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Crypto Coin Offerings and the Freedom of Expression

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I. INTRODUCTION

Open, peer-to-peer, privacy-enhancing networks of software resources power massive digital economies in the form of crypto coin protocols and their users. A coin is an item that operates as a medium of exchange, or a currency, and therefore deserves to be exempt from regulation as a security or commodity in the view of many sellers of digital tokens.¹ The Telegram Group, led by the founder of social media giant VKontakte, attempted to build such a token, the Gram coin and the TON Blockchain, promising “a decentralized platform for everyone.”² Initially planned as a public offering like Ether, Ripple, TRON, and other popular tokens, Telegram transitioned Gram into a private offering restricted to accredited wealthy investors, purported to restrict the resale of Grams, disclaimed any obligation to govern or maintain the coin or the TON Blockchain or to create any applications for it, and stated that the TON Foundation would not vote Grams it retained.³ Even so, the Securities and Exchange Commission (SEC) enjoined any offer to sell Grams not registered as securities.⁴

¹ See, e.g., Defs.’ Br. in Opp. to Pl.’s Mot. for a Prelim. Inj. and in Supp. of Defs.’ Mot. for Summ. Judg. at 25–28, *SEC v. Telegram Group Inc.*, No. 19-cv-09439 (S.D.N.Y. brief filed Jan. 15, 2020), <http://bridgingtheweek.com/ckfinder/userfiles/files/Defendants Motion for SJ Telegram.pdf> [<http://perma.cc/8VPP-VNCA>] (arguing that a coin as an item used for exchange is exempt from regulation as a security under 15 U.S.C. § 78c(a)(10) (collecting cases); *CFTC v. McDonnell*, 287 F. Supp. 3d 213, 227–29 (E.D.N.Y. 2018) (discussing, but rejecting, argument that exchanges of cryptocurrencies involve “actual delivery” of a currency or commodity and are exempt under 7 U.S.C. § 2(c)(2)(C)(i)(II)(bb)(AA) from regulation by Commodity Futures Trading Commission) (citing *CFTC v. Gelfman Blueprint, Inc.*, No. 17-7181, 2017 WL 4228737 (S.D.N.Y. filed Sept. 21, 2017)).

² Defs.’ Br. in Opp. to Pl.’s Mot. for a Prelim. Inj. and in Supp. of Defs.’ Mot. for Summ. Judg., *supra* note 1, at 9–10, 17–20, 28.

³ See *id.* at 1, 7–20, 28–29. *But see* *SEC v. Telegram Group Inc.*, 448 F. Supp. 3d 352 (S.D.N.Y. 2020) (finding that Telegram stated that it intended to use investor funds to develop the TON Blockchain, that Grams could be purchased en masse as cryptocurrency and return value to purchasers as a result), *final judgment entered*, (S.D.N.Y. June 26, 2020) (enjoining defendants Telegram Group, Inc. and TON Issuer, Inc. from offering security without an effective registration statement or applicable exception to registration requirement); Complaint at ¶¶ 2, 52, 54, 79, 86, 89, 104, *SEC v. Telegram Group Inc.*, No. 19-cv-9439 (S.D.N.Y. complaint filed Oct. 11, 2019) (alleging that Telegram at least indirectly sold Grams to the public, sold them regardless of whether purchasers would use TON Blockchain, indicated that it would integrate Grams with Telegram Messenger under its control, did not restrict all resales at a profit, and sold more than \$424 million in Grams in the U.S.).

⁴ See *Telegram*, 448 F. Supp. 3d 352. While recognizing the existence of an exemption for private offerings to accredited investors by which Telegram could sell Grams without registering them, the SEC contended that given Telegram’s intention that Grams reach the public to fuel the TON Blockchain, this exemption could not apply, so this exemption could not apply to Grams or seemingly any other cryptocurrency.

The government's pursuit of Kik Interactive for marketing a crypto coin as an unregistered security heightened the tension between permissionless software development and potentially crushing regulation.⁵ While Section 5 of the Securities Act of 1933 (Securities Act) and Section 12(g) of the Securities Exchange Act of 1934 (Exchange Act) require that certain securities and stocks be registered before they are offered to large segments of the public, Kik's coin does not necessarily represent stock in a company but rather a ticket to enter a decentralized ecosystem of digital services.⁶ Kik is a software and social media company.⁷ If it can be prosecuted for offering a cryptocurrency, relics of banks' checkered past will haunt most blockchain enterprises.

See id. at 358–59; Pl.'s Mem. in Supp. of Emerg. Appl. for Order to Show Cause, Temp. Restr. Ord., and Ord. Granting Exped. Discov. and Other Relief, at 23–25, *Telegram* (S.D.N.Y. brief filed Oct. 11, 2019). Some lawyers in this area opine that one of the three main routes to make an ICO, Regulation D, requires issuers to specify that tokens issued under such an exemption cannot be sold for at least a year. *See, e.g.,* Bonnie J. Roe, *Regulation A: A Pathway for the ICO?*, LEXOLOGY (July 26, 2018), <http://www.lexology.com/library/detail.aspx?g=c208268c-bd8a-4b19-8dff-aaa828c99293> [<http://perma.cc/RFG2-WP8G>] (citing Regulation D, 17 C.F.R. § 230.500 *et seq.*); Jennifer A. Connors et al., *Offering Exemptions Available to Companies Issuing ICOs*, LEXOLOGY (May 14, 2018), <http://www.lexology.com/library/detail.aspx?g=bbfe3e00-9cc4-4eb5-9886-08b245062a0f> [<http://perma.cc/7FKF-AH8M>] (citing Rule 506, 17 C.F.R. § 230.506). Regulation A, which does not impose the one-year restriction on issuers or purchasers, requires the issuer to prepare potentially complex equity or debt arrangements in addition to the terms and conditions for the token itself. *See Roe, supra*.

⁵ *See, e.g.,* SEC v. Kik Interactive Inc., No. 19-cv-5244, 2020 WL 5819770 (S.D.N.Y. Sept. 30, 2020) (granting summary judgment to SEC on claim that unregistered offering of blockchain-based digital currency called “Kin,” which could be used to buy and sell copyrightable works among other things, and instructing parties to file proposed injunctive and monetary judgment for plaintiff), *subsequent proceedings* at slip op. (S.D.N.Y. final judgment filed Oct. 21, 2020) (entering consent judgment, from which defendant waived any appeal, enjoining defendant from issuing any security without filing a registration statement, and requiring it to pay a \$5 million civil penalty and to notify SEC of any sale or transfer of three million Kin tokens and any new digital asset or token); Complaint, SEC v. Kik Interactive Inc., No. 19-cv-5244 (S.D.N.Y. complaint filed June 4, 2019), <http://www.courtlistener.com/recap/gov.uscourts.nysd.516941/gov.uscourts.nysd.516941.1.0.pdf> [<http://perma.cc/V479-64XU>]; Br. of Amicus Curiae The Blockchain Association, at 20, SEC v. Telegram Group Inc., No. 19-cv-09439 (2d Cir. brief filed Apr. 3, 2020, refilled May 13, 2020) (arguing that settlements like the one in *Kik Interactive*, along with “limited and opaque statements, speeches, no action letters, [and] closed-door meetings,” are “prejudicing firms trying to comply with the law and depriving the public of any [administrative] notice or comment”); *see also* ADAM THIERER, PERMISSIONLESS INNOVATION: THE CONTINUING CASE FOR COMPREHENSIVE TECHNOLOGICAL FREEDOM 8–13 (2016).

⁶ *See* Defendant's Answer at ¶¶ 77, 112–19, 122, 190, SEC v. Kik Interactive Inc., No. 19-cv-5244 (S.D.N.Y. Aug. 6, 2019), <http://www.courtlistener.com/docket/15722539/22/us-securities-and-exchange-commission-v-kik-interactive-inc/> [<http://perma.cc/YFA6-ZBF9>].

⁷ *See id.* ¶¶ 5, 37.

Federal courts have concluded that cryptocurrencies could fall under the federal securities laws, the commodities laws, or other statutes.⁸ Courts have also found state statutes and

⁸ See, e.g., SEC v. NAC Foundation, LLC, No. 20-cv-04188-RS, 2021 U.S. Dist. LEXIS 4079 (N.D. Cal. Jan. 8, 2021) (claims stated under Securities Act and Exchange Act for fraudulent and unregistered offerings of AML Bitcoin); Zakinov v. Ripple Labs, Inc., No. 18-cv-06753, 2020 U.S. Dist. LEXIS 32982 (N.D. Cal. Feb. 26, 2020) (claim stated under Securities Act for unregistered sale of Ripple token); SEC v. Telegram Group Inc., No. 19-cv-09439 (S.D.N.Y. Oct. 11, 2019) (restraining digital token sale or promotion as unregistered sale of securities); SEC v. Titanium Blockchain Infrastructure Servs., Inc., No. CV18-4315, slip op. at § IV (C.D. Cal. May 30, 2018), *subsequent proceedings at* (C.D. Cal. May 23, 2019) (enjoining blockchain business from, inter alia, violating Section 5 of the Securities Act, 15 U.S.C. § 77e, by directly or indirectly, in the absence of any applicable exemption, selling securities by means of prospectus or otherwise in interstate commerce without a registration statement being in effect with SEC); Solis v. Latium Network, Inc., No. 18-10255, slip op. (D.N.J. Dec. 10, 2018) (claim stated under Securities Act for \$25,000 investment in digital token with limited platform “functionality”); Rensel v. Centra Tech, Inc., No. 17-24500, 2018 U.S. Dist. LEXIS 100720 (S.D. Fla. June 14, 2018) (one plaintiff of two adequately pleaded claim for selling unregistered securities); SEC v. PlexCorps, No. 17 Civ. 7007, 2017 WL 6398722 (E.D.N.Y. Dec. 14, 2017) (finding that likelihood of success existed that SEC would establish that “PlexCoin Tokens” were investment contracts under Securities Act and Exchange Act that should not be sold in interstate commerce without registration statement being in effect with the SEC as to them); CFTC v. McDonnell, 287 F. Supp. 3d 213 (E.D.N.Y. 2018) (declining to dismiss claim that cryptocurrency constituted regulated commodity under Commodities Exchange Act); Audet v. Fraser, No. 16-CV-940, 2017 U.S. Dist. LEXIS 167830 (D. Conn. Oct. 11, 2017) (declining to dismiss claim that cryptocurrency offering violated Securities Act); Press Release, SEC, SEC Halts Alleged \$1.7 Billion Unregistered Digital Token Offering (Oct. 11, 2019), <http://www.sec.gov/news/press-release/2019-212> [<http://perma.cc/FQL7-KL98>] (SEC ordered promoters of Telegram token, the Gram, to halt offering as unregistered offering of securities); No-Action Letter re: Pocketful of Quarters, Inc., SEC, Div. of Corp. Fin. (July 25, 2019), <http://www.sec.gov/corpfin/pocketful-quarters-inc-072519-2a1> [<http://perma.cc/H6ZX-4NJQ>] (suggesting that digital token sale might be a security if proceeds are used “to build the . . . [p]latform,” if the platform is not “fully functional and operational,” or if it is possible to transfer tokens to wallets); Letter from Jay Clayton, SEC Chairman, to the Hon. Ted Budd, U.S. House of Representatives (Mar. 7, 2019), <http://www.coincenter.org/app/uploads/2020/05/clayton-token-response.pdf> [<http://perma.cc/B3PL-27L8>] (Securities Act and Exchange Act may cover ICOs because they “encompass virtually any instrument that *may* be sold as an investment”) (emphasis added); No-Action Letter re: TurnKey Jet, Inc., SEC, Div. of Corp. Fin. (Apr. 3, 2019), <http://www.sec.gov/divisions/corpfin/cf-noaction/2019/turnkey-jet-040219-2a1.htm> [<http://perma.cc/VZX9-WFQR>] (similar to Pocketful of Quarters, *supra*); Press Release, SEC, Two ICO Issuers Settle SEC Registration Charges, Agree to Register Tokens as Securities (Nov. 16, 2018), <http://www.sec.gov/news/press-release/2018-264> [<http://perma.cc/33DY-J6LM>] (Airfox and Paragon agreed to consent orders barring their unregistered token sales, refunding money to previous purchasers, and agreeing to register); Press Release, SEC, SEC Obtains Emergency Order Halting Fraudulent Coin Offering Scheme (May 29, 2018), <http://www.sec.gov/news/press-release/2018-94> [<http://perma.cc/Y7VR-T386>]; Br. of SEC in Supp. of U.S. in Opp. to Def.’s Mot. to Dismiss Indictment at 11–17, United States v. Zaslavskiy, No. 17-CR-0647 (E.D.N.Y. Mar. 19, 2018) (arguing that defendant’s RECoin tokens were securities despite being classified as a cryptocurrency); Public Statement, SEC, Div. of Enft and Trading Mkts., Statement on Potentially Unlawful Online Platforms for Trading Digital Assets (Mar. 7, 2018), <http://www.sec.gov/news/public-statement/enforcement-tm-statement-potentially-unlawful-online-platforms-trading> [<http://perma.cc/9USG-R9RG>]; Press Release, SEC, SEC Suspends Trading in Three Issuers Claiming Involvement in Cryptocurrency and Blockchain Technology (Feb. 16, 2018), <http://www.sec.gov/news/press-release/2018-20> [<http://perma.cc/UZH5-T3M7>]; Public Statement, Jay Clayton, SEC Chairman, Statement on Cryptocurrencies and Initial Coin Offerings (Dec. 11, 2017), <http://www.sec.gov/news/public-statement/statement-clayton-2017-12-11> [<http://perma.cc/X5WZ-LZWA>]; Munchee Inc., No. 10445 (Dec. 11, 2017),

common-law theories applicable to some token-related disputes.⁹ With the SEC and state securities regulators warning that the

<http://www.sec.gov/litigation/admin/2017/33-10445.pdf> [<http://perma.cc/VQB3-WW9Q>] (enforcement action against smartphone app developer who issued tokens to public); Complaint, *Plexcorps*, No. 17-CV-07007 (E.D.N.Y. complaint filed Dec. 1, 2017) (contending that token was a security whose offering should have been registered); SEC Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO, Release No. 81207, 2017 WL 7184670 (July 25, 2017); *Investor Bulletin: Initial Coin Offerings*, SEC (July 25, 2017), http://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_coinofferings [<http://perma.cc/D5X6-BJWM>]; Investor Alert: Public Companies Making ICO-Related Claims, SEC (Aug. 28, 2017), http://www.sec.gov/oiea/investor-alerts-and-bulletins/ia_icorelatedclaims [<http://perma.cc/DM82-LEP2>]; Investor Alert: Bitcoin and Other Virtual Currency-Related Investments, SEC Off. of Inv. Educ. & Advoc. (May 7, 2014), <http://www.investor.gov/additional-resources/news-alerts/alerts-bulletins/investor-alert-bitcoin-other-virtual-currency> [<http://perma.cc/Y8GK-JJMU>] (Bitcoin investment opportunities could be securities); *see also* In the Matter of AWAX Ltd., No. CD-2019-00006 (Feb. 25, 2019), <http://asc.alabama.gov/Orders/2019/CD-2019-0006.pdf> [<http://perma.cc/T7V2-KF2T>]; News Release, Alabama Securities Commission, Alabama Securities Commission Updates Coordinated Crypto Crackdown (Aug. 28, 2018), http://www.asc.state.al.us/news_detail.aspx?ID=12943 [<http://perma.cc/LC53-94FB>] (describing state administrative orders as part of “Operation Cryptosweep”); ALABAMA SECURITIES COMMISSION, ADMINISTRATIVE ACTIONS - 2018, <http://asc.alabama.gov/2018.aspx> [<http://perma.cc/JNL7-XFQL>] (listing five cease and desist orders issued between April 20 and May 18, 2018, targeting blockchain projects Extrabit, Leverage, Pool Trade, Platinum Coin, and Chain Group Escrow); ShipChain, Inc., No. 20182574 (May 21, 2018), <http://2hsvz0l74ah31vgcm16peuy12tz.wpengine.netdna-cdn.com/wp-content/uploads/2018/05/ShipChain-Inc-Administrative-Order-to-Cease-and-Desist-COS-01685821xD2C78-1.pdf> [<http://perma.cc/P999-C9AS>] (identifying tokens sold by ShipChain as securities); Press Release, Ohio Department of Commerce, Ohio Division of Securities Participates in “Operation Cryptosweep,” a Coordinated International Cryptocurrency Crackdown (May 21, 2018), <http://apps2.com.ohio.gov/admn/pressroom/View?FileName=3655.pdf> [<http://perma.cc/2K3T-T38W>] (noting that the North American Securities Administrators Association (NASAA) brought about nearly seventy state or Canadian provincial inquiries and investigations and thirty-five enforcement actions related to ICOs or cryptocurrencies); LeadInvest, No. ENF-18-CDO-1760 (Tex. State Secs. Bd. Feb. 26, 2018), <http://www.ssb.texas.gov/sites/default/files/ENF-18-CDO-1760.pdf> [<http://perma.cc/CR5D-CZK5>] (issuing emergency cease and desist order, finding that a “technology company that specializes in the development of trading software” was offering a cryptocurrency lending program to Bitcoin miners that, inter alia, was an unlawful unregistered offering of securities in Texas); Caviar & Kirill Bensonoff, No. E-2017-0120 (Mass. Secs. Div. Jan. 17, 2018), http://www.morrisoncohen.com/siteFiles/files/2018_01_17%20-%20In%20the%20Matter%20of%20Caviar%20and%20Krill%20Bensonoff.pdf [<http://perma.cc/RR7Q-U92G>] (seeking to stop unregistered ICO and obtain refunds); *Cryptocurrency Enforcement*, TEX. STATE SECS. BD., <http://www.ssb.texas.gov/cryptocurrency-enforcement> [<http://perma.cc/WWF2-EWP2>] (“The Texas State Securities Board was the first state securities regulator to enter an enforcement order against a cryptocurrency firm and to date the Securities Commissioner has entered 26 administrative orders involving 79 individuals and entities.”).

⁹ *See, e.g.,* Zakinov v. Ripple Labs, Inc., 369 F. Supp. 3d 950, 952 (N.D. Cal. Feb. 28, 2020) (discussing claims stated under Securities Act and California Corporations Code for unregistered sale of Ripple token); Fabian v. Lemahieu, No. 19-cv-00054, 2019 WL 4918431, at *13–14 (N.D. Cal. Oct. 4, 2019) (declining motion to dismiss state law claims for fraud, negligence, and negligent misrepresentation in marketing Nano Coins); Audet v. Fraser, No. 16-CV-940, 2017 WL 4542386, at *9–11 (D. Conn. Oct. 11, 2017) (declining to dismiss claims that cryptocurrency offering violated Securities Act and amounted to common law fraud and aiding/abetting thereof); Shin v. Time Squared Global, LLC, No. SACV 15-0943, 2016 WL 8856653, at *2–3 (C.D. Cal. Feb. 8, 2016) (declining to dismiss claims for intentional misrepresentation, breaches of contract, and promissory estoppel respecting blockchain business).

securities laws apply to many cryptocurrencies,¹⁰ token and appcoin promoters may subject themselves to long prison sentences for offering or selling unregistered securities, operating unregistered “exchanges,” transacting in tokens, advising those who transact in tokens as “investments” as to which tokens are best or when it is time to buy or sell them, or even publishing articles or books on the topic.¹¹ In other countries—notably China, India, Russia, and South Korea—similar laws threatened, for at least a time, to decimate cryptocurrency trading.¹²

¹⁰ See *Investor Bulletin: Initial Coin Offerings*, *supra* note 8; Statement on Potentially Unlawful Online Platforms for Trading Digital Assets, *supra* note 8; Public Statement, Jay Clayton, SEC Chairman, Statement on NASAA’s Announcement of Enforcement Sweep Targeting Fraudulent ICOs and Crypto-asset Investment Products (May 22, 2018), <http://www.sec.gov/news/public-statement/statement-nasaas-announcement-enforcement-sweep-targeting-fraudulent-icos-and> [<http://perma.cc/MC5C-95KG>]; see also Andres Guadamuz & Chris Marsden, *Blockchains and Bitcoin: Regulatory Responses to Cryptocurrencies*, FIRST MONDAY (Dec. 7, 2015), <http://firstmonday.org/ojs/index.php/fm/article/view/6198> [<http://perma.cc/KT5E-PPPR>] (citing Investor Alert: Bitcoin and Other Virtual Currency-Related Investments, *supra* note 8); Press Release, SEC, SEC Sanctions Operator of Bitcoin-Related Stock Exchange for Registration Violations (Dec. 8, 2014), <http://www.sec.gov/news/press-release/2014-273> [<http://perma.cc/N634-MME7>]; Investor Bulletin: Exchange-Traded Funds (ETFs), SEC Off. of Inv. Educ. & Advoc. (Aug. 2012), <http://www.sec.gov/files/etfs.pdf> [<http://perma.cc/R4QD-BR2Z>].

¹¹ See, e.g., 15 U.S.C. § 77e(a), (c); 15 U.S.C. § 78u(d)(1); *Investor Bulletin: Initial Coin Offerings*, *supra* note 8; William O. Douglas & George E. Bates, *The Federal Securities Act of 1933*, 43 YALE L.J. 171, 173, 182, 192 (1933); Malcolm A. MacIntyre, *Criminal Provisions of the Securities Act and Analogies to Similar Criminal Statutes*, 43 YALE L.J. 254, 254–55 (1933); Bernard Susman, *Exempted Transactions Under the Securities Act of 1933*, 24 WASH. U. L. Q. 383, 383–84 (1939).

¹² See Evelyn Cheng & Cheang Ming, *Bitcoin Briefly Falls 11% after South Korea Moves to Ban New Cryptocurrency Trading Accounts*, CNBC (Dec. 28, 2017, 7:45 PM), <http://www.cnbc.com/2017/12/28/bitcoin-drops-11-percent-as-south-korea-moves-to-regulate-cryptocurrency-trading.html> [<http://perma.cc/KYQ4-9RZ9>]. South Korea reversed course in large part. See Swapna Krishna, *South Korea Won’t Ban Cryptocurrency Trading After All*, ENGADGET (Feb. 20, 2018), <http://www.engadget.com/2018/02/20/south-korea-no-ban-on-cryptocurrency-bitcoin-trading/> [<http://perma.cc/MVG9-KJR2>]. The China story is more complicated; authorities reportedly banned banks and payment processors from providing any direct or indirect Bitcoin-related services, including clearing transactions, exchanging Bitcoins for government currencies, or registering Bitcoin-related customers. See Guadamuz & Marsden, *supra* note 10; U.S. LIBR. OF CONG., GLOB. LEGAL RSCH. CTR., *Regulation of Bitcoin in Selected Jurisdictions* (Jan. 2014), <http://www.loc.gov/law/help/bitcoin-survey/regulation-of-bitcoin.pdf> [<http://perma.cc/T48J-HJQ7>]. The Central Bank of the Russian Federation warned against all transactional use of Bitcoins as potentially linked to illegal conduct. See *id.* India’s banking regulators reportedly issued notices or rules that prompted cryptocurrency exchanges to shutter themselves. See U.S. LIBR. OF CONG., *supra* (citing Anuj Srivas, *Bitcoin Exchanges Shut Shop in India*, HINDU (Dec. 26, 2013), <http://www.thehindu.com/business/Industry/bitcoin-exchanges-shut-shop-in-india/article5504407.ece> [<http://perma.cc/F5HX-KPTL>]; Abhiram Nandakumar & Ratnika Maruvada, *RBI Puts the Brakes on the Bitcoin Train*, REUTERS (Jan. 17, 2014), <http://blogs.reuters.com/india/2014/01/17/rbi-puts-the-brakes-on-the-bitcoin-train-in-india/> [<http://perma.cc/3ZH8-TNAN>]). See Nirupama Devi Bhaskar et al., *Bitcoin IPO, ETF, and Crowdfunding*, in CHUEN, HANDBOOK 315 (David L. K. Chuen ed., 2015) (discussing Russia); Kenneth Rapoza, *Will Russia Make Any Waves In Crypto This Year?*, FORBES

Concerns about the SEC's role are slowing down crypto coin offerings, even as some publishers of software and digital content struggle with arbitrary bans and large deductions from their revenue to app stores' operators.¹³ Digital tokens and appcoins solve historical dilemmas of software licensing—including traditional app stores' closed systems for app approval, high advertising costs as a percentage of initial revenue, low levels of participation in in-app economies, and high intermediary charges reducing developers' margins.¹⁴ Millions of app users can

(Jan. 2, 2019), <http://www.forbes.com/sites/kenrapoza/2019/01/02/will-russia-make-any-waves-in-crypto-this-year/#717e9d8c4271> [<http://perma.cc/P9V7-ZW82>] (“[R]ussian ICOs have come and gone. That market is dead. STOs are the new thing, but the Russians looking to raise money that way are setting up shop in Singapore or here in the U.S.”). Enforcement seemed to be lax in 2018, however, with allegedly fraudulent Russian ICOs continuing in existence until they were shut down by North Dakota and Texas, and crypto exchanges opening offices in Russia, a blockchain platform operating in Moscow, and apparent ICO promoters from Russia being active in Ukraine and New York. *See id.*; Waves Platform, BITCOIN WIKI (2019), http://en.bitcoinwiki.org/wiki/Waves_Platform [<http://perma.cc/N3BQ-A2K3>]. Interestingly, one exchange that has or had an office in Russia was originally from another ICO-skeptical jurisdiction, China, i.e. Binance, and it has had meetings in Shanghai, Shenzhen, and Hong Kong. *See Rapoza, supra; Binance Weekly Report: Binance Research, CZ Cryptokitties, and More*, BINANCE (Jan. 6, 2019), <http://www.binance.com/en/blog/288965342777069568/Binance+Weekly+Report:+Binance+Research,+CZ+Cryptokitties,+and+More> [<http://perma.cc/H9AZ-66PB>] (reporting activity in Shanghai); Olga Kharif, *Biggest Crypto Exchange Takes on Tether With Own Stablecoins*, BLOOMBERG (June 5, 2019, 11:19 AM), <http://www.bloomberg.com/news/articles/2019-06-05/biggest-crypto-exchange-takes-on-tether-with-own-stablecoins> (noting that Binance was largest crypto exchange in mid-2019 and made announcements from Hong Kong); *see also* REUTERS, *China's Bitcoin Market Alive and Well as Traders Defy Crackdown*, EXPRESS TRIBUNE (Sept. 30, 2017), <http://tribune.com.pk/story/1520086/chinas-bitcoin-market-alive-well-traders-defy-crackdown/> (noting more than three years after Bitcoin and other coins were made illicit, or at least suspect, China waited until September 4, 2017 to formally ban ICOs and even weeks after that, “the three largest players OkCoin, Huobi and BTCChina . . . announced that they will close their mainland businesses by the end of September”).

¹³ *See How Can the Blockchain Disrupt the App Store Business?*, MEDIUM (Oct. 31, 2017), <http://medium.com/@appcoins/how-can-the-blockchain-disrupt-the-app-store-business-13f0321bb48a> [<http://perma.cc/9B2D-83TK>] (“Whenever a user makes a purchase inside a game or an app, the developer only gets 70% of the transaction value. AppCoins will change that by rewarding the developer with 85% of the tokens spent by the user.”); Laurel Deppen, *Android Developers: Here are 4 Types of Apps Google Just Banned from the Play Store*, TECHREPUBLIC (July 27, 2018), <http://www.techrepublic.com/article/android-developers-here-are-4-types-of-apps-google-just-banned-from-the-play-store/> [<http://perma.cc/D987-2SAP>] (discussing seemingly vague ban on apps that are repetitive of other apps in experience and are not unique in store's eyes); Jason Pontin, *Why Publishers Don't Like Apps*, MIT TECHNOLOGY REVIEW (May 7, 2012), <http://www.technologyreview.com/s/427785/why-publishers-dont-like-apps/> [<http://perma.cc/AS3X-UDNR>] (noting a thirty percent share demanded by app stores); James Titcomb, *Murdoch-backed App Opens Feud with Google after Android Ban*, TELEGRAPH (U.K.) (Apr. 16, 2018, 4:29 PM) (describing allegation that app store breached British law by banning app that pays users for viewing ads upon unlocking mobiles) (on file with author).

¹⁴ *AppCoins: Redesigning the App Economy*, APPCOINS 1 (Dec. 14, 2017), http://web.archive.org/web/20180330084054/https://appcoins.io/pdf/appcoins_white_paper.

potentially use digital tokens to exchange game content or unlock game developers' upgrades.¹⁵ Banking law's past could therefore slow down software and internet inventions.

Enter regulatory competitors. Regulatory competition—sometimes criticized as a “race to the bottom”—involves efforts by jurisdictions to match or surpass the attractiveness of other jurisdictions' laws from the standpoint of companies and investors.¹⁶ On some occasions, countries such as Australia, Brazil, Singapore, Switzerland, Belarus, and Lithuania, and states such as New Hampshire, Nevada, and Wyoming, have reassured some types of token promoters that they will not be targeted or amended their laws to attract initial coin offering (ICO) promoters, rather than chasing them away with vague bans.¹⁷ The European Union is slowly gaining a reputation for trying not to scare off ICOs.¹⁸ Like Singapore, it has taken a light-touch approach by vaguely

pdf [<http://perma.cc/Y769-X7SN>].

¹⁵ Reinaldo Ferreira, *\$18 Million ICO: Social Android App Store Aptoide Launches AppCoins*, EU STARTUPS (Nov. 8, 2017), <http://www.eu-startups.com/2017/11/social-android-app-store-aptoide-launches-appcoins-with-a-e60-million-ico/>

[<http://perma.cc/2CER-N84H>] (explaining one million apps downloaded more than four billion times by 200 million users of Aptoide app store, which was subsequently involved in launch of AppCoins to enable payments by developers to users for viewing ads, and trade digital and/or user-generated content in-game).

¹⁶ See, e.g., Thomas Apolte, *Jurisdictional Competition For Quality Standards: Competition of Laxity?*, 30 ATL. ECON. J. 389, 402 (2002).

¹⁷ See James Gatto, *Nevada Passes Pro-blockchain Law*, SHEPPARD MULLIN (June 13, 2017), <http://www.lawofthelevel.com/2017/06/articles/virtual-currency/nevada-blockchain-law/> [<http://perma.cc/6DZC-GUJX>] (explaining Nevada prohibited municipalities from requiring licenses from blockchain-based businesses “or imposing any other requirement relating to the use of a blockchain by any person or entity”); Bhaskar et al., *supra* note 12, at 318–19 (noting Australia and Brazil planned to but did not regulate cryptocurrencies as payments etc. in 2014); Jennifer Post, *Wyoming Signs Cryptocurrency Bills into Law*, THOMPSON COBURN (Apr. 11, 2018), <http://www.thompsoncoburn.com/insights/publications/item/2018-04-11/wyoming-signs-cryptocurrency-bills-into-law> [<http://perma.cc/933L-39L9>] (indicating that Wyoming law amendments in 2018 included explicit exemption from money transmitter regulations, and exempting “utility tokens” from state securities law as long as they can be exchanged for products or services, are not sold as investments, and their issuers are not involved in supporting a secondary market for trading them). See also DAVID L. K. CHUEN & LINDA LOW, INCLUSIVE FINTECH: BLOCKCHAIN, CRYPTOCURRENCY AND ICO 106, 113 (2018); Diego Zuluaga, *Should Cryptocurrencies Be Regulated like Securities?* 3, (Ctr. for Monetary & Fin. Alts. Inst., Briefing Paper No. 1 June 25, 2018), <http://www.cato.org/sites/cato.org/files/pubs/pdf/cmfa-briefing-paper-1-updated.pdf> [<http://perma.cc/LH2U-JYLN>] (discussing why some regulatory approaches will squelch ICOs or at least make them inaccessible to startups or non-bankers); Franklin R. Edwards, Kathleen Hanley, Robert Litan & Roman L. Weil, *Crypto Assets Require Better Regulation: Statement of the Financial Economists Roundtable on Crypto Assets*, 75 FIN. ANALYSTS J. 14, 15–17 (2019) (discussing friendlier approaches to ICOs on part of Japan, South Korea, etc.).

¹⁸ Gina Conheady, *The EU Approach to ICO Regulation: A Friendly Regulatory Framework for ICOs?*, BLOOMBERG LAW (Mar. 23, 2018, 11:19 AM), <http://news.bloomberglaw.com/securities-law/the-eu-approach-to-ico-regulation-a-friendlier-regulatory-framework-for-icos> [<http://perma.cc/FZ5C-NLVV>] (explaining that,

warning that some ICOs could be subject to prospectus requirements, without finding specific tokens in violation of them.¹⁹ Such moves may explain why the SEC announced in 2018 that Bitcoin and Ether, two cryptocurrencies with the most users and largest market capitalizations, are not securities, despite previously announcing that ICOs may involve securities and require registration of all parties involved.²⁰

The ICO market has grown more than 1,000% annually by value, and perhaps even faster by units, with more than 1,100 coins being founded in less than a decade.²¹ Should Congress or other U.S. states consider adopting an approach like that of Singapore or New Hampshire? If so, where will the deregulatory push end, and at what cost? Will the European Union or Asian Tigers divert investment from the U.S., or could lax regulation harm U.S. investors while China, EU members, India, and Russia protect their investors by taking a hard line on ICOs?²² Will ICO authors follow the original “bitcoin refugees” into exile in Asia, Canada, or island nations ranging from the Bahamas and Bermuda to Cyprus and Malta?²³

while European Securities and Markets Authority has concluded that ICOs “could, potentially,” be securities offerings that must be preceded by a prospectus and registered unless exempt, the European Central Bank has stated that for purposes of currency and payments laws, “in the EU, virtual currency is not currently regulated and cannot be regarded as being subject to the (current) Payment Services Directive or the E-Money Directive”).

¹⁹ See *id.*; see also JONES DAY, *Initial Coin Offerings—A Singapore Perspective*, White Paper 2, 4–5 (Nov. 2017), <http://www.jonesday.com/files/upload/initial-coin-offerings-a-singapore-perspective.pdf> [<http://perma.cc/9BGS-WM3E>]; cf. Zuluaga, *supra* note 17, at 3 (describing exemption of ICO tokens that can be redeemed for services and are not marketed as investments as “lighter”). See generally Nikolei M. Kaplanov, *Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against Its Regulation*, 25 LOY. CONSUMER L. REV. 111 (2012).

²⁰ See, e.g., *All Cryptocurrencies*, COINMARKETCAP, <http://coinmarketcap.com/all/views/all> [<http://perma.cc/8QHW-G87N>] (last updated Dec. 21, 2020).

²¹ See CHUEN & LOW, *supra* note 17, at 111–13; David Rohret & Michael Vella, *Crypto Currency: Expanding the Underground Cyber Economy*, PROQUEST, <http://search.proquest.com/openview/048f46b1c47681eb0f1d928fe435f79e/1?pq-origsite=gscholar&cbl=396500> (noting a count of 1,147 “crypto coins” by 2017), in *PROCEEDINGS OF THE 13TH INTERNATIONAL CONFERENCE ON CYBER WARFARE AND SECURITY (ICCWS 2018)* 645 (John S. Hurley & Jim Q. Chen eds., 2018), <http://toc.proceedings.com/38822webtoc.pdf> [<http://perma.cc/2HPM-34A4>].

²² See CHUEN & LOW, *supra* note 17, at 106–12.

²³ See Jeffrey Gogo, *Bahamas Releases Discussion Paper on Crypto-Asset Regulation*, BITCOIN.COM (Nov. 10, 2018), <http://news.bitcoin.com/bahamas-releases-discussion-paper-on-crypto-asset-regulation/> [<http://perma.cc/GPC2-BVX3>]; see also Jasper Hamill, *Canadian Regulators Welcome US Bitcoin Refugees with Open Arms*, REGISTER (May 20, 2013, 15:57 UTC), http://www.theregister.co.uk/2013/05/20/canada_welcomes_bitcoin_traders_fintrac_letter/ [<http://perma.cc/7LXA-4JJ3>]; Nathaniel Popper, *Have a Cryptocurrency Company? Bermuda, Malta or Gibraltar Wants You*, N.Y. TIMES (July 29, 2018), <http://www.nytimes.com/2018/07/29/technology/cryptocurrency-bermuda-malta-gibraltar.html> [<http://perma.cc/RHC7-5N39>].

This Article explores precedents that exist within U.S. securities and consumer protection laws for a light touch approach for use by the U.S. in the context of global regulatory competition for ICOs. The novelty of its approach lies in surveying the treatment of specific types of statements to investors or consumers in areas outside of federal securities law. Some of these statements closely resemble those that ICO and appcoin promoters use to sell tokens, gain followers, attract developers, and tout their respective ecosystems. In Part II, the Article examines typical ICO white paper statements and their regulatory implications.²⁴ The law of commercial speech and intermediate First Amendment scrutiny undergirds Part III, which analyzes First Amendment issues arising out of cryptocurrency and ICO promotion.²⁵ Part IV contains a brief survey of statutory and constitutional principles supporting light-touch regulatory regimes, including principles that shape the law of federal securities fraud, securities registration, false advertising of goods or services, common-law fraud, and products liability.²⁶

Crypto coin offerings are similar to relatively unregulated provision of information in securities law and in other fields, including vague boasts and “ad speak,” genuine optimistic statements about the future, subjective ratings of securities or commodities, software “upgrades,” search-engine speech, and the creation of economies in virtual worlds. This Article highlights the First Amendment and other constitutional issues that onerous regulations may confront and draws analogies to how legislatures and the courts have reconciled the freedom of economic expression and the cause of consumer protection under the Exchange Act, the Lanham Act, consumer fraud law, and the law of warranties. Several themes in the case law in these areas are ripe for application to ICOs: the need for precision and proportionality in framing regulation, the proscription against regulatory overkill and one-size-fits-all approaches, and the duty of courts and regulators to preserve basic freedoms.²⁷

²⁴ *Cf.* 44 *Liquormart, Inc. v. Rhode Island*, 517 U.S. 484, 507 (1996) (plurality opinion) (discussing “the less than strict standard that generally applies in commercial speech cases”); *Fla. Bar v. Went For It, Inc.*, 515 U.S. 618, 623 (1995) (calling this “‘intermediate’ scrutiny”); *see* *Greater New Orleans Broad. Ass’n, Inc. v. United States*, 527 U.S. 173, 183 (1999) (assessing substantial state interest to justify extensiveness); *Thompson v. W. States Med. Ctr.*, 535 U.S. 357, 374 (2002) (stating that *Central Hudson* scrutiny is “significantly stricter than the rational basis” analysis).

²⁵ The First Amendment provides that “Congress shall make no law . . . abridging the freedom of speech, or of the press” U.S. CONST. amend. I; *see infra* Part III.

²⁶ *See infra*, Part IV.

²⁷ *See id.*

II. THE STRUCTURE OF CRYPTO SPEECH

A. Software's Historically Deregulated Domain

Regulation exists on a sort of spectrum. On one side there is what the Supreme Court has referred to in constitutional terms as “comprehensive federal system[s]” of regulation.²⁸ Further, in the deregulatory direction are multistakeholder approaches, like the regulation of the internet under the light-touch (initially) of the U.S. Department of Commerce,²⁹ or the regulation of the early ICOs.³⁰ In early ICOs, participants in building markets and infrastructures mostly regulate their own “ecosystems” using standards, protocols, shared applications, and research communication, while the common law and statutes stand in reserve for the more severe disputes that arise.³¹ A multistakeholder approach to internet governance gained prominence with the operations of the Internet Corporation for Assigned Names and Numbers.³² Next comes self-regulation, which is sometimes merely an adjunct to public regulation in a multistakeholder approach.³³ At the other extreme from fully

²⁸ See P.R. Dep't of Consumer Affs. v. Isla Petrol. Corp., 485 U.S. 495, 502–503 (1988) (involving federal petroleum pricing law); cf. Atlas Roofing Co. v. Occupational Safety & Health Rev. Comm'n, 430 U.S. 442, 454–55 (1977) (federal occupational health and safety law).

²⁹ See generally Adamantia Rachovitsa, *Rethinking Privacy Online and Human Rights: The Internet's Standardisation Bodies as the Guardians of Privacy Online in the Face of Mass Surveillance*, UNIV. GRONINGEN FAC. L. RSCH. PAPER SERIES NO. 01/2017 (2017), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2911978; see also Michael L. Rustad, *Internet Law in a Nutshell*, SUFFOLK UNIV. L. SCH. RSCH. PAPER NO. 09-05 8–10, 44–48, 196–206, 217, 366 (2009), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1329092 (describing multistakeholder approach and roles of Department of Commerce, FTC, Federal Communications Commission, state attorneys general, and Internet Corporation for Assigned Names and Numbers, among others).

³⁰ See P.R. Dep't of Consumer Affs. v. Isla Petrol. Corp., 485 U.S. 495, 502–03 (1988) (involving federal petroleum pricing law); cf. Atlas Roofing Co. v. Occupational Safety & Health Rev. Comm'n, 430 U.S. 442, 454–55 (1977) (federal occupational health and safety law).

³¹ See DON TAPSCOTT & ALEX TAPSCOTT, *HOW THE TECHNOLOGY BEHIND BITCOIN AND OTHER CRYPTOCURRENCIES IS CHANGING THE WORLD* loc. 68 (2018) (ebook), <http://books.google.com/books?id=NqBiCgAAQBAJ&pg=PT68>.

³² See Kieren McCarthy, *Read the Letter than Won the Internet Governance Battle*, REGISTER, (Dec. 2, 2005, 09:07 UTC), http://www.theregister.co.uk/2005/12/02/rice_eu_letter [<http://perma.cc/6TA6-ZNB4>]; see also STEWART PATRICK, *THE SOVEREIGNTY WARS: RECONCILING AMERICA WITH THE WORLD* 168–9 (2018).

³³ See generally Alejandro Komai & Gary Richardson, *A Brief History of Regulations Regarding Financial Markets in the United States: 1789 to 2009*, (Nat'l Bureau of Econ. Resch., Working Paper No. 17443, 2011), <http://www.nber.org/papers/w17443> [<http://perma.cc/M9Q7-S3Q9>]; Saule T. Omarova & Margaret E. Tahyar, *That Which We Call a Bank: Revisiting the History of Bank Holding Company Regulation in the United States*, 31 REV. BANKING & FIN. L. 113 (2011); Matthew P. Allen, *A Lesson from History, Roosevelt to Obama—The Evolution of Broker-Dealer Regulation: From Self-Regulation, Arbitration, and Suitability to Federal Regulation, Litigation, and Fiduciary Duty*, 5 ENTREPRENEURIAL BUS. L.J. 1 (2010). Cf. Rustad, *supra* note 29, at 49.

regulated industries are unregulated bazaars, anarchy, anonymous speech-making, and internet content in some respects.³⁴

Polycentric approaches to regulation help organize the internet's potential chaos, using a multistakeholder approach. In polycentric systems of regulation, multiple nodes enforce norms on a semi-autonomous basis. Nodes may include states, nongovernmental organizations, corporations, voluntary associations, and other actors.³⁵ A polycentric model is driving aspects of U.S. cybersecurity policy.³⁶

³⁴ See Restoring Internet Freedom, 82 Fed. Reg. 25568 (proposed May 23, 2017) (describing internet interconnection services, as opposed to retail internet service for a monthly or hourly fee, as “historically unregulated”); FCC Report to Congress, Federal-State Joint Board on Universal Service, 13 FCC Rcd. 11501, 11524 para. 43 (Apr. 10, 1998) (“The language and legislative history of both the House and Senate bills indicate that the drafters of each bill regarded telecommunications services and information services as mutually exclusive categories.”); Letter from Five Senators to Honorable William E. Kennard, Chairman, FCC, at 1 (Mar. 20, 1998) [<http://perma.cc/67U8-DZNR>] (“[N]othing in the 1996 [Telecommunications] Act or its legislative history suggests that Congress intended to alter the current classification of Internet and other information services or to expand traditional telephone regulation to new and advanced services.”); Comments of AT&T Services, Inc., Protecting and Promoting the Open Internet; Framework for Broadband Internet Services, before the FCC, GN Docket Nos. 14-28, 10-127, at 59 (July 15, 2014) [<http://perma.cc/VL7W-53RA>] (describing “backbone Internet access and content-delivery services to thousands of large and small businesses and edge providers” as “historically unregulated peering and transit arrangements” under federal law); see also Sarah Castle, *Cyberbullying on Trial: The Computer Fraud and Abuse Act and United States v. Drew*, 17 J.L. & POL’Y 579, 597 (2009) (“After all, [internet speech] involves the expression of words and thoughts through an historically unregulated medium.”); Ann Daniels, *The Online Gun Marketplace and the Dangerous Loophole in the National Instant Background Check System*, 30 J. MARSHALL J. INFO. TECH. & PRIV. L. 757, 760, 766–67 (2014) (noting that websites such as Armslist operate as “unregulated bazaar[s]” because federal law exempts secondary sales of firearms from regulations applicable to primary sales with licensed gun dealers); Philipp Paech, *The Governance of Blockchain Financial Networks*, 80 MOD. L. REV. 1073 (2017), http://eprints.lse.ac.uk/87569/1/Paech_Governance%20of%20Blockchain_Author.pdf [<http://perma.cc/5SRS-LJ45>] (attributing “the original, highly disruptive concept underlying *Bitcoin* or *Ethereum*” to “open, largely anonymous, unregulated peer-to-peer networks that eliminate the need for financial intermediaries”). For example, on bulletin boards organized by Usenet or services such as Yahoo!, young people and others could anonymously post their thoughts for the world at large to potentially read. See Castle, *supra*, at 583 n.24.

³⁵ See Elinor Ostrom, *Coping with Tragedies of the Commons*, 2 ANN. REV. POLI. SCI. 493, 528 (1999) [<http://perma.cc/EP7W-7TDQ>]; see also Elinor Ostrom, Polycentric Systems as One Approach for Solving Collective-Action Problems 1–2 (2008) (Ind. Univ. Sch. Pub. & Env’t Aff., Research Paper No. 2008-11-02), http://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/4417/W08-6_Ostrom_DLC.pdf [<http://perma.cc/V9DM-9AFV>]; VINCENT OSTROM, THE MEANING OF AMERICAN FEDERALISM: CONSTITUTING A SELF-GOVERNING SOCIETY 17–18 (1991); VINCENT OSTROM, *Federalism, Polycentricity, and Res Publica: Some Reflections on the American Experiments in Republican Government*, in THE PRACTICE OF CONSTITUTIONAL DEVELOPMENT: VINCENT OSTROM’S QUEST TO UNDERSTAND HUMAN AFFAIRS 49 (Filippo Sabetti, Barbara Allen & Mark Sproule-Jones eds., 2008); see generally Vincent Ostrom, *Polycentricity*, Paper Presented at 1972 Annual Meeting of the American Political Science Association, Washington, D.C. (Sept. 5, 1972) <http://hdl.handle.net/10535/3763> [<http://perma.cc/Z5QN-3WXH>].

³⁶ See *CCIA Urges Senate to Improve Cybersecurity Information Sharing Act*, COMPUT.

Cryptocurrencies may be well-suited to polycentric regulatory responses. Crypto coin networks are not traditional properties or companies that could ever be controlled by an executive officer or board of directors; they bring together dispersed creative and technical contributors. Bitcoin is a “concept” and “network” like the internet, as well as a quantum of measurement or value for various transactional purposes.³⁷ Altcoins, appcoins, and ICOs involve opportunities to access or deploy segments of digital code.³⁸ The Monetary Authority of Singapore describes coins and tokens as “cryptographically—secured representation[s]” of the right to obtain something or do something, presumably something that the issuer of the coin or token can influence.³⁹

As the first cryptocurrency, Bitcoin has a fascinating history. It was launched in January 2009 with a reference to the second bailout of the British banks.⁴⁰ A paper attributed to Satoshi Nakamoto was subtitled “A Peer-to-peer electronic cash system.”⁴¹ Just as Napster and Limewire replaced vulnerable websites for hosting music files with a distributed network of user file libraries, Bitcoin would distribute the transaction ledger in a permissionless and transparent way, while eliminating inflation by restricting the number of coins and requiring increasingly complex math problems to be solved to issue them as supply runs out.⁴² It is thought that the PayPal blockade of Wikileaks—a move towards coordinated corporate censorship that presaged recent initiatives to ban social media users—contributed to online support for an alternative to corporate systems.⁴³ In that respect, the rise and fate of

& COMMC’NS INDUS. ASS’N (Oct. 15, 2015), <http://www.ccianet.org/2015/10/ccia-urges-senate-to-improve-cybersecurity-information-sharing-act> [<http://perma.cc/TF9V-3JZB>]; see generally *Vulnerabilities Equities Policy and Process for the United States Government*, WHITE HOUSE (Nov. 15, 2017), <http://www.whitehouse.gov/sites/whitehouse.gov/files/images/External%20-%20Unclassified%20VEP%20Charter%20FINAL.PDF> [<http://perma.cc/4PKH-TVFY>].

³⁷ See *Some Bitcoin Words You Might Hear*, BITCOIN, <http://bitcoin.org/en/vocabulary> [<http://perma.cc/9A9B-8LXM>]; Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, BITCOIN, <http://bitcoin.org/bitcoin.pdf> [<http://perma.cc/7JNK-NNF8>].

³⁸ See *Cryptocurrencies: Oversight of New Assets in the Digital Age: Hearing Before the H. Comm. on Agric.*, 115th Cong. (2018) (statement of Lowell D. Ness, Managing Partner of Perkins Coie LLP); Nathan Schneider, *Decentralization: An Incomplete Solution*, J. CULT. ECON. 1, 7 (2019) (discussing altcoins); Zuluaga, *supra* note 17, at 2 (discussing ICOs and AppCoins as code); cf. *Policing the Wild Frontier*, ECONOMIST (Apr. 26, 2018), <http://www.economist.com/finance-and-economics/2018/04/26/regulating-virtual-currencies-and-icos> [<http://perma.cc/3GGM-DN6R>] (ICOs involve investments in “virtual tokens,” a form of “technology,” specifically based on “blockchain technology”).

³⁹ JONES DAY, *supra* note 19, at 2.

⁴⁰ Coryanne Hicks, *The History of Bitcoin*, U.S. NEWS (Sept. 1, 2020), <http://money.usnews.com/investing/articles/the-history-of-bitcoin>.

⁴¹ Nakamoto, *supra* note 37.

⁴² See *id.*

⁴³ See Yochai Benkler, *A Free Irresponsible Press: WikiLeaks and the Battle over the*

cryptocurrencies is fundamentally tied to the great political controversies of our century.⁴⁴ Bitcoin and crypto coin software in general embody a form of political association and organizing for collective freedom.⁴⁵

Cryptocurrencies and blockchains are in their infancy. They are like the internet in 1989 or 1990. In their world, Amazon and Google have not been invented yet. Innovators are trying to solve problems with transaction costs and delays, energy consumption, theft, and lack of trust.⁴⁶

Part of the case for crypto coins involves promoting economic efficiency.⁴⁷ Blockchains could reduce the costs of wire transfers, private ledgers, and other financial costs dramatically by some estimates.⁴⁸ One method of enabling frictionless commerce is to deploy automated smart contracts to pay out tokens based upon conditions triggered by Internet of Things devices or other technologies.⁴⁹ Cryptocurrency-enabled sectors of the economy in the near future could include software, social media, logistics, hospitality, wallets, payments, capital markets and investment banking, real estate, and many others.⁵⁰

Soul of the Networked Fourth Estate, 46 HARV. CIV. RTS.-CIV. LIB. L. REV. 311, 312–15 (2011) (describing blockades of Wikileaks donations); Mark Jansen, *Bitcoin: The Political Virtual of an Intangible Virtual Currency*, 17 INT'L J. CMTY. CURRENCY RSCH. 8, 10 (2012) (describing links of BitCoin's rise to Wikileaks blockade); Benjamin Wallace, *The Rise and Fall of Bitcoin*, WIRED (Nov. 23, 2011, 2:52 PM), <http://www.wired.com/2011/11/mf-bitcoin/> [<http://perma.cc/29SW-XHR7>].

⁴⁴ See Benkler, *supra* note 43, at 313; Philip Di Salvo, *Whistleblowers*, in THE INTERNATIONAL ENCYCLOPEDIA OF JOURNALISM STUDIES 1, 1–3 (2019); KATHLEEN HALL JAMIESON, CYBERWAR: HOW RUSSIAN HACKERS AND TROLLS HELPED ELECT A PRESIDENT: WHAT WE DON'T, CAN'T, AND DO KNOW 1 (2018); Peter Osborne, *He's a Hero, not a Villain*, 30 BRIT. JOURNALISM REV. 43, 44 (2019); Brian Rappert, *Leaky Revelations: Commitments in Exposing Militarism*, 60 CURRENT ANTHROPOLOGY S148, S148 (2019).

⁴⁵ See Ashutosh Bhagwat, *When Speech Is Not "Speech,"* 78 OHIO STATE L.J. 839, 884 (2017) (arguing that "First Amendment protection should extend only to collective, communicative activity that has relevance to democratic citizenship and self-governance (defined broadly)" and surveying related case law). It is noteworthy that the sale of violent video games to minors and the operation of commercial adult websites constitute "speech," even though such conduct offers little in terms of argumentation or analysis that is important for political or economic progress. See *Brown v. Ent. Merchs. Ass'n*, 564 U.S. 786, 790 (2011); see *Ashcroft v. Am. Civ. Liberties Union*, 542 U.S. 656, 666–67 (2004).

⁴⁶ See, e.g., Nicola Atzei, Massimo Bartoletti & Tiziana Cimoli, *A Survey of Attacks on Ethereum Smart Contracts*, in 6TH INTERNATIONAL CONFERENCE ON PRINCIPLES OF SECURITY AND TRUST 164–86 (Matteo Maffei & Mark Ryan eds., 2017).

⁴⁷ See DAVID MILLS ET AL., FED. RSRV. BD., 2016-095, DISTRIBUTED LEDGER TECHNOLOGY IN PAYMENTS, CLEARING, AND SETTLEMENT (2016).

⁴⁸ See PRIMAVERA DE FILIPPI & AARON WRIGHT, BLOCKCHAIN AND THE LAW: THE RULE OF CODE 64 (2018); see RACHEL F. FEFER, CONG. RSCH. SERV., IF10810, BLOCKCHAIN AND INTERNATIONAL TRADE 1 (2019); see MILLS ET AL., *supra* note 47.

⁴⁹ See DE FILIPPI & WRIGHT, *supra* note 48, at 72–76, 81, 88.

⁵⁰ See, e.g., *infra* Tables 1 and 2; see also Eric Johnson, *Logistics Startup ShipChain Hit with Cease-and-Desist Order*, JOC.COM (May 23, 2018, 12:48 PM),

B. Crypto Coin White Papers as Speech

ICOs are solicitations to buy or subscribe to systems of digital code, or to accept them for various forms of informational or commercial exchanges.⁵¹ Bitcoins are computer files that share certain characteristics of currencies, such as being tradable for goods or services or for official currencies, and being accepted for deposit in online accounts (wallets, i.e. other computer files).⁵² Application tokens, known as appcoins, coordinate rights of access to content, programs, networks, or online democracies, most famously in the way that semi-autonomous code-based economic agents known as “smart contracts” operate on the Ethereum network to unlock content or resources in an ecosystem, the “Cryptocosm.”⁵³

Bitcoin transactions, like those in the banking system, are recorded on ledgers.⁵⁴ A ledger is a database, and a database is a form of speech. Blockchains are public ledgers of transactions, and differ from bank ledgers in being more public, more comprehensive of all transactions in a given cryptocurrency or

http://www.joc.com/international-logistics/logistics-startup-shipchain-hit-cease-and-desist-order_20180523.html (discussing an example of a logistics project); Abhimanyu Krishnan, *4 Blockchain Projects That Will Change the Real Estate Industry*, INV. IN BLOCKCHAIN (Mar. 13, 2018), <http://www.investinblockchain.com/blockchain-projects-real-estate/> [<http://perma.cc/3BGG-V6MV>] (discussing hospitality and real estate project examples); LBRY (@LBRYcom), TWITTER (2019), <http://twitter.com/LBRYcom> (providing updates on a social media project); *Ledger Fever: 95 Bitcoin & Blockchain Startups in One Market Map*, CB INSIGHTS (Feb. 23, 2017), <http://www.cbinsights.com/research/bitcoin-blockchain-startup-market-map/> [<http://perma.cc/3BGG-V6MV>] (listing capital markets and wallets/payments projects); Matt Levine, *The SEC Gets a Token Fight*, BLOOMBERG (Jan. 29, 2019, 5:35 AM), <http://www.bloomberg.com/opinion/articles/2019-01-28/the-sec-gets-a-token-fight> [<http://perma.cc/M59E-DJW7>] (discussing apps).

⁵¹ See Future Tech Podcast, *Cooley LLP Marco Santori Fintech Bitcoin and Blockchain Attorney*, YOUTUBE (July 11, 2017), <http://www.youtube.com/watch?v=tPGQS0Aiu5Q>; see Zuluaga, *supra* note 17, at 2, 4; cf. *Policing the Wild Frontier*, *supra* note 38, at 67 (explaining that ICOs involve buying or subscribing to “blockchain technology”).

⁵² See Fed. Election Comm’n, *Advisory Opinion 2014-02* (May 8, 2014), at 2, <http://www.fec.gov/files/legal/aos/2014-02/2014-02.pdf> [<http://perma.cc/V53G-SPK4>] (citing U.S. GOV’T ACCOUNTABILITY OFF., GAO-13-516, *VIRTUAL ECONOMIES AND CURRENCIES 5* (2013), <http://www.gao.gov/assets/660/654620.pdf> [<http://perma.cc/CM9W-WDN4>]); see François R. Velde, *Bitcoin: A Primer*, CHI. FED LETTER (Fed. Rsrv. Bank of Chi., Chi., Ill.), no. 317, Dec. 2013, at 1, http://www.chicagofed.org/digital_assets/publications/chicago_fed_letter/2013/cfldecember2013_317.pdf [<http://perma.cc/R9L7-YDLR>].

⁵³ See Jonathan Rohr & Aaron Wright, *Blockchain-Based Token Sales, Initial Coin Offerings, and the Democratization of Public Capital Markets*, 70 HASTINGS L.J. 463, 474–78 (2019); see also *How Can the Blockchain Disrupt the App Store Business?*, *supra* note 13; Future Tech Podcast, *supra* note 51; GEORGE GILDER, *LIFE AFTER GOOGLE: THE FALL OF BIG DATA AND THE RISE OF THE BLOCKCHAIN ECONOMY* (2018).

⁵⁴ Benjamin Wallace, *The Rise and Fall of Bitcoin*, WIRED (Nov. 23, 2011, 2:52 PM), <http://www.wired.com/2011/11/mf-bitcoin/> [<http://perma.cc/29SW-XHR7>].

token, and semi-private in that in many instances the transacting parties' names, addresses, countries of residence, and IP addresses are not reliably linked to each transaction record.⁵⁵ Blockchains are often touted as being "immutable," but "forks" of a particular chain, such as the Ethereum blockchain, may change the ledger after a vote or other decision by the token's subscribers, foundation, or other controlling parties.⁵⁶ They promote the integrity of cryptocurrencies like Bitcoin by providing a radically distributed, yet richly transparent index of transactions.⁵⁷

ICOs involve the sale of cryptocurrency tokens based largely on white papers, or extended arguments for why a new way of organizing economic relations, assembling and deploying assets, or exchanging messages or entitlements could benefit the buyers of tokens.⁵⁸ An ICO white paper typically strikes four major themes: bold and optimistic predictions for the future, summaries of the cryptographic solution employed, indications of how the coin or asset will unlock content or network resources, and arguments about how peer-to-peer production of that content or resource will help secure a better or more efficient future. Table 1 presents examples of future-predictive themes from influential white papers for ICOs.⁵⁹

⁵⁵ See Fed. Election Comm'n, *supra* note 52, at 2; DEP'T OF COM., NAT'L INST. OF STANDARDS & TECH., NISTIR 8202, BLOCKCHAIN TECHNOLOGY OVERVIEW (2018); Rebecca Lewis et al., *Blockchain and Financial Market Innovation*, ECON. PERSPS. (Fed. Rsrv. Bank of Chi., Chi., Ill.), no. 7, 2017, at 1; see also 2 ANDREAS M. ANTONOPOULOS, THE INTERNET OF MONEY 59–60 (2017).

⁵⁶ See Vitalik Buterin, *Hard Fork Completed*, ETHEREUM FOUND. BLOG (July 20, 2016), <http://blog.ethereum.org/2016/07/20/hard-fork-completed/> [<http://perma.cc/2VJP-6UFJ>]; see DAVID MILLS ET AL., *supra* note 47, at 17.

⁵⁷ See Ty McCormick, *The Darknet: A Short History*, FOREIGN POL'Y (Dec. 9, 2013, 5:44 PM), <http://foreignpolicy.com/2013/12/09/the-darknet-a-short-history/> [<http://perma.cc/288Y-SKWN>].

⁵⁸ See *Investor Bulletin: Initial Coin Offerings*, *supra* note 8 (referring to use of white papers in ICOs).

⁵⁹ While Bitcoin did not hold an ICO, it offered coins in return for mining, or contributions of computing power to the network, so it is included here as offering something for coins for that reason, as well as for the sake of completeness.

Table 1: ICO White Paper Predictions

Bitcoin ⁶⁰	In payment systems, security and privacy will come into conflict as increases in computing power may necessitate a public history of transactions that is too large and complex to tamper or forge; the public record of transactions could threaten privacy while hacks will threaten payment security.
Ethereum ⁶¹	In the future, autonomous agents will exist on blockchains to allocate resources and currency balances, offering an alternative to centralized corporations.
Ripple ⁶²	There is a need for a global, distributed payment-processing system, which would resist not only fraud but also authentic transactions that conflict (presenting the double-spending problem).
EOS ⁶³	Blockchain users typically write distributed applications or DApps for customers in finance, logistics, media, retail sales, or the sharing economy, and want a decentralized and open-entry community in which to do so, secured with cryptography and a “Constitution” for dispute-resolution.
TRON ⁶⁴	By partnering with BitTorrent, a decentralized userbase adopting the same crypto token can empower creators to distribute their work directly to fans without incurring intermediary charges.

⁶⁰ Nakamoto, *supra* note 37, at 1.

⁶¹ Vitalik Buterin, *A Next Generation Smart Contract & Decentralized Application Platform*, <http://web.archive.org/web/20140126001912/http://www.ethereum.org/ethereum.html> [<http://perma.cc/5G52-ELAE>].

⁶² David Schwartz, Noah Youngs & Arthur Britto, *The Ripple Protocol Consensus Algorithm*, http://ripple.com/files/ripple_consensus_whitepaper.pdf [<http://perma.cc/LPS5-XX6Q>].

⁶³ Ian Grigg, *EOS - An Introduction*, 7 (July 5, 2017), <http://whitepaperdatabase.com/wp-content/uploads/2018/03/EOS-Introduction-whitepaper.pdf> [<http://perma.cc/CR4J-3BU9>]; *see also EOS.IO Technical White Paper v2*, GITHUB (Mar. 16, 2018), <http://github.com/EOSIO/Documentation/blob/master/TechnicalWhitePaper.md> [<http://perma.cc/CZ4G-NJEY>]; GITHUB, <http://github.com> [<http://perma.cc/MNX6-LLA9>]. BitCoin, Ether, Ripple, and EOS were among the top 200 coins by market capitalization in early 2020. *See, e.g., All Cryptocurrencies, supra* note 20.

⁶⁴ *Tron: Whitepaper*, TRON 16 (2018), <http://web.archive.org/web/20180104232249/https://dn-peiwoweb-qbox.me/Tron-Whitepaper-1031-V18-EN.pdf> [<http://perma.cc/K9CX-2T8Q>]. *See also Tron: Advanced Decentralized Blockchain Platform*, TRON 4 (Dec. 10, 2018), http://tron.network/static/doc/white_paper_v_2_0.pdf [<http://perma.cc/7GXU-WE78>]; Ailsa Sherrington, *TRON Answers Our Questions About Project Atlas*, THENEXTWEB (Dec. 5, 2018), <http://thenextweb.com/hardfork/2018/12/05/tron-answers-our-questions-about-project-atlas> [<http://perma.cc/77DD-WSNJ>]. TRON was among the top 200 coins by market capitalization in early 2020. *See, e.g., All Cryptocurrencies, supra* note 20.

Golem ⁶⁵	Instead of subscribing to expensive corporate cloud service providers, digital artists and others in need of sophisticated computing resources will rent them from a decentralized supercomputer fueled by microservices rendered in exchange for token transfers.
Kin ⁶⁶	Creative people with internet access, by building cooperative content platforms using tokens, will be liberated from dependence on large advertising-based social media corporations.
Filecoin ⁶⁷	Internet users, by using encrypted and decentralized storage of their content provided in exchange for the network's coin, will evade censorship and interception of data while enjoying reliability of files.
Steem ⁶⁸	Contributors to the vast advertising businesses of major social media platforms will take control of their creativity by using smart tokens to rapidly and efficiently earn money from fan communities.
Musicoin ⁶⁹	Hundreds of thousands of musicians can collaborate independently on the same blockchain-powered platform to sell or license their music and get paid rapidly and reliably.
Bancor ⁷⁰	An "Internet of Value" will enable anyone to adopt a digital token that will help them get paid for writing articles, commenting in discussions, or selling goods or services.
Gram ⁷¹	A social media application can integrate an advanced multi-blockchain architecture that can handle thousands of distributed applications for the network's users.

⁶⁵ *The Golem Project: Crowdfunding Whitepaper*, GOLEM (Nov. 2016), <http://golem.network/crowdfunding/Golemwhitepaper.pdf> [<http://perma.cc/8JH2-6RXB>]. Golem was among the top 100 coins by market capitalization in early 2020. See, e.g., *All Cryptocurrencies*, *supra* note 20.

⁶⁶ *Kin: A Decentralized Ecosystem of Digital Services for Daily Life*, KIN 6 (May 2017), http://www.kin.org/static/files/Kin_Whitepaper_V1_English.pdf [<http://perma.cc/Q6HK-5VNG>]. See also Levine, *supra* note 50 (describing Kik Interactive's dispute with the SEC over registration of this white paper).

⁶⁷ *Filecoin: A Decentralized Storage Network*, PROTOCOL LABS 1 (July 19, 2017), <http://filecoin.io/filecoin.pdf> [<http://perma.cc/QT2A-5KL8>]. Filecoin was among the top 200 coins by market capitalization in early 2020. See, e.g., *All Cryptocurrencies*, *supra* note 20.

⁶⁸ *Steem: An Incentivized, Blockchain-based, Public Content Platform*, STEEM 5 (June 2018), <http://steem.com/SteemWhitePaper.pdf> [<http://perma.cc/SA96-AXTU>].

⁶⁹ *Musicoin: A Decentralized Platform Revolutionizing Creation, Distribution and Consumption of Music*, MUSICOIN 12 (Oct. 2017), <http://drive.google.com/file/d/1KVvcwPKUngMNffgWW65k1p4UvKg5QG0u/view> [<http://perma.cc/626S-MDGH>].

⁷⁰ Eyal Hertzog, Guy Benartzi & Galia Benartzi, *Bancor Protocol: Continuous Liquidity for Cryptographic Tokens Through Their Smart Contracts*, 3 (Mar. 18, 2018), http://storage.googleapis.com/website-bancor/2018/04/01ba8253-bancor_protocol_whitepaper_en.pdf [<http://perma.cc/LDB7-39VS>]. Bancor was among the top 200 coins by market capitalization in early 2020. See, e.g., *All Cryptocurrencies*, *supra* note 20.

⁷¹ Nikolai Durov, *Telegram Open Network*, 3, 79, 101, 124 (Mar. 2, 2019), <http://test.ton.org/ton.pdf> [<http://perma.cc/E8TD-Q7Y6>].

OpenST ⁷²	Individuals and companies will mint and issue branded, digital tokens that users can easily exchange for other branded tokens or for a “Simple Token”—a convertible store of value across many brands.
Syncfab ⁷³	In the Industrial Internet of Things (IIOT), tokens will incentivize manufacturers and supply chain vendors to exchange time-sensitive supply and demand information more rapidly, as well as competitively sensitive data, like purchase histories, to decentralize and revolutionize manufacturing.
Smart VALOR ⁷⁴	Memberships in a new form of stock exchange will be made available in a token sale, with the members then participating in a Swiss-based marketplace for crypto coins—including asset-backed tokens relating to emerging companies, venture capital, private equity, and real estate funds.
Gram ⁷⁵	All information, including photo and video, will be sold at its market-clearing price using a token that approximates in value a share of all the information available for purchase with the token; miners will maintain the metadata on available information and its pricing to earn tokens.
Fetch.ai ⁷⁶	Using a new platform for trading machine intelligence, data can “sell itself” over a decentralized protocol that operates more efficiently, and in more dimensions, than traditional software retailers.

The Bitcoin paper initiated the tradition of crypto coin offerings heralding a new form of economic organization in which the users of a public network, by joining the processing power and storage capacity of their collective computing resources, would forge an alternative to government-backed financial intermediaries keeping currency users “honest.”⁷⁷

⁷² Benjamin Bollen et al., *OpenST Protocol White Paper*, 22 (June 1, 2018), <http://drive.google.com/file/d/0Bwgf8QuAEOb7Z2xIeU1Ld21DSjQ/view> [<http://perma.cc/MY7Q-NUQV>]. See also GITHUB PAGES, [github.io](https://github.com) [<http://perma.cc/2BWB-WW6H>].

⁷³ *Decentralized Manufacturing*, SYNCFAB 7 (Aug. 3, 2018), http://syncfab.com/SyncFab_MFG_WP.pdf [<http://perma.cc/3Y84-Z73Q>].

⁷⁴ *Decentralized Marketplace for Tokenized Alternative Investments*, SMART VALOR 2, 9–10, 60 (Nov. 2018), <http://res.smartvalor.com/pblic/SMART-VALOR-WhitePaper.pdf> [<http://perma.cc/4PJG-E2XJ>] (arguing that it is a basic human right for people all over the world to possess and make their own decisions about their money and investments).

⁷⁵ Durov, *supra* note 71, at 45.

⁷⁶ Toby Simpson, Arthur Meadows & Humayun Sheikh, *Fetch.AI: Token Overview: A Decentralised World for the Future Economy*, 7, 22 (Feb. 2019), <http://fetch.ai/wp-content/uploads/2019/10/Fetch.AI-Token-Overview.pdf> [<http://perma.cc/G5EC-6GAW>]. Fetch.ai was among the top 200 coins by market capitalization in early 2020. See, e.g., *All Cryptocurrencies*, *supra* note 20.

⁷⁷ See Nakamoto, *supra* note 37, at 1 (arguing that the decentralized public ledger of

Altcoins and other crypto coins continue to argue in their vein, speculating that and providing reasons why peer-to-peer administration of a collective resource such as a payment, storage, or media network will benefit coin holders. Table 2 presents examples of peer-to-peer arguments from influential or otherwise noteworthy white papers for ICOs.

Table 2: P2P Arguments in White Papers

Bitcoin ⁷⁸	A peer-to-peer network could document a public record of token spending, using cryptographic proof-of-work timestamps to distribute the role of verifying transactions and token status to computer nodes distributed across a network, rather than using a ledger controlled by a trusted central party.
Ethereum ⁷⁹	In the future, autonomous agents will exist on blockchains to allocate resources and currency balances, offering an alternative to centralized corporations.
Ripple ⁸⁰	There is a need for a global, distributed payment-processing system which would resist both fraud and authentic but conflicting (double-spent) transactions.
EOS ⁸¹	Blockchain users typically write distributed applications or DApps for customers in finance, logistics, media, retail sales, or the sharing economy, and want a decentralized and open-entry community in which to do so, secured with cryptography and a “Constitution” for dispute-resolution.
TRON ⁸²	By acquiring the BitTorrent software and protocol, the TRON token founders are bringing DApps and smart contracts to end users who can now directly exchange information or value without trusted central intermediaries.

token spending, maintained simultaneously at many nodes and updated on a peer-to-peer basis, would be computationally too voluminous to tamper with if user nodes remain “honest” for the most part: “The system is secure as long as honest nodes collectively control more CPU power than any cooperating group of attacker nodes.”).

⁷⁸ *See id.*

⁷⁹ Buterin, *supra* note 56.

⁸⁰ Schwartz et al., *supra* note 62; *see also* ARVIND NARAYANAN ET AL., BITCOIN AND CRYPTOCURRENCY TECHNOLOGIES: A COMPREHENSIVE INTRODUCTION 36 (2016); STEFAN LOESCH, A GUIDE TO FINANCIAL REGULATION FOR FINTECH ENTREPRENEURS 31 (2018); BERNARDO NICOLETTI, THE FUTURE OF FINTECH: INTEGRATING FINANCE AND TECHNOLOGY IN FINANCIAL SERVICES 4 (1st ed. 2017); Robert Pemberton, THE RISE OF RIPPLE - THE STARTER GUIDE TO UNDERSTANDING RIPPLE CRYPTOCURRENCY AND WHAT YOU NEED TO KNOW (2018),

<http://www.scribd.com/read/367903350/The-Rise-of-Ripple-The-Starter-Guide-to-Understanding-Ripple-Cryptocurrency-and-What-You-Need-to-Know> [<http://perma.cc/KN5C-CZBP>].

⁸¹ Grigg, *supra* note 63, at 7.

⁸² *Tron: Advanced Decentralized Blockchain Platform*, *supra* note 64, at 4–5, 7, 37.

Golem ⁸³	Computers assembled in a peer-to-peer network can share the network's applications, computing capacity, and other infrastructure, unrestricted by the rules of proprietary cloud solutions or payment processors. When combined with storage coins like Filecoin and the capabilities of other Ethereum tokens, the Golem network could enable even large streaming services to run in decentralized ways.
Kin ⁸⁴	The Kin token will be a "decentralized ecosystem of digital services for daily life," enabling creators for social media and other industries and even casual browsers to be paid for their contributions to public discourse.
Filecoin ⁸⁵	A "peer-to-peer algorithmic market[]" for storage will be more efficient than "monolithic" options.
Steem ⁸⁶	Social media intermediaries such as Facebook and YouTube could be replaced with a blockchain for attribution and payments, with fast-launching digital assets maintained using a decentralized blockchain and open-source software.
Musicoin ⁸⁷	A Pay Per Play Smart Contract will harness peer-to-peer file sharing's efficiency while promoting remuneration of musicians at higher levels than the record labels or streaming giants plan to allow.
Bancor ⁸⁸	A "Smart Token" network will facilitate a multiplicity of highly liquid low-fee mechanisms of digital exchange.
OpenST ⁸⁹	Users who join an open network of networks can leverage "crypto-economics" to mint and issue their own tokens that may be tethered to a convertible crypto-assets backed by a "value blockchain."
Syncfab ⁹⁰	In the Industrial Internet of Things (IIOT), tokens will incentivize manufacturers and supply chain vendors to exchange time-sensitive supply and demand information more rapidly, as well as competitively sensitive data like purchase histories, to decentralize and revolutionize manufacturing.
Smart Valor ⁹¹	A peer-to-peer marketplace for tokens and token-backed investments achieves scale by incentivizing issuers and investors to participate and then leveraging the transactional relationships among its participants, thereby promoting the

⁸³ GOLEM, *supra* note 65.

⁸⁴ Defendant's Answer at 82, SEC v. Kik Interactive Inc., No. 19-cv-5244 (S.D.N.Y. Aug. 6, 2019) <http://www.courtlistener.com/recap/gov.uscourts.nysd.516941/gov.uscourts.nysd.516941.22.0.pdf> [<http://perma.cc/YD6G-U73W>].

⁸⁵ PROTOCOL LABS, *supra* note 67, at 1.

⁸⁶ STEEM, *supra* note 68, at 31.

⁸⁷ MUSICOIN, *supra* note 69, at 12.

⁸⁸ Hertzog et al., *supra* note 70, at 5.

⁸⁹ Bollen et al., *supra* note 72, at 5.

⁹⁰ SYNCFAB, *supra* note 73, at 18.

⁹¹ SMART VALOR, *supra* note 74, at 9, 58.

	“basic human right for people all over the world to possess and make their own decisions about their money and investments.”
Gram ⁹²	A multi-blockchain infrastructure, potentially integrated with a social messaging application, could execute and secure millions of transactions per second, scaling up crypto applications.
Fetch.ai ⁹³	Decentralized software agents collaborating in an “ <i>economic Internet</i> ” will offer themselves and seek out their brethren to perform computing tasks including machine learning, in exchange for tokens.

C. AppCoins as Microtransactions to Access Expressive Content

With appcoins, software developers will enjoy more open and social—and perhaps more fair and just—ways of finding users.⁹⁴ Cryptocurrencies and token standards enable investors and startup founders to collaborate smoothly and quickly.⁹⁵ A market for apps worth an estimated \$200 billion annually in this decade will be revolutionized, and become more efficient.⁹⁶ The West Coast credo of “beg for forgiveness, don’t ask for permission” has ensured that work on ICOs has continued despite many warnings and great uncertainty, with those from the East Coast and other regions who are more cautious being left behind.⁹⁷

Appcoins could serve as decentralized versions of the ubiquitous microtransactions that dominate video games

⁹² See Durov, *supra* note 71, at 3, 101.

⁹³ See Simpson et al., *supra* note 76, at 7.

⁹⁴ See APPCOINS OFFICIAL, *AppCoins ICO is Closed—Hardcap Reached!*, MEDIUM (Dec. 21, 2017), <http://appcoins.medium.com/appcoins-ico-is-closed-hardcap-reached-3a653e6b9208> [<http://perma.cc/6WJY-L5SU>] (“AppCoins is a new cryptocurrency that all Aptoide users can earn and spend inside app stores. Once the protocol is implemented, AppCoins can be adopted by any app store, regardless of the operating system. The protocol creates a new shared ecosystem among all app stores, powered by the blockchain. AppCoins is to become the new universal language of the global app economy.”); see also *AppCoins: Redesigning the App Economy*, *supra* note 14, at 1, 4–6, 16–18 (explaining how AppCoins will target problems facing traditional app stores such as their closed systems for app approval, high advertising costs as a percentage of initial revenue, low levels of participation in in-app economies, and high intermediary charges reducing developers’ margins).

⁹⁵ See generally *Why Aptoide?*, APTOIDE (2020), <http://en.aptoide.com/company/> [<http://perma.cc/QEG7-R5U4>] (providing information on “[a]ll the advantages of the blockchain technology” for over three hundred million users in addition to stating that “[r]ecent studies prove that Aptoide is the safest Android app store”).

⁹⁶ See *AppCoins: Redesigning the App Economy*, *supra* note 14, at 19.

⁹⁷ Future Tech Podcast, *supra* note 51; see also *Our Clients: Angellist*, COOLEYGO (2020), <http://www.cooleygo.com/clients/angellist/> [<http://perma.cc/B5KT-YFPE>] (describing the “ask for forgiveness, not permission” approach as the corporate policy of Angellist, a California-based company designed to help startups change the world through permissionless innovation); see generally ADAM THIERER, PERMISSIONLESS INNOVATION: THE CONTINUING CASE FOR COMPREHENSIVE TECHNOLOGICAL FREEDOM 7 (2016).

marketed on a freemium model, or as existing in persistent online multiplayer worlds. As of nearly five years ago, Electronic Arts earned about two-thirds of a billion dollars in revenue from microtransactions in sports games such as *FIFA 16*.⁹⁸ In 2019, the top five free-to-play video games each made more than \$1.5 billion in revenue, driven largely by microtransactions.⁹⁹ There was an estimated \$90 billion in freemium revenue in 2019.¹⁰⁰ Cryptocurrencies may make microtransactions more lucrative and efficient for developers of games, or other creative works, because the administrative costs and intermediary fees may be reduced.¹⁰¹

Using units such as the Satoshi, one hundred million of which equal one Bitcoin, gatherers or curators of data to which others might like to subscribe—like sports data for fantasy football players or financial data for market timers—could be paid in efficient microtransactions, including subscription or usage fees.¹⁰² Microtransactions of this kind establish a persistent market in virtual worlds alongside the traditional market in game graphics and engines sold on recorded media, such as CDs or DVDs.¹⁰³ In addition, combining microtransactions with crypto coins liberates players from the arbitrary discretion of the publisher in the traditional model, which results in days and days of work on characters and buildings being deleted.¹⁰⁴ An appcoin enables the players of

⁹⁸ See Matthew R. Yost, *Video Game Gambling: Too Big a Bet for New Jersey*, 70 RUTGERS UNIV. L. REV. 335, 341 (2017); see also Rebecca E. McDonough, *Loot Boxes: "It's a Trap!"*, 46 N. KY. L. REV. 62, 85 (2019) (defining microtransactions and identifying them as responsible for "81% of the approximately \$36 billion generated in revenue for the video game industry" in 2017 alone).

⁹⁹ See Eric Griffith, *2019's Top 'Free' Games Each Made \$1.5 Billion-Plus*, PCMAG (Jan. 13, 2020), <http://www.pcmag.com/news/2019s-top-free-games-each-made-15-billion-plus> [<http://perma.cc/3UVN-UG9E>].

¹⁰⁰ See *id.*

¹⁰¹ See MARC ANDREESSEN, *Why Bitcoin Matters*, NEW YORK TIMES (Jan. 21, 2014, 11:54 AM), <http://dealbook.nytimes.com/2014/01/21/why-bitcoin-matters> [<http://perma.cc/YA6S-QDQ9>]; Ioannis Lianos, *Blockchain Competition: Gaining Competitive Advantage in the Digital Economy—Competition Law Implications*, in REGULATING BLOCKCHAIN: TECHNO-SOCIAL AND LEGAL CHALLENGES 329, 335 (Philipp Hacker et al. eds. 2019); see also PEDRO FRANCO, UNDERSTANDING BITCOIN: CRYPTOGRAPHY, ENGINEERING, AND ECONOMICS 187 (2014) ("It is often said that Bitcoin makes micropayments viable, given Bitcoin's low fees.").

¹⁰² See SUREDBITS, *Micro-Transactions with Crypto*, MEDIUM (Aug. 17, 2018), <http://medium.com/suredbits/micro-transactions-with-crypto-117d6b72eebf> [<http://perma.cc/3SFU-5X8M>].

¹⁰³ Cf. Kirill Shilov, *3 Innovative Ways the Blockchain Can Ramp Up Your In-game Revenue*, HACKER NOON (Mar. 12, 2018), <http://hackernoon.com/3-innovative-ways-the-blockchain-can-ramp-up-your-in-game-revenue-c00cc92c661e> [<http://perma.cc/A4AR-BF99>] (stating that players are "more than happy to pay for in-game extras" and spend as much as they want because they can access otherwise unavailable characters and items).

¹⁰⁴ See BITGUILD, *BitGuild: Changing Games Forever*, MEDIUM (Mar. 1, 2018),

some games to secure their creations on the blockchain, protecting players from these abrupt losses.¹⁰⁵

Appcoins can help check the power of what regulators suggest is an emerging monopoly or oligopoly concerning the monetization of online content.¹⁰⁶ The market power of prominent

<http://medium.com/the-notice-board/bitguild-changing-games-forever-132d97332f00>
[<http://perma.cc/882S-HHNV>].

¹⁰⁵ See *id.* (“On the BitGuild platform, everything you earn in-game belongs to you and exists securely on the blockchain. As long as you control your private key, passphrase, and any secure information tied to your wallet, everything you’ve collected while playing is owned by you.”); see also *BitGuild: Blockchain Gaming Platform*, BITGUILD 10–12 (2018), http://static1.squarespace.com/static/5d522e48bfd7c300010f2c3c/t/5e27ed4400949e3e253e0541/1579674994414/BitGuild_Whitepaper_v0.73_EN.pdf [<http://perma.cc/J2A5-L6AR>]; *Meet Your New Blockchain Wallet*, ENJIN (2020), <http://enjin.io/software/wallet> [<http://perma.cc/8U77-2VFQ>] (“Securely store, buy, and sell blockchain assets and collectibles.”); Jeffrey Kaufmann, (July 2016) (LBRY Plan 6-10 on file with author) (offering an example of a blockchain-based social media platform that allows for content monetization); cf. Tim Copeland, *Taking Ethereum Mainstream: Social Media App Pepo Goes Live at Devcon 5*, DECRYPT (Oct. 8, 2019), <http://decrypt.co/10091/taking-ethereum-mainstream-social-media-app-pepo-goes-live-at-devcon-5> [<http://perma.cc/43XL-5WA3>] (describing Pepo, a crypto app that “allows for fast, cheap micropayments” on the Ethereum blockchain so users can “get paid in crypto when people upvote [or like their] 30-second videos”) (alteration in original); Jason Goldberg, *Thanks to Better UX, This Year Dapps Will Go Mainstream*, YAHOO FINANCE (Dec. 30, 2019), <http://finance.yahoo.com/news/thanks-better-ux-dapps-mainstream-103954527.html> [<http://perma.cc/R6VK-7XE5>] (“In Pepo, every tap of the ‘like’ button transfers a token—giving a whole new meaning and value to likes. Suddenly, content creators can be instantly rewarded by their fans and earn real money for their creations, without any middlemen.”); Gabriel Rubinstein, *This Blockchain-Based Social Media Network is the First Apple Pay Approved DApp*, COINTELEGRAPH (Nov. 15, 2019), <http://cointelegraph.com/news/this-blockchain-based-social-media-network-is-the-first-apple-pay-approved-dapp> [<http://perma.cc/3UTF-87LX>] (noting that Pepo “tokens are used to tip the creators [chosen by the user], but also can be spent on [gift cards via] the marketplace”) (alteration in original).

¹⁰⁶ See, e.g., FIN. TIMES LTD., *Big Tech Chiefs Cast as 21st Century Robber Barons at US Hearing*, IRISH TIMES (July 30, 2020, 12:31 AM), <http://www.irishtimes.com/business/technology/big-tech-chiefs-cast-as-21st-century-robber-barons-at-us-hearing-1.4317722> [<http://perma.cc/Z29K-MKB3>] (“The hearing cast the leaders of 21st century corporate America as modern robber barons”); Keach Hagey & Rob Copeland, *Justice Department Ramps up Google Probe, with Heavy Focus on Ad Tools*, WALL ST. J. (Feb. 5, 2020), http://www.wsj.com/articles/justice-department-ramps-up-google-probe-with-heavy-focus-on-ad-tools-11580904003?reflink=share_mobilewebshare&shareToken=stb1a208f43b2d40b2b3ad302dd94fde86 (noting that an inquiry by the Justice Department into antitrust violations involving the Internet is focusing on Google’s presence “at every link in the complex chain between online publishers and advertisers, giving it unique power over the monetization of digital content”); Pontin, *supra* note 13 (describing Internet intermediaries taking a large share of app developers’ online earnings); see also Taylor Hatmaker & Devin Coldewey, *Secret Documents from US Antitrust Probe Reveal Big Tech’s Plot to Control or Crush the Competition*, TECHCRUNCH (July 31, 2020, 12:07 PM), <http://techcrunch.com/2020/07/31/house-antitrust-investigation-documents> [<http://perma.cc/7YQU-J8N3>] (suggesting that internal Google documents produced “during the House Judiciary’s marathon hearing” may support some legislators’ theory that Google strove to “control or crush” competitors like YouTube because Google officials expressed “alarm about the ‘orthogonal threat’ posed by social networks and other websites with ‘high entertainment value’”) (emphasis added); Rachel Denney, *Will Antitrust Probe into Google Start Crackdown on Big Tech?*, IMPACT (Feb. 13, 2020),

platforms upon which creators rely to earn a living is even being compared to the railroad monopolies of the nineteenth century, which treated farmers and shippers arbitrarily and charged unjust and discriminatory rates in the years prior to the Interstate Commerce Act, thereby increasing enforcement of the Sherman Act.¹⁰⁷

Unlike corporate stock, which is an investment that will pay off or not based on the efforts of corporate management and does not confer an entitlement to use of a product or service, ICOs and appcoins such as Ether unlock network assets or application data.¹⁰⁸ Ether, as the Ethereum network token, leverages computing power for applications to use.¹⁰⁹ Most ICOs are not typical business shares or partnership contracts sold as investments without any utility in terms of software or content.¹¹⁰ Crypto coins are uniquely valuable because they are linked to creatively-developed applications and reams of networked data, as a result of which commentators use phrases such as “utility tokens” and “functional cryptocurrencies.”¹¹¹

<http://www.impactbnd.com/blog/will-antitrust-probe-into-google-start-crackdown-on-big-tech> [<http://perma.cc/G25H-LNS9>] (“Google controls multiple key platforms that companies use to place advertisements, such as YouTube, Google’s search engine, and a host of platforms that fall under ‘Google Network.’”); *id.* (“Google Ad Manager—which is comprised of DoubleClick Ad Exchange and DoubleClick for publishers—controls a significant portion of the infrastructure for monetizing digital content.”); Paresch Dave & Sheila Dang, *Explainer: Advertising Executives Point to Five Ways Google Stifles Business*, REUTERS (Sept. 11, 2019, 1:29 PM), <http://www.reuters.com/article/us-tech-antitrust-google-explainer/explainer-advertising-execs-point-to-five-ways-google-stifles-business-idUSKCN1VW2L9> [<http://perma.cc/ZP6P-8SAH>] (“The ubiquity of Google’s ad server provides virtually total control over which ads are shown and monetized for the majority of the Internet[.]”) (alteration in original); Gerrit De Vynck, *Google’s Chrome Becomes Web ‘Gatekeeper’ and Rivals Complain*, BLOOMBERG (May 28, 2019, 5:00 AM), <http://www.bloomberg.com/news/articles/2019-05-28/google-s-chrome-becomes-web-gatekeeper-and-rivals-complain> (programmers of rival internet browsers argue that Google stifles competition with its Chrome browser); Benjamin Edelman, *Does Google Leverage Market Power Through Tying and Bundling?*, 11 J. COMPETITION L. & ECON. 365, 365–66 (2015) (arguing that Google dominates some aspects of internet use by tying practices in order “to expand its dominance into additional markets”).

¹⁰⁷ See ELEC. FRONTIER FOUND., *Before the Federal Trade Commission: Hearings on Competition and Consumer Protection in the 21st Century*, FED. TRADE COMM’N 1, 7–10 (Nov. 15, 2018), http://www.ftc.gov/system/files/documents/public_comments/2018/11/ftc-2018-0076-d-0021-162495.pdf [<http://perma.cc/64GP-LGS8>] (comparing dominant internet platforms to “essential [railroad] facilities, resources, and services,” with user data and connections serving as the virtual “bridge[s]” from market to market within the analogy) (alteration in original).

¹⁰⁸ See Marco Santori, *Appcoin Law: ICOs the Right Way*, COINDESK (Nov. 9, 2016, 12:11 PM), <http://www.coindesk.com/appcoin-law-part-1-icos-the-right-way> [<http://perma.cc/7E3K-QRGG>].

¹⁰⁹ See Zuluaga, *supra* note 17, at 2, 6 n.22.

¹¹⁰ See *id.* at 2–3.

¹¹¹ See *id.* at 1, 4; DE FILIPPI & WRIGHT, *supra* note 48, at 100–01.

III. CATEGORIZING CRYPTO COIN OFFERINGS AS EXPRESSION

Cryptocurrency offerings and appcoins in particular have proliferated in a cloudy regulatory environment.¹¹² Yet increasingly, vague criminal statutes threaten coders who offer computer files that operate in some ways like money, in other ways like software, and in still other ways like the stuff of cryptography or futurism in literature.¹¹³ This Part explains the First Amendment standards applicable to crypto coin speech, and advocates narrowing the scope of securities laws.

A. First Amendment Analogies

Analogies often prove to be critical to the resolution of important First Amendment cases. For example, is a ban on selling pharmacies' data on doctors' prescription trends more like a "ban on the sale of cookbooks" (as the Supreme Court held), or more like a ban on the sale of private medical records to other

¹¹² See Gian Volpicelli, *The \$3.8bn Cryptocurrency Bubble Is a Huge Deal. But It Could Break the Blockchain*, WIRED UK (July 14, 2017), <http://www.wired.co.uk/article/what-is-initial-coin-offering-ico-token-sale> [<http://perma.cc/E3XH-4S3A>]; see also Bhaskar et al., *supra* note 12, at 554 (suggesting that most ICOs involve incentivizing labor that builds out a network of content or transactions, by enabling the laborers to "exit" after selling coins on an exchange or to another company in a merger or acquisition, or after coins are exchanged for stock subject to an Initial Public Offering (IPO)); cf. Marco Santori, *Appcoin Law: ICOs the Right Way*, COINDESK (Nov. 9, 2016, 11:11 AM), <http://www.coindesk.com/appcoin-law-part-1-icos-the-right-way> [<http://perma.cc/7E3K-QRGG>] (defining appcoins as ICOs that are not securities because, inter alia, they are useful to access network or encrypted application assets—like condominium shares, their "sellers" may not be the ones creating the trading market that could lead buyers to profit from coin trading, or the profits from trading will vary due to the efforts of appcoin buyers who are the ones building out the user-generated content in a computer network, game, or virtual world); Reinaldo Ferreira, *\$18 Million ICO: Social Android App Store Aptoide Launches AppCoins*, EU-STARTUPS (Nov. 8, 2017), <http://www.eu-startups.com/2017/11/social-android-app-store-aptoide-launches-appcoins-with-a-e60-million-ico/> [<http://perma.cc/GD5S-WQ7Q>] (explaining how AppCoins compatible with the Aptoide app store will enable video-game and virtual-world players to be rewarded with virtual currency for their time, which they can then use to access new or better games or world content, or to engage in trades with other players).

¹¹³ See *Winters v. New York*, 333 U.S. 507 (1948) (statute prohibiting publishing pattern of stories promoting "bloodshed" was void for vagueness under First Amendment despite being justified by state as preventing criminal incitement); cf. *Brown v. Ent. Merchs. Ass'n*, 564 U.S. 786, 805 (2011) (statute making it a crime to sell violent video games to minors was overly restrictive of protected software-encoded speech, as well as underinclusive with respect to other violent content); *Ent. Software Ass'n v. Blagojevich*, 469 F.3d 641, 650 (7th Cir. 2006) (statute making it a crime to sell sexually explicit video games to minors "sweeps too broadly" in violation of First Amendment, although court did not reach vagueness issue discussed by lower court); *James v. Meow Media, Inc.*, 300 F.3d 683, 699 (6th Cir. 2002) (warning that imposing tort liability on violent video games would raise First Amendment concerns). Futurism is a genre or movement that concerns "events and trends of the future, or which anticipate[s] the future." *Futurism*, LEXICO (last visited Nov. 16, 2020), <https://www.lexico.com/en/definition/futurism> [<http://perma.cc/4YM5-HHYU>].

doctors in search of new patients?¹¹⁴ Does a regulation prohibiting the use of corporate funds in the creation of videos attacking a likely presidential candidate justified as preventing bribery, or does it amount to government censorship of political speech, even on advocacy websites?¹¹⁵ Is an inaccurate credit report, bond rating, or search engine result more like a defamatory statement or more like profit-seeking ad activity?¹¹⁶

Commercial speech is accorded less protection than non-commercial speech.¹¹⁷ Indeed, the Court has recognized that the Government has wider latitude to regulate the former.¹¹⁸ However, commercial speech is not inherently undeserving of protection; the Court has observed: “It is clear . . . that speech does not lose its First Amendment protection because money is

¹¹⁴ Sorrell v. IMS Health Inc., 564 U.S. 552, 570–72 (2011); *id.* at 586–90 (Breyer, J., joined by Ginsburg, J., and Kagan, J., dissenting) (analogizing regulation at issue to regulation of privacy of patient records generated by provider participation in federal insurance programs and to how “FDA oversees the form and content of labeling, advertising, and sales proposals of drugs, but not of furniture” as content-neutral regulation subject to lesser scrutiny).

¹¹⁵ See Citizens United v. Fed. Election Comm’n, 558 U.S. 310, 337 (2010) (pressing the website analogy as a “classic example[] of censorship”); *id.* at 447 (Ginsburg, J., joined by Breyer, J., and Sotomayor, J., concurring in part and dissenting in part) (analogizing case at bar to political corruption through “selling access,” an act mere degrees away from bribery).

¹¹⁶ Compare Dun & Bradstreet, Inc. v. Greenmoss Builders, Inc., 472 U.S. 749, 762 (1985) (analogizing credit reports to advertising regulation for purposes of First Amendment limitations on actions for libel and slander relating to a matter of public concern); *with id.* at 788–90 (Brennan, J., joined by Marshall, J., Blackmun, J., and Stevens, J., dissenting) (pressing the analogy between credit reports and more political speech or press writing). See also *id.* at 762 n. 8 (plurality opinion) (“The dissent suggests that our holding today leaves all credit reporting subject to reduced First Amendment protection. This is incorrect. The protection to be accorded a particular credit report depends on whether the report’s ‘content, form, and context’ indicate that it concerns a public matter.”). See also *Compuware Corp. v. Moody’s Invs. Servs., Inc.*, 499 F.3d 520, 529–30 (6th Cir. 2007) (applying First Amendment actual malice standard to claim based on credit rating of a public company); *Search King Inc. v. Google Tech., Inc.*, No. CIV-02-1457, 2003 WL 21464568, at *4 (W.D. Okla. May 27, 2003) (rejecting argument that accuracy of search engine results could be regulated as purportedly objective service offered for profit); Paula Lauren Gibson, *Does the First Amendment Immunize Google’s Search Engine Results from Government Antitrust Scrutiny?*, 23 COMPETITION: J. OF ANTITRUST & UNFAIR COMPETITION L. SECTION STATE BAR CAL., no. 1, 2014, at 125 (citing, *inter alia*, *Langdon v. Google, Inc.*, 474 F. Supp. 2d 622 (D. Del. 2007)); Frank Pasquale, *Rankings, Reductionism, and Responsibility*, 54 CLEV. ST. L. REV. 115 (2006).

¹¹⁷ See *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm’n of N.Y.*, 447 U.S. 557, 562–63 (1980) (“The Constitution therefore accords a lesser protection to commercial speech than to other constitutionally guaranteed expression.”).

¹¹⁸ *Id.* at 563 (“The First Amendment’s concern for commercial speech is based on the informational function of advertising. Consequently, there can be no constitutional objection to the suppression of commercial messages that do not accurately inform the public about lawful activity. The government may ban forms of communication more likely to deceive the public than to inform it . . .”).

spent to project it, as in a paid advertisement of one form or another.”¹¹⁹

Speech may be denied First Amendment protection if it offers or facilitates a transaction that is itself illegal.¹²⁰ Speech, however, is not denied First Amendment protection simply because it invites or induces a payment of funds.¹²¹ An advertisement for ordinary products or services may deserve some manner of constitutional protection because it serves the public interest.¹²² For this reason, speech inviting a money-for-content transaction may enjoy protection akin to that recognized for strictly political or non-profit speech.¹²³ In addition to information touching upon ethical and political considerations, such as whether goods are “Made in the USA” or produced without animal cruelty, price and quality information is similarly important to consumers in a capitalist democracy.¹²⁴ As a result, even the laws of commercial libel and deceptive advertising are hemmed in by free speech law.¹²⁵

Crypto coin speech is quite unlike that of a lawyer, accountant, or other professional, whose speech is ripe for regulation.¹²⁶ In First Amendment case law relating to lawyers, the Supreme Court and the lower federal courts have stressed the fiduciary relationship between lawyers and their clients.¹²⁷ Advice rendered by a fiduciary

¹¹⁹ *Va. State Bd. of Pharmacy v. Va. Citizens Consumer Council*, 425 U.S. 748, 761 (citing *Buckley v. Valeo*, 424 U.S. 1, 35–59 (1976); *New York Times Co. v. Sullivan*, 376 U.S. 254, 266 (1964)).

¹²⁰ *See Va. State Bd. of Pharmacy*, 425 U.S. at 759 (citing *Pittsburgh Press Co. v. Pittsburgh Comm’n on Hum. Relations*, 413 U.S. 376, 384 (1973)) (although advertisements for employment may be “commercial speech,” they can be prohibited if discriminatory, because discriminatory hiring is an illegal transaction).

¹²¹ *See id.* at 761; *see also NAACP v. Button*, 371 U.S. 415, 429 (1963); *Jamison v. Texas*, 318 U.S. 413, 417 (1943); *Cantwell v. Connecticut*, 310 U.S. 296, 306–07 (1940); *Riley v. Nat’l Fed’n of the Blind of N.C., Inc.*, 487 U.S. 781 (1988) (striking down state statute compelling disclosure of contributors’ actual contributions and imposing a licensing requirement on professional fundraisers).

¹²² *See Va. State Bd. of Pharmacy*, 425 U.S. at 764 (citing *Bigelow v. Virginia*, 421 U.S. 809 (1975)); *Chicago Joint Bd. v. Chicago Tribune Co.*, 435 F.2d 470 (7th Cir. 1970); *Fur Info. & Fashion Council, Inc. v. E. F. Timme & Son*, 364 F. Supp. 16 (S.D.N.Y. 1973)).

¹²³ *See Va. State Bd. of Pharmacy*, 425 U.S. at 761 (citing *Bigelow v. Virginia*, 421 U.S. 809 (1975)).

¹²⁴ *See id.* at 765; *FTC v. Procter & Gamble Co.*, 386 U.S. 568, 603–604 (1967) (Harlan, J., concurring).

¹²⁵ *See Va. State Bd. of Pharmacy*, 425 U.S. at 762–65.

¹²⁶ *See Dun & Bradstreet, Inc. v. Greenmoss Builders, Inc.*, 472 U.S. 749, 758 n.5 (1985) (stating in dicta that “the power of the State to license lawyers, psychiatrists, and public school teachers—all of whom speak for a living—is unquestioned”) (citing *Thomas v. Collins*, 323 U.S. 516 (1945)).

¹²⁷ *See Milavetz, Gallop & Milavetz, P.A. v. United States*, 559 U.S. 229, 250–52 (2010) (while “[u]njustified or unduly burdensome disclosure requirements offend the First Amendment by chilling protected speech,” regulation of advertising at issue was constitutional because its requirements “govern only professionals who offer bankruptcy-

is often delivered in private rather than in a public forum like a newspaper or a website, and therefore does not implicate the public's weighty interest in the "free flow of . . . information."¹²⁸ Moreover, the patient or other client has a greater interest in informed, accurate disclosures from an existing fiduciary than a person whose will is not overborne by in-person solicitation of specialized services.¹²⁹ This interest is attenuated when it comes to solicitation by strangers, or advice received from them.¹³⁰

related services to consumer debtors."); *Va. State Bd. of Pharmacy*, 425 U.S. at 770 ("Virginia is free to require whatever professional standards it wishes of its pharmacists . . ."); *Fla. Bar v. Went For It, Inc.*, 515 U.S. 618, 631 (1995) (Florida Bar may regulate timing of attorney direct-mail solicitations to forestall "the demonstrable detrimental effects that such 'offense' has on the profession it regulates"); *Ibanez v. Fla. Dep't of Bus. & Prof'l Reg.*, 512 U.S. 136, 139 (1994) (upholding regulation of attorney advertising under scheme suggesting that "only licensed CPA's may 'practice public accounting'" (citing *Fl. Stat. § 473.322(1)(a)*); *Zauderer v. Office of Disciplinary Couns. of the Sup. Ct. of Ohio*, 471 U.S. 626, 629 (1985) (discussing professional regulation); *Lowe v. SEC*, 472 U.S. 181, 229–30 (1985) (noting that although licensing of professional speech—often arising in fiduciary relationships—does not trigger heightened First Amendment scrutiny, "a regulation of speech" rather than the "profession" would necessitate increased scrutiny) (citing *Village of Schaumburg v. Citizens for a Better Env't*, 444 U.S. 620 (1980)); *Riley*, 487 U.S. at 813 (Rehnquist, J., joined by O'Connor, J., dissenting) ("For example, bar admission requirements may have some incidental effect on First Amendment protected activity by restricting a petitioner's right to hire whomever he pleases to serve as his attorney, but we have never suggested that state regulation of admission to the bar should generally be subject to strict scrutiny.").

¹²⁸ *Dun & Bradstreet*, 472 U.S. at 762; *see also Lovell v. Griffin*, 303 U.S. 444, 452 (1938) ("The liberty of the press is not confined to newspapers and periodicals. It necessarily embraces pamphlets and leaflets.").

¹²⁹ *See, e.g., Planned Parenthood of Se. Pa. v. Casey*, 505 U.S. 833, 884 (1992) (discussing state law requiring doctors to disclose certain risks while advising patients regarding services related to childbirth and abortion); *Wollschlaeger v. Governor*, 848 F.3d 1293, 1308–09 (11th Cir. 2017) (en banc) (where there is a law regulating a professional who has a "personal nexus" to a particular client and is not "speaking generally," rational basis review may apply) (citing *Lowe*, 472 U.S. at 232 (White, J., dissenting)); *Pickup v. Brown*, 740 F.3d 1208, 1229–31 (9th Cir. 2013) (as amended on rehearing) (upholding a law providing a certain form of therapy and distinguishing it from a law regulating abstract medical speech including "recommending" that same therapy); *Locke v. Shore*, 634 F.3d 1185, 1191 (11th Cir. 2011) ("There is a difference, for First Amendment purposes, between regulating professionals' speech to the public at large versus their direct, personalized speech with clients."); *Pearson v. McCaffrey*, 139 F. Supp. 2d 113, 121 (D.C. Cir. 2001) ("During a doctor-patient conversation, physicians are engaging in the practice of medicine, which has a long history of being regulated to protect the public safety."); *but see Wollschlaeger*, 848 F.3d at 1309–10 (holding, in striking down a state law prohibiting certain forms of medical advice or discussions, that "characterizing speech as conduct is a dubious constitutional enterprise" because, for example, "doctor-patient communications about medical treatment receive substantial First Amendment protection") (internal citation omitted); *Conant v. Walters*, 309 F.3d 629, 637–39 (9th Cir. 2002) (rejecting an attempt to regulate ways in which "a doctor's 'recommendation' of marijuana may encourage illegal conduct by the patient," and holding that professionals "have rights to speak freely subject only to the government regulating with 'narrow specificity.'") (quoting *NAACP v. Button*, 371 U.S. 415, 433 (1963)).

¹³⁰ *See infra* notes 206–207.

Professional speech and reports by hired experts (such as credit bureaus) are also purportedly objective and therefore verifiable.¹³¹ By contrast, the utility and ultimate value of any particular crypto coin depends upon many debatable premises and unpredictable future trends. While attorney and other professional advertising may involve similarly subjective and unverifiable claims about qualifications, respective track records, and likelihood of various outcomes including large damages recoveries in the case of personal-injury lawyers in particular, such advertising is unlike crypto white papers in that it is often “solely motivated by the desire for profit”¹³² and “[does] no more than propose a commercial transaction.”¹³³

Professional regulation does not dictate an orthodox viewpoint in a “matter[] of opinion or force citizens to confess by word or act their faith therein.”¹³⁴ By contrast, regulating crypto white papers may censor calls for fundamental economic and social change, a form of speech that has been deemed “the essence of self-government.”¹³⁵ It is a matter of great public concern whether an alternative to the fraud-prone system of banking and investment (a system arguably driving historic levels of inequality) can be built, just as it was of great import whether the Internet would make everyone a publisher. Thus, crypto speech should take its place “on the highest rung of the hierarchy of First Amendment values.”¹³⁶ For speech at that level, the constitutional presumption should be that “more speech” is preferable to less, unless an “emergency” is threatened.¹³⁷

¹³¹ *See id.*

¹³² *Dun & Bradstreet*, 472 U.S. at 762.

¹³³ *Pittsburgh Press Co. v. Pittsburgh Com. on Human Rels.*, 413 U.S. 376, 385 (1973). *See also Dun & Bradstreet*, 472 U.S. at 791–92 (Brennan, J., joined by Marshall, J., Blackmun, J., and Stevens, J., dissenting) (“In every case in which we have permitted more extensive state regulation on the basis of a commercial speech rationale the speech being regulated was pure advertising—an offer to buy or sell goods and services or encouraging such buying and selling.”).

¹³⁴ *Zauderer*, 471 U.S. at 651.

¹³⁵ *Garrison v. Louisiana*, 379 U.S. 64, 74–75 (1964). *See also New York Times Co. v. Sullivan*, 376 U.S. 254, 269 (1964).

¹³⁶ *NAACP v. Claiborne Hardware Co.*, 458 U.S. 886, 913 (1982) (quoting *Carey v. Brown*, 447 U.S. 455, 467 (1980)).

¹³⁷ *44 Liquormart v. Rhode Island*, 517 U.S. 484, 498 (1996); *compare id.* at 497 (discussing situations in which less speech might be permissible as a state-law mandate). *See also Citizens United v. Fed. Election Comm’n.*, 558 U.S. 310, 361 (2010) (“[I]t is our law and our tradition that more speech, not less, is the governing rule.”); *Lorillard Tobacco Co. v. Reilly*, 533 U.S. 525, 571 (2001) (“The First Amendment . . . constrains state efforts to limit advertising of tobacco products, because so long as the sale and use of tobacco is lawful for adults, the tobacco industry has a protected interest in communicating information about its products and adult customers have an interest in

Investment fraud and other misleading commercial speech may be regulated without running afoul of the First Amendment.¹³⁸ In this regard, it is useful to compare price regulation of a goods and services with more general, quasi-political statements about a company's business practices or its working environment, including matters subject to collective bargaining. Statements relating to price, the contents of goods, the qualifications of a person to perform a service for a fee, and the like, do little more than propose a commercial transaction, and often do *not* contain more general or political opinions.¹³⁹ On the other hand, compelled disclosures of controversial statements of opinion or belief raise different and heightened levels of constitutional scrutiny.¹⁴⁰ The Supreme Court, for example, has distinguished between a basic, factual disclosure that a fundraiser is paid to raise funds, from a disclosure of more

receiving that information."); *Rubin v. Coors Brewing Co.*, 514 U.S. 476, 497 (1995) (observing that "more speech and a better informed citizenry are among the central goals of the Free Speech Clause."); *Riley v. Nat'l Fed'n of the Blind*, 487 U.S. 781, 800 (1988) (explaining that public education is less speech-restrictive alternative to compelling or dictating the content of speech by adding unwanted disclosures or other verbiage).

¹³⁸ See, e.g., *Ohralik v. Ohio State Bar Ass'n*, 436 U.S. 447, 456 (1978) ("Numerous examples could be cited of communications that are regulated without offending the First Amendment, such as the exchange of information about securities . . ."); *Paris Adult Theatre I v. Slaton*, 413 U.S. 49, 64 (1973) (stating in dicta that "neither the First Amendment nor 'free will' precludes States from having 'blue sky' laws to regulate what sellers of securities may write or publish about their wares."); *Bulldog Inv. Gen. P'ship v. Sec'y of the Commonwealth*, 460 Mass. 647, 663, 668 (2011) (concluding that because Supreme Court authority declares securities regulation to be consistent with First Amendment rights in commercial speech area, it passed First Amendment muster to require disclosure statements).

¹³⁹ See, e.g., *Greater New Orleans Broad. Ass'n v. United States*, 527 U.S. 173, 193–94 (1999) (broadcasting of casino advertising may be regulated to prevent harm to gamblers or the public, in part because "It is well settled that the First Amendment mandates closer scrutiny of government restrictions on speech than of its regulation of commerce alone.") (citing *Trs. of the State Univ. of N.Y. v. Fox*, 492 U.S. 469, 480 (1989)); *N.Y. State Rest. Ass'n v. N.Y. City Bd. of Health*, 556 F.3d 114, 132 (2d Cir. 2009) (holding that state requirement that restaurants post caloric content data on menus was permissible under First Amendment because "Commercial disclosure requirements are treated differently from restrictions on commercial speech because mandated disclosure of accurate, factual, commercial information does not offend the core First Amendment values of promoting efficient exchange of information or protecting individual liberty interests.") (quoting *Nat'l Elec. Mfrs. Ass'n v. Sorrell*, 272 F.3d 104, 114–15 (2d Cir. 2001); *Pharm. Care Mgmt. Ass'n v. Rowe*, 429 F.3d 294, 308–11 (1st Cir. 2005) (upholding pharmaceutical benefit manager disclosure requirements as regulating only "expression related solely to the economic interests of the speaker and its audience.") (quoting *El Dia, Inc. v. P. R. Dept. of Consumer Affairs*, 413 F.3d 110, 115 (1st Cir. 2005), and citing *Central Hudson Gas & Electric Corp. v. Public Serv. Comm'n of N. Y.*, 447 U.S. 557, 561 (1980); *Anschutz Corp. v. Merrill Lynch & Co.*, 785 F. Supp. 2d 799, 824, 830 (N.D. Cal. 2011) (negligent misrepresentation claims related to investing are not subject to dismissal under First Amendment); *Abu Dhabi Com. Bank v. Morgan Stanley & Co.*, 651 F. Supp. 2d 155, 176 (S.D.N.Y. 2009) (similar).

¹⁴⁰ *Riley*, 487 U.S. at 796.

complex ideas and claims with which the speaker may disagree.¹⁴¹ Requiring a credit rating agency to adopt standards might also rise to the level of compelled speech.¹⁴² As a result, not every statement by an agency that harms another business or investor can be silenced or corrected without abridging the freedom of speech.

In addressing a case involving the publication of an article relating to a security within the SEC's jurisdiction, the D.C. Circuit in 1988 rejected the notion that enjoining such an article would constitute a forbidden prior restraint or an impermissible intrusion of securities law into protected commercial speech under the First Amendment.¹⁴³ The court reasoned that "areas of extensive economic supervision," such as securities and competition law, are subject to the deferential scrutiny of commercial speech regulations.¹⁴⁴ Moreover, the court analogized the regulation of such articles—even those that resembled journalism rather than proxy or offering statements—to the regulation of attorney conduct.¹⁴⁵

However, the continued viability of the D.C. Circuit's 1988 ruling is questionable. While at the time misleading speech seemed to be completely outside the First Amendment's impact zone, recent cases undermine this view.¹⁴⁶ In *Ibañez v. Florida*

¹⁴¹ See *id.* at 796–99, n.11 (making this distinction). See also *Hurley v. Irish-American Gay, Lesbian & Bisexual Grp. of Bos.*, 515 U.S. 557, 559, 577 (1995) (explaining that it violates the First Amendment to force a speaker to be associated with a message with which the speaker does not agree); *Mia. Herald Publ'g Co. v. Tornillo*, 418 U.S. 241, 256 (1974) (holding that newspapers may not be required to serve as a neutral forum in which candidates for public office may respond to attacks); *Thomas v. Collins*, 323 U.S. 516, 539–40 (1945) (observing that a regulation which merely requires a speaker to present identification might be permissible, while one that more aggressively censors or shapes the speech would not be absent some commercial nexus); *Glickman v. Wileman Bros. & Elliot, Inc.*, 521 U.S. 457, 481 (1997) (Souter, J., dissenting) (noting that "compelling cognizable speech officially is just as suspect as suppressing it, and is typically subject to the same level of scrutiny."); *Compuware Corp. v. Moody's Invs. Servs., Inc.*, 499 F.3d 520, 533–34 (requiring company to change its rating of company offering would violate First Amendment); *Jefferson Cty. Sch. Dist. v. Moody's Invs. Servs., Inc.*, 175 F.3d 848, 856–58 (requiring company to change its ratings of a bond would be impermissible under First Amendment); *Wollschlaeger v. Governor*, 848 F.3d 1293, 1308 (observing that courts are "properly skeptical of the government's ability to calibrate the propriety and utility of speech on certain topics."); *Search King Inc. v. Google Tech., Inc.*, No. CIV-02-1457, 2003 WL 21464568, at *4 (requiring Google to up-rank website to avoid interfering with site's business interests might infringing Google's freedom of speech) (citing *Mia. Herald*, 418 U.S. at 256).

¹⁴² See *Compuware*, 499 F.3d at 533–34.

¹⁴³ *SEC v. Wall St. Publ'g Inst., Inc.*, 851 F.2d 365, 369–73 (D.C. Cir. 1988).

¹⁴⁴ See *id.* at 373 (citing *Meese v. Keene*, 481 U.S. 465 (1987); *Zauderer v. Office of Disciplinary Couns. of the Sup. Ct. of Ohio*, 471 U.S. 626, 650).

¹⁴⁵ *Commodity Trend Serv., Inc. v. Commodity Futures Trading Comm'n*, 149 F.3d 679, 686 (7th Cir. 1998).

¹⁴⁶ See Rebecca Tushnet, *Truth and Advertising: The Lanham Act and Commercial*

Department of Business & Professional Regulation, the Supreme Court distinguished between categories of “potentially” and *actually* misleading speech, stating that only the latter is subject to prohibition even in professional contexts of advertising services offered for a fee.¹⁴⁷ In *United States v. Alvarez*,¹⁴⁸ the Court deemed efforts to boost one’s image with an inflated and misleading military record to be a potentially First Amendment-protected part of “dynamic” public debates.¹⁴⁹ In *Expressions Hair Design v. Schneiderman*, the Court rejected an effort to regulate the prices displayed or announced by retailers, even though the Solicitor General of the United States warned that the law regulated conduct alone and that such a ruling might jeopardize false advertising law.¹⁵⁰ The following year, the Court concluded that regulating the manner in which unlicensed pro-life “pregnancy centers” masqueraded as medical clinics at the expense of unwitting patients violated the First Amendment. The state of California had passed a law requiring such centers to disclose that they were not licensed medical centers and did not employ doctors. California defended the law, arguing that the centers were affected as “treatment” providers or advertisers of treatment for a fee.¹⁵¹ The disclosure requirement was justified only by a fear of potential harm, according to the Court, and therefore imposed an unjustified burden.¹⁵² In short,

Speech Doctrine, TRADEMARK LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH, 294–99 (Graeme Dinwoodie & Mark Janis eds. 2008), <http://ssrn.com/abstract=1014418> [<http://perma.cc/BX2R-USM9>] (citing, inter alia, Robert Post, *The Constitutional Status of Commercial Speech*, 48 UCLA L. REV. 1, 22 (2000)); cf. *Ohralik v. Ohio State Bar Ass’n*, 436 U.S. 447, 464 (1978).

¹⁴⁷ 512 U.S. 136, 136–51, 152 (1994).

¹⁴⁸ 567 U.S. 709, 710 (2012).

¹⁴⁹ *Id.* at 728; see also *id.* at 735–39 (Breyer, J., joined by Kagan, J., concurring in the judgment) (noting that lying without foreseeable injury to others may be protected speech); *id.* at 733, 749 (Alito, J., joined by Scalia, J., and Thomas, J., dissenting) (conceding that lying to “further philosophical or scientific debate” might be constitutionally protected); Louis W. Tompros et al., *The Constitutionality of Criminalizing False Speech Made on Social Networking Sites in a Post-Alvarez, Social Media-Obsessed World*, 31 HARV. J.L. & TECH. 65, 92–102 (2017) (suggesting that criminalizing false statements on Internet that do not cause foreseeable harm is unconstitutional after *Alvarez*). Whether the defendant in *Alvarez* stood to gain commercially from the statement at issue is debatable. See *Alvarez*, 567 U.S. at 714 (he was not applying for a job or “financial benefits”); *id.* at 744 (Alito, J., joined by Scalia, J., and Thomas, J., dissenting) (claiming to have been awarded a military honor could lead to “other material rewards, such as lucrative contracts”).

¹⁵⁰ 137 S. Ct. 1144, 1150–51 (2017); see Br. of Amicus Curiae, at 20–31, *Expressions Hair Design, v. Schneiderman*, 137 S. Ct. 1144 (U.S. brief filed Nov. 21, 2016) (No. 15-1391), <https://www.scotusblog.com/wp-content/uploads/2016/11/15-1391-amicus-neither-party-U.S.pdf> [<http://perma.cc/22W7-DH9L>] (arguing that the law passed First Amendment muster by halting “potentially or demonstrably misleading advertising”).

¹⁵¹ *Nat’l Inst. of Family & Life Advocs. v. Becerra*, 138 S. Ct. 2361, 2369–78 (2018), *rev’g Nat’l Inst. of Family & Life Advocs. v. Harris*, 839 F.3d 823 (9th Cir. 2016).

¹⁵² *Id.* at 2377.

contemporary First Amendment doctrine relies on “counterspeech” as an available method of resolving the potential harms of unregulated public discourse, and disfavors preemptive bans.¹⁵³

While registration of traditional securities might therefore add to the body of information available to the public,¹⁵⁴ registration requirements for coins such as Ether or Bitcoin would chill a substantial amount of coin speech without necessarily adding much information to the marketplace.¹⁵⁵ Disclosure of the information required to register a traditional securities offering may be primarily factual and uncontroversial, but forcing a utility coin, service coin, or appcoin promoter to call a coin a “security” and to call itself a shareholder or founder of a company mandates a controversial statement of a subjective legal conclusion.¹⁵⁶ Such decisions present serious First Amendment dangers by allowing government officials to determine whether a potential speaker has satisfied “necessarily subjective” standards to qualify as an eligible speaker.¹⁵⁷ Even in the context of advertising services to the general public, a disclosure requirement violates the freedom of speech if it relates to *someone else’s* services or is “unduly burdensome.”¹⁵⁸ It is improper under *Zauderer* and its progeny to mandate a disclosure that is inaccurate or one that is controversial.¹⁵⁹ A

¹⁵³ *Alvarez*, 567 U.S. at 726; Dan L. Burk, *Patents and the First Amendment*, 96 WASH. U.L. REV. 197, 248–50 (2018) (arguing that patents issued on methods or systems of “digital writing” or “Internet communications” warrant strict scrutiny regardless of the purpose of Congress in regulating such methods or systems under *Reed*); Lisa P. Ramsey, *Increasing First Amendment Scrutiny of Trademark Law*, 61 SMU L. REV. 381, 431–41 (2008) (arguing that trademark doctrines trigger strict scrutiny by discriminating based upon subject matter via content-based speech restrictions).

¹⁵⁴ See *SEC v. Wall St. Publ’g Inst., Inc.*, 851 F.2d 365, 374–76 (D.C. Cir. 1988).

¹⁵⁵ See *Thomas v. Collins*, 323 U.S. 516, 539 (1945) (“As a matter of principle a requirement of registration in order to make a public speech would seem generally incompatible with an exercise of the rights of free speech and free assembly.”); *Lovell v. City of Griffin*, 303 U.S. 444, 451 (1938) (requiring one to apply for a permit to speak “strikes at the very foundation of the freedom of the press by subjecting it to license and censorship”); William Hinman, Director, Bur. of Corp. Fin., SEC, Digital Asset Transactions: When Howey Met Gary (Plastic) (June 14, 2018), <https://www.sec.gov/news/speech/speech-hinman-061418> [<http://perma.cc/B7VP-LNMS>] (Bitcoin and Ether) (questioning value of requiring registration of Bitcoin, for example, as security regulated by SEC).

¹⁵⁶ See *infra* note 202 and accompanying text.

¹⁵⁷ *Metromedia, Inc. v. City of San Diego*, 453 U.S. 490, 510 (1981); see also *Lovell v. City of Griffin*, 303 U.S. 444, 450 (1938); *Near v. Minnesota ex rel. Olson*, 283 U.S. 697 (1931).

¹⁵⁸ Nat’l Inst. of Family & Life Advocs., 138 S. Ct. at 2372, 2377–78.

¹⁵⁹ See *American Beverage Ass’n v. City & County of San Francisco*, 916 F.3d 749, 764–67 (9th Cir. 2019) (Christen, J., joined by Thomas, J., concurring in the result) (inaccurate or scientifically controversial disclosure fails under *Zauderer*); *National Ass’n of Mfrs. v. SEC*, 800 F.3d 518, 530 (D.C. Cir. 2015) (holding that a non-factual or ideologically-loaded disclosure fails muster under *Zauderer*); *Ent. Software Ass’n v.*

compelled statement that Bitcoin or a utility token is a security might be inaccurate, while a compelled statement that a particular cryptocurrency can be subject to an accounting of revenue or profits like a typical corporation would certainly be controversial.

Major crypto coin white papers are starkly dissimilar to IPO registration statements or other corporate proxy statements, which may be regulated extensively with little fear of First Amendment challenges to the regulatory scheme, or at least under traditional First Amendment doctrine predating the widespread adoption of the Internet.¹⁶⁰ Unlike corporations issuing stock, but like other open source software projects, many cryptocurrencies lack a centralized issuer.¹⁶¹ Although other tokens are explicitly marketed as investments and lose all their value due to the incompetence or criminality of their founders and/or promoters, so-called “service tokens” or appcoins as well as payment or “currency” tokens operate less like corporations and more like subscriptions or monies.¹⁶² Consumers do not

Blagojevich, 469 F.3d 641, 652 (7th Cir. 2006) (questioning a mandate of somewhat subjective “18” label on “sexually explicit” video games as when not being a mere factual disclosure); *Wash. Post v. McManus*, 355 F. Supp. 3d 272, 282, 296–300 (D. Md. 2019) (A disclosure requirement for paid digital communications on online platforms, such as political ads on news websites, could not be sustained as a requirement to disclose uncontroversial information under *Zauderer*. The court noted that “laws compelling publishers to make election-related disclosures [do not] have much of a history in this country.”), *aff’d*, 944 F.3d 506 (4th Cir. 2019).

¹⁶⁰ See, e.g., *supra* note 146.

¹⁶¹ See, e.g., ARVIND NARAYANAN, JOSEPH BONNEAU, EDWARD FELTEN, ANDREW MILLER, & STEVEN GOLDFEDER, *BITCOIN AND CRYPTOCURRENCY TECHNOLOGIES: A COMPREHENSIVE INTRODUCTION* 25 (2016); cf. Philip Oettinger and Andrew Ellis, *Preparing a Successful IPO in 2018*, HARVARD LAW SCH. FORUM ON CORP. GOV. (Jan. 30, 2018), <https://corpgov.law.harvard.edu/2018/01/30/preparing-a-successful-ipo-in-2018/> [<http://perma.cc/B8QR-FRFM>] (companies considering an IPO typically have accounting standards, corporate governance and committee charters, chief financial officers, and the like).

¹⁶² See DMITRI BOREIKO, *BLOCKCHAIN-BASED FINANCING WITH INITIAL COIN OFFERINGS (ICOS): FINANCIAL INDUSTRY DISRUPTION OR EVOLUTION?* 141–155 (2019) (describing varying functional use cases and characteristics of cryptocurrencies, including to purchase a service or serve as a medium of exchange); Phillip Hacker & Chris Thomale, *Crypto-Securities Regulation, ICOs, Token Sales and Cryptocurrencies under EU Financial Law*, 15 EURO. CO. & FIN. L. REV. 645, draft at 33–37 (2018), <http://ssrn.com/abstractid=3075820> (similar); see also Philipp Maume & Mathias Fromberger, *Regulation of Initial Coin Offerings: Reconciling U.S. and E.U. Securities Laws*, 19 CHI. J. INT’L L. 548, 558–59, nn. 70–75 (2019); see also Aurelio Gurrea-Martinez & Nydia Remolina León, *The Law and Finance of Initial Coin Offerings, in CRYPTOASSETS: LEGAL, REGULATORY, AND MONETARY PERSPECTIVES* 117, 120–29 (Chris Brummer ed., 2019) (citing, inter alia, Hacker & Thomale, *supra*); cf. Andrea Ordanini et al., *Crowd-funding: Transforming Customers Into Investors Through Innovative Service Platforms*, 22 J. SERV. MGMT. 443, 444 (2011) (predicting that certain types of services would lend themselves to having their development funded by their own customers, via crowdfunding); see generally Dirk A. Zetsche, Ross P. Buckley, & Douglas W. Arner, *The*

“invest” in money or services, but rather earn or buy them; a coin without an “enterprise” is therefore not a “security” that should have to be registered unless exempt, among other requirements.¹⁶³ While the distinction might be lost if crypto coins also had to preregister, this is an argument against enacting such a requirement in the first place.

A crypto white paper, in many ways, is like computer scientists’ research output, or (less charitably) like an article in a magazine quoting a corporate executive touting his or her corporation, or else a scientific study funded by a corporation to boost its sales by praising its products.¹⁶⁴ This is highly significant, for it supports the contention that a white paper or other crypto coin article or social media post does not “retain[] its commercial character when it is inextricably intertwined with otherwise fully protected speech.”¹⁶⁵ Unlike a pure advertisement (e.g. for a specific car at a specific price), many white papers do not state a price, and instead read like lengthy tracts of peer-to-peer software coding, coupled with arguments for decentralized economic power and new forms of online activity and human relationships.¹⁶⁶ The paper that popularized the digital coin movement, the Bitcoin white paper, emphasized cybersecurity advantages of a digital cash system based on coins secured by a peer-to-peer methodology using a lot of work to make the ledger of transactions difficult to forge or mutilate as hackers array computer power against the ledger.¹⁶⁷ If cybersecurity in 2008 was a scholarly discipline (notably in computer science) related to reducing the perpetration of fraud using the Internet, Bitcoin promised to advance it by harnessing the users of the coin to generate a tamper-resistant chronological list of past Bitcoin transfers, preventing digital check kiting.¹⁶⁸ White

Distributed Liability of Distributed Ledgers: Legal Risks of Blockchain, 2018 U. ILL. L. REV. 1361 (2018).

¹⁶³ See, e.g., 15 U.S.C. § 77b(a)(1) (omitting money within definition of “security” even while defining “security” to include “investment contract” and providing numerous examples of such contracts or securities); 15 U.S.C. § 78c(a)(10) (excluding “currency” from definition of “security” even while defining “security” to include “investment contract”).

¹⁶⁴ See, e.g., Andreessen, *supra* note 101.

¹⁶⁵ Riley v. Nat’l Fed’n of the Blind, 487 U.S. 781, 796 (1988).

¹⁶⁶ See NARAYANAN ET AL., *supra* note 161, at 25 (exploring computer science of cryptocurrencies in depth); cf. Bernstein v. United States Dep’t of Just., 176 F.3d 1132, 1141 (1999) (finding that computer source code is protected as free speech).

¹⁶⁷ See Nakamoto, *supra* note 37, at 1.

¹⁶⁸ See Nakamoto, *supra* note 37, at 1; cf., e.g., *The Cybersecurity Partnership Between the Private Sector and Our Government: Protecting Our National and Economic Security: Joint Hearing Before the S. Comm. on Commerce, Sci., & Transp. and the S. Comm. on Homeland Sec. & Governmental Aff.*, 113th Cong. 11–12 (2013) (statement of Janet Napolitano, Secretary, U.S. Department of Homeland Security) (noting that fraud by

papers may also summarize other tokens or their own white papers, which is something not often seen in corporate disclosure filings.¹⁶⁹

Peer-to-peer payment systems often resemble labor unions' organizational structure to a greater extent than they resemble corporations or partnership shares. In attempting to evade the "excessive fees" of banks, payment processors, app stores dominated by oligopolistic Internet platforms, and the like, crypto coin founders and subscribers exercise their basic First Amendment rights to freedom of association and joint economic activism.¹⁷⁰ While the users of such systems may expect to earn a profit from successful management of their assets within the system, a potentially larger portion of the value of payment tokens derives from their utility in various marketplaces, rather than their being invested and earning a return like money that buys a share of stock.¹⁷¹ A union pension likewise depends on the

counterfeiting was a key cybersecurity priority during the Obama administration); PRESIDENT'S INFO. TECH. ADVISORY COMM., CYBER SECURITY: A CRISIS OF PRIORITIZATION 8 (2005), http://www.nitrd.gov/pitac/reports/20050301_cybersecurity/cybersecurity.pdf [<http://perma.cc/SXY4-ECHY>]. Check kiting is the informal name for obtaining money or assets in the control of a financial institution by knowingly and with the intent to defraud making a false representation of having enough funds to pay for a purchase or debt, such as by writing a completely bogus check with no funds there to cover the amount. *See, e.g.*, 18 U.S.C. § 1344; *United States v. Doherty*, 969 F.2d 425, 428 (7th Cir. 1992).

¹⁶⁹ *See generally, e.g.*, Paulo Trezentos & Diego Pires, *AppCoins: Distributed and Trusted App-based Transactions Protocol* (Aptoide, Working Paper No. 0.40d, 2017), http://web.archive.org/web/20171105090613/https://appcoins.io/pdf/appcoins_whitepaper.pdf [<http://perma.cc/DJ6G-6LCP>]; Buterin, *supra* note 56.

¹⁷⁰ *See* *United Transp. Union v. Mich. Bar*, 401 U.S. 576, 577–80, 586 (1971) (holding that union had right to offer Illinois attorneys to Michigan clients, in probable violation of Michigan laws governing unlicensed provision of legal advice by those lacking admission to the state bar, nonlawyers sharing or controlling a lawyer's fees, nonlawyer soliciting clients for lawyers, etc. Court invoked "the First Amendment principle that groups can unite to assert their legal rights *as effectively and economically as practicable.*") (emphasis added) (first citing *United Mine Workers v. Ill. State Bar Ass'n*, 389 U.S. 217 (1967); then citing *Brotherhood of R.R. Trainmen v. Va. State Bar*, 377 U.S. 1 (1964); and then citing *NAACP v. Button*, 371 U.S. 415 (1963)); *see also*, *In re Primus*, 436 U.S. 412, 426 (1978) ("The Court has held that the First and Fourteenth Amendments prevent state proscription of a range of solicitation activities by labor unions seeking to provide low-cost, effective legal representation to their members."); *Talley v. California*, 362 U.S. 60, 64 (1960) (noting right to hand out information without regulation of one's identity); *United Transp. Union*, 401 U.S. at 586–600 (Harlan, J., concurring in part and dissenting in part) (reciting various potential violations of Michigan law governing attorney registration and conduct, and similar violations in *Brotherhood of R.R. Trainmen*); *State Emp. Bargaining Agent Coalition v. Rowland*, 718 F.3d 126, 133–34 (2d Cir. 2013) (noting First Amendment also protects economic or other "associations") (quoting *NAACP v. Alabama ex rel. Patterson*, 357 U.S. 449, 460–61 (1958)); *Boardman v. Inslee*, 354 F. Supp. 3d 1232, 1247 (W.D. Wash. 2019) (noting that "[c]onditioning public employment on union membership, no less than on political association, inhibits protected association and interferes with government employee's [sic] freedom to associate," justifying "strict" First Amendment scrutiny) (quoting *Rowland*, 718 F.3d at 133–35)).

¹⁷¹ *See Int'l Brotherhood of Teamsters v. Daniel*, 439 U.S. 551, 562 (1979) (concluding

efforts of the portfolio or investment managers to maximize the return on investment while minimizing risk, ensuring that the defined benefit or other retirement arrangement can be paid in the end.¹⁷² Still, focusing only on the extent to which pension funds are “invested” in order to mandate registration under securities laws improperly ignores other aspects of a union and its pension fund.¹⁷³ Requiring preregistration as an approved speaker on such topics as the trading of cryptocurrencies restricts “[t]he right thus to discuss, and inform people concerning, the advantages and disadvantages of [crypto coin open-source software projects] and joining them”; this right “is protected not only as part of free speech, but as part of free assembly.”¹⁷⁴ Moreover, the fact that some white papers might not require registration if they reject founder involvement in developing the token ecosystem on principle, or forswear any commercial use of the token under any circumstances, should trigger strict scrutiny of *Howey*-style tests for registration.¹⁷⁵

Crypto coin collectives also implicate the “right to work for a living.”¹⁷⁶ The right to work for some manner of compensation may be protected under the Fifth Amendment from federal interference, and under some combination of the Fifth and the Fourteenth Amendments at the state level.¹⁷⁷ Laws with

that a pension fund was not a security within meaning of anti-fraud provisions of Securities Acts because larger portion of its value came from employer contributions in exchange for labor than from investments by fund manager(s)).

¹⁷² See *id.* (noting that fund’s investments made tens of millions of dollars); see also *Manhattan Ford Lincoln, Inc. v. UAW Local 259 Pension Fund*, 331 F. Supp. 3d 365, 382–83, 393 (D.N.J. 2018) (noting that union pensions depend for viability on “long-term investment-return assumption[s] [as to] . . . how much its current assets will grow through investments” and are subject to federal law that makes plan sponsors liable to overage of vested benefits vs. contributions plus investment-generated assets) (first citing Kathryn J. Kennedy, *Pension Funding Reform: It’s Time to Get the Rules Right (Part 1)*, 108 TAX NOTES 907, Appendix A (Aug. 22, 2005); and then citing 29 U.S.C. § 1393(a)–(c)).

¹⁷³ See *Daniel*, 439 U.S. at 558–62.

¹⁷⁴ *Thomas v. Collins*, 323 U.S. 516, 519, 524–25, 532 (1945) (finding prohibition of union solicitation for compensation unless one registers and obtains an organizer’s card was unconstitutional for this reason); see also *id.* at 550 (Roberts, C.J., dissenting) (noting requirement to register for the card under Texas law).

¹⁷⁵ See *Barr v. Am. Ass’n of Pol. Consultants, Inc.*, 140 S. Ct. 2335, 2347 (2020) (first citing *Reed v. Town of Gilbert*, 576 U.S. 155, 163–64; and then citing *Sorrell v. IMS Health Inc.*, 564 U.S. 552, 563–64) (stating strict scrutiny applies to any law that “focuses on whether [a person] is *speaking* about a particular topic.”).

¹⁷⁶ *Examining Bd. of Eng’rs v. Otero*, 426 U.S. 572, 604 (1976).

¹⁷⁷ See *Otero*, 426 U.S. at 604 (noting the Fourteenth Amendment demands respect for right to earn a living) (citing *Truax v. Raich*, 239 U.S. 33, 41 (1915)); see also, e.g., *Greene v. McElroy*, 360 U.S. 474, 492 (1959) (“[T]he right to hold specific private employment and to follow a chosen profession free from unreasonable governmental interference comes within the ‘liberty’ and ‘property’ concepts of the Fifth Amendment.”); *Schwartz v. Bd. of Bar Exam’rs*, 353 U.S. 232, 246–47 (1957) (finding the Fourteenth Amendment’s Due Process Clause protects those pursuing legal occupations from

unpredictable reach or breadth may be void for vagueness as denials of due process of law; they may also violate equal protection principles if they fail to apply to all actors, instead singling out an unlucky few.¹⁷⁸

Increasingly since the 1960s, the Fifth Amendment has invalidated statutes or ordinances that (1) are framed indefinitely or (2) that invite random or discriminatory application to the detriment of economic or political activity.¹⁷⁹ As a criminally enforceable norm, the prohibition against selling “*Howey*” securities absent a registration or applicable exemption raises particularly acute vagueness concerns.¹⁸⁰ Additionally, the

irrational exclusion from it); *Meyer v. Nebraska*, 262 U.S. 390, 399 (1923) (stating the Fourteenth Amendment liberty interests under Due Process Clause extend “to engage in any of the common occupations of life”); *Truax*, 239 U.S. at 41 (“[T]he right to work for a living in the common occupations of the community is of the very essence of the personal freedom and opportunity that it was the purpose of the [Fourteenth] Amendment to secure.”); Timothy Sandefur, *The Common Law Right to Earn a Living*, 7 INDEPENDENT REV. 69, 70, 75 (2002) (citing right recognized in Magna Carta to buy and sell and arguing that right to earn a living should be protected under Constitution’s Article IV, concerning “privileges and immunities which are, in their nature, fundamental; which belong, of right, to the citizens of all free governments.”) (quoting *Corfield v. Coryell*, 6 F. Cas. 546, 551–52 (C.C.D.Pa. 1823) (No. 3230)); see generally Timothy Sandefur, *The Right to Earn a Living*, 6 CHAP. L. REV. 207 (2003) (exploring various sources of the right to pursue a lawful occupation).

¹⁷⁸ See *Village of Willowbrook v. Olech*, 528 U.S. 562, 564 (2000) (“[T]he purpose of the equal protection clause . . . is to secure every person within the State’s jurisdiction against intentional and arbitrary discrimination, whether occasioned by express terms of a statute or by its improper execution through duly constituted agents.”) (internal quotation marks omitted).

¹⁷⁹ See, e.g., *City of Akron v. Akron Ctr. for Reprod. Health*, 462 U.S. 416, 451–52 (1983), *abrogated by* *Planned Parenthood v. Casey*, 505 U.S. 833 (1992); *Kolender v. Lawson*, 461 U.S. 352, 353–54 (1983); *Grayned v. City of Rockford*, 408 U.S. 104 (1972); *Papachristou v. City of Jacksonville*, 405 U.S. 156, 162 (1972); *Keyishian v. Bd. of Regents of Univ. of N.Y.*, 385 U.S. 589, 604 (1967); *AMA v. FTC*, 638 F.2d 443, 452–53 (2d Cir. 1980); *Standard Oil Co. v. FTC*, 577 F.2d 653, 661–62 (9th Cir. 1978) (quoting Joseph A. Kaplan & Sons, Inc. v. FTC, 347 F.2d 785, 791 (D.C. Cir. 1965)); Evan Bernick, *Towards a Consistent Economic Liberty Jurisprudence*, 23 GEO. MASON L. REV. 479, 481–89 (2016) (collecting cases). See also *Cantwell v. Connecticut*, 310 U.S. 296, 308 (1940) (striking down a “a statute sweeping in a great variety of conduct under a general and indefinite characterization, and leaving to the executive and judicial branches too wide a discretion in its application”); *Hague v. C.I.O.*, 307 U.S. 496, 515–16 (1939) (“[U]ncontrolled official suppression of the privilege [of expression]” is unconstitutional as “arbitrary suppression of free expression of views”).

¹⁸⁰ See *Mukong v. Cameroon*, Communication No. 458/1991, U.N. Doc. No. CCPR/C/51/D/458/1991, ¶9.8 (views adopted July, 21 1994) (detention under arbitrary legal norms that violate freedom of expression); Human Rights Committee, General Comment No. 34: Article 19: Freedoms of Opinion and Expression, ¶47, U.N. Doc. No. CCPR/C/GC/34 (Sept. 12 2011) (“Defamation laws must be crafted with care to ensure that they comply with paragraph 3, and that they do not serve, in practice, to stifle freedom of expression.”). See also *Gorji-Dinka v. Cameroon*, Communication No. 1134/2002, U.N. Doc. No. CCPR/C/83/D/1134/2002, ¶5.1 (Mar. 17 2005); *Van Alphen v. Netherlands*, Communication No. 305/1988, U.N. Doc. No. CCPR/C/39/D/305/1988, ¶5.6 (July, 23 1990).

international human right of freedom of expression is also infringed if civil or criminal sanctions are unpredictable or speech-suppressive, such as by imposing to jail terms or fines.¹⁸¹

B. Commercial Speech Challenges

The First Amendment provides little protection for false or misleading speech.¹⁸² For example, prior restraints on commercial speech may be permissible when false or misleading statements are made in connection with the marketing of pharmaceutical ingredients or testimonials about their effectiveness, as such speech does no more than propose a commercial transaction.¹⁸³

A “reasonable relationship” test, or form of rational basis review, applies to law governing an “ordinary” commercial sale.¹⁸⁴ This is similar to the “permissive” standard of review for disclosure rules, where a market actor is compelled by law to speak in a manner that includes “purely factual and uncontroversial information.”¹⁸⁵

There is a suggestion that speech “incidental” to unlawful “conduct” (whether an offer, sale, failure to register within a certain profession or trade, etc.) should be entirely excluded from First Amendment coverage.¹⁸⁶ If incitement of imminent lawless

¹⁸¹ See *Reno v. Am. Civ. Liberties Union*, 521 U.S. 844, 871–73 (1997); *Semler v. Or. State Bd. of Dental Exam’r*, 294 U.S. 608, 609, 612 (1935). See also *Van Alphen*, CCPR/C/39/D/305/1988, at ¶5.6; *Mukong*, CCPR/C/5/D/458/1991, at ¶9.7; *Gorji-Dinka*, CCPR/C/83/D/1134/2002, at ¶5.1.

¹⁸² See *Va. State Bd. of Pharmacy v. Va. Citizens Consumer Council, Inc.*, 425 U.S. 748, 771–72 n.24 (1976) (noting that “truthful information” may not be suppressed even when “wholly false” or merely “deceptive or misleading” speech may be subject to state or federal regulation to deal with its false or misleading character, for example “to require that a commercial message appear in such a form, or include such additional information, warnings, and disclaimers, as are necessary to prevent its being deceptive.”).

¹⁸³ See *id.* at 772 n.24 (“[G]reater objectivity and hardiness of commercial speech . . . may also make inapplicable the prohibition against prior restraints.”) (citing *New York Times Co. v. United States*, 403 U.S. 713 (1971); *Donaldson v. Read Mag.*, 333 U.S. 178, 189–91 (1948); *FTC v. Standard Educ. Soc’y*, 302 U.S. 112, 116–17 (1937); *E.F. Drew & Co. v. FTC*, 235 F.2d 735, 739–40 (2d Cir. 1956)).

¹⁸⁴ See *Expressions Hair Design v. Schneiderman*, 137 S. Ct. 1144, 1152 (2017) (Breyer, J. concurring) (citing *Zauderer v. Off. of Disciplinary Couns. of Sup. Ct. of Ohio*, 471 U.S. 626, 651 (1985)).

¹⁸⁵ See *id.* at 1152 (Breyer, J. dissenting) (quoting *Zauderer*, 471 U.S., at 651).

¹⁸⁶ See *id.* at 1151 (“[I]t has never been deemed an abridgment of freedom of speech or press to make a course of conduct illegal merely because the conduct was in part initiated, evidenced, or carried out by means of language, either spoken, written, or printed.”) (quoting *Rumsfeld v. F. for Acad. and Inst. Rts., Inc.*, 547 U.S. 47, 62 (2006)); *Holder v. Humanitarian L. Project*, 561 U.S. 1, 28–29 (2010); *Riley v. Nat’l Fed’n of the Blind of N.C., Inc.*, 487 U.S. 781, 813 (1988) (Stevens, J., dissenting in part); *Brandenburg v. Ohio*, 395 U.S. 444, 447 (1969) (per curiam); ROBERT C. POST, *DEMOCRACY, EXPERTISE, AND ACADEMIC FREEDOM: A FIRST AMENDMENT JURISPRUDENCE FOR THE MODERN STATE* 2–3, 22–24 (Yale Univ. Press) (2012) (suggesting that when Congress or a state legislature

conduct may be proscribed, as the Court has often stated, speech that is part of a pattern of such conduct cannot be protected.¹⁸⁷ On the other hand, when violence or factual fraud plays no part in the pattern of conduct, then speech incidental to such nonviolent conduct may not be banned.¹⁸⁸ Many scholars argue for heightened First Amendment scrutiny of content-based regulations such as those purporting to dictate how a particular commercial message must be communicated to the public.¹⁸⁹ Several justices of the Supreme Court, whose views were perhaps more representative of recent majorities in First Amendment cases, opined that it would violate the First Amendment to enjoin the publication of a newsletter dedicated to recommending the buying or selling of securities. Specifically, the violation was alleged to be that a publisher had violated the Investment Advisers Act by failing to disclose criminal convictions in the course of registering as an adviser before starting the newsletter.¹⁹⁰

To begin with the *Central Hudson* test for narrower possible regulations that would serve a governmental interest, there are numerous alternatives to prior restraints on ICOs in the form of

regulates a profession—or presumably also, another trade or business—this does not raise a constitutional issue under the First Amendment).

¹⁸⁷ See, e.g., *Sable Commc'ns of Cal., Inc. v. Fed. Commc'ns Comm'n*, 492 U.S. 115, 124–25 (1989); *Roth v. United States*, 354 U.S. 476, 485 (1957); *Chaplinsky v. N.H.*, 315 U.S. 568, 571–72 (1942). See generally *United States v. Stevens*, 559 U.S. 460, *passim* (2010) (declining to adopt categories of low-value speech in addition to fraud, obscenity, fighting words, malicious libel, etc.).

¹⁸⁸ See *Giboney v. Empire Storage & Ice Co.*, 336 U.S. 490, 497–98; *Milk Wagon Drivers Union v. Meadowmoor Dairies, Inc.*, 312 U.S. 287, 292–93 (1941) (emphasizing “contemporaneously violent conduct” in affirming injunction against picketing nonunion retailers or retailers purchasing from nonunion producers).

¹⁸⁹ See Hillary Greene, *Muzzling Antitrust: Information Products, Innovation and Free Speech*, 95 B.U. L. REV. 35, 69–70 (2015) (discussing antitrust as being potentially content-based as prohibiting certain sales) (citing *Sorrell v. IMS Health Inc.*, 131 S. Ct. 2653, 2569–70, 2661–67, 2670–71 (2011)); Hillary Greene & Dennis Yao, *Antitrust as Speech Control*, 60 WM. & MARY L. REV. 1215, 1218 (2019) (citing, inter alia, Frederick Schauer, *The Boundaries of the First Amendment: A Preliminary Exploration of Constitutional Salience*, 117 HARV. L. REV. 1765, 1765, 68 (2004)) (discussing both securities and antitrust laws as content-based regulations); Antony Page & Katy Yang, *Is Regulation Fair Disclosure Constitutional?*, 39 U.C. DAVIS L. REV. 1, 42–47, 63 (2005) (citing, inter alia, *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n*, 447 U.S. 557, 561 (1980)) (discussing securities laws generally and Regulation Fair Disclosure in particular as being content-based and subject to heightened review); Bruce E. Johnson & Jeffrey L. Fisher, *Why Format, Not Content, Is the Key to Identifying Commercial Speech*, 54 CASE W. RES. L. REV. 1243, 1253–54 (2004).

¹⁹⁰ See *Lowe v. SEC*, 472 U.S. 181, 211 (1985) (White, J., joined by Rehnquist, J., and Burger, C.J., concurring). The lower court judges agreed. See also *SEC v. Lowe*, 725 F.2d 892, 906 (2d Cir. 1984) (Briant, J., dissenting); *id.* at 895; *SEC v. Lowe*, 556 F. Supp. 1359, 1371 (E.D.N.Y. 1983). The majority in *Lowe* did not reach the First Amendment issue.

registration as a security or commodity issuer/exchange. Under light touch approaches, narrower restrictions on crypto coin expression could regulate false but verifiable claims without suppressing subjective or unverifiable opinions. For example, the Federal Trade Commission (FTC) currently regulates misleading Internet access subscription advertisements or terms under the light touch approach adopted by the Federal Communications Commission in 2017 for broadband Internet access regulation.¹⁹¹ The FTC also has the power (although it presently defers to the ESRB) to regulate misleading claims in the marketing or terms of video games, email accounts, online marketplaces, and social media access contracts, without requiring such offerings to be preregistered with it.¹⁹² Similarly, the statutes and common-law

¹⁹¹ See, e.g., *Mozilla Corp. v. FCC*, 940 F.3d 1, 17–18, 49–50, 59, 71–72 (D.C. Cir. 2019) (citing *In re Restoring Internet Freedom*, 33 FCC Rcd. 311, ¶¶ 1, 4, 18, 152, 209, 217 (2018)); *id.* at 71–72 (“We do note that antitrust enforcement by the Commission’s sister agencies (the Department of Justice and the FTC . . . aims at generating and protecting competition, . . . [which] would tend to multiply the voices in the public square,” [promote transparency, and give teeth to] “ISP commitments [of open access to the Internet and minimum quality of service provided to users] backed up by FTC enforcement”) (quoting *Restoring Internet Freedom*, 33 FCC Rcd., at ¶ 153).

¹⁹² See *In re Take-Two Interactive Secs. Litig.*, 551 F. Supp. 2d 247, 263 (S.D.N.Y. 2008) (noting FTC investigation of video-game “Easter eggs,” or “hidden” mini-games); *St. Clair Shores Gen. Empl. Ret. Sys. v. Eibeler, Inc.*, No. 06 Civ. 688, 2008 WL 2941174, *3 (S.D.N.Y. July 30, 2008) (“On July 26, 2005, Take-Two announced that the [FTC] had commenced an investigation into the advertising for [Grand Theft Auto: San Andreas, a video game].”); see also Press Release, FTC, FTC Imposes \$5 Billion Penalty and Sweeping New Privacy Restrictions on Facebook (July 24, 2019), <http://www.ftc.gov/news-events/press-releases/2019/07/ftc-imposes-5-billion-penalty-sweeping-new-privacy-restriction> [<http://perma.cc/YJ35-CJ2P>]; FTC, FILE NO. 092-3184, STATEMENT OF CHAIRMAN JOE SIMONS AND COMMISSIONERS NOAH JOSHUA PHILLIPS AND CHRISTINE S. WILSON, *IN RE FACEBOOK, INC.*, 3–4 (July 24, 2019), http://www.ftc.gov/system/files/documents/public_statements/1536946/092_3184_facebook_majority_statement_7-24-19.pdf [<http://perma.cc/2FRY-QBRB>]; Snapchat, Inc., File No. 132-3078, Docket No. C-4501, 8 (F.T.C. Dec. 23, 2014), <http://www.ftc.gov/system/files/documents/cases/141231snapchatcmpt.pdf> [<http://perma.cc/LJ6Z-TCAJ>] (complaint relating to marketing of social media access contracts); MySpace LLC, File No. 102-3058, Docket No. C-4369, 2012 WL 4101790, *4 (F.T.C. Aug. 30, 2012) (decision and order relating to marketing of social media access contracts); Facebook, Inc., File No. 092-3184, Case No. 19-cv-2184, Docket No. C-4365, 1–2, 4 (F.T.C. Aug. 10, 2012), <http://www.ftc.gov/sites/default/files/documents/cases/2012/08/120810facebookdo.pdf> [<http://perma.cc/BDB9-Q9MY>] (decision and order relating to marketing of social media access contracts); *In re Google Inc.*, 152 F.T.C. 435, 454–55 (2011) (decision and order relating to marketing of Google social networking service within Gmail); *In re Take-Two Interactive Software, Inc.*, 142 FTC. 1, 24–26 (2006) (consent order requiring compliance with video game marketing standards); *In re Microsoft Corp.*, 134 FTC. 709, 710–12 (2002) (complaint relating to Microsoft Windows operating system marketing); *In re Geocities*, 127 FTC. 94, 94, 96–98, 123–25 (1999) (decision and order relating to marketing of website hosting service); Press Release, FTC, Federal Court Finds Amazon Liable for Billing Parents for Children’s Unauthorized In-App Charges (April 27, 2016), <http://www.ftc.gov/enforcement/cases-proceedings/122-3238/amazoncom-inc> [<http://perma.cc/B6QT-59XU>] (online marketplace); Press Release, FTC, Four National

principles governing fraud, warranties, fiduciary duties, unjust enrichment, restitution, and related causes of action provide robust remedies—including incarceration and punitive damages far in excess of the remedies the SEC typically seeks—and do not require every transaction to be registered by a financial elite in advance.¹⁹³ In some cases, even counterspeech or public

Retailers Agree to Pay Penalties Totaling \$1.26 Million for Allegedly Falsely Labeling Textiles as Made of Bamboo, While They Were Rayon (Jan. 3, 2013), <http://www.ftc.gov/enforcement/cases-proceedings/102-3132/amazoncom-inc-united-states-america-federal-trade-commission> [<http://perma.cc/5PVS-AXE6>]; Press Release, FTC, FTC Finalizes Privacy Settlement with Myspace (Sept. 11, 2012), <http://www.ftc.gov/enforcement/cases-proceedings/102-3058/myspace-llc-matter> [<http://perma.cc/L9QH-WMNV>]; Press Release, FTC, Makers of Grand Theft Auto: San Andreas Settle FTC Charges (June 8, 2006), <http://www.ftc.gov/news-events/press-releases/2006/06/makers-grand-theft-auto-san-andreas-settle-ftc-charges> [<http://perma.cc/2PM5-T2AU>]; *cf. In re Gateway Learning Corp.*, 138 FTC. 443, 470 (2004) (decision and order relating to marketing of computer hardware and bundled software). *See generally* 15 U.S.C. § 45(n) (2006); FTC Policy Statement on Deception, appended to Cliffdale Assocs., Inc., 103 FTC. 110, 174 (1984); FTC Policy Statement on Unfairness, appended to Int'l Harvester Co., 104 F.T.C. 949, 1070 (1984), *available at* <http://www.ftc.gov/public-statements/1980/12/ftc-policy-statement-unfairness> [<http://perma.cc/L45E-CG5Y>]; Letter from Jessica Rich, Director of FTC Bureau of Consumer Protection, to WhatsApp and Facebook (Apr. 10, 2014), *available at* <http://www.ftc.gov/public-statements/2014/04/letter-jessica-1-rich-director-federal-trade-commission-bureau-consumer> [<http://perma.cc/8L6H-XDGN>]; Complaint, In the Matter of WhatsApp, Inc., (Aug. 29, 2016), *available at* https://epic.org/privacy/ftc/whatsapp/EPIC-CDD-FTC-WhatsApp-Complaint-2016.pdf?utm_source=rss&utm_medium=rss [<http://perma.cc/FT4M-5UWA>].

¹⁹³ *See, e.g.,* Anschutz Corp. v. Merrill Lynch and Co., Inc., 785 F. Supp. 2d 799, 824 (N.D. Cal. 2011) (after-the-fact negligent misrepresentation claims related to investing not subject to dismissal under First Amendment despite issues of subjective ratings); Abu Dhabi Commercial Bank v. Morgan Stanley & Co. Inc., 651 F. Supp. 2d 155, 176 (S.D.N.Y. 2009) (similar); *In re Nat'l Century Fin. Enters.*, 580 F. Supp. 2d 630, 639–40 (S.D. Ohio 2008) (after-the-fact negligent misrepresentation claim could be brought against rating agency, despite First Amendment). The SEC typically seeks a cease-and-desist order, disgorgement of profits, and sometimes a commitment to issue refunds and/or a ban on trading or managing public companies. *See* LOUIS LOSS, FUNDAMENTALS OF SECURITIES REGULATION 1054 (2003); *see also id.* at 1292–93 (punitive damages not available in civil suits under Exchange Act, although they would be in common-law fraud and deceit actions); *id.* at 97, 1239 (punitive damages not available under section 11 of Securities Act, the cause of action for omission of material facts from a registration statement or a misstatement of such facts in it). The FTC may seek similar remedies. *See, e.g.,* 15 U.S.C. §§ 45(m), (n), 57b; *FTC v. AMG Capital Mgmt.*, 910 F.3d 417, 428 (9th Cir. 2018) (affirming \$1.27 billion in equitable disgorgement relief in case involving misleading websites); Press Release, FTC, FTC Approves Final Settlement With Facebook (Aug. 10, 2012), <http://www.ftc.gov/news-events/press-releases/2012/08/ftc-approves-final-settlement-facebook> [<http://perma.cc/SLQ9-V49A>]; FTC, FILE NO. 092-3184, STATEMENT OF CHAIRMAN JOE SIMONS AND COMMISSIONERS NOAH JOSHUA PHILLIPS AND CHRISTINE S. WILSON, *IN RE* FACEBOOK, INC., 3–4 (July 24, 2019), http://www.ftc.gov/system/files/documents/public_statements/1536946/092_3184_facebook_majority_statement_7-24-19.pdf [<http://perma.cc/2FRY-QBRB>]; *see generally* J. Howard Beales III & Timothy Muris, *Striking the Proper Balance: Redress Under Section 13(b) of the FTC Act*, 79 ANTITRUST L.J. 1, 40 (2013); *cf.* Brief of Amici Curiae Chamber of Comm. of the United States of Am. & Nat'l Ret. Fed'n in Supp. of Pet'r, *AMG Cap. Mgmt. v. FTC*, 910 F.3d 417 (9th Cir. 2018) (No. 19-508) <http://www.scotusblog.com/case-files/cases/amg->

education efforts may be deemed adequate multi-stakeholder alternatives to harsh penalties for proven falsehoods.¹⁹⁴ The availability of such alternatives to prior restraints and difficult-to-satisfy preregistration requirements establishes a less restrictive means to regulate ICO speech under the First Amendment.

Regulation of commercial speech by means of keeping the public in ignorance of developments in a field of applied science or other commerce fails First Amendment scrutiny when less restrictive but equally or more effective regulations of conduct are available.¹⁹⁵ For example, the Supreme Court has struck down, because less restrictive means of regulation were available, certain prohibitions on the promotion of products and solicitation of new clients relating to prescriptions for “compounded drugs.”¹⁹⁶ Rather than enforced ignorance of products that may not violate the law in itself—in this case, an offer of compounded drugs—Congress should have directly regulated the prescription of such drugs to patients who do not need them or who might be harmed by them, either in isolation or as combined with their other medications.¹⁹⁷ Similarly, the First Amendment makes it unconstitutional to ban advertisements or labels that reference the low price or high alcohol content of beer or spirits.¹⁹⁸ Although this ban might

capital-management-llc-v-federal-trade-commission/ [http://perma.cc/XX79-PMYH] (arguing against broad restitutionary powers of FTC as statutory and constitutional matter); Berin Szóka & Geoffrey Manne, *The Federal Trade Commission: Restoring Congressional Oversight of the Second National Legislature* (2016), available at <http://docs.house.gov/meet-ings/IF/IF17/20160524/104976/HHRG-114-IF17-Wstate-ManneG-20160524-SD004.pdf> [http://perma.cc/W9KG-89RW] (exploring and ultimately criticizing scope of FTC’s remedial powers).

¹⁹⁴ Thus, in *Alvarez*, the less restrictive means available to regulators trying to preserve the incentive or expressive purposes of the military medal and honors systems was to public a database of confirmed awardees and their medals or honors. *United States v. Alvarez*, 567 U.S. 709, 735 (2012) (Breyer, J., concurring).

¹⁹⁵ See, e.g., *Ibanez v. Fla. Dep’t of Bus. & Pro. Regul.*, 512 U.S. 136, 152 (1994) (O’Connor, J., concurring) (“States may not completely ban potentially misleading commercial speech if narrower limitations can ensure that the information is presented in a nonmisleading manner.”); cf. *Bernstein v. U.S. Dep’t of Just.*, 176 F.3d 1132, 1139–41 (9th Cir. 2000) (speech on cryptography, including distribution of executable code, protected by First Amendment from export controls that unconstitutionally operated as prior restraint).

¹⁹⁶ *Thompson v. W. States Med. Ctr.*, 535 U.S. 357, 366, 375–76 (2002). *But see id.* at 382–83 (Breyer, J., joined by Roberts, C.J., Stevens, J., and Ginsburg, J., dissenting) (emphasizing the risk that patients will take “untested” compounds, which due to new drug combinations, differing absorption rates, or other factors “can, for some patients, mean infection, serious side effects, or even death”).

¹⁹⁷ *Thompson*, 535 U.S. at 374–75 (citing *Va. State Bd. of Pharmacy v. Va. Citizens Consumers Council, Inc.*, 425 U.S. 748 (1976)).

¹⁹⁸ 44 *Liquormart, Inc. v. Rhode Island*, 517 U.S. 484, 505–08 (citing *Rubin v. Coors*

reduce alcohol abuse and implicitly subsidize alternatives like water or fruit juice, directly regulating the price or alcohol percentage of a beverage is a less restrictive and potentially more effective alternative to compelled ignorance of available options at alcohol retailers.¹⁹⁹ For these reasons, a regulation's relationship to the underlying governmental interest should not be indirect, immaterial, speculative, or disproportionate.²⁰⁰

Assuming that a form of rational basis review applies, the path towards a First Amendment defense to ICO or appcoin registration or other requirements will be more difficult.²⁰¹ Regulators or prosecutors are citing abuses to crack down on ICOs, as China, New York, and other jurisdictions are doing, in order to protect consumers from harm, banks from unfair competition, or investors and non-investors alike from instability.²⁰² Even as a "preventative" criminal statute triggered by speech, the Supreme Court might uphold it as advancing "urgent" national interests in consumer protection.²⁰³ The impact on speech of regulating the conduct would be incidental and the

Brewing Co., 514 U.S. 476, 491 (1995)).

¹⁹⁹ *Id.*

²⁰⁰ See *Ibanez*, 512 U.S. at 143–44 (quoting *Edenfield v. Fane*, 507 U.S. 761 (1993)) (speculation and conjecture insufficient basis to invoke governmental interest in First Amendment context); *United States v. Caronia*, 703 F.3d 149, 165–66 (2d Cir. 2012) (promotion of off-label drug use could lead to patient injury, medical malpractice, and civil claims for negligence, it may not be restrained simply due to these potential harms if true and non-misleading under First Amendment); cf. *Amarin Pharma, Inc. v. FDA*, 119 F. Supp. 3d 196, 236 (S.D.N.Y. 2015) (“[T]he FDA’s concern that future events may one day make [a promotional] claim misleading cannot justify treating [a] presently true and non-misleading statement as if it were unprotected speech.”).

²⁰¹ See *United States v. Carolene Prods. Co.*, 304 U.S. 144, 152 (1938) (explaining that “regulatory legislation affecting ordinary commercial transactions” typically need only “rest[] upon some rational basis.”); see also *Expressions Hair Design v. Schneiderman*, 137 S. Ct. 1144, 1152 (Breyer, J., concurring) (contending that this precedent should apply to a regulation of how a business describes its prices and services to purchasers).

²⁰² See Franklin R. Edwards et al., *Crypto Assets Require Better Regulation: Statement of the Financial Economists Roundtable on Crypto Assets*, 75 FIN. ANALYSTS J. 14, 15 (2019) (emphasizing these risks in call for better regulation of ICOs and crypto-exchanges like Coinbase); Kelvin FK Low & Ernie Teo, *Bitcoins and Other Cryptocurrencies as Property?*, 9 LAW, INNOVATION & TECH. 235, 253–54 (2017) (describing risk that consumers will suffer cyberthefts measured in tens or hundreds of millions of dollars on unregulated cryptocurrency exchanges like Mt. Gox or Ethereum blockchain); Christian Rueckert, *Cryptocurrencies and Fundamental Rights*, 5 J. CYBERSECURITY 1, 4 (2019); Daniel Folkinshteyn & Mark Lennon, *Braving Bitcoin: A Technology Acceptance Model (TAM) Analysis*, 18 J. INFO. TECH. CASE & APPLICATION RSCH. 220, 226 (2016) (arguing that after traditional financial institutions lobbied for them, New York’s regulations had “their desired effect of causing many bitcoin businesses to pull out of New York State altogether”) (internal citations omitted).

²⁰³ *Holder v. Humanitarian Law Project*, 561 U.S. 1, 34–35 (2010).

speech offering a prohibited transaction could be prohibited alongside the transaction itself.²⁰⁴

Contemporary commercial speech doctrine does not, in my view, support a rational basis review of the requirement that a registration statement is required before a crypto coin may be offered via a white paper, website, or social media account. Section 5 of the Securities Act²⁰⁵ does not simply mandate that coin promoters disclose “purely factual and uncontroversial information,” like the address of a law office or the names and bar affiliations of its partners.²⁰⁶ Instead, unless an exemption applies, it requires years of audited income and cash flow statements that have a contested and arguably speculative application to tokens such as Bitcoin.²⁰⁷ Thus, a law requiring a

²⁰⁴ See *Expressions Hair Design*, 137 S. Ct. at 1150–51 (observing that if a law regulated the price of a sandwich, it would regulate the speech announcing or evidencing the price of the sandwich, but holding that a “law’s effect on speech [may] be only incidental to its primary effect on conduct, and ‘it has never been deemed an abridgment of freedom of speech or press to make a course of conduct illegal merely because the conduct was in part initiated, evidenced, or carried out by means of language, either spoken, written, or printed’”) (quoting *Rumsfeld v. F. for Acad. & Institutional Rights, Inc.*, 547 U.S. 47 (2006)).

²⁰⁵ 15 U.S.C. § 77e (2012).

²⁰⁶ See *Expressions Hair Design*, 137 S. Ct. at 1152–53 (Breyer, J., concurring) (suggesting that a statute that required a merchant to disclose its respective cash and credit-card prices for the same good or service would require such a disclosure of uncontroversial information) (citing *Zauderer v. Off. of Disciplinary Couns. of Sup. Ct. of Ohio*, 471 U.S. 626, 651 (1985)).

²⁰⁷ See Eric M. Sherbet, *Bridging the GAAP: Accounting Standards for Foreign SEC Registrants*, 29 INT’L L. 875, 880 (1995); Michael Vignone, *Inside Equity-Based Crowdfunding: Online Financing Alternatives for Small Businesses*, 91 CHI. KENT L. REV. 803, 822 (2016). Exemptions may limit the amount of value that circulates via the token by classifying such value as issued securities. 17 C.F.R. §§ 200, 227, 232 (1998) (one-million-dollar limit within certain twelve-month periods). An exemption for securities offered outside the United States may be placed at risk if there are resales back to persons in the United States. See 17 C.F.R. §§ 230, 249 (1998). Another exemption for private placements may not be suited to publicly available crypto coins. See 15 U.S.C. § 77d(a)(2) (exempting transactions by issuers not involving a public offering); SEC, *Facilitating Capital Formation and Expanding Investment Opportunities by Improving Access to Capital in Private Markets*, Release No. 33-10763 (proposed Mar. 4, 2020); SEC, *Concept Release on Harmonization of Securities Offering*, 84 Fed. Reg. 30, 460 (proposed June 18, 2019), <http://www.sec.gov/rules/concept/2019/33-10649.pdf> [<http://perma.cc/3VHN-YG8G>]. Regarding whether crypto coins can comply with SEC regulatory requirements, it is noteworthy that many of them—perhaps hundreds—may not have traditional operating profits at the time of launch; Bitcoin, Ether, Telegram, and Kik, for example, strained to avoid being classified as passive investments whereby token purchasers obtain shares in a traditional profit-making business, instead creating foundations and emphasizing tokens’ use cases or non-transferability. See, e.g., *Defs.’ Br. in Supp. of Defs.’ Mot. for Summ. Judg.*, at 6–12, 14–15, *Telegram*; *Defs.’ Answer*, at 9–16, 41–100, 121, *SEC v. Kik Interactive, Inc.*, No. 19-cv-5244 (S.D.N.Y. answer filed Aug. 6, 2019) (hundreds of coins, and Kik’s case); Wells Submission of Kik Interactive, Inc. at 17–26, No. 19-cv-05244 (S.D.N.Y. 2020); *In re Kik Interactive*, No. HO-13388 (SEC Div. of Enft., brief filed Nov. 16, 2018) (similar); Hinman, *supra* note 155; *infra* note 238 (noting heavy burden of applying accounting standards to crypto coins); *infra* note 338 (tokens

gas station to disclose a cash price of \$2.99 for a gallon of regular unleaded gasoline alongside a credit-card price of \$3.19 merely requires the credit-card price to be revealed, and “would not hinder the transmission of information to the public.”²⁰⁸ Strictly applying Section 5 of the Securities Act and Section 12(g) of the Exchange Act to crypto coins would hinder speech relating to them because, as explained below, such coins are frequently not amenable to traditional metrics of profitability, managerial control, and expectation of success.

Requiring pre-registration of all token offerings undermines a primary function of the First Amendment: “To require a censorship through license which makes impossible the free and unhampered distribution of pamphlets strikes at the very heart of constitutional guarantees.”²⁰⁹ Like the restriction on pharmaceutical effectiveness claims that have not been cleared with the FDA, an outright restriction on non-registered claims regarding crypto coin use cases or potential value is clearly unconstitutional.²¹⁰ Even someone with a criminal record should have the right to publish ideas that could become potential investments via a newsletter or its contemporary internet equivalent.²¹¹ Like a restriction on federal employees from receiving pay for speaking on topics on which they have expertise, a pre-registration requirement for ICO and AppCoin white papers would chill the formulation and growth of expression, while other regulations with lesser impacts on speech were available.²¹²

feel they must break law).

²⁰⁸ *Expressions Hair Design*, 137 S. Ct. at 1153 (Breyer, J., concurring).

²⁰⁹ *Schneider v. New Jersey*, 308 U.S. 147, 164 (1939).

²¹⁰ See Lars Noah, *Off-Label Drug Promotion and the First Amendment*, 162 U. PA. L. REV. ONLINE 239, 251 (2014) (arguing that a “blanket prohibition on any statements concerning off-label uses sweeps broadly to prevent the dissemination of information even if it is presented in an entirely truthful and nonmisleading way . . . would strike First Amendment scholars as at least mildly perplexing, if not blatantly unconstitutional”) (citing, *inter alia*, *Wash. Legal Found. v. Henney*, 51 F. Supp. 2d 81, 83–87 (D.D.C. 1999), *vacated in part*, 202 F.3d 331 (D.C. Cir. 2000)).

²¹¹ *Lowe v. SEC*, 472 U.S. 181, 235 (1985) (White, J., concurring in the result) (person with criminal record should not be banned from advising others as to propriety of investments via a newsletter, because such a regulation would be contrary to the Court’s “commercial speech cases [which] have consistently rejected . . . drastic prohibitions on speech” even if justified by preventing “fraudulent” claims) (citing *Zauderer*, 471 U.S. 626); see also *In re R.M.J.*, 455 U.S. 191, 203 (1982); *Bates v. State Bar of Ariz.*, 433 U.S. 350, 384 (1977).

²¹² See *United States v. Nat’l Treasury Emps. Union*, 513 U.S. 454, 476 (1995); Ned Snow, *Content-Based Copyright Denial*, 90 IND. L.J. 1473, 1481 (2015) (“The facts and reasoning of *National Treasury* seem to imply that Congress may not deny copyright to content creators. Denying copyright could be viewed as a denial of compensation for speech, where property rights in expression (i.e., a copyright) would represent a form of

It is not sufficient to say that advertisements or professional speech must be subject to some kind of legal oversight.²¹³ Rather, courts consider whether the mode of advertisement or solicitation can overbear the will of the recipient, rendering the recipient unable or unwilling to simply discard or ignore the contents.²¹⁴ Absent that kind of overpowering solicitation, the less restrictive alternative of remedying fraudulent crypto coin or other product offerings after the fact, shows that penalizing unregistered speech relating to the utility or value of crypto coins is disproportionate and unconstitutional.²¹⁵

compensation. Under *National Treasury*, . . . [Congress may not] chill speech before it ever happened.”) (citing *National Treasury*, 513 U.S. 454).

²¹³ Cf. Bhagwat, *supra* note 45, at 839–40.

²¹⁴ See *Shapero v. Ky. Bar Ass’n*, 486 U.S. 466, 474–76 (1988) (noting that an advertisement from a lawyer, unlike an ongoing attorney-client relationship, “can readily be put in a drawer to be considered later, ignored, or discarded,” so the relevant inquiry is not whether advertisements harm “potential clients” but rather “whether the mode of communication poses a serious danger that lawyers will exploit any such susceptibility”); see also *Fla. Bar v. Went For It, Inc.*, 515 U.S. 618, 637–40 (1995) (arguing that under *Shapero*, direct mail solicitations of clients within thirty days of their accidents may serve a “legitimate purpose” and recipients may simply throw them in the trash if they are not useful or helpful).

²¹⁵ See, e.g., *Shapero*, 486 U.S. at 468, 476 (ban on “soliciting legal business for pecuniary gain by sending truthful and nondeceptive letters to potential clients known to face particular legal problems” unconstitutional because less restrictive means existed: punishing “actual abuses” or “isolated abuses of mistakes,” and requiring filing of all solicitations with the bar or other regulator for investigative and information-gathering purposes related to such prosecutions and punishments); *In re R.M.J.*, 455 U.S. at 201–02 (noting overbearing or inherently misleading advertising may be banned, but truthful advertising of legal services may not be prohibited by state bars that could punish “inaccurate” solicitations plagued by major “omissions;” “the preferred remedy is more disclosure, rather than less”) (quoting *Bates*, 433 U.S. at 375); *Went For It*, 515 U.S. at 641–43 (Kennedy, J., joined by Stevens, J., Souter, J., and Ginsburg, J., dissenting) (objecting to “wild disproportion” of relatively narrow regulation on solicitation of legal business of accident victims within thirty days of accident, and emphasizing a less restrictive alternative that when a client “enters into a contract with an attorney and later regrets it, Florida, like some other States, allows clients to rescind certain contracts with attorneys within a stated time after they are executed”); *Ohralik v. Ohio State Bar Ass’n*, 436 U.S. 447, 462 n.20 (1978) (finding the Court has held that “a lawyer who engages in solicitation as a form of protected political association generally may not be disciplined without proof of actual wrongdoing that the State constitutionally may proscribe.”); *id.* at 476 (Marshall, J., concurring in part and concurring in the judgment) (while “misrepresentation” may occur in attorney solicitation, its prevention is among the “concededly legitimate interests [that] might well be served by more specific and less restrictive rules than a total ban on pecuniary solicitation”); *In re Primus*, 436 U.S. 412, 438–39 (1978) (imposing ethical discipline on attorney who solicits client—in furtherance of right of free association—violates the First Amendment unless there is actual misconduct). *But see Ohralik*, 436 U.S. at 456, 461, 464 (upholding “prophylactic” ban on in-person solicitation which might, among other evils, be misleading, even though presumably such “misrepresentation” could be punished after it actually occurs).

C. International Law Perspectives on Freedom of Expression

Human rights law recognizes the right of everyone “to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice.”²¹⁶ The Human Rights Committee—which is empowered to opine to signatories to a core human-rights convention as to the scope of the right to seek and impart ideas in the media—maintains that such infringements must be “provided by law,” and must be necessary “for respect of the rights or reputations of others” or “for the protection of national security or of public order (*ordre public*), or of public health or morals.”²¹⁷ Preregistration of crypto coin speech is of doubtful necessity to protect the rights of others, which could be protected by a variety of other means including FTC cease and desist orders and disgorgement of profits, civil litigation for fraud or other torts with the prospect of class actions and punitive damages, and criminal prosecution for a variety of fraud-related offenses.

Human rights law also recognizes the right to hold an opinion, and this is seen as so fundamental that it is “a right to which the Covenant permits no exception or restriction.”²¹⁸ The UN expert on the freedom of expression, David Kaye, announced in 2018 that his office sees “laws or arrangements” that “require the ‘proactive’ monitoring or filtering of content” as conflicting with the free expression norm against “prepublication censorship.”²¹⁹ He objected that “restriction of user-generated content before its publication subjects users to restrictions on freedom of expression without prior judicial review of the legality, necessity and proportionality of such restrictions.”²²⁰ Any disproportionate or unjustified restrictions on the freedom of expression violate the right to speak and communicate ideas recognized under human-rights law.²²¹

²¹⁶ G.A. Res. 14668, International Covenant on Civil and Political Rights art. 19 pt. 2 (Dec. 19, 1966).

²¹⁷ *Id.* at pt. 3.

²¹⁸ U.N. OHCHR, 102d Sess., General Comment No. 34, art. 19 ¶ 9, U.N. Doc. CCPR/C/GC/34, 9 (Sept. 12, 2011); *see also* Letter from the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression to European Commission, at 3 (June 13, 2018), <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gId=23907> [<http://perma.cc/GZB9-QJ4G>].

²¹⁹ Letter from Special Rapporteur, *supra* note 218, at 6 (quoting Human Rights Council, Report of the Spec. Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression, David Kaye, A/HRC/38/35, ¶ 67).

²²⁰ *Id.* at 7.

²²¹ *See* Eric Barendt, *Freedom of Expression in the United Kingdom Under the Human Rights Act 1998*, 84 *IND. L.J.* 851, 862 (2009) (finding that under ECHR Art.

Regional as well as universal human-rights treaties protect the right to earn a living and choose one's occupation.²²² They also protect the freedom of association, which frequently and by tradition includes the exchange of funds as dues, as well as the freedom of expression including the right to share ideas by any media regardless of national frontiers.²²³ As Christian Rueckert explains, there is a human right to build crypto coin ecosystems:

When a message is transmitted or information is embedded in the blockchain using a transaction of bitcoins, [for example], this transaction clearly falls within the scope of the right to freedom of expression and information. . . . Persons who provide software as an infrastructure for the transfer of information can also invoke the right to freedom of expression and information. This follows from the *Pirate Bay* decision of the [European Court of Human Rights] where the Court decided that providers of a file-sharing website can rely on Art. 10 [of the European Convention on Human Rights and Fundamental Freedoms]. . . . [A]ny restriction of the Bitcoin protocol's development and any regulatory guideline for developers interfere[s] with their right to freedom of expression.²²⁴

Like the securities laws and the other laws analyzed below, the freedom of expression may not protect the utterance of false facts, even in noncommercial speech—although nations may have more leeway to prevent misleading advertisements.²²⁵ Some

10(2), when a law limiting a right is “disproportionate and [not] justified by relevant and sufficient reasons” it gives rise to a “strong presumption” that the right should be protected) (citing [European] Convention for the Protection of Human Rights and Fundamental Freedoms, art. 10, Nov. 4, 1950, 213 U.N.T.S. 221, 230).

²²² See Charter of Fundamental Rights of the European Union, 2016 O.J. (C 202) 7.6.2016 at art. 15 ¶ 1; Rueckert, *supra* note 202, at 7–8; see also G.A. Res. 2200A (XXI), International Covenant on Civil and Political Rights, art. 6 ¶ 1, *adopted and opened for signature, ratification, and accession* Dec. 16, 1966, 999 U.N.T.S. 171 (entered into force Mar. 23, 1976); Organization of American States, *Additional Protocol to The American Convention on Human Rights in the Area of Economic, Social and Cultural Rights “Protocol of San Salvador”*, at art. 6, <http://www.oas.org/juridico/english/sigs/a-52.html> [<http://perma.cc/4LU8-6MJF>]; Juridical Condition and Rights of the Undocumented Migrants, Advisory Opinion OC-18/03, Inter-Am. Ct. H.R. (ser. A) No. 18, at 36 (Sept. 17, 2003); Hugh Collins, *The Impact of Human Rights Law on Contract Law in Europe*, 22 EUR. BUS. L. REV. 429 (2011); Michael Ramsden & Luke Marsh, *The ‘Right to Work’ of Refugees in Hong Kong: MA v. Director of Immigration*, 25 INT'L J. OF REF. L. 574, 582, 584–85 (2013).

²²³ See Charter of Fundamental Rights of the European Union, *supra* note 222, at arts. 10 ¶ 1, 12 ¶ 1; Rueckert, *supra* note 202, at 8–9.

²²⁴ Rueckert, *supra* note 202, at 9 (citing European Court of Human Rights, Fredrik Neij and Peter Sunde Kolmisoppi (The Pirate Bay) v. Sweden, No. 40397/12.Ret (13 Mar. 2013), ¶ 11.27; Lorna Woods, *Article 11: Freedom of Expression and Information*, in THE EU CHARTER OF FUNDAMENTAL RIGHTS: A COMMENTARY 311–340 (Steve Peers, Tamara Hervey, Jeff Kenner, & Angela Ward eds., 2014)).

²²⁵ See *Ohralik v. Ohio State Bar Ass'n*, 436 U.S. 447, 456, 461, 464 (1978) (upholding “prophylactic” ban on in-person solicitation which might, among other evils, be misleading). *But see Ohralik*, 436 U.S. at 476 (Marshall, J., concurring) (observing that

incorrect factual statements, however, are inevitable in all domains and may fall within the freedom of expression.²²⁶

IV. REGULATING MISLEADING EXPRESSIONS WHILE DEREGULATING “ECOSYSTEM SPEECH”

One must distinguish commercial speech that makes an “easily verifiable” claim from speech that is subjective, quasi-political, or based on optimistic projections.²²⁷ Under the *Central Hudson* test, the “State cannot regulate speech that poses no danger to the asserted state interest, . . . nor can it completely suppress information when narrower restrictions on expression would serve its interest as well.”²²⁸ There is a real danger, as explained above, that speech relating to crypto coins as an alternative to traditional ways of conducting e-commerce or buying software will be completely banned.²²⁹ Requiring pre-registration of crypto white papers in this way strikes at the heart of the First Amendment. That is because all “sanctions on the publication of truthful information of public concern” threaten “the core purposes of the First Amendment.”²³⁰

blanket requirement that solicitation not be done in person could be unconstitutional in certain circumstances, such as those in *In re Primus*).

²²⁶ See European Convention for the Protection of Human Rights and Fundamental Freedoms, art. 10 ¶ 1, Nov. 4, 1950, 213 U.N.T.S. 221, 230; Rueckert, *supra* note 202, at 9 (citing GRABENWARTER, *THE EUROPEAN CONVENTION OF HUMAN RIGHTS* (2014)).

²²⁷ Va. State Bd. of Pharm. v. Va. Citizens Consumer Council, Inc., 425 U.S. 748, 772 n.24 (1976).

²²⁸ Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm’n of N.Y., 447 U.S. 557, 565 (1980); see also *Thompson v. W. States Med. Ctr.*, 535 U.S. 357, 371 (2002) (“[I]f the Government could achieve its interests in a manner that does not restrict speech, or that restricts less speech, the Government must do so.”); 44 *Liquormart, Inc. v. Rhode Island*, 517 U.S. 484, 507 (1996) (plurality opinion) (holding the state law ban on advertising the price of alcoholic beverages invalid under the First Amendment because “alternative forms of regulation that would not involve any restriction on speech,” such as counter-speech/education or taxation or limitation of sale of aggregate alcohol content per container or per consumer, might have been successful); *Rubin v. Coors Brewing Co.*, 514 U.S. 476, 490–91 (1995) (finding law restricting advertising alcohol content of beer was invalid as suppression of information that would be less effective than “directly limiting the alcohol content of beers”); *Nat’l Ass’n of Mfrs. v. SEC*, 748 F.3d 359, 373 (D.C. Cir. 2014) (striking down regulation and stating: “Without any evidence that alternatives would be less effective, we still cannot say that the restriction here is narrowly tailored.”).

²²⁹ While some companies could file for registration with the SEC and/or CFTC and sell their tokens, the decentralized establishment and circulation of tokens by poorly funded, widely dispersed financial amateurs might make the typical crypto coin virtually impossible to launch under a restrictive securities or commodities law regime. See *infra* notes 250, 337.

²³⁰ *Bartnicki v. Vopper*, 532 U.S. 514, 533–34 (2001); see also *Central Hudson*, 447 U.S. at 565 (government may not “completely suppress information when narrower restrictions on expression would serve its interest as well.”) (emphasis added); Geoffrey Miller, *The SEC as Censor: Is Banning an Investment Newsletter a Prior Restraint of the Press?*, 11 *PREVIEW OF THE U.S. SUP. CT. CASES* 243, 243 (1985) (“The First Amendment . . . prohibits the government from unreasonably interfering with people’s ability to communicate . . . through speech. It

Regulation of securities may do no violence to the First Amendment if it is not targeted at speech or if such targeting is “necessary to achieve the goals of federal securities laws.”²³¹ Still, in framing regulations of software (and internet) speech, Congress, the states, the courts, and administrative agencies attempt to differentiate speech that governments regard as harmful from other speech that should be lawful.²³² They have drawn distinctions that support the conclusion, among others, that writing the Bitcoin or Ether white papers and launching these foundational crypto coins did not violate the Securities Act or amount to fraudulent activity. Similar distinctions are drawn in implementing other laws governing advertising, commerce, and commercial speech. Accordingly, this Part surveys federal and state law for distinctions and doctrines relevant to misleading ICO/AppCoin speech.

A. The Governmental Interest in Regulating Coin-Founding Speech

The governmental interest in preventing fraud and regulating professional conduct or complex economic systems is often said to be substantial and even compelling.²³³ Yet there is a reduced public interest in regulating vague boasts and wild-eyed boosterism. Throughout the law, legislatures and adjudicators tend to distinguish between vague or optimistic statements about oneself or one’s enterprise, and statements of existing or recent fact that could be verified as being true or false. This distinction supports statutory and constitutional principles embodying light-touch regulatory regimes, including principles of the law of federal securities fraud, securities registration and disclosure requirements, false

limits the power of the government to regulate the flow of information among individuals.”)

²³¹ Page & Yang, *supra* note 189, at 7 n.26 (quoting Regulation of Communications among Shareholders, Release Nos. 34–31, 326, IC-19031, 57 Fed. Reg. 48,276 (Oct. 22, 1992)).

²³² The agencies on which this Part will focus include the SEC and the FTC.

²³³ See, e.g., *Zauderer v. Off. of Disciplinary Couns. of Super. Ct. of Ohio*, 471 U.S. 626, 657–58 (1985) (substantial interest in preventing deception with reasonable regulation); *Ohralik v. Ohio State Bar Ass’n*, 436 U.S. 447, 460 (1978) (finding a “particularly strong” interest in “protecting consumers and regulating commercial transactions,” and “a special responsibility for maintaining standards among members of the licensed professions”); *SEC v. Wall Street Pub.*, 851 F.2d 365, 373–74 (D.C. Cir. 1988) (suggesting that government interest in preventing misleading statements about securities was either unquestionable or substantial enough under *Zauderer*); cf. *Janus v. Am. Fed’n of State & Mun. Emps., Council 31*, 138 S. Ct. 2448, 2465–66 (2018) (peaceful relations between unions and management even in public employers is a compelling interest); *Posadas de P.R. Assocs. v. Tourism Co. of P.R.*, 478 U.S. 328, 341 (1986) (consumer “welfare” a “substantial” governmental interest”).

advertising of goods or services, common-law fraud, and products liability.²³⁴

Crypto white papers tend to focus on projections and puffery. In that, they are similar to relatively unregulated provision of information in both securities law and in other fields, including over-the-top self-promotion, honest if flawed optimism about the future, subjective comparisons of securities or commodities, search-engine results or other rankings, and the creation of economies in virtual worlds.²³⁵ Depending on how the SEC conducts its enforcement and public-education campaigns, the law's solicitude for puffery will either buttress its regulatory forbearance, or stand in contrast to its potential overreaching.

B. Traditional Legal Principles Governing Optimistic Statements

1. The Securities Act and Exchange Act

Federal courts have concluded that cryptocurrencies could fall under the regulatory purview of the SEC under the Securities Act and the Exchange Act, as well as under other investment-related laws.²³⁶ Moreover, the ABA wants states to follow New York's lead in purporting to impose prior restraints on persons handling "virtual currencies."²³⁷ Such laws, however, threaten to make most cryptocurrency speech unlawful as it has

²³⁴ See TAPSCOTT & TAPSCOTT, *supra* note 31, at ch. 11 (observing that numerous legal scholars argue for a light touch approach to blockchain); *supra* note 34 (citing authorities on status of information services under communications law); *infra* notes 323, 325, 340 (citing treatment of puffery and forward-looking statements in securities law, puffery in false advertising and fraud law, etc.).

²³⁵ See, e.g., *supra* note 116; cf. VILI LEHDONVIRTA & EDWARD CASTRONOVA, VIRTUAL ECONOMIES: DESIGN AND ANALYSIS 96 (2014) (suggesting that certain sales of Facebook Credits by users to Facebook Platform developers, and even more marketplace sales of Linden dollars, a virtual currency in a virtual world, are unregulated); Iviane Ramos de Luna et al., *Analysis of a Mobile Payment Scenario: Key Issues and Perspectives*, in IMPACT OF MOBILE SERVICES ON BUSINESS DEVELOPMENT AND E-COMMERCE 22, 27 (Francisco Liébana et al. eds., 2019) (stating that European Central Bank regards Facebook Credits and virtual world currencies as unregulated virtual currencies).

²³⁶ See, e.g., Press Release, Two ICO Issuers Settle SEC Registration Charges, Agree to Register Tokens as Securities, *supra* note 8.

²³⁷ *Chino v. N.Y. Dep't of Fin. Servs.*, No. 101880/2015, slip op. 51908(U) (N.Y. Sup. Ct. N.Y. Cnty. Dec. 21, 2017) (citing N.Y. COMP. CODES R. & REGS. tit. 23, § 200.1 *et seq.*, noting that it requires filing lists of "the identity and physical address of parties to transactions," current financial statements, official background checks, verification of tax status of every applicant's household or business, fingerprints, etc., and holding that plaintiff had failed to file a cognizable challenge to its constitutionality); Plaintiff's Amended and Verified Complaint and Article 78 Petition, *Chino v. N.Y. Dep't of Fin. Servs.*, No. 101880/2015 (N.Y. Sup. Ct., N.Y. Cnty. complaint filed May 25, 2017) (challenging constitutionality of BitLicense regime, which allegedly drove out of business a service intending to provide computers and services needed to process cryptocurrencies at delis and bodegas).

historically been articulated and structured. The cost of reporting financial results with the SEC under the Exchange Act is more than most coins could bear, and it is unclear how Generally Accepted Accounting Principles apply to Ether or Bitcoin, not to mention other coins with artificial intelligence or social media integration.²³⁸ In other countries, notably China and South Korea, regulation drove much crypto coin activity underground.²³⁹

The principles of American consumer and investor protection law provide a basis for regulating misleading ICO promotions after the fact and only as to provably false factual claims, as opposed to punishing mere failures to register in advance. The SEC and CFTC initially took a somewhat hands-off approach to crypto coins, warning that transactions in them could satisfy the *Howey* test and the definition of capital gains, etc., but not pursuing enforcement actions in 99% or 99.9% of cases that their announcements might justify.²⁴⁰ The SEC Chairman has referred

²³⁸ See Justin Cooke, Jason Denisenko & Richard Cohen, *Initial Coin Offerings: A Comparative Overview of Securities Regulatory Environments in the US, UK and Asia Pacific*, Allen & Overy, in BLOCKCHAIN & CRYPTOCURRENCY REGULATION 2019 (Josias Dewey ed., Rory Smith, 1st ed. 2019), (“The extensive ongoing reporting and other obligations that accompany Exchange Act registration would prove far too burdensome for the typical ICO issuer.”). Since 2003, the use of Generally Accepted Accounting Standards has become more mandatory, with fewer available exceptions even for truthful departures from them. See 17 C.F.R. §§ 228.10–229.10 (2020); Conditions for Use of Non-GAAP Financial Measures, Securities Act Release No. 8176, Exchange Act Release No. 47, 226, 68 Fed. Reg. 4,820 (Jan. 30, 2003).

²³⁹ See Emily Parker, *Can China Contain Bitcoin?*, MIT TECH. REV. (Dec. 11, 2017), <https://www.technologyreview.com/s/609320/can-china-contain-bitcoin> [<http://perma.cc/7D3W-M49X>]; Elaine Ramirez, *Crazy For Cryptocurrency: Why South Koreans Are Risking It All*, FORBES (Aug. 2, 2017, 1:28 AM), <https://www.forbes.com/sites/elaineramirez/2017/08/02/crazy-for-cryptocurrency-why-south-koreans-are-risking-it-all-on-ethereum/> [<http://perma.cc/CWN6-9ZKL>]; cf. Steven Russolillo & Eun-Young Jeong, *South Korea’s Cryptocurrency Crackdown Isn’t Stopping This Bitcoin Exchange’s Launch*, WALL ST. J., (Jan. 22, 2018, 5:25 AM), <https://www.wsj.com/articles/south-koreas-cryptocurrency-crackdown-isnt-stopping-this-bitcoin-exchanges-launch-1516616723> [<http://perma.cc/NE3J-SQCW>].

²⁴⁰ See Letter from Llew Claasen, Exec. Dir., Bitcoin Found., to Uniform Law Commission San Diego Meeting (July 14, 2017) (noting early federal consensus that blockchain innovation typified by Bitcoin should continue), <https://www.scribd.com/document/353781110/07-14-2017-Letter-to-ULC-Regarding-Virtual-Currencies> [<http://perma.cc/8X33-Q2A8>]; Jay Clayton, Chairman, SEC, Testimony on “Oversight of the U.S. Sec. and Exch. Comm’n” (Dec. 11, 2018), <https://www.sec.gov> [<http://perma.cc/FN4T-PZN7>] (suggesting that SEC enforcement activity on unregistered digital token sales began in 2017, long after such sales began, and did not target promoters of Bitcoin or Ethereum, two of the largest token ecosystems, in first two years); see also Defendant’s Motion to Dismiss Indictment for Subject Matter Jurisdiction & Vagueness at 22, *United States v. Zaslavskiy*, No. 17 CR 647 (RJD), 2018 WL 4346339 (E.D.N.Y. Sept. 11, 2018); Angela Walch, *The Bitcoin Blockchain as Financial Infrastructure: A Consideration of Operational Risk*, 18 NYU J. LEGISL. PUB. POL’Y 837, 891 (2015).

to a period of educating ICO promoters being followed by a period of suing or prosecuting them.²⁴¹ Famously, SEC guidance relating to the DAO affair indicated that digital token investment schemes may be unregistered offerings of securities.²⁴² The SEC has sued several firms for unregistered ICOs and obtained consent decrees or injunctions against many, perhaps most, of them, as well as a short criminal sentence in one egregious case.²⁴³ Moreover, the CFTC warned of pump and dump practices in crypto markets, which is a manipulative device in connection with the sale of a security or a commodity.²⁴⁴

The Supreme Court has recognized a critical distinction between fraud in an investment offering versus a non-“investment” fraud, which would not be securities fraud.²⁴⁵ Thus, many

²⁴¹ See, e.g., Clayton, *supra* note 240.

²⁴² See, e.g., SEC Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934, *supra* note 8; Brief of SEC in Support of United States in Opposition to Defendant’s Motion to Dismiss Indictment, at 11-17, *United States v. Zaslavskiy*, No. 17 CR 647 (E.D.N.Y. Sept. 11, 2019) (discussing DAO report). See also *Zaslavskiy*, No. CR-647(S-1), slip op. at 1 (S.D.N.Y. sentence imposed Nov. 18, 2019) (resulting in SEC obtaining a sentence of incarceration of eighteen months, plus restitution).

²⁴³ See, e.g., SEC v. Titanium Blockchain Infrastructure Servs. Inc., No. CV18-4315-DSF, slip op. at § III (C.D. Cal. May 30, 2018), *subsequent proceedings at* (C.D. Cal. consent judgment filed May 23, 2019) (injunction against offering unregistered token as security); SEC v. PlexCorps, 2017 U.S. Dist. LEXIS 206145 (E.D.N.Y. Dec. 14, 2017) (finding SEC likely to be able to show that “PlexCoin Tokens” were securities that need to be registered); SEC v. Shavers, No. 4:13-CV-416, 2014 WL 4652121, at *1, *10 (E.D. Tex. Sept. 18, 2014) (investigating the SEC’s stated claim against promoter of Bitcoins Savings & Trust for selling unregistered securities, although promoter did not seem to have own coin or token); Press Release, Two ICO Issuers Settle SEC Registration Charges, Agree to Register Tokens as Securities, *supra* note 8; Press Release, SEC Obtains Emergency Order Halting Fraudulent Coin Offering Scheme, *supra* note 8; Press Release, SEC Suspends Trading in Three Issuers Claiming Involvement in Cryptocurrency and Blockchain Technology, *supra* note 8.

²⁴⁴ Press Release, Commodity Futures Trading Comm’n, CFTC Issues First Pump-and-Dump Virtual Currency Customer Advisory CFTC Warns Customers to Avoid Pump-and-Dump Schemes (Feb. 15, 2018); see also Press Release, Commodity Futures Trading Commission, CFTC Staff Issues Consumer Advisory on Digit. Tokens (July 16, 2018) (“Beware Virtual Currency Pump-and-Dump Schemes highlights virtual currency pump-and-dump schemes that occur in the largely unregulated cash market for virtual currencies and digital tokens, and typically on platforms that offer a wide array of coin pairings for traders to buy and sell.”); Oscar Williams-Grut, *Market Manipulation 101: ‘Wolf of Wall Street’-Style ‘Pump and Dump’ Scams Plague Cryptocurrency Markets*, BUS. INSIDER (Nov. 13, 2017, 11:00 PM), <https://www.businessinsider.com/ico-cryptocurrency-pump-and-dump-telegram-2017-11?op=1> [<http://perma.cc/N8Z9-5U7W>] (“Traders artificially inflate the price of small cryptocurrencies with the hope of making a quick profit . . .”). A pump and dump scheme traditionally involved the purchase of stock, the false touting of it online or elsewhere, and then its dumping or sale at the resulting inflated price. See SEC v. Whittemore, 659 F.3d 1, 4 (D.C. Cir. 2011); *United States v. Gordon*, 710 F.3d 1124, 1128 n.2 (10th Cir. 2013); *Schnell v. Consecro, Inc.*, 43 F. Supp. 2d 438, 441, 447 (S.D.N.Y. 1999); Hoke, Exchange Act Release No. 16266, 1999 WL 670961 (Aug. 30, 1999); *United States v. Hoke*, Dock. 99-CR-411-ALL (C.D. Cal. 1999).

²⁴⁵ See *Reves v. Ernst & Young*, 494 U.S. 56, 61 (1990) (“Congress did not . . . ‘intend

investments that are offered to others do not need to be registered as securities, including business and law partnerships and sales of businesses, software licenses useful in making the licensee's business more profitable, contracts to sell or lease items which the investor continues to control, union pension fund investments, condominiums and housing cooperatives, and certificates of deposit to earn a fixed interest rate on capital delivered to a bank—any fraud preceding such deals would not be fraud in connection with the sale of a “security” or “investment contract.”²⁴⁶ When an

to provide a broad federal remedy for all fraud.”) (quoting *Marine Bank v. Weaver*, 455 U.S. 551, 556 (1982)).

²⁴⁶ See *Marine Bank*, 455 U.S. at 557 n.5 (explaining that for purposes of securities fraud action, a certificate of deposit did not qualify as a “certificate of deposit, for a security” under Exchange Act, 15 U.S.C. § 78c(a)(10), even though the plaintiff invested such a certificate in a slaughterhouse and retail meat-market refers, because a “certificate of deposit, for a security” *traditionally* refers to instruments issued “in the course of corporate reorganizations”); *Int'l Brotherhood of Teamsters, Chauffeurs, Warehousemen & Helpers of Am. v. Daniel*, 439 U.S. 551, 561–62 (1979) (indicating that entitlement to benefits paid under union pension fund whose size would be affected by success of fund's investments was not a “security” or “investment contract” under *SEC v. W.J. Howey Co.*, 328 U.S. 293, 300 (1946)); *United Hous. Found., Inc. v. Forman*, 421 U.S. 837, 845, 858–59 (1975) (stating that “shares” in a nonprofit housing cooperative are not “securities” or “investment contracts” under Securities Act/Exchange Act); *SEC v. ETS Payphones, Inc.*, 408 F.3d 727, 732–33 (11th Cir. 2005) (per curiam) (finding that investments in payphone leasing and placement business would only be securities if investors “retained minimal control over the telephones”); *Matek v. Murat*, 862 F.2d 720, 731–32 (9th Cir. 1988) (suggesting that investments in general partnership are not put into a security or “investment contract” when partners control enterprise using their voting rights and have access to information about partnership affairs otherwise than through protections of SEC filing requirements); *Goodwin v. Elkins & Co.*, 730 F.2d 99, 103 (3d Cir. 1984) (“An investment contract or interest may still be classed as a security even if the investor is required to perform some duties, as long as those duties are ‘nominal or limited and would have little direct effect upon receipt by the participants of the benefits promised by the promoters.’”) (citation omitted); *Williamson v. Tucker*, 645 F.2d 404, 419 (5th Cir. 1981) (holding that joint venturers or partners may not buy securities or investment contracts when their “powers” are “real one[s] which they are in fact capable of exercising”); *Odom v. Slavik*, 703 F.2d 212, 215 (6th Cir. 1983) (per curiam) (similar to *Williamson*); *Lino v. City Investing Co.*, 487 F.2d 689, 691–93 (3d Cir. 1973) (concluding that even when promoters contact investors to sell them franchises, franchises created by such sales are not securities when investors work to make the franchises profitable); *Rivanna Trawlers Unlimited v. Thompson Trawlers, Inc.*, 650 F. Supp. 1378, 1383 (W.D. Va. 1986) (“In determining whether a partnership or joint venture comes under the securities law, courts have considered the powers that the investors or partners are legally entitled to, rather than what powers they exercised or expected to exercise” and “courts have uniformly refused to define investments as securities in cases where ‘the power retained by the investors is a real one which they are in fact capable of exercising’”) (quoting *Williamson*, 645 F.2d at 419); *Cryptocurrencies: Oversight of New Assets in the Digital Age: Hearing Before the Comm. on Agric.*, 115th Cong. 70 (2018) (statement of Lowell D. Ness, Managing Partner, Perkins Coie LLP) (“Ongoing software updates and upgrades constitute ongoing efforts of others under *Howey*, but they are not likely to rise to the requisite level of efforts to form an investment contract.”); Debevoise & Plimpton, A Securities Law Framework for Blockchain Tokens, COINBASE 20, 22 (Dec. 7, 2016), <https://www.coinbase.com/legal/securities-law-framework.pdf> [<http://perma.cc/AEL9-ZBG3>] (indicating that licenses of software should not be treated as security, because

investor continues to control the business in which he or she invests, as with a franchise of a national restaurant or retail chain that uses standard layouts or recipes, he or she may not purchase a security or investment control because the franchisor or other business partner is not in complete control.²⁴⁷ In the case of union pension funds, it is not a typical “investment” to labor under a collective bargaining agreement that calls for a share of one’s compensation to be diverted into a pension whose funds are invested for profit.²⁴⁸ With respect to condominiums and housing cooperatives, they are not securities when they are not marketed based “solely by the prospects of a return,” because units may be used for household purposes even though any shares in units and common areas may also be flipped for large profits.²⁴⁹

Crypto coin corporations are arguing in several pending lawsuits that because their token actually operates as a currency, it is excluded from the definition of security by statute.²⁵⁰ The Exchange Act states that a security or investment contract, by definition, “shall not include currency.”²⁵¹ To the extent that a crypto coin is useful in payments, just like euros and to a greater extent some foreign currencies (those of Venezuela or Zimbabwe, for example), this exemption should apply.

A narrowing construction of “security” would be appropriate in view of the principle of statutory construction known as *noscitur a sociis*, and perhaps also the one known as *eiusdem generis*, at least when it comes to crypto coins that are not marketed as shares of stock or securities using those precise words. The principle of *noscitur a sociis* states that one should

software used in a business is not directly controlled by licensor).

²⁴⁷ See *ETS Payphones, Inc.*, 408 F.3d at 732 (holding that investors in payphone leasing and placement business only purchased securities because they “retained minimal control over the telephones” and that “the more control investors retain, the less likely it becomes that the contract qualifies as a security”).

²⁴⁸ *Daniel*, 439 U.S. at 561–62.

²⁴⁹ *Forman*, 421 U.S. at 852–53 (emphasis added) (citing *Howey*, 328 U.S. at 300).

²⁵⁰ See, e.g., Defendants’ Memorandum of L. (1) in Support of Their Motion for Summary Judgment & (2) in Opposition to Plaintiff’s Application for a Preliminary Injunction at 5–6, *SEC v. Telegram Grp. Inc.*, No. 19 Civ. 9439 (PKC), 2020 WL 61528 (S.D.N.Y. Jan. 3, 2020); Answer to Complaint at 12, 22, 26–27, *U.S. SEC v. Kik Interactive Inc.*, No. 19 Civ. 5244 (AKH), 2020 WL 5819770 (S.D.N.Y. Sept. 30, 2020); Notice of Motion & Motion to Dismiss Consol. Complaint for Violations of Fed. & Cal. L. at 21 n.19, *Zakinov v. Ripple Labs, Inc.*, No. 18-cv-06753-PJH, 2020 WL 922815 (N.D. Cal. Feb. 26, 2020). A criminal defendant already mentioned above also has argued unsuccessfully that a currency used for payment, whether Bitcoin or some new coin, is not a security. Defendant’s Motion to Dismiss Indictment for Subject Matter Jurisdiction & Vagueness at 6, 9–10, *United States v. Zaslavskiy*, No. 17 CR 647 (RJD), 2018 WL 4346339 (E.D.N.Y. Sept. 11, 2018).

²⁵¹ 15 U.S.C. § 78c(a)(10) (2018).

construe a phrase like “investment contract” by its neighbors in a statute or statutory clause.²⁵² The principle of *ejusdem generis* requires a general term or phrase to be interpreted as within the same class or genus as the more specific terms that precede it in a statutory list.²⁵³ In the case of the Securities Act, the terms that precede and follow “investment contract” are relatively passive investments like stocks, bonds, mineral rights, and debt notes.²⁵⁴

An important consequence of paying attention to these basic rules of construction is that some crypto coins would be neither securities nor commodities. Protecting crypto coins from the prior restraints imposed by the Securities Act and the Exchange Act alone will not vindicate the freedom of expression when it comes to white papers and token ecosystems if any contract relating to a digital token remains unlawful unless it is sold by an entity regulated under the Commodities Exchange Act (CEA).²⁵⁵ Reading the catch-all clause of the CEA as being restricted by *ejusdem generis* and *noscitur a sociis* to commodities similar to the agricultural and precious mineral commodities listed in CEA is one way of ensuring that crypto coins are not subject to the CEA’s restraints.²⁵⁶

Congressional intent may also be relevant to the question of whether crypto coin white papers are offers of investment contracts. Congress intended the definition of “security” to capture “the ordinary concept of a security,” as of the 1930s, which was likely far removed from something like Bitcoin or other digital tokens.²⁵⁷ Likewise, the legislative history indicates that by “commodities,” Congress meant such tangible items like fruit, lumber, and metals.²⁵⁸ Both the Securities Act and the CEA were intended to apply to new instruments such as “irregular”

²⁵² ANTONIN SCALIA & BRYAN A. GARNER, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS* 195 (2012).

²⁵³ Egon Guttman, *The Futures Trading Act of 1978: The Reaffirmation of CFTC-SEC Coordinated Jurisdiction over Security/Commodities*, 28 AM. U. L. REV. 1, 24–25 (1978); *Ejusdem Generis*, BLACK’S LAW DICTIONARY (4th ed. 1968) (citing *Goldsmith v. United States*, 42 F.2d 133, 137 (2d Cir. 1930)).

²⁵⁴ See *Forman*, 421 U.S. at 847 (citing 15 U.S.C. § 77b(a)(1) (2018)).

²⁵⁵ See 7 U.S.C. §§ 6(a), 6h (2018); *SEC v. Nat’l Sec., Inc.*, 393 U.S. 453, 463 (1969); Guttman, *supra* note 253, at 29.

²⁵⁶ See 7 U.S.C. §§ 6a(a)(1), 6h (2018); see also Andrew Verstein, *Crypto Assets and Insider Trading Law’s Domain*, 105 IOWA L. REV. 1, 20 (2019) (noting that if cryptocurrencies are still commodities, exemption from classification as securities may be of limited value, because it “takes crypto assets out of the frying pan of securities regulation and into the fire of commodities regulation”).

²⁵⁷ *Forman*, 421 U.S. at 847–48 (quoting H.R. REP. NO. 73-85, at 11 (1933)).

²⁵⁸ Guttman, *supra* note 253, at 24–25 (collecting authorities).

securities or futures contracts on ocean shipping rates or mortgages, but as mentioned above, they have not been applied to investments such as franchises, even though franchises resemble stocks or mineral rights, so there must be a limit to such laws' protective scope.²⁵⁹

Many crypto coins are unlike public corporations in which members of the general public passively own shares, because such coins require significant efforts by coin adopters to succeed. The mining of Bitcoin and other mined tokens, which can confirm the validity of ongoing transactions and assemble the blockchain while preventing fraud, is an obvious example of how crypto owners are non-passive investors who are more like franchisees than Apple or Wells Fargo shareholders.²⁶⁰ As a result of being, in part, dependent on the expertise and marketing efforts of token purchasers, as well as their "efforts to 'setup and maint[ain]'" a blockchain and token-based ecosystem, many token founders do not exploit purchasers who are "solely" reliant on their efforts.²⁶¹

When it is a license of software, or a partnership to control a protocol directly rather than via managers and boards of directors as intermediaries, a crypto coin investment should not be ruled to be a security because the community and the ecosystem it creates shapes a coin's value.²⁶² Software and real property, like certificates relating to the ownership of precious metals, are not securities because they fluctuate based on market conditions rather than solely due to the developer's or metals dealer's ongoing efforts.²⁶³ A lease of valuable property rights is

²⁵⁹ SEC v. W.J. Howey Co., 328 U.S. 293, 301 (1946) (referring to new promotional schemes covered by definition of security, which is not formulaic); Guttman, *supra* note 253, at 11, 14–15 (citing SEC v. C.M. Joiner Leasing Corp., 320 U.S. 344, 351 (1968)) (indicating that "irregular" forms of investment are covered, including futures on mortgages or ocean shipping rates).

²⁶⁰ See Andreessen, *supra* note 101; Bhaskar et al., *supra* note 12, at 311–12; Notice of Filing of Proposed Rule Change Relating to the Listing and Trading of Shares of the EtherIndex Ether Trust Under NYSE Area Equities Rule 8.201, 2017 WL 149923 (Jan. 13, 2017). Some crypto coins, it must be noted, are more centralized and do not use miners, making them less susceptible to this particular defense to being classified as a "security." See Ying-Yingsieh, Jean-Philippe (JP) Vergne & Shawang, *The Internal and External Governance of Blockchain-Based Organizations: Evidence from Cryptocurrencies in BITCOIN AND BEYOND CRYPTOCURRENCIES, BLOCKCHAINS, AND GLOBAL GOVERNANCE* (Malcolm Campbell-Verduyn ed., 2017).

²⁶¹ Ne. Revenue Servs., LLC v. Maps Indeed, Inc., 685 F. App'x 96, 100–01 (3d Cir. 2017).

²⁶² See Debevoise & Plimpton, *supra* note 246, at 17–22; Ness, *supra* note 246, at 47–48.

²⁶³ See Noa v. Key Futures, Inc., 638 F.2d 77, 79–80 (9th Cir. 1980) (Certificates of ownership of silver bars are not a security because value "depended upon the fluctuations of the silver market," even though dealer in certificates might go out of business before actually delivering silver, making purchasers investors in their view.); Marini v. Adamo,

clearly not a security, even though it is needed to create or expand a profitable enterprise such as oil or gas drilling.²⁶⁴ A sale of a work of art as an investment, even under false pretenses, does not create an “investment contract.”²⁶⁵ Similarly, a note secured by a mortgage on residential real estate, even if as part of an investment, is not a security if there is a “commercial” purpose for it such as resolving cash flow difficulties, rather than selling a business to the public in parts.²⁶⁶

The Bitcoin protocol and founding documents operate as a copyright and trademark license, to compensate the developers of an extremely complex and ingenious open-source software project, and one of the most successful branding and marketing campaigns of all time.²⁶⁷ An expectation that a digital token will support a “business” related or underlying the token may be different than an “expectation of profits” from an “enterprise” directly controlled by another’s “efforts,” as required by securities law.²⁶⁸ At least one court has held that an expectation that the

812 F. Supp. 2d 243, 256–58 (E.D.N.Y. 2011) (questioning whether purchaser of rare coins through another is strictly dependent upon intermediary for success of that investment if purchaser could sell coins early); Defendants’ Memorandum of Law in Support of Their Motion for Summary Judgment and in Opposition to Plaintiffs’ Application for a Preliminary Injunction, at 31–39, Sec. & Exch. Comm’n v. Telegram Grp. Inc., 448 F. Supp. 3d 352 (S.D.N.Y. 2020) (No. 19-cv-9439).

²⁶⁴ See *Nolfi v. Ohio Ky. Oil Corp.*, 675 F.3d 538, 546–47 (6th Cir. 2012); see also *Odom v. Slavik*, 703 F.2d 212, 213–15 (6th Cir. 1983) (holding that a limited partnership agreement to develop a real estate community was not a securities transaction even if a minor partner was denied control of it, making him dependent on the other general partners); *SEC v. Crude Oil Corp. of Am.*, 93 F.2d 844, 845, 847–48 (7th Cir. 1937) (emphasizing that none of the purchasers of contracts for future delivery of oil actually expected or wanted to receive the oil, instead desiring merely a speculative profit, in finding “forward contract” to be a security); *Perry v. Gammon*, 583 F. Supp. 1230, 1231–33 (N.D. Ga. 1984) (holding the “ordinary sale of real estate” is not a “securities transaction” even if purchasers intend to rely on real estate’s existing management at time of sale); *Wabash Valley Power Ass’n v. Pub. Serv. Co. of Ind.*, 678 F. Supp. 757, 765–67 (S.D. Ind. 1988) (working through a similar analysis as to purchasers of interest in nuclear power project, who expected to use the power but also perhaps to profit from energy transactions).

²⁶⁵ See *Mechigian v. Art Cap. Corp.*, 612 F. Supp. 1421, 1424, 1428 (S.D.N.Y. 1985) (investor in a lithographic plate for work of art touted as being worth much more than it really was, due to ability to make and sell prints from it at a profit, did not purchase security because “we should not try to turn every ‘thing’ which might be purchased and sold into a ‘security’ or “every commercial contract would end up being enforced in . . . class actions.”).

²⁶⁶ See *Singer v. Livoti*, 741 F. Supp. 1040, 1048–49 (S.D.N.Y. 1990) (indicating that a “commercial or consumer purpose” would indicate that a “routine” consumer transaction, including a “note secured by a mortgage on a home,” is not regulated by securities laws); see also *Zolfaghari v. Sheikholeslami*, 943 F.2d 451, 455 (4th Cir. 1991) (noting that a note secured by a mortgage on one home held as an investment for a return would not be a security).

²⁶⁷ See Walch, *supra* note 240, at 876–80.

²⁶⁸ But see *Cryptocurrencies: Oversight of New Assets in the Digital Age: Hearing Before the H. Comm. on Agric.*, *supra* note 38 (statement of Lowell D. Ness, Managing

Blockvest digital token will support a “business” would not make it a security; the court refused to find that purchasers of the token were investors in securities.²⁶⁹ A subsequent decision finding the Blockvest tokens to be securities emphasized that the purchasers were described as “‘passive’ investors.”²⁷⁰ A more active investor is different, as illustrated by cases declining to find a securities transaction when a franchisee buys the right to use trademarks and trade secrets in exchange for paying royalties and fees while agreeing to abide by certain standards, or when a business buys complicated software like Photoshop or Salesforce that is subject to use terms.²⁷¹

Many crypto coins also serve as a license to use a privacy-preserving form of software, reminiscent in some ways of anonymous email accounts, network firewalls, or internet browsers with privacy modes.²⁷² The absence of a dominant central firm in permission-less token-funded ecosystems could reduce the level of distrust with which many people view new technologies such as e-commerce, digital subscriptions, or social networking.²⁷³ In the context of online purchases of creative

Partner of Perkins Coie LLP, arguing that some token purchasers rely on promoters to build token “network”).

²⁶⁹ See *SEC v. Blockvest, LLC*, No. 18CV2287-GPB(BLM), 2018 WL 6181408, at *6–*7 (S.D. Cal. Nov. 27, 2018).

²⁷⁰ See *id.* at *5, *8 (quoting ICO marketing materials). The ICO at issue was relatively egregious in terms of portraying itself as a security, including by adopting a name that mashed up “blockchain” and “invest,” using a “Blockchain Exchange Commission” logo with an eagle design purloined from the SEC itself, and in terms of promising passive investors strong returns. To view the logo, see Ross Todd, *Lawyers Sound Off on What SEC’s Early Loss Really Means for Crypto ICOs and Securities*, LAW.COM (Nov. 29, 2018, 2:51 PM), <http://www.law.com/nationallawjournal/2018/11/29/lawyers-sound-off-on-what-secs-early-loss-really-means-for-crypto-icos-and-securities/> [<http://perma.cc/84HW-CV3J>].

²⁷¹ See Debevoise & Plimpton, *supra* note 246, at 20–22. The analysis in this memorandum is based in part on *SEC v. Koscot Interplanetary, Inc.*, 497 F.2d 473 (2d Cir. 1974), in which the court suggested that a promoter of an investment must retain “immediate control” for its contract with investors to qualify as “investment contract,” because “remote” control analogous to that of a franchisor over a franchisee’s format or décor would not qualify. *Id.* at 484–85. See also *Cont’l Mktg. Corp. v. SEC*, 387 F.2d 466, 470 (10th Cir. 1967) (to be a security, an investment must be “inescapably tied to the efforts of the ranchers and the other defendants and not to the efforts of the investors.”) (emphasis added).

²⁷² See Shlomit Azgad-Tromer, *Crypto Securities: On the Risks of Investments in Blockchain-Based Assets and the Dilemmas of Securities Regulation*, 68 AM. UNIV. L. REV. 69, 133 (2018); Benedikt Bünz et al., *Zether: Towards Privacy in a Smart Contract World*, in FINANCIAL CRYPTOGRAPHY AND DATA SECURITY 423, 424 (Joseph Bonneau & Nadia Heninger eds., 2020) (discussing tokenized “techniques for confidential and anonymous payments, such as Monero and Zcash”) (footnote omitted); Yong Yu et al., *Blockchain-Based Solutions to Security and Privacy Issues in the Internet of Things*, 25 IEEE WIRELESS COMM’NS 12 (2018).

²⁷³ See THIBAUT SCHREPEL & VITALIK BUTERIN, BLOCKCHAIN CODE AS ANTITRUST 4–5 SSRN 3597399 (2020); see also Charles Kim, *How Patreon Champions its Creators and Patrons’ Data Rights*, TRANSCEND (May 12, 2020), <http://transcend.io/blog/how->

content, ranging from films to software, such protection of the purchasers' privacy promotes their own right to read, exchange ideas, and participate in the benefits of intellectual and scientific advances.²⁷⁴

Moreover, like the owners of general partnerships, many token holders can vote to affirm or reject a particular protocol or transactions, thereby potentially forking or otherwise altering a blockchain.²⁷⁵ Just as importantly, many tokens operate on blockchains that are open to inspection and provide transparency without SEC filings, just like general partners or joint venturers have access to books, records, and important meetings, which assures them of transparency without classifying their partnership or venture interests as securities.²⁷⁶ Such

patreon-champions-its-creators-and-patrons-data-rights [http://perma.cc/B5MN-ETRU] (noting that digital subscriptions create considerable privacy risks in terms of sharing personal and payment data).

²⁷⁴ See, e.g., G.A. Res. 2200A (XXI), International Covenant on Civil and Political Rights, art. 19(2), *adopted and opened for signature, ratification, and accession* Dec. 16, 1966, 999 U.N.T.S. 171 (entered into force Mar. 23, 1976) ("Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice."); G.A. Res. 217 (III) A, Universal Declaration of Human Rights, art. 27 ¶ 1, (Dec. 10, 1948) ("Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits."); Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace*, 28 CONN. L. REV. 981, 981–83 (1996); Neil M. Richards, *Intellectual Privacy*, 87 TEX. L. REV. 387, 388–89 (2008); Joseph Thai, *The Right to Receive Foreign Speech*, 71 OKLA. L. REV. 269, 274–75 (2018); Lea Shaver, *The Right to Science and Culture*, 2010 WIS. L. REV. 121, 123–25 (2010).

²⁷⁵ See BitGuild, *PLAT Is Migrating to Tron*, MEDIUM, (Apr. 8, 2019), <http://medium.com/the-notice-board/plat-is-migrating-to-tron-cf64909bfb3> [http://perma.cc/ZP3C-56XH]; Stéphane Blemus & Dominique Guégan, *Initial Crypto-asset Offerings (ICOs), Tokenization and Corporate Governance* 8 (Centre d'Économie de la Sorbonne, Working Paper No. arXiv:1905.03340, 2019) ("Besides, each type of crypto-asset issued during an ICO possesses its own underlying characteristics, granting rights different from the other crypto-assets (voting rights, share of capital or any particular advantage ...)."); James Grimmelman, *All Smart Contracts are Ambiguous*, 2 J.L. & INNOVATION 1, 19 (2019) (observing that of some smart contracts, in which category author includes some digital tokens, "protocol changes, forks, 51% attacks, and other consensus breakdowns are a kind of corruption threat" that "subject smart contracts to abrogation or alteration at the whims of other blockchain users"); Wenbin Zhang et al., *A Privacy-Preserving Voting Protocol on Blockchain*, 2018 IEEE 11TH INT'L CONF. ON CLOUD COMPUTING (CLOUD) 401, 401 ("As blockchain technologies mature and ecosystems over blockchain evolve, peers on blockchain networks often face situations in which they need to conduct voting for decision-making; as happened in the case of the DAO hard fork event on Ethereum."); see also Jonathan Rohr & Aaron Wright, *Blockchain-Based Token Sales, Initial Coin Offerings, and the Democratization of Public Capital Markets*, 70 HASTINGS L. J. 463, 475 (2019); Walch, *supra* note 240, at 861–66, 876–80; Angela Walch, *Open-Source Operational Risk: Should Public Blockchains Serve as Financial Market Infrastructures?*, in 2 HANDBOOK OF BLOCKCHAIN, DIGITAL FINANCE, AND INCLUSION 243, 259–66 (David Lee Kuo Chuen & Robert Deng eds., 2018).

²⁷⁶ See, e.g., Andreessen, *supra* note 101; David Bernstein, *Blockchain Could*

transparency and control leads courts to find that some partnerships are not securities.²⁷⁷ While corporate shareholders and limited partners also have voting rights, their shares in an enterprise may be deemed a security because their real say in what goes on is heavily diluted.²⁷⁸ The same may be true of widely-subscribed crypto coins, where the number of voting rights with respect to ledger transactions may rival the shareholder count of public companies and exceed the number of limited partners in a limited liability partnership.²⁷⁹ Still, unlike a corporation, blockchain-enabled tokens may provide a way of managing the token that is more democratic than the process characterizing most shareholders' ability to participate in corporate governance, which is minimal in many cases due to officers' and directors' power.²⁸⁰ Like Bitcoin users, adopters of new crypto coins "must rely on the efforts of others on the blockchain's ecosystem to bring their investment to fruition," but that does not mean that they are like corporate shareholders.²⁸¹

Transform Securities Transfer System, INT'L FIN. L. REV. (May 29, 2018) <http://www.iflr.com/Article/3807306/IFLR-magazine/Blockchain-could-transform-securities-transfer-systems.html> [<http://perma.cc/8JCX-6D6U>]; DE FILIPPI & WRIGHT, *supra* note 48, at 19–26, 35–37, 56–57, 109–13, 119, 133–35, 196–99; FEFER, *supra* note 48; Guadamuz & Marsden, *supra* note 10; Nakamoto, *supra* note 37, at 2, 6; *compare, with supra* note 246 (citing, *inter alia*, *Matek v. Murat*, 862 F.2d 720, 730–31 (9th Cir. 1988), *abrogated by* SEC v. Schooler, 905 F.3d 1107 (9th Cir. 2018)).

²⁷⁷ See *Williamson v. Tucker*, 645 F.2d 404, 419–20 (5th Cir. 1981) (emphasizing partners' access to information and abilities to participate in enterprise's affairs); *Odom v. Slavik*, 703 F.2d 212, 214–16 (6th Cir. 1983) (holding that ability to participate in affairs of an enterprise would result in investment in enterprise as partner not being a security); *Gotham Print, Inc. v. Am. Speedy Printing Ctrs.*, 863 F. Supp. 447, 454 (E.D. Mich. 1994) (noting profits of enterprise resulting "at least in large part" from participant-investors' efforts, in addition to those of promoter, franchise-style agreement was not a security).

²⁷⁸ *Williamson*, 645 F.2d at 419–20.

²⁷⁹ Cf. Michael Abramaowicz, *Cryptocurrency-Based Law*, 58 ARIZ. L. REV. 359, 389 (2016) ("In corporations . . . voters elect board members and entrust those board members to make decisions."); *id.* at 386 ("But . . . Bitcoin cannot allow voting based on one-person, one-vote, even if that were desirable.").

²⁸⁰ See, e.g., Stephen M. Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NW. U. L. REV. 547, 557–59 (2003); Lucian Arye Bebchuk, *The Case for Increasing Shareholder Power*, 118 HARV. L. REV. 833, 836–37, 843–47 (2005); Lucian Arye Bebchuk, *The Case for Shareholder Access to the Ballot*, 59 BUS. L. 43, 44–45, 47–48 (2003); Lisa M. Fairfax, *From Apathy to Activism: The Emergence, Impact, and Future of Shareholder Activism as the New Corporate Governance Norm*, 99 B.U. L. REV. 1301, 1304, 1307–11 (2019); *but see id.* at 1304–5 (recognizing a new era of actively voting shareholders has emerged, particularly with "SEC rule allowing shareholders to submit proxy access bylaws," although scholars continue to argue that low rate of directors being ousted means that "majority voting has no impact or . . . that shareholders are not willing to exercise their voting authority") (citing 17 C.F.R. § 240.14a-8(i)(8) (2018)); *Bus. Roundtable v. SEC*, 647 F.3d 1144, 1146–47 (D.C. Cir. 2011); Stephen J. Choi et al., *Does Majority Voting Improve Board Accountability?*, 83 U. CHI. L. REV. 1119, 1122, 1128 (2016); William K. Sjostrom, Jr. & Young Sang Kim, *Majority Voting for the Election of Directors*, 40 CONN. L. REV. 459, 469 (2007).

²⁸¹ Shlomit Azgad-Tromer, *Crypto Securities: On the Risks of Investments in*

Some combination of coding, mining, and automated processes may be more determinative of the coin's value than the identity of its founders or the coding enterprise's cash flow at the time of a coin's initial issuance.

Finally, like franchisees or member-managers of apartment cooperatives and the like, many coin purchasers use and improve their investments.²⁸² The SEC looks to the token purchasers' role in managing the network as an important factor, but it views crypto coins with influential or indispensable founders as more likely to be securities.²⁸³ It is true that in a case involving investors in rare (precious metal) coin portfolios designed—at the option of the buyer—with coins of the buyer's choosing or coins selected by the manager and seller, the court found a security to exist.²⁸⁴ However, that decision relied on a binding precedent regarding apartment cooperatives—finding their utility and owner-member upkeep to be irrelevant—which was later reversed by the Supreme Court.²⁸⁵ Other cases involving investments in live beavers or cosmetics for resale also predated the apartment cooperative

Blockchain-Based Assets and the Dilemmas of Securities Regulation, 68 Am. U. L. Rev. 69, 121–25 (2018). Although Bitcoin is now viewed as a “decentralized” token with an unimportant central management, see Hinman, *supra* note 155, at 3, the Bitcoin Foundation continued to shape the technological requirements of the token as late as 2017, by its own statement. See Claasen, *supra* note 240. Likewise, while the blockchain-based Aptoide app store had an existing open-source reference implementation, in 2018 the “ASF - App Store Foundation” was “created to coordinate the development of the protocol and reference implementation under an open governance model; board of directors is elected by AppCoins owners.” *AppCoins Milestones*, ICOBENCH (2019), <https://icobench.com/ico/appcoins/milestones> [<http://perma.cc/Z7KM-VWL3>].

²⁸² See, e.g., *Lino v. City Investing Co.*, 487 F.2d 689, 690–93 (regarding franchisees); *Endico v. Fonte*, 485 F. Supp. 2d 411, 415 (S.D.N.Y. 2007) (noting member-manager of apartment rehabilitation project, in which members who purchased access to the project would need to perform labor on it).

²⁸³ See No-Action Letter re: *Pocketful of Quarters, Inc.*, *supra* note 8; Hinman, *supra* note 155; Brief of SEC in Support of the United States' in Opposition to Defendant's Motion to Dismiss Indictment, *United States v. Zaslavskiy*, No. 17-CR-0647 (RJD) (E.D.N.Y. Mar. 19, 2018), at 14–15 (citing *Cont. 1 Mktg. Corp. v. SEC*, 387 F. 2d 466, 470–71 (10th Cir. 1967)); *SEC v. Aqua-Sonic Prods. Corp.*, 687 F.2d 577, 583–84 (2d Cir. 1982); *SEC v. Glenn W. Turner Enters., Inc.*, 474 F.2d 476, 482 (9th Cir. 1973); SEC, Div. of Corp. Fin., Framework for “Investment Contract” Analysis of Digital Assets (2018), <https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets> [<http://perma.cc/FK4G-CB5E>]; SEC Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934, *supra* note 8, at 9–10.

²⁸⁴ *SEC v. Brigadoon Scotch Distribs., Ltd.*, 388 F. Supp. 1288, 1292–93 (S.D.N.Y. 1975).

²⁸⁵ See *id.* at 1293 (citing *Forman v. Cmty. Servs., Inc.*, 500 F.2d 1246 (2d Cir. 1974), *cert. granted*, 419 U.S. 1120 (1975), *rev'd*, 421 U.S. 837, as justifying the expansive definition of “security” applied in the case); *Wuliger v. Eberle*, 414 F. Supp. 2d 814, 821 (N.D. Ohio, 2006) (citing *Brigadoon Scotch* ruling on Federal Coin Reserve as justifying a conclusion that “viatical life settlements” were securities).

case.²⁸⁶ If such precedents do not count, “functional cryptocurrencies” or “utility tokens” may not be securities after all.²⁸⁷

Crypto coin promoters such as Ripple Labs and Telegram Group are increasingly arguing that, as a functioning currency their tokens are and should be excluded from the definition of a security.²⁸⁸ Broad definitions of “currency” as a medium of exchange that circulates regardless of official status bolster this argument.²⁸⁹ This argument might not place crypto coins on the same lightly-regulated plane as other forms of software or political information, because the coin firms making this argument often point to the CFTC as having jurisdiction over currencies as commodities.²⁹⁰ However, there is a third category

²⁸⁶ See *SEC v. Koscot Interplanetary, Inc.*, 497 F.2d 473, 485 (5th Cir. 1974); *Con'l Mktg. Corp. v. SEC*, 387 F.2d 466, 469–70 (10th Cir. 1967); cf. *Forman*, 421 U.S. at 851–52, 858 (emphasizing that while a share in an apartment complex may be an “investment,” it is not a security or “investment contract” because it was not marketed as generating profits or resale revenue but was capable of “personal use”). It is true that in *Forman*, the Court announced that it was not deciding whether the promotion of an asset as both personally useful and a profitable investment would be a securities transaction, but it also suggested that it would not have been an investment contract to lease land rights that were directly useful as well as being a potentially profitable source of oil drilling rights that the lessor was primarily responsible for and promoting, stating instead that the land was strictly “incidental” to the drilling rights. *Forman*, 421 U.S. at 858 nn.17–18 (citing *SEC v. CM Joiner Leasing Corp.*, 320 U.S. 344, 348 (1943)).

²⁸⁷ See, e.g., Nate Crosser, *Initial Coin Offerings as Investment Contracts: Are Blockchain Utility Tokens Securities*, 67 U. KAN. L. REV. 379, 409–11 (2018); Anthony R.G. Nolan et al., *Initial Coin Offerings: Key US Legal Considerations for ICO Investors and Sponsors*, 19 J. INV. COMPLIANCE 1 (2018), <https://www.emerald.com/insight/content/doi/10.1108/JOIC-02-2018-0016/full/html> [<http://perma.cc/A9JA-6ZYW>]; Zuluaga, *supra* note 17, at 2, 4.

²⁸⁸ Defendant’s Memorandum in Opposition to Plaintiff’s Motion for Summary Judgment, at 20–23, *SEC v. Telegram Group Inc.*, No. 19-cv-9439 (PKC) (S.D.N.Y. Jan. 14, 2020); Notice of Motion and Motion to Dismiss Consol. Complaint for Violations of Fed. & Cal. L., at 3, *In re Ripple Labs Inc. Litig.* No. 18-cv-06753 (PJH) (N.D. Cal. brief filed 2019); Defendant’s Motion to Dismiss Indictment, at 6–10, 16–17, *U.S. v. Zaslavskiy*, No. 17-cr-0647 (RJD) (E.D.N.Y. Feb. 27, 2018); Defendant’s Reply Brief in Support of Motion to Dismiss Indictment, at 2–11, *U.S. v. Zaslavskiy*, No. 17-cr-0647 (RJD) (E.D.N.Y. Mar. 26, 2018); Defendant’s Reply Brief in Support of Motion to Dismiss, Ex. A at 3, *U.S. v. Zaslavskiy*, No. 17-cr-0647 (RJD) (E.D.N.Y. Feb. 27, 2018) (referencing McDonnell/Coin Drop Markets); see also Defendant’s Local Rule 56.1 Statement in Support of Their Motion for Summary Judgment, at 1, 3, 6–7, *SEC v. Telegram Group Inc.*, No. 19-cv-9439 (PKC) (S.D.N.Y. Jan. 14, 2020).

²⁸⁹ See MERRIAM-WEBSTER INC., WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 557 (Philip Babcock Gove ed. 2002) (defining “currency” as “something that is in circulation as a medium of exchange”) (emphasis added); *Currency*, MERRIAM-WEBSTER.COM, <https://www.merriam-webster.com/dictionary/currency> [<http://perma.cc/S8MF-ENEN>] (last visited Nov. 16, 2020); see also *Emery Bird Thayer Dry Goods Co. v. Williams*, 98 F.2d 166, 172 (8th Cir. 1938) (“Our investigation indicates that any one of three meanings may be attributable to the term ‘money’: (1) Gold or silver as the monetary standard of the Nation; (2) coins and currency actually circulating as a medium of exchange; or (3) the unit of value, the dollar.”).

²⁹⁰ See Plaintiff’s Reply Memorandum of Law in Further Support of Its Motion for Summary Judgment, at 15, *SEC v. Telegram Group Inc.*, No. 19-cv-9439 (PKC) (S.D.N.Y. Jan. 27, 2020), (No. 19 Civ. 9439); Notice of Motion and Motion to Dismiss Consol.

that is probably even more apposite: vouchers or barter units. The customs laws of the United Kingdom have a category possibly suited to such virtual commodities used for barter, called “special purpose vouchers.”²⁹¹ The Monetary Authority of Singapore, Canada’s Revenue Agency, and the Australian Taxation Office have analogized Bitcoin to a barter transaction, in which a business decides to trade its goods or services for another asset that may not be a domestic or foreign currency in traditional terms.²⁹² Hong Kong and the Central Bank of the Republic of Taiwan made a similar move by calling bitcoin a “virtual commodity,” rather than traditional currency.²⁹³

The SEC has been vague in announcing that the duty to register applies to “virtually any instrument that *may* be sold as an investment.”²⁹⁴ Virtually anything may be bought and sold for

Complaint for Violations of Fed. Cal. L., at 3, In re Ripple Labs Inc. Litig., No. 18-cv-06753 (PJH) (N.D. Cal. brief filed 2019).

²⁹¹ See LIBR. OF CONG., *supra* note 12 (citing Tom Gullen, *The Challenge of Being a Bitcoin Trader*, FINANCIAL SERVICES CLUB BLOG (Nov. 13, 2013), <http://thefinanser.co.uk/fsclub/2013/11/the-challenge-of-being-a-bitcoin-trader.html> [<http://perma.cc/UG9W-AUCH>]).

²⁹² See *id.* (citing Terence Lee, *Singapore Government Decides Not to Interfere with Bitcoin*, TECHINASIA (Dec. 23, 2013), <http://www.techinasia.com/singapore-government-decides-interfere-bitcoin/> [<http://perma.cc/72WN-7NK7>]); *Bitcoins Aren't Tax Exempt, Revenue Canada Says*, CBC NEWS (Apr. 26, 2013), <http://www.cbc.ca/news/business/revenue-canada-says-bitcoins-aren-t-tax-exempt-1.1395075> [<http://perma.cc/8W6Y-EU44>]; Jasper Hamill, *Canadian Regulators Welcome US Bitcoin Refugees with Open Arms*, THE REGISTER (May 20, 2013), http://www.theregister.co.uk/2013/05/20/canada_welcomes_bitcoin_traders_fintrac_letter/ [<http://perma.cc/Q5T5-KXH2>].

²⁹³ See Oksana Panova et al., *International Models of Legal Regulation and Ethics of Cryptocurrency Use*, *Country Review*, 22 J. LEG., ETH. REGUL. ISSUES 1, 3 (2019); Yogesh Malhotra, *Future of Bitcoin & Statistical Probabilistic Quantitative Methods: Global Financial Regulation (Interview: Hong Kong Institute of CPAs)*, H.K. INST. CERTIF. PUB. ACCTS., (Jan. 20, 2014), http://finrm.org/Future_of_Bitcoin.pdf [<http://perma.cc/5ZLU-A6DY>].

²⁹⁴ Letter from Jay Clayton, SEC Chairman, to the Hon. Ted Budd, *supra* note 8, at 1 (emphasis added); see also Proskauer, *SEC Director William Hinman: “Current offers and sales of Ether are not securities transactions,”* JD SUPRA (June 18, 2018), <http://www.jdsupra.com/legalnews/sec-director-william-hinman-current-32939/> [<http://perma.cc/PGY6-288R>] (describing SEC “Chairman Jay Clayton’s position that he has not seen a single token issued through an ICO that is not a security”); *SEC to Regulate Bitcoin ICOs, Token Sales*, PYMNTS (Aug. 17, 2017), <http://www.pymnts.com/news/payment-methods/2017/sec-to-regulate-bitcoin-icos-token-sales/> [<http://perma.cc/8ARX-FEL7>] (“According to a report in Seeking Alpha, the SEC said the cryptocurrencies are subject to federal securities laws. ‘Offers and sales of digital assets by ‘virtual’ organizations are subject to the requirements of the federal securities laws,’ said SEC Chairman Jay Clayton, according to the report.”). One application of the definition of a “security” to digital asset transactions by an SEC official is slightly more precise, in requiring that the asset be purchased as an investment will be profitable due to the promoter’s “efforts,” but becomes virtually limitless again by incorporating a definition of promoter that would include eBay, franchisors, law firm partners, condominium associations, banks offering certificates of deposit, sellers of food crops or

speculative purposes by investors in the age of eBay and StubHub.²⁹⁵ The SEC has warned, in issuing no-action letters to sellers of unregistered digital tokens, that such a transaction might constitute the (criminal) unregistered sale of a security if proceeds are used “to build the . . . Platform,” if the platform is not “fully functional and operational,” if the tokens are not “immediately usable” on the platform, or if it is possible to transfer tokens to wallets.²⁹⁶ That leaves open a very narrow window in which to sell tokens without the chill and threat imposed by potential criminal prosecution or civil orders making an enterprise insolvent.²⁹⁷ Under the SEC’s view, would any form of blockchain-based art that could be exchanged for cryptocurrencies held in wallets be considered a “security?” A certain reading of its no-action letters might suggest that digital art, such as cryptokitties that sold for Ether, might be a security because it can be exchanged for other tokens.²⁹⁸

products in bulk, and anyone else who “is working actively” on a matter relevant to the “success of [an] enterprise.” See Hinman, *supra* note 155 (“Similarly, investment contracts can be made out of virtually any asset (including virtual assets), provided the investor is reasonably expecting profits from the promoter’s efforts.”); cf. *Framework for “Investment Contract” Analysis of Digital Assets*, U.S. SEC, DIV. OF CORP. FIN. (Apr. 3, 2019), <http://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets> [<http://perma.cc/SW7Y-HTYC>] (similar). Commodities such as wheat, soy beans, oranges, orange juice, beer, and whiskey are not defined as securities under federal law even though farmers and cooperatives thereof invest in their production and expect a profit from their eventual sale. See *Glen-Arden Commodities, Inc. v. Costantino*, 493 F.2d 1027, 1033–34 (2d Cir. 1974) (collecting cases).

²⁹⁵ See, e.g., George Hopkin, *Kidding Around: Investing in Rare Toys*, H. K. TATLER (Dec. 28, 2015), <http://hk.asiatatler.com/life/kidding-around-investing-in-rare-toys> [<http://perma.cc/6HB3-JH7T>] (noting that some rare toys are worth tens of thousands of dollars as an investment, more than a Bitcoin and many times what Ether or other newer tokens may be worth); *Vintage Super Mario Bros. Video Game Sells for \$114,000*, ASSOCIATED PRESS (July 11, 2020), <http://apnews.com/article/99710286a6d37450f8dd87fd71faa1d3/> [<http://perma.cc/8K9H-BL7U>]; Jason M. Bailey, *Collectors Are Spending Thousands on Video Games They Will Never Play*, N.Y. TIMES (Jan. 27, 2020), <http://www.nytimes.com/2020/01/27/business/video-games-wata-heritage.html> [<http://perma.cc/5XSX-VPNH>] (noting rare Nintendo games may be sold for more than \$12,000 or even \$100,000 each); Mark Seifert, *Highest Graded Copy Of X-Men #1 Goes For Record \$492,937.50*, BLEEDING COOL (July 26, 2012), <http://bleedingcool.com/comics/highest-graded-copy-of-x-men-1-goes-for-record-492937-50/> [<http://perma.cc/T4EH-V2VV>].

²⁹⁶ No-Action Letter re: Pocketful of Quarters, Inc., *supra* note 8; cf. No-Action Letter re: Turnkey, Jet, Inc., *supra* note 8.

²⁹⁷ See Olly Jackson, *US, UK Cryptocurrency Laws Deterring Blockchain Companies*, INT’L FIN. L. REV. (Aug. 31, 2018), <https://www.iflr.com/article/b1lp1wzy4q4wh9/us-uk-cryptocurrency-laws-deterring-blockchain-companies> [<http://perma.cc/QF68-9HKA>]; Olly Jackson, *Initial Coin Offerings: SEC Stance Discouraging Issuances*, INT’L FIN. L. REV., Aug. 20, 2018, at 1–2, LEGAL SOURCE.

²⁹⁸ See generally Tonya M. Evans, *Cryptokitties, Cryptography, and Copyright*, 47 AIPLA Q.J. 219, 220–250 (2019) (describing how smart contracts permit digital artists to exercise more control over their productions than traditional online games or worlds such

As long as the freedom of speech is not impacted, courts have held that the broad definition of security utilized by the SEC after *Howey* may not be determined to be unconstitutionally vague or overbroad.²⁹⁹ At least one court, however, has held that “impersonal” investment publications that do not propose a purchase by a specific customer are not commercial speech, and are therefore “protected” under the First Amendment.³⁰⁰ As a result, persons desiring to publish newsletters or market chart documents could challenge a registration requirement in the U.S. Code, albeit one governing commodities investment advice.³⁰¹ Under the analysis of that court, white papers or other crypto coin promotional speech are directed to the world at large, rather than being targeted to the particular situation of any particular buyer or proposing an imminent purchase. A law censoring them should be struck down as being void for vagueness; it leaves speakers guessing as to how much speech or conduct directed at the general public it forbids or requires.³⁰²

The vagueness defect of a potential prohibition on marketing of unregistered crypto coins is compounded by the relative weakness of the scienter requirement contained in the statute cited by the SEC.³⁰³ Courts rejecting vagueness challenges in complex financial crimes often emphasize the scienter requirement of the underlying statutes, which may, for example, only criminalize falsifying certain paperwork with a “purpose of evading” the statutory paperwork mandate.³⁰⁴ Although a violation of the Exchange Act, for example, must be committed

as Minecraft or World of Warcraft); Bryan Wilson, *Blockchain and the Law of the Cat: What Cryptokitties Might Teach*, 88 UMKC L. REV. 365, 369–70 (2019) (observing that cryptokitties have been sold for tens of thousands of Ether tokens worth more than \$27 million over the two years ending March 2019).

²⁹⁹ See *Glen-Arden Commodities, Inc. v. Costantino*, 493 F.2d 1027, 1029–30 (2d Cir. 1974); *SEC v. Brigadoon Scotch Distrib. Co.*, 480 F.2d 1047, 1052 n.6 (2d Cir. 1973); *United States v. Zaslavskiy*, No. 17-CR-647, 2018 WL 4346339, at *8–9 (E.D.N.Y. Sept. 11, 2018).

³⁰⁰ See *Commodity Trend Serv., Inc. v. Commodity Futures Trading Comm’n*, 149 F.3d 679, 686 (7th Cir. 1998).

³⁰¹ See *id.* at 686–89 (citing 7 U.S.C. § 1a(5)(C)).

³⁰² See *United States v. Lanier*, 520 U.S. 259, 266 (1997).

³⁰³ See Hinman, *supra* note 155, at n.2 (citing 15 U.S.C. §§ 77b(a)(1) and 78c(a)(10)); Complaint at 6–35, *SEC v. ReCoin Grp. Found., LLC*, No. 17 CV 5725 (RJD), 2017 U.S. Dist. LEXIS 34225 (E.D.N.Y. Jan. 30, 2018), 2017 U.S. Dist. Ct. Pleadings LEXIS 34225, at *1 (citing 15 U.S.C. §§ 77b(a)(1), 77e(a), 77e(c), 78c(a)(10), 78u(d)(1)–(3), and 78u(d)(5)); see also *SEC v. Edwards*, 540 U.S. 389, 393 (2004) (equating the definition of “security” in the Exchange Act, 15 U.S.C. § 78c(a)(10) with the definition in the Securities Act, 15 U.S.C. § 77b(a)(1)).

³⁰⁴ See, e.g., *Skilling v. United States*, 561 U.S. 358, 412 (2010); *United States v. DeVore*, No. 90-3982, slip op. at 12 (6th Cir. May 6, 1991) (unpublished table disposition); *United States v. Drew*, 259 F.R.D. 449, 464 (C.D. Cal. 2009); *United States v. Scanio*, 705 F. Supp. 768, 773–79 (W.D.N.Y. 1988), *aff’d*, 900 F.2d 485 (2d Cir. 1990).

“willfully” in order to be a crime, courts have relaxed this requirement by holding that a willful violation does not require knowledge of the existence or meaning of the rule at issue.³⁰⁵ This state of affairs aggravates the lack of a clear meaning attached to the obligation to register “investment” offerings. Imprisonment for up to 10 years is a penalty that may be difficult to justify in cases involving ignorance of the law.³⁰⁶

Attorney speech presents a helpful analogy to token promoter speech, as both attorneys and promoters solicit new business and could be trusted by their clients or customers, raising questions of fiduciary duties and misleading advertisements. A Nevada Supreme Court rule restricting attorney speech on pending cases because it may disrupt the proceedings, or taint the result, was void for vagueness because the rule did not clarify what kinds of pretrial or mid-trial public appeals stating that a client in a criminal case is innocent, are permissible.³⁰⁷ Although attorneys perform services for pay in trials, they still have a First Amendment interest in undeterred free speech, in being clearly told what they can do, in objective standards, and in uniform enforcement procedures for their profession.³⁰⁸ Finally, the attorney speech and academic freedom cases strongly suggest that civil consequences for vague offenses may violate the First Amendment; this is relevant to such securities or commodities law remedies as being barred from certain markets or being ordered to halt an offering or to refund all proceeds.³⁰⁹

³⁰⁵ See, e.g., *United States v. Dixon*, 536 F.2d 1388, 1395 (2d Cir. 1976); *United States v. Peltz*, 433 F.2d 48, 54–55 (2d Cir. 1970). Perhaps for this reason, although seemingly glossing over the insistence by these courts that willfully represents a mens rea requirement, the SEC contends that it is a strict liability offense for a broker in cryptocurrencies or an offeror thereof to make an untrue statement or omission of material fact. See Order Instituting Administrative and Cease-And-Desist Proceedings, Crypto Asset Management, L.P., Securities Act Release No. 33-10544, Investment Company Act Release No. 33222 (Sept. 11, 2018), <http://www.sec.gov/litigation/admin/2018/33-10544.pdf> [<http://perma.cc/4YJS-F6VV>].

³⁰⁶ See 15 U.S.C. § 78ff(a) (2002); *Skilling*, 561 U.S. at 412; *Drew*, 259 F.R.D. at 464.

³⁰⁷ See *Gentile v. State Bar of Nev.*, 501 U.S. 1030, 1048–51 (1991).

³⁰⁸ See *id.* at 1048–52; see also *United States v. Wunsch*, 84 F.3d 1110, 1119 (9th Cir. 1996) (citing *Grayned v. City of Rockford*, 408 U.S. 104, 108–09 (1972)). Some degree of subjective enforcement by administrative agencies or state attorneys general may be permitted. See *Prime Healthcare Servs., Inc. v. Harris*, 216 F. Supp. 3d 1096, 1125 (S.D. Cal. 2016) (upholding scheme requiring California Attorney General to approve sale of nonprofit health care provider’s assets, including by determining whether sale is in public interest, Supreme Court has upheld statutes “based upon standards such as the public interest”) (quoting *Montgomery Nat. Bank v. Clarke*, 882 F.2d 87, 89–90 (3d Cir. 1989)).

³⁰⁹ See *Gentile*, 501 U.S. at 1034–35, 1051; see also *FCC v. Fox Television Stations, Inc.*, 567 U.S. 239, 254–55, 257–58 (2012) (indicating non-criminal penalties imposed by FCC violated Fifth Amendment by not placing penalized broadcaster on reasonable notice of

2. The Lanham Act of 1946

The Lanham Act provides a cause of action for false or misleading descriptions, statements of fact, or representations in interstate commerce.³¹⁰ A claim for deceptive advertising under federal law requires proof of a factual statement that is false, that will be likely to induce purchases (be material to them), and that has a tendency to deceive a “substantial” number of persons.³¹¹ Thus, “adspeak” and other claims that lack a specific, “inherent” meaning may be unregulated by laws on advertising on Internet-based services.³¹²

The First Amendment’s protection of scientific studies that boost demand for commercial products may be relevant to crypto coin white papers. It has been held that the “publication and dissemination of a scientific study that had the effect of touting a company’s product is noncommercial speech and [is] thereby immune from the false advertising provisions of the Lanham Act.”³¹³ One court has articulated an even broader principle: “Statements of opinion are not generally actionable under the Lanham Act.”³¹⁴ The FTC once adopted a similar standard in regulating deceptive acts and practices in interstate commerce.³¹⁵ Moreover, the publication of boastful

offense definition or scope); *Cohen v. San Bernardino Valley Coll.*, 92 F.3d 968, 970 (9th Cir. 1996) (illustrating non-criminal penalties imposed by public college); *Dambrot v. Cent. Mich. Univ.*, 55 F.3d 1177, 1183–84 (6th Cir. 1995) (illustrating non-criminal penalties imposed by public university); *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 579–80 (1985) (Brennan, J., joined by Marshall, J., dissenting) (assuming that civil copyright suit triggered First Amendment principles); *Burk*, *supra* note 145, at 197, 236, 238 (arguing that civil enforcement invoking the “coercive mechanisms of the state” is state action triggering First Amendment scrutiny); *Ramsey*, *supra* note 145, at 407–08 (arguing that civil enforcement of trademarks constitutes First Amendment state action); Eugene Volokh, *The Void-for-Vagueness / Fair Notice Doctrine and Civil Cases*, THE VOLOKH CONSPIRACY (June 21, 2012), <https://volokh.com/2012/06/21/the-void-for-vagueness-fair-notice-doctrine-and-civil-cases/> [<http://perma.cc/KL7L-Z3Z6>] (collecting cases, including *Fox*, *supra* note 300). *But see* *Manhattan Cmty. Access Corp. v. Halleck*, 139 S. Ct. 1921, 1926 (2019) (indicating holder of public monopoly right is not state actor); *San Francisco Arts & Athletics, Inc. v. U.S. Olympic Comm.*, 483 U.S. 522, 543–47 (1987) (rejecting challenge to discriminatory enforcement of trademark-like exclusivity in term “Olympics” and/or Olympic symbol because how recipient of right enforced it was not state action).

³¹⁰ See 15 U.S.C. § 1125(b) (2012).

³¹¹ *Wells Fargo & Co. v. ABD Ins. & Fin. Servs., Inc.*, 758 F.3d 1069, 1071 (9th Cir. 2014) (citing *Southland Sod Farms v. Stover Seed Co.*, 108 F.3d 1134, 1139 (9th Cir. 1997)).

³¹² See *XYZ Two Way Radio Serv. Inc. v. Uber Techs., Inc.*, 214 F. Supp. 3d 179, 185 (E.D.N.Y. 2016) (citing *Greenwich Taxi, Inc. v. Uber Techs., Inc.*, 123 F. Supp. 3d 327, 336 (D. Conn. 2015)).

³¹³ See *Greater Hous. Transp. Co. v. Uber Techs., Inc.*, 155 F. Supp. 3d 670, 690 (S.D. Tex. 2015); see also *ONY, Inc. v. Cornerstone Therapeutics, Inc.*, 720 F.3d 490, 498 (2d Cir. 2013).

³¹⁴ *Coastal Abstract Serv., Inc. v. First Am. Title Ins. Co.*, 173 F.3d 725, 731 (9th Cir. 1999).

³¹⁵ See FTC, *Advertising in Books Enforcement Policy*, 36 Fed. Reg. 13,361, 13,414 (July 21, 1971) (distinguishing between promotion of a “product as part of a commercial scheme” other than a book, and statements in or quotations from books, as to which FTC as a “matter of policy” and in light of First Amendment “issues” will not attempt to enjoin

claims is frequently classified as noncommercial speech, because such claims are not sufficiently specific or measurable.³¹⁶ Similarly, the many projections and assertions that crypto coin ecosystems will disrupt or revolutionize some industry, are likewise general and not specific.

The trademark tort arose as an application of fraud or deceit as a cause of action at common law.³¹⁷ It was not a deceit at common law to make boastful claims upon which no reasonable person would rely.³¹⁸ As the *Restatement (Second) of Torts* put it,

or seize profits from even if opinions stated in said books are misleading or deceptive).

³¹⁶ See *Greater Hous. Transp. Co.*, 155 F. Supp. 3d at 692, 695–96 (finding Uber’s “taking the necessary steps to . . . build the safest option for consumers” was mere puffery, not a specific or measurable claim that could be false); *XYZ Two Way Radio Serv.*, 214 F. Supp. 3d 179 at 183, 185 (similar). As one court discussed:

The patchwork of district court decisions in such cases discuss, but do not create, a workable test for puffery. This Court, however, discerns several factors on which these decisions rely: (i) vagueness; (ii) subjectivity; and (iii) inability to influence the buyers’ expectations. . . . See *Castrol Inc. v. Pennzoil Co.*, 987 F.2d 939, 945 (3d Cir.1993) (“Puffery is distinguishable from misdescriptions or false representations of specific characteristics of a product.”); . . . General descriptions about the product—e.g., high-speed internet service as the “fastest, easiest way to get online”; a truck as the “most dependable, long-lasting”; or an insurance policy as providing that its policyholders are “in Good Hands”—can constitute puffery. See *Fink v. Time Warner Cable*, 810 F.Supp.2d 633, 643–44 (S.D.N.Y.2011); *Hubbard v. Gen. Motors Corp.*, No. 95 Civ. 4362, 1996 WL 274018, at *7 (S.D.N.Y. May 22, 1996); *Loubier v. Allstate Ins. Co.*, No. 3:09cv261, 2010 WL 1279082, at *5 (D.Conn. Mar. 30, 2010) . . . The “subjectivity” factor applies when the disputed statements may not be measured on an objective basis, such as by reference to clinical studies or comparison with the product’s competitors. See *Lipton v. Nature Co.*, 71 F.3d 464, 474 (2d Cir.1995) (“Subjective claims about products, which cannot be proven either true or false, are not actionable [for false advertising claims].” (quotations omitted)); . . . [A] statement that “you can grow thick, beautiful grass ANYWHERE” with a specific type of grass seed is “so exaggerated as to preclude reliance by consumers.” In re *Scotts EZ Seed Litig.*, No. 12 Civ. 4727, 2013 WL 2303727, at *7 n. 3 (S.D.N.Y. May 22, 2013) (quotations omitted). Likewise, “consumers know that vehicles that are ‘rock-solid’ will be dented by an impact that would not dent a rock.... A fiberglass roof may be ‘strong’ enough to withstand a hard blow, a falling tree branch, or the weight of an elephant, without being guaranteed to be indestructible.” *Jordan v. Paccar, Inc.*, 37 F.3d 1181, 1185 (6th Cir. 1994). See also *Leonard v. Abbott Labs., Inc.*, No. 10-CV-4676, 2012 WL 764199, at *22 (E.D.N.Y. Mar. 5, 2012) (Spatt, J.) (finding that a statement concerning a baby formula manufacturer’s aim to “comply[] with all applicable laws and regulations”—which, taken literally, would entail every single law in the hundreds of “countries where it operates”—embodies the sort of exaggeration that no buyers could take seriously).

Avola v. La.-Pac. Corp., 991 F. Supp. 2d 381, 392–94 (E.D.N.Y. 2013).

³¹⁷ See *Taylor v. Carpenter*, 23 F. Cas. 742 (C.C.D. Mass. 1844); Robert C. Denicola, *Trademarks as Speech: Constitutional Implications of the Emerging Rationales for the Protection of Trade Symbols*, 1982 WIS. L. REV. 158, 160 (1982).

³¹⁸ Cf. *Vulcan Metals Co. v. Simmons Mfg. Co.*, 248 F. 853, 856 (2d Cir. 1918) (L. Hand, J.) (“There are some kinds of talk which no sensible man takes seriously, and if he does he suffers from his credulity. If we were all scrupulously honest, it would not be so;

a seller's attempt to "exaggerate the advantages of [a] bargain" is a well-known tactic that should not deceive.³¹⁹

The First Amendment protects a great deal of nonfiction commentary and creative world-building from prior restraint or subsequent punishment under the Lanham Act and similar state laws. Thus, using the trademark of another person in a political statement or campaign may not create trademark infringement liability.³²⁰ In addition, creatively evoking a trademark in an artistic or musical work may be shielded from injunctive relief or damages by the First Amendment.³²¹ For similar reasons, crypto coin white papers that are dominated by socioeconomic or techno-political commentary deserve protection.

3. State Consumer Protection Law

Other courts have construed state law protections against false or misleading advertising to require a consideration of basic reasoning techniques available to potential consumers, which might dispel potential deception or confusion as to promotional content.³²² For example, the prohibition of false advertising under California law immunizes puffery and relatively pure statements of opinion from liability.³²³ Although advertising need

but, as it is, neither party usually believes what the seller says about his own opinions, and each knows it.”).

³¹⁹ RESTATEMENT (SECOND) OF TORTS § 539 cmt. c (AM. L. INST. 1977).

³²⁰ See *Lucasfilm Ltd. v. High Frontier*, 622 F. Supp. 931, 934–35 (D.C. 1985) (holding that public interest group's use of "star wars" to persuade the public of views about the Reagan Administration's strategic defense initiative did not infringe upon filmmaker's STAR WARS trademark because "[p]urveying points of view is not a service" and because it was a "descriptive, non-trade use"); see also *Tax Cap Comm. v. Save Our Everglades, Inc.*, 933 F. Supp. 1077, 1081 (S.D. Fla. 1996) (concluding that although not passing judgment on use of trademark to solicit contributions, its use to promote environmental group was not marketing of a service but rather "political activity").

³²¹ See, e.g., *Mil-Spec Monkey, Inc. v. Activision Blizzard, Inc.*, 74 F. Supp. 3d 1134, 1140–43 (N.D. Cal. 2014) (finding use of another's trademark for "expressive purpose" protected by First Amendment unless it is "explicitly mislead[ing]") (collecting cases); *Dillinger, LLC v. Elec. Arts Inc.*, 795 F. Supp. 2d 829, 837–38 (S.D. Ind. 2011).

³²² For example, when a few steps of reasoning from publicly available data could dispel the falsity or misleading character of the defendant's speech, it is not actionable. See *MacDonald v. Thomas M. Cooley L. Sch.*, 880 F. Supp. 2d 785, 794 (W.D. Mich. 2012) (finding no claim could be pled based on misleading employment statistic because "basic deductive reasoning[]" informs a reasonable person that the employment statistic includes all employed graduates, not just those who obtained or started full-time legal positions."); *Gomez-Jimenez v. N.Y. L. Sch.*, 956 N.Y.S.2d 54, 59 (App. Div. 2012) (finding where defendant was arguably not fully "candid and []complete" in making disclosures of data plaintiffs allegedly relied on, not to be material); *Austin v. Albany L. Sch. of Union Univ.*, 957 N.Y.S.2d 833, 842–43 (Sup. Ct. 2013) (holding that "a reasonable consumer acting reasonably under the circumstances" would not be materially misled by data disclosures that claimed a certain number of law school graduates were employed without disaggregating part-time jobs).

³²³ See *Atari Corp. v. 3DO Co.*, No. C 94-20298 RMW (EAD), 1994 WL 723601, at *2–3

only be “unfair, deceptive, untrue or misleading” under California law, federal courts interpret a key provision (California Business and Professions Code § 17200) as requiring proof similar to that needed in a false advertising claim under the Lanham Act.³²⁴ Likewise, false advertising law and warranty law in other states provide a safe harbor for boastful claims that a product is great or the best.³²⁵ Similarly, the protection of products from “trade libel” does not regulate opinions or personal judgments.³²⁶

(N.D. Cal. May 16, 1994) (holding that a video game system was the “most advanced” video game system available was puffery under state law of false advertising) (citing Cal. Bus. & Prof. Code §§ 17200, 17500). *See also* Anderson v. 1399557 Ontario Ltd., No. 18-CV-1672 (PJS/LIB), slip op. at 11 (D. Minn. Nov. 4, 2019) (suggesting that claim of providing a “lifetime” warranty might be true or subjectively believed to be right even if warranty lasted a “very limited” time); Fair Isaac Corp. v. Experian Info. Sol., Inc., 645 F. Supp. 2d 734, 763 (D. Minn. 2009) (it protected as puffery under the Lanham Act to claim that a credit score service determined creditworthiness with “significantly greater precision,” is “more predictive than what’s in the market,” is “the most accurate scoring algorithm attainable,” and uses “most up-to-date information available”).

³²⁴ Zeltiq Aesthetics, Inc. v. BTL Indus., Inc., 32 F. Supp. 3d 1088, 1099 (N.D. Cal. 2014) (quoting Clearly v. News Corp., 30 F.3d 1255, 1262–63 (9th Cir. 1994)); *see also* Philip Morris USA Inc. v. Shalabi, 352 F. Supp. 2d 1067, 1072 (C.D. Cal. 2004).

³²⁵ *See, e.g.*, Hubbard v. Gen. Motors Corp., No. 95 Civ. 4362, 1996 WL 274018, at *7 (S.D.N.Y. May 22, 1996); David A. Hoffman, *The Best Puffery Article Ever*, 91 IOWA L. REV. 1395, 1402–03, 1411 (2006).

³²⁶ *See, e.g.*, Coastal Abstract Serv., Inc. v. First Am. Title Ins. Co., 173 F.3d 725, 730 (9th Cir. 1999) (equating commercial libel’s protection of opinions with that under Lanham Act, which requires false statement of existing fact); Cook, Perkiss & Liehe, Inc. v. N. Cal. Collection Serv. Inc., 911 F.2d 242, 243 (9th Cir. 1990) (stating that no cause of action would lie for disparagement or libel of a corporation by publishing an ad suggesting its fees or costs would eat customers alive, or that ad’s publisher are “low cost commercial collection experts” in comparison to it); Blatty v. N.Y. Times Co., 728 P.2d 1177, 1181, 1183 (Cal. 1985) (affirming demurrer to action for trade libel and holding: “Statements of opinion, [h]owever pernicious, are immunized by the First Amendment in order to insure that their ‘correction [depends] not on the conscience of judges and juries but on the competition of other ideas.’”) (citation omitted); Hofmann Co. v. E.I. Du Pont de Nemours & Co., 248 Cal. Rptr. 384, 388 (Ct. App. 1988) (stating trade libel plaintiff may not hold speaker liable for expressing speaker’s “view, judgment, or appraisal . . . [a] belief stronger than impression and less strong than positive knowledge.”). *Cf.* Sullivan v. Conway, 157 F.3d 1092, 1095 (7th Cir. 1998) (finding statement that lawyer is “very poor” was an “opinion that is so difficult to verify or refute that it cannot feasibly be made a subject of inquiry by a jury”); Levinsky’s Inc. v. Wal-Mart Stores, Inc., 127 F.3d 122, 126–27 (1st Cir. 1997) (finding statement that store is “trashy” could not be basis of tort liability as it was merely expressing “a subjective view, an interpretation, a theory, conjecture, or surmise”); Moldea v. N.Y. Times Co., 22 F.3d 310, 312, 316 (D.C. Cir. 1994) (finding statement that journalist was “sloppy” and unprofessional could not be grounds for tort liability because “reasonable minds can and do differ” on what these terms mean); Chapin v. Knight-Ridder, Inc., 993 F.2d 1087, 1093 (4th Cir. 1993) (accusing a charity of “charging hefty mark-ups on goods it ships” was a statement that was immune from tort liability as it stated an opinion); Phantom Touring, Inc. v. Affiliated Publ’ns, 953 F.2d 724, 727–28 (1st Cir. 1992) (holding statements that stage play was “fake,” “phony,” “a rip-off, a fraud, a scandal, a snake-oil job” were not tortious as admitting “of numerous interpretations”); McCabe v. Rattiner, 814 F.2d 839, 842–43 (1st Cir. 1987) (holding reference to the plaintiff’s real estate development as a “scam” to be non-actionable because of the “lack of precision”); Della Penna v. Toyota Motor Sales, Inc., 902 P.2d 740, 751 (Cal. 1995) (holding expression of opinion should not result in liability

4. Protecting “Ecosystem Speech”

Like the print press or social media, crypto coins create ecosystems. Instead of readers/browsers, writers/uploaders, editors, and advertisers, crypto coins often have four “constituencies,” in addition to their own founders and promoters: subscribers who use or pay with the coin, other subscribers who accept payment with the coin, “miners” who verify the authenticity of transactions and maintain distributed ledgers, and software developers and other creative businesses who make new uses of the coin possible.³²⁷ The creation of a forum for speech, edited by the founder or current manager, implicates First Amendment interests.³²⁸ Even the organizers of a public parade, the Supreme Court famously held, have a right to shape the message conveyed by the various floats and marchers who participate.³²⁹ Whatever the merits of the Court’s ruling, its analysis of the First Amendment problem posed by forced conformity to an ideology is pertinent to crypto coins and banking norms: the right to articulate “public viewpoints” deserves protection against “forced inclusion” in another viewpoint.³³⁰

It matters not that crypto coin white papers are lower-quality speech, for some, than the *Miami Herald* or CNN. The freedom of expression does not depend on the quality of a speaker’s viewpoint.³³¹ Promoting oneself in the marketplace of ideas and touting one’s platform on social media are important entitlements under the First Amendment doctrine.³³²

for tortious interference with prospective business relations).

³²⁷ Andreessen, *supra* note 101.

³²⁸ See *Mia. Herald Publ’g Co. v. Tornillo*, 418 U.S. 241, 250, 258 (1974); see also *Turner Broad. Sys., Inc. v. FCC*, 512 U.S. 622, 651 (1994).

³²⁹ See *Hurley v. Irish-Am. Gay, Lesbian and Bisexual Grp. of Bos.*, 515 U.S. 557, 559 (1995).

³³⁰ See *Boy Scouts of Am. v. Dale*, 530 U.S. 640, 648 (2000).

³³¹ See *Kleindienst v. Mandel*, 408 U.S. 753, 769 (1972) (“The dangers and the undesirability of making [free speech] determination[s] on the basis of factors such as the size of the audience or the probity of the speaker’s ideas are obvious.”).

³³² See *Packingham v. North Carolina*, 137 S. Ct. 1730, 1735 (2017) (noting importance of social media for exchanges of views); see also *Village of Schaumburg v. Citizens for a Better Env’t*, 444 U.S. 620, 628–29 (1980) (recognizing constitutional right to distribute literature in order “to present [one’s] views on political, social or economic questions”) (quoting *Schneider v. State*, 308 U.S. 147, 163 (1939)); cf. *Manhattan Cmty. Access Corp. v. Halleck*, 139 S. Ct. 1921, 1934–44 (2019) (Sotomayor, J., joined by Ginsburg, J., Breyer, J., and Kagan, J., dissenting) (contending that there is a right of access to cable access television channel opened up as a public forum by legislation creating a corporation to manage a local cable network).

C. Allowing Forward-Looking Statements in and After Coin Offerings

In First Amendment cases, the narrow-tailoring or less-restrictive-means inquiry involves whether Congress or the states could have been more careful and discriminate in regulating speech.³³³ Yet, how is one to determine that a “substantial number of [a rule’s] applications are unconstitutional” so as to conclude that it is overbroad?³³⁴

An obvious less-restrictive and narrowly-tailored alternative to the obligation to preregister coin offerings is to punish false statements of fact with civil and criminal liability after harm is done. This should not be too difficult to achieve; there seems to be an enormous range of harms involving cyberthefts, insider trading of cryptocurrencies, and garden-variety frauds that could be prosecuted or enjoined under a variety of theories.³³⁵

Focusing on actual harm and factual misstatements would liberate startups to participate in the blockchain revolution. According to a senior attorney to ICO founders, the SEC has declared “war on cryptocurrencies.”³³⁶ One entrepreneur told a

³³³ See, e.g., *Citizens United v. FEC*, 558 U.S. 310, 336–37 (2010); *Glickman v. Wileman Bros. & Elliott, Inc.*, 521 U.S. 457, 466 (1997); *United States v. Nat’l Treasury Emps. Union*, 513 U.S. 454, 475 (1995); *Simon & Schuster, Inc. v. Members of N.Y. State Crime Victims Bd.*, 502 U.S. 105, 116 (1991).

³³⁴ *United States v. Stevens*, 559 U.S. 460, 473 (2010) (quoting *Wash. State Grange v. Wash. State Republican Party*, 552 U.S. 442, 449 n.6 (2008)); *Simon & Schuster*, 502 U.S. at 122 n.* (“A regulation is not ‘narrowly tailored’ . . . where, as here, ‘a substantial portion of the burden on speech does not serve to advance [Congress’s] goals.’”) (citation omitted); 16A AM. JUR. 2D *Constitutional Law* § 429 (2017).

³³⁵ See First Amended Class Action Complaint at 38, *Fabian v. LeMahieu*, 2019 U.S. Dist. LEXIS 172906 (N.D. Cal. 2019) (No. 19-cv-00054) (alleging that \$170 million worth of digital tokens were lost on Bitgrail exchange in early February 2018); Bloomberg, *The SEC Is Sending Subpoenas in Expanded ICO Crackdown*, FORTUNE (Mar. 1, 2018, 2:45 AM), <http://fortune.com/2018/03/01/sec-ico-cryptocurrency-subpoenas/> (noting that SEC “has been concerned for months that some ICOs are raising money for businesses that don’t even exist”); Jordan Pearson, *Everything You Need to Know About the Congressional Cryptocurrency Hearing*, VICE (Mar. 14, 2018, 10:05 AM), <https://www.vice.com/en/article/qveg3p/financial-services-congressional-hearing-ico-cryptocurrency-regulation> [<http://perma.cc/B6AE-QBJY>] (mentioning \$500 million taken in cybertheft affecting Japanese crypto exchange); Shane Shifflett & Coulter Jones, *Buyer Beware: Hundreds of Bitcoin Wannabes Show Hallmarks of Fraud*, WALL ST. J., (May 17, 2018, 12:05 PM), <https://www.wsj.com/articles/buyer-beware-hundreds-of-bitcoin-wannabes-show-hallmarks-of-fraud-1526573115> (“Hundreds of technology firms raising money in the fevered market for cryptocurrencies are using deceptive or even fraudulent tactics to lure investors.”); Andrea Tan & Yuji Nakamura, *Timeline: Growing List of Major Cryptocurrency Heists*, INS. J. (Feb. 1, 2018), <https://www.insurancejournal.com/news/international/2018/02/01/479206.htm> [<http://perma.cc/V5J9-8FAM>] (“[In 2016,] Bitfinex said hackers took 119,756 Bitcoin, valued at about \$65 million.”).

³³⁶ Jeff John Roberts, *SEC Guidance Sparks Fear and Loathing in Crypto Industry*, FORTUNE (Apr. 5, 2019, 7:16 AM), <https://fortune.com/2019/04/05/sec-crypto-rules/>.

researcher: “If you’re just starting up, you’re almost forced to break the [criminal] law and hope that you can get away with it long enough to produce some traction’ to secure investors’ money, after which you can try to meet regulatory requirements.”³³⁷ As another entrepreneur stated: “We’re all forced to break the law until someone calls us out.”³³⁸ If a crypto coin is a security, simply discussing the value of owning it via impersonal online publications might be enjoined, or even criminal, if such an act is widely known to be illegal.³³⁹

Pursuing the true perpetrators of investor harm while leaving other coins alone would ameliorate this problem. A well-known and workable framework for such a regulation results from application of the “bespeaks caution” doctrine and “safe harbor” for “forward-looking statements” as well as the falsity and materiality requirements of securities fraud law.³⁴⁰ This would shield good-faith statements that have a basis when made or that are so “rosy” that no one would reasonably rely on them. Such a framework properly distinguishes between false statements of existing fact or fraudulent promises or projections on the one hand and genuine but controversial aspirations communicated publicly to potential share purchasers or business partners.³⁴¹ Participants in high-technology

³³⁷ BRIAN PATRICK EHA, *HOW MONEY GOT FREE: BITCOIN AND THE FIGHT FOR THE FUTURE OF FINANCE* (2017).

³³⁸ *Id.*

³³⁹ See 15 U.S.C.A. § 80(b)-2(a)(11) (West) (regulating recommendations involving securities); 15 U.S.C.A. § 77x (West) (criminalizing willful violation of provisions of Securities Act or regulations thereunder involving securities); 15 U.S.C.A. § 78ff(a) (West) (criminalizing willful violation of provisions of Securities Act or regulations thereunder); *Lowe v. SEC.*, 472 U.S. 181, 216–19 (1985) (White, J., concurring); *SEC. v. Suter*, 732 F.2d 1294, 1298–1302 (7th Cir. 1984) (holding SEC could enjoin newsletters with investment recommendations about whether or when to buy or sell particular securities); *United States v. Peltz*, 433 F.2d 48, 54–55 (2d Cir. 1970) (holding “willfully” means realizing illegality of act); S. REP. NO. 76-1775, at 22–23 (1940).

³⁴⁰ *Slayton v. Am. Express Co.*, 604 F.3d 758, 768–70 & n.5 (2d Cir. 2010). The safe harbor for forward-looking statements is statutory, being modeled on the “bespeaks caution” doctrine and added to the Exchange Act. *Id.* at 770 & n.5 (citing, inter alia, 15 U.S.C.A. § 78u-5(c)(1)(A)(i) (West)).

³⁴¹ See, e.g., *Tongue v. Sanofi*, 816 F.3d 199, 214 (2d Cir. 2016) (holding that “no reasonable investor would have been misled by Defendants’ optimistic statements regarding the approval and launch” of their new drug); *Shaw v. Digit. Equip. Corp.*, 82 F.3d 1194, 1217 (1st Cir. 1996) (holding no securities liability for “rosy affirmation[s] commonly heard from corporate managers and numbingly familiar to the marketplace—loosely optimistic statements that are so vague . . . that no reasonable investor could find them important in the total mix of information available”); *In re Syntex Corp. Sec. Litig.*, 95 F.3d 922, 926 (9th Cir. 1996) (distinguishing statement that turns out not to be true from one untrue at outset); *Kline v. First W. Gov’t Sec., Inc.*, 24 F.3d 480, 486 (3d Cir. 1994) (holding forward-looking projections actionable as securities fraud only if “[they are] issued without reasonable genuine belief [in their accuracy or truth] or if [they] ha[ve] no basis”); *Gregory v. ProNAi Therapeutics Inc.*, 297 F. Supp. 3d 372, 398–417 (S.D.N.Y. 2018) (distinguishing “sincerely held views” from “historical statement” that is not “correct”) (quoting *In re Int’l Bus. Machines Corp. Sec. Litig.*,

markets are familiar with this framework as courts have routinely applied it to them.³⁴² Although a special-purpose law on fraud involving crypto coin offerings might need to modify aspects of the framework, its fundamental distinction or premise would be helpful.³⁴³

Regarding regulatory and jurisdictional competition, other countries will move forward aggressively with their token-based businesses whether or not the United States falls behind. Several European countries are establishing legal frameworks that facilitate crypto-coin inventions and platforms.³⁴⁴ China is taking numerous moves, including creating state-owned crypto coins, to become the world leader in virtual currency and blockchain technology.³⁴⁵ As of late 2019, Japan had not clearly defined ICOs as securities. Europe and the United Kingdom may not regulate payment mechanisms on blockchain platforms as investments.³⁴⁶

163 F.3d 102, 109–10 (2d Cir. 1998)); *Nursing Home Pension Fund v. Oracle Corp.*, 242 F. Supp. 2d 671, 678 (N.D. Cal. 2002) (distinguishing “statements of present fact” from “future projections”) (internal citation omitted); *In re MobileMedia Sec. Litig.*, 28 F. Supp. 2d 901, 936–40 (D.N.J. 1998) (similar to *Kline and Shaw*); *In re Bell Atl. Corp. Sec. Litig.*, No. 91-0514, 1997 WL 205709, at *23 (E.D. Pa. 1997) (cited in *MobileMedia*).

³⁴² See *Slayton*, 604 F.3d at 770, 772 (distinguishing “historical fact” from “future projections, estimates or opinions”) (citations and internal quotation marks omitted).

³⁴³ In particular, the safe harbor for forward-looking statements appears to require a warning list of factors that could cause projections or intentions not to materialize such as one might find in a registration statement or prospectus, which typically has a different and much more formal organization and tone than a white paper about a token. See *Slayton*, 604 F.3d at 770–72 (indicating cautionary statements should be “substantive” about such “important factors”) (citing 15 U.S.C. § 78u-5(c)(1)(A)(i); H.R. Conf. Rep. 104-369, at 42 (1995), as reprinted in 1995 U.S.C.C.A.N. 730, 742); *Inst. Invs. Grp. v. Avaya, Inc.*, 564 F.3d 242, 256 (3d Cir. 2009) (discussing specificity of statements in prospectus); *Gregory*, 297 F. Supp. 3d at 405 (indicating cautionary statements must have “specificity” about risks).

³⁴⁴ See J.D. Alois, *Will Paris Become the Capital of ICOs? French National Assembly Approves Key Framework for Initial Coin Offerings*, CROWD FUND INSIDER (Sept. 13, 2018, 5:30 pm), <https://www.crowdfundinsider.com/2018/09/139003-will-paris-become-the-capital-of-icos-french-national-assembly-approves-key-framework-for-initial-coin-offerings/> [<http://perma.cc/L6MQ-SV9K>] (discussing France, Malta, and Switzerland).

³⁴⁵ See Arjun Kharpal, *With Xi’s Backing, China Looks to Become a World Leader in Blockchain as US Policy Is Absent*, CNBC (Dec. 15, 2019, 6:30 PM), <https://www.cnbc.com/2019/12/16/china-looks-to-become-blockchain-world-leader-with-xi-jinping-backing.html> [<http://perma.cc/223L-C9K7>] (“Since March, over 500 blockchain projects have been registered with the Cyber Administration of China. Some of China’s largest internet companies from Tencent to Huawei have registered projects.”); *id.* (stating a partner at “Blockchain Valley Ventures” claimed “that China’s blockchain push could put other countries behind, to the point where the world’s second-largest economy could dominate the technology and the way it’s developed.”); Coie, *supra* note 35 (warning blockchain technology could cluster abroad).

³⁴⁶ See Cooke, Denisenko & Cohen, *supra* note 229.

D. Increasing Remedies for Factual Fraud

The Securities Act and/or Exchange Act could be amended to award treble damages, punitive damages, and/or statutory damages in cases of willful misstatements of existing fact in connection with the purchase or sale of a security.³⁴⁷ The breadth of a law is not the only measure of its effectiveness; its deterrent and remedial strength may also be relevant.³⁴⁸ Investment law would be more forceful if it offered the relief available under other federal laws, such as those governing counterfeiting (\$2 million per willful offense type), copyright infringement (\$150,000 per willful offense type), false advertising (treble damages), or competition law violations (treble damages).³⁴⁹ As one court has observed: “Undeniably, punitive damages would deter violations of the Act and punish those who did commit violations.”³⁵⁰

Amendments to the securities laws would not help the purchasers of utility tokens and appcoins under the approach advocated in this article. To aid such purchasers and anyone else who buys a good or service, the Lanham Act could be amended with a few simple words that would create a federal remedy for interstate commerce fraud.³⁵¹ This amendment would significantly impact

³⁴⁷ See 15 U.S.C.A. § 78bb(a) (West) (limiting plaintiffs’ recovery to “actual damages”); *Globus v. Law Rsch Serv., Inc.*, 418 F.2d 1276, 1282–86 (2d Cir. 1969); *Green v. Wolf Corp.*, 406 F.2d 291, 302–04 (2d Cir. 1968).

³⁴⁸ See *Carlson v. Green*, 446 U.S. 14, 21–22 (1980) (noting that cause of action promising punitive damages may have greater deterrent effect); *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 350 (1974) (stating that punitive damages punish and deter). Statutory damages may also deter; indeed, one law increasing statutory damages ranges in copyright was called the Digital Theft Deterrence and Copyright Damages Improvement Act of 1999, Pub. L. No. 106–160, 113 Stat. 1774 (1999). See Jeremy Wilson et al., *Product Counterfeiting Legislation in the United States: A Review and Assessment of Characteristics, Remedies, and Penalties*, 106 J. CRIM. L. & CRIMINOLOGY 521, 533–34 (2016); Pamela Samuelson & Tara Wheatland, *Statutory Damages in Copyright Law: A Remedy in Need of Reform*, 51 WM. & MARY L. REV. 439, 461–62 (2009).

³⁴⁹ See 15 U.S.C.S. § 15 (LexisNexis) (treble damages); 15 U.S.C. § 1117 (West) (\$2 million); 17 U.S.C.A. § 504(d) (West) (\$150,000 per work). By contrast, the Supreme Court has rejected a theory that would allow securities fraud plaintiffs who cannot plead conventional investment damages to be able to recover for an inflated purchase price at the time of a transaction; absent actual damages, the Court apparently intends that securities plaintiffs receive nothing under federal law, in stark contrast to copyright or trademark plaintiffs. See *Dura Pharm., Inc. v. Broudo*, 544 U.S. 336, 346–47 (2005).

³⁵⁰ *Globus*, 418 F.2d at 1284.

³⁵¹ The amendment to 15 U.S.C. § 1125(a) would have to state that the standing to sue for false advertising and the like under federal law extends to those “likely to be damaged by such act, regardless of the presence or absence of the person’s direct competition with the plaintiff or the person’s economic or reputational injury from such act.” This proposed amendment is based on language in 15 U.S.C. § 1125(c), which creates a federal injunctive remedy for dilution (and, which 15 U.S.C. § 1117 creates a damages remedy). For extensive arguments in favor of such an amendment, see Jeremy Rovinsky,

remedies in false advertising by granting consumers a private right of action for false descriptions of fact in connection with goods or services marketed in interstate commerce.³⁵² In its discretion, the court could increase the damages award to three times those actually inflicted on the plaintiff.³⁵³ Similarly, consumers could obtain a private right of action for unfair or deceptive methods of competition under the FTC Act.³⁵⁴ Many consumers have such a cause of action under state law already, but the elements and remedies could be harmonized.³⁵⁵ Arbitration clauses that make class actions or punitive damages unavailable in fraud or false-advertising cases could be declared incompatible with federal law, or at least it could be made permissible under federal law for the states to prohibit or restrict such clauses.³⁵⁶ Frauds that inflict many minor economic losses are not economical to litigate individually.³⁵⁷

E. Reducing the Burden Associated with Disclosure Requirements

In the House of Representatives, legislation has been introduced to exclude from the definition of a “security,” in the Securities Act and the Exchange Act, certain digital tokens based on a mathematical digital ledