairman White addressing the general solicitation allowance and stating that any market will perpetuate some sort of fraud, but there is no evidence of pervasive fraud in the securities market).

[161] *See* Geeza, *supra* note 136, at 587–88 (describing the justifications for removing the ban on general advertising and solicitation). With the increased prevalence of commercials and media advertising securities offerings, it is likely that more people will consider private placements as a viable financial strategy. *Id.*

[162] *Id.* at 587.

[163] Pub. L. No 104-290, 110 Stat. 3416 (1996); 17 C.F.R § 230.506(c) (2013); *see* Campbell, *supra* note 143, at 620 (discussing the value of the passage of NSMIA for preempting state blue sky laws); Geeza, *supra* note 136, at 588 (discussing the modern reality that marketing is a key business necessity that justifies the allowance of general advertising and solicitation).

[164] *See* Maria A. Pallante, *The Next Great Copyright Act*, 36 COLUM. J.L. & ARTS 315, 329 (2013) (elucidating the various lawsuits that the DMCA spurred, including those regarding the eligibility of certain companies for safe harbor protections); *see also* S. REP. NO. 105-190, at 2 (1998) (noting that

the consequential efforts by courts to drill down the standards over the past twenty years, statutory vagueness allows the safe harbors to remain applicable in a radically different technological era.[165]

Critics of the statutory vagueness argue that, instead of promoting the development of innovative technology, disputes over the language have clogged federal courts with expensive litigation and made the safe harbors less clear.[166] This is directly contrary to the original goal of safe harbor provisions, which was to provide "greater certainty" to ISPs.[167] At best, critics argue, an ambiguous safe harbor is not useful because it provides no guidance for liability avoidance and, at worst, it can act as a false promise of immunity.[168]

For example, courts dispute the degree to which an ISP must have knowledge of infringement before it loses safe harbor protection.[169] The two most influential federal circuit courts in the technology sphere, the Second and Ninth Circuit Courts of Appeals, differ on the issue, with the Ninth Circuit giving broad protection to ISPs and the Second Circuit narrowing the circumstances under which the safe harbor applies.[170] Unsurprisingly, ISPs and copy-

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the DMCA was enacted purposefully so that "the efficiency of the Internet will continue to improve and that the variety and quality of services on the Internet will expand"); Blevins, *supra* note 118, at 1879 (noting that the DMCA is "not a model of textual clarity").

[165] Emilio Nicolas & Jackson Walker, *So Far, So Good? The DMCA Safe Harbors at Twenty*, JD SUPRA (Sept. 27, 2018), https://www.jdsupra.com/legalnews/so-far-so-good-the-dmca-safe-harbors-at-61844/ [https://perma.cc/W5DG-B4AX]; *see* Sag, *supra* note 24, at 506 (noting the technological advancement since 1998, supported by the fact that only 41% of households in the United States had an Internet connection at the time of the DMCA passage).

[166] Jessica Di Palma, Note, *The Digital Millennium Copyright Act and the Clash Between Authors and Innovators: The Need for a Legislative Amendment to the Safe Harbor Provisions*, 47 LOY. L.A. L. REV. 797, 823 (2014); *see* Mark A. Lemley, *Rationalizing Internet Safe Harbors*, 6 J. TELECOMM. & HIGH TECH. L. 101, 102 (2007) (calling the safe harbors "a confusing and illogical patchwork").

[167] Blevins, *supra* note 118, at 1879; *see* S. REP. NO. 105-190, at 20 (1998) (stating that the safe harbors provide service providers assurance regarding the potential legal ramifications of infringement perpetuated on their platforms).

[168] Lee, *supra* note 124, at 262. When businesses invest resources in developing a business model based on the assumption of immunity, it can be disastrous when that assumption turns out to be false. *Id.*

[169] *See* Susanna Monseau, *Fostering Web 2.0 Innovation: The Role of the Judicial Interpretation of the DMCA Safe Harbor, Secondary Liability, and Fair Use*, 12 J. MARSHALL REV. INTELL. PROP. L. 70, 85 (2012) (stating that it is unclear to ISPs what kind of knowledge and type of activity would strip them of safe harbor protection). The so-called "red-flag theory" has been advanced by copyright holders arguing that ISPs have sufficient awareness of infringement when there has been other infringing activity on their platforms. Lee, *supra* note 124, at 251.

[170] *See* Di Palma, *supra* note 166, at 813–22 (detailing the diverging opinions regarding the safe harbor provisions in the Second Circuit and Ninth Circuit). *Compare* UMG Recordings, Inc. v. Shelter Capital Partners LLC, 718 F.3d 1006, 1022–23 (9th Cir. 2013) (holding that simply hosting copyrightable content, understanding that their platforms could be hosting infringing material, and failing to locate infringing materials that they are unaware of will not cause ISPs to lose safe harbor protection), *with* Viacom Int'l, Inc. v. YouTube, Inc., 676 F.3d 19, 32 (2d. Cir. 2012) (holding that ISPs are disqualified from the safe harbor protection if they have actual knowledge of circumstances that indicate infringement).

right owners also hold different views about court interpretation of the stat-
utes.[171] ISPs prefer interpretations that create bright-line rules to reduce com-
pliance costs and increase predictability, whereas copyright owners prefer un-
specific, fact-intensive interpretations that broaden the doctrine and increase
their chances of a win in court proceedings.[172] Either way, the multitude of
court decisions and various factors added upon each iteration have complicated
the issue and made the safe harbor protections less predictable and more ex-
pensive to litigate.[173]

Still other critics argue that the statute was not drafted to keep apace with
future technological change.[174] The DMCA was passed before social network-
ing sites became a daily part of life, so the intricacies of that business model
are not reflected in the text.[175] They argue that, contrary to the DMCA's goal
of flexibility, as new technologies and business models emerge, the enumerat-
ed safe harbor categories of the DMCA may become obsolete.[176] This trend
would echo the many securities regulations that struggle to adapt to the use of
rapid communications technologies by investors and cryptocurrency develop-
ing faster than regulators can pass laws.[177]

Congress intentionally drafted the statute to allow courts to shape it in
tandem with the Internet's own development, which is the reason that the safe
harbors have remained so vitally important to the success of companies like
Google, which was founded shortly before passage of the DMCA.[178] With ap-

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[171] Blevins, *supra* note 118, at 1824–25.

[172] *Id.* The uncertain statutes serve to benefit copyright owners alleging infringement because they
often generate fact-intensive questions, pushing ISPs to settle quickly to avoid the costs of litigation.
Id. at 1829–30. Copyright violations are also known for high and unpredictable monetary damages,
running up to $150,000 per infringement, that help explain ISP skittishness about potential litigation.
Id. at 1832.

[173] Eric Goldman, *Viacom Loses Again*—Viacom v. YouTube, Tech. & Mktg. L. Blog (Apr. 19,
2013), https://blog.ericgoldman.org/archives/2013/04/viacom_loses_ag.htm [https://perma.cc/7QV5-
4K4E] (using *Viacom* as an illustrative example of a lawsuit that has added additional unnecessary
layers of common law interpretation to the safe harbors, thereby creating uncertainty and added ex-
penses for all future suits).

[174] *See* Lemley, *supra* note 166, at 113 (arguing that the safe harbors became obsolete with the
rise of peer-to-peer networking and will continue to lose relevance as other new technologies are de-
veloped).

[175] Monseau, *supra* note 169, at 84. Napster, the earliest known file-sharing website, was invented
seven months post-DMCA enactment. *Id.*

[176] *Id.* at 75.

[177] Cohn & Yadley, *supra* note 90, at 6; *see* Tapscott & Tapscott, *supra* note 1, at 308 (argu-
ing that technologically disruptive innovations like cryptocurrency are moving so quickly that it is
often difficult for government institutions to fully comprehend or regulate them). There seems to be a
consensus among the general public and legal commentators that intellectual property law specifically
has struggled to adapt in the face of new technology. Monseau, *supra* note 169, at 75.

[178] Brown, *supra* note 121, at 444; *see* H.R. Rep. No. 105-551, at 61 (1998) (explaining that Con-
gress "believes that technology is likely to be the solution to many of the issues facing copyright own-
ers and service providers in this digital age"); Sag, *supra* note 24, at 506 (noting the founding of
Google on September 4, 1998, which was two months before the passage of the DMCA).

propriate judicial tailoring, the safe harbors have evolved to meet new techno-logical needs and remain relevant in modern cases.[179] As with Regulation D, twenty years of use in the field has exposed aspects of the statute that could be adapted and improved upon, but it is up to Congress to either amend the statute or continue to leave its interpretation to divided courts.[180]

C. Cryptocurrencies: Regulate Them, Let Them Be, or Somewhere in Between?

Reactions among scholars and commentators regarding cryptocurrency regulations range from urging caution to encouraging immediate regulatory guidance.[181] Some warn that quickly introducing regulations without a com-prehensive understanding of cryptocurrency, its implications, and its potential evolution would harm the development of the industry, and recommend pass-ing legislation with great precaution.[182] In the same vein, criticism surrounds the existing patchwork of state cryptocurrency guidance.[183] Similar to issues with state blue sky laws and Regulation D, the mess of state regulations nega-tively affects both innovators and federal regulators.[184] Regulation passed too early in the development of a fledgling industry can stunt innovation or cause innovators to move to illegitimate channels to avoid oversight, which reduces

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[179] Henderson, *supra* note 122, at 247.

[180] Nicolas & Walker, *supra* note 165.

[181] *Compare* TAPSCOTT & TAPSCOTT, *supra* note 1, at 264 (encouraging a balanced approach to cryptocurrency regulation), *with* Chuang, *supra* note 64 (quoting an investor who believes, "[i]t's better to have clear guidelines, even if they are bad guidelines because entrepreneurs can understand that better than the current environment of ambiguity").

[182] *See* TAPSCOTT & TAPSCOTT, *supra* note 1, at 263 (arguing that if regulators do not understand a technology or its implications, they will fail at regulating effectively); Goforth, *supra* note 16, at 107 (noting that CFTC and SEC regulators have cautioned Congress about the necessity of balancing flourishing innovation and legitimate regulatory needs); Primavera de Filippi, *We Must Regulate Bitcoin. Problem Is, We Don't Understand It*, WIRED (Mar. 1, 2016), https://www.wired.com/2016/03/must-understand-bitcoin-regulate/ [https://perma.cc/2TCY-88MV] (advocating for cryptocurrency regulation to be "elaborated carefully and in a well-informed manner" so as not to prematurely stifle future technological growth).

[183] *See* Cohn & Yadley, *supra* note 90, at 13 (criticizing the uncertainty and costliness of review-ing state law in the capital-raising process); Alkadri, *supra* note 70, at 89 (arguing that the inconsistent state regulations negatively affect cryptocurrency businesses, federal regulators, and consumers); Stankovic, *supra* note 27 (calling out legislative uncertainty, partly as a result of divergent state ap-proaches to cryptocurrency, as an important risk factor in the cryptocurrency industry).

[184] *See* Cohn & Yadley, *supra* note 90, at 13 (arguing that the need to abide by state laws adds unnecessary time and cost to capital-raising and may deter prospective securities issuers altogether); Alkadri, *supra* note 70, at 89 (stating that federal regulators are concerned that inconsistent state regu-lations create barriers to consumer transparency and protections); Stankovic, *supra* note 27 (calling out issues with the legislative uncertainty created by dissimilar cryptocurrency regulations). States have been criticized for the reactive nature of their regulatory schemes, implemented in response to arbitrary news crises rather than in pursuit of long-term goals. Hughes & Middlebrook, *supra* note 53, at 498–99.

competitiveness—and subsequent technological development—within the legitimate industry.[185]

A suggested middle-ground approach welcomes cryptocurrency and works with innovators to devise uniform regulations that satisfy all parties.[186] One commentator argues that cryptocurrencies will not be able to reach their full potential or be considered mainstream until they are regulated by law.[187] Cryptocurrency entrepreneurs and investors have also continuously warned that the lack of regulation in the United States is causing capital to be sent overseas where regulatory certainty is greater.[188] Members of Congress have echoed this sentiment by asking the SEC to clarify its position on the status of various digital tokens as securities for fear that cryptocurrency entrepreneurs may be heading overseas.[189]

III. Cryptocurrency Regulations: Precarious but Necessary

The lack of clear cryptocurrency regulatory guidance is harmful to both innovators and investors.[190] Furthermore, cryptocurrency needs a stable regulatory environment to become a viable new technology.[191] The successes and

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[185] Hughes & Middlebrook, *supra* note 53, at 499–500; *see* Tim Worstall, *It Could Be the Bureaucrats That Kill Bitcoin*, Forbes (May 16, 2013), https://www.forbes.com/sites/timworstall/2013/05/16/it-could-be-the-bureaucrats-that-kill-bitcoin/#681e42497002 [https://perma.cc/SZ59-9MSX] (arguing that, because of Bitcoin's recent popularity, regulatory requirements that are a function of the global financial system will "strangle" its growth prematurely).

[186] *See* Tapscott & Tapscott, *supra* note 1, at 292 (praising the Canadian Senate Report that incorporated suggestions from a variety of blockchain stakeholders and suggested that governments should welcome cryptocurrency); Jon Martindale, *Go Ahead, Pass Laws. They Can't Kill Bitcoin, Even if They Try*, Dig. Trends (Dec. 19, 2017), https://www.digitaltrends.com/computing/dont-worry-about-bitcoin-regulation-it-cant-be-stopped/ [https://perma.cc/PK3J-JX5J] ("Ultimately, the best response to bitcoin is not to limit it, but to embrace the technology and try and work with it.").

[187] de Filippi, *supra* note 54, at 9–10. de Filippi argues that cryptocurrency has already proven itself sustainable and economically viable, so its survival will depend on its ability to operate in a regulated system and gain public trust. *Id.* at 5, 10. Hughes and Middlebrook similarly argue that regulation can signal legitimacy to financial heavyweights, like banks and investors, with the capacity to raise capital and push products to the market. Hughes & Middlebrook, *supra* note 53, at 499.

[188] *See* Jon Russell, *The US Is Losing Out to the Rest of the World on Blockchain, Warn Crypto Figures*, TechCrunch (Sept. 5, 2018), https://techcrunch.com/2018/09/05/the-us-is-losing-out-to-the-rest-of-the-world-on-blockchain-warn-major-crypto-figures/ [https://perma.cc/3EUB-44LW] (quoting two cryptocurrency entrepreneurs that over 80% of their investments in token and blockchain companies are overseas because entrepreneurs feel more secure in starting cryptocurrency companies outside of the United States).

[189] Kate Rooney, *Congress Members Ask SEC Chairman for Clarity on Cryptocurrency Regulation*, CNBC (Sept. 28, 2018), https://www.cnbc.com/2018/09/28/congress-ask-sec-chairman-for-clarity-on-cryptocurrency-regulation.html [https://perma.cc/42AY-Z3ZK].

[190] Brennan et al., *supra* note 19, at 14 (stating that the excitement over cryptocurrency and the concurrent lack of a clear regulatory scheme may cause investors to lose sight of reality and developers to behave recklessly).

[191] *See* Sonderegger, *supra* note 11, at 216 (arguing that the success of cryptocurrency depends on proper regulation that does not stifle entrepreneurship); Obie & Rasmussen, *supra* note 19 (stating that

criticisms of Regulation D and the DMCA safe harbor provisions illustrate the type of regulation that the industry needs: clear and definitive, but flexible and iterative.[192]

Section A of this Part posits that the regulatory agencies must work together to achieve a uniform cryptocurrency regulatory scheme and must exercise caution in enacting regulations.[193] Section B of this Part argues that the iterative process surrounding the passage of Regulation D and its subsequent amendments serves as a model for future cryptocurrency regulations.[194] Section C of this Part argues that the vagueness of the DMCA safe harbors offers a good example of successful regulatory drafting for cryptocurrency.[195]

A. General Approach: Determining the Lead Regulator and Exercising Caution

The current overlapping system of federal regulations is confusing and precarious for cryptocurrency entrepreneurs and investors alike.[196] Before it can be determined *how* to regulate cryptocurrency, it must be determined *who* should regulate it.[197] Whether cryptocurrency is a security, a currency, a property, or a commodity must be clarified at a federal level as the first step in determining regulatory authority and removing barriers to entry for entrepreneurs.[198] Congress seems to think the SEC should lead the charge, but regardless of which agency prevails, there must be a general federal consensus that one regulatory agency will implement and enforce a uniform scheme of cryptocurrency regulations.[199]

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the lack of a single regulatory agency with authority to oversee cryptocurrency is causing confusion and uncertainty).

[192] *See* Thompson & Langevoort, *supra* note 39, at 1615 (praising the elimination of Regulation D's ban on general solicitation that resulted from a long-fought popular campaign); Di Palma, *supra* note 166, at 823 (arguing that the vagueness of the DMCA safe harbors has only created confusion for ISPs and copyright owners).

[193] *See infra* notes 196–204 and accompanying text.

[194] *See infra* notes 205–214 and accompanying text.

[195] *See infra* notes 215–225 and accompanying text.

[196] *See* Goforth, *supra* note 16, at 103 (describing the overlapping and confusing collection of regulations surrounding cryptocurrency); Obie & Rasmussen, *supra* note 19 (arguing that entrepreneurs refrain from innovating for fear of accidentally breaking the law and investors refrain from investing due to uncertainty in the cryptocurrency industry).

[197] *See* Stankovic, *supra* note 27 (describing the divergent approaches to cryptocurrency among states and various regulatory agencies). Regulatory uncertainty has been called out as the most important risk factor in the cryptocurrency industry. *Id.*

[198] *See* Goforth, *supra* note 16, at 103 (stating that cryptocurrency is defined as a currency, commodity, security, or property depending on the agency); Obie & Rasmussen, *supra* note 19 (arguing that overlapping regulations from federal agencies makes cryptocurrency innovation expensive).

[199] *See* Obie & Rasmussen, *supra* note 19 (making suggestions for the SEC to clarify cryptocurrency regulations and noting that the overlapping federal agency regulations are harmful to innovation); Rooney, *supra* note 83 (elaborating on the SEC's current position on cryptocurrency); Rooney,

Regulators must exercise caution because, although regulations are necessary, they could be anti-competitive if executed incorrectly.[200] An excessive regime of cryptocurrency regulations stunt innovation, economic efficiency, and investment; moreover, it could endanger the effectiveness of the rule of law.[201] For many innovators, the simple threat of regulatory scrutiny over their activities, and in turn potential penalties, is enough for them to pause or terminate their work or refuse to enter the market altogether.[202] Cryptocurrency offers a break-through alternative to traditional banking because it allows individuals to transfer digital property in a frictionless, instant, and secure way.[203] Because of the countless societal benefits that these types of secure transfers offer, the government must regulate carefully to avoid deterring entrepreneurs from entering the space.[204]

B. Regulation D: A Model for an Iterative Process and State Blue Sky Law Issues

Although Regulation D has its fair share of critics, it represents a positive example of regulators iterating laws over time to adjust to modern technological advancements.[205] As modern communications technologies made it easier for issuers to contact potential investors, regulators adjusted Rule 506(c) to allow general solicitation and advertising.[206] This sort of iterative feature will likely be necessary in any cryptocurrency regulation given the speed at which the technology is evolving.[207]

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supra note 189 (summarizing a letter sent by members of Congress to the SEC urging the agency to clarify cryptocurrency regulations).

[200] OECD REPORT, *supra* note 12, at 14.

[201] *See id.* (stating that unnecessary and cumbersome regulations can be harmful to economic growth and challenge the positive justifications of a regulatory scheme).

[202] Torrance & von Hippel, *supra* note 13, at 798. An enforcement action for a small startup or business could be financially devastating, especially when compared to the seemingly unlimited monetary and administrative resources of government agencies. *Id.*

[203] *See* TAPSCOTT & TAPSCOTT, *supra* note 1, at 6 (describing the benefits of cryptocurrency, including its distributed, encrypted, and public nature); Andreessen, *supra* note 1 (extolling the virtues of Bitcoin as a computer science breakthrough).

[204] TAPSCOTT & TAPSCOTT, *supra* note 1, at 264; *see* Andreessen, *supra* note 1 (claiming that the benefits of the creation of cryptocurrency are hard to overstate).

[205] *See, e.g.*, Cohn & Yadley, *supra* note 90, at 6–7 (criticizing the Regulation D exemption updates for only benefitting large companies and failing to fully address technological advancements); *see* HASSETT & SHAPIRO, *supra* note 141, at 4 (attributing regulatory discrepancies to attempts by regulators to draft new laws that neutralize unpopular regulations of the past).

[206] *See* Cohn & Yadley, *supra* note 90, at 6 (describing the modern technological advancements that increased the amount of information available to issuers and speed with which it can be communicated to investors).

[207] *See* HASSETT & SHAPIRO, *supra* note 141, at 4 (describing the effect of regulators identifying harmful or unpopular regulations and proposing new laws to address the issues); Emerging Tech. from the arXiv, *supra* note 52 (stating that the market for cryptocurrency is in a period of aggressive growth). Some argue that the cryptocurrency craze is analogous to the dot-com bubble due to the rapid

Much as Regulation D was adjusted to meet modern needs, regulators must be vigilant and continue to educate themselves about the advancements in the cryptocurrency industry so that regulations continue to be applicable and relevant.[208] Existing regulations used to monitor the financial and investment industry are ill-suited for cryptocurrency, so an adaptable process will be necessary to allow regulators to regularly assess the suitability of the regulatory framework as new technologies evolve.[209] Involving collaborative representatives from the cryptocurrency community in this process is the best course of action to create favorable regulations for all parties involved.[210]

The passage of NSMIA to preempt state blue sky laws clashing with Regulation D serves as a pertinent example of regulators revising laws over time to address problems as they arise.[211] Regulators recognized the burdensome effect of overlapping state blue sky laws on entrepreneurs, and federal preemption provided a beneficial solution.[212] The cryptocurrency sphere is similarly suffering from a lack of coordination between states and the federal government; it could greatly benefit from federal preemption.[213] Cryptocurrency companies are intrinsically Internet-based endeavors, and the financial burden of obtaining operating licenses and maintaining compliance on a state-by-state basis is not necessarily feasible.[214]

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growth of both industries and similar sky-high valuations. Bryanov, *supra* note 41. A much broader range of actors, however, constitute cryptocurrency investors than were involved in the dot-com venture capital craze. *Id.* These actors are also considerably more well-informed about market conditions due to technological advancements that increase the transparency of the information market surrounding cryptocurrency. *Id.*

[208] *See* Brennan et al., *supra* note 19, at 14 (extolling the benefits of continued education about cryptocurrency regulations).

[209] *See* CANADIAN SENATE REPORT, *supra* note 53, at 17 (providing a positive example of regulatory awareness by stating the Committee's intention to revisit cryptocurrencies in a few years to learn more about the advancements in the technology and make new recommendations based on those findings); Tu & Meredith, *supra* note 1, at 274–75 (describing the difficulties encountered in trying to fit cryptocurrency into existing regulatory schemes). The regulatory framework for financial services in almost every country was not built in anticipation of cryptocurrencies. Andreessen, *supra* note 1. Cryptocurrencies have a risk profile, due to their virtual nature, that does not match the risk profile of traditional financial institutions or the regulations that surround them. Tu & Meredith, *supra* note 1, at 274–75.

[210] *See* TAPSCOTT & TAPSCOTT, *supra* note 1, at 297 (advocating for the government to regulate cautiously and collaboratively in a process involving multiple stakeholders); Obie & Rasmussen, *supra* note 19 (suggesting that the SEC create a working group with multiple regulatory agencies and cryptocurrency community representatives to help clarify and formalize cryptocurrency regulations).

[211] Pub. L. No. 104-290, 110 Stat. 3416 (1996).

[212] *See* Cohn & Yadley, *supra* note 90, at 13 (describing the ways in which state blue sky laws impede capital-raising); Sjostrom, *supra* note 96, at 1152 (describing overlapping state blue sky laws as burdensome for potential issuers).

[213] Stankovic, *supra* note 27; *see* Shin, *supra* note 17 (describing the current cryptocurrency regulation as a turf war between the federal government, state governments, and regulatory agencies that is harmful to innovation and growth).

[214] Goforth, *supra* note 16, at 104; Alkadri, *supra* note 70, at 89.

C. DMCA Safe Harbors: Demonstrated Necessity for Clarity and Flexibility

The DMCA safe harbors provide an example of regulations drafted with intentional vagueness to allow them to grow with the technological advancements of their subject matter.[215] Because the safe harbors contain broad language but encompass a specific set of ISP conduct, they have remained applicable to ISPs today even though twenty years have passed since the inception of the DMCA.[216] Any future cryptocurrency regulations must also strike a fine line between ambiguity and specificity.[217] Ambiguity enables regulatory application in many different situations, and specificity renders regulations immediately useful rather than leaving them to the courts for interpretation.[218]

Because of cryptocurrency's ideological underpinnings as a safer, quicker, and cheaper alternative to traditional payments systems, it requires a degree of regulatory independence that will encourage innovation while providing some necessary guidance.[219] The challenge is to transform rules designed for old technology, so that they are familiar enough to be immediately useful but also able to keep up with cryptocurrency as it rapidly evolves.[220] One commentator has even stated that cryptocurrency needs regulations that are similar to the technology itself: "humble, experimental, and iterative."[221]

Regulators must be careful with the degree of ambiguity, however, because a new regulation can be especially harmful if it incentivizes investors to wait to invest due to uncertainty.[222] If a regulation is likely to perpetuate a drawn-out and expensive court battle with no immediately clear outcome, it is likely to temper investor enthusiasm.[223] For example, copyright violations have unpredictable monetary damages—up to $150,000 per infringement—and the DMCA safe harbors have not excelled at reducing this uncertainty for ISPs,

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[215] *See* S. REP. NO. 105-190, at 2 (1998) (noting that the DMCA was enacted purposefully so that the Internet will continue to grow in efficiency and the services offered will grow in both number and quality).

[216] *See* 17 U.S.C. § 512(a)–(d) (2018) (ratification of the DMCA safe harbors); Henderson, *supra* note 122, at 246–47 (describing the DMCA as the bedrock of federal digital copyright law and attributing its modern applicability to built-in ambiguities).

[217] Sonderegger, *supra* note 11, at 216; *see* Brennan et al., *supra* note 19, at 14 (comparing the regulatory uncertainty to a foggy road and advocating for a conservative approach similar to driving cautiously when it is hard to see the road ahead).

[218] *See* Sonderegger, *supra* note 11, at 216 (arguing for vaguely-defined cryptocurrency regulations that allow for self-regulation).

[219] *See id.* (arguing that the disruptive effects of cryptocurrency shake the regulatory foundation that traditional financial systems rely upon); Andreessen, *supra* note 1 (describing Bitcoin as a way to transfer digital property in a safe, secure, public, and legitimate manner).

[220] TAPSCOTT & TAPSCOTT, *supra* note 1, at 264.

[221] *Id.* at 293.

[222] *See* HASSETT & SHAPIRO, *supra* note 141, at 9 (positing that regulation can negatively affect investment activity if its impacts on business are indeterminate).

[223] *Id.*

wasting both judicial time and ISP resources with costly litigation.[224] The meaning of some of the safe harbors are still disputed, so ideally cryptocurrency regulations would be less statutorily vague but still allow for innovation and encourage investment.[225]

<div align="center">CONCLUSION</div>

Since 2009, the popularity of cryptocurrency has grown immensely. As it has moved to the forefront of public awareness, it is unsurprising that regulators desire to regulate it. The current regulatory environment in the United States, however, is characterized by a chaotic puzzle of regulations and definitions from multiple regulatory agencies. Venture capitalists and entrepreneurs alike are hesitant to set up shop in the United States when it comes to cryptocurrency; both companies and capital have flocked to other countries with more stable (and friendly) cryptocurrency regulatory environments. Regulation D and the DMCA safe harbors represent examples of regulations that had a positive impact on their respective industries by providing certainty to innovators and removing market barriers. Regulation D eased the burdens on small emerging companies for raising capital through an iterative process, stimulating the explosion of dot-com companies in the 1990s. With the rapid growth of cryptocurrency, any regulations put into practice should allow for a similar process and regulators must be just as flexible, if not more, in adjusting the regulations over time. Regulators intentionally drafted the DMCA safe harbors vaguely to allow the statute to grow in tandem with the evolution of ISPs and the Internet. Cryptocurrency regulations should be drafted similarly to keep up with virtual currency's rapid evolution. Regulators must strike a fine balance; beneficial cryptocurrency regulations will contain both the ambiguity to be applicable across a variety of situations and the specificity to create clear guidelines and stability for innovators and investors.

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[224] *See* Blevins, *supra* note 118, at 1832 (describing the liability issues with respect to the vague drafting of the safe harbors); Lemley, *supra* note 166, at 102 (describing the inconsistent ways in which safe harbors apply to different claims).

[225] *See* Lee, *supra* note 124, at 234 (summarizing the main aspects of the safe harbors that are in dispute); Monseau, *supra* note 169, at 85 (same). Though the "built-in ambiguities" allow the safe harbors to apply to a variety of cases, they can also result in widely divergent opinions. Henderson, *supra* note 122, at 247. This type of uncertainty is exactly what investors are concerned about. *Id.*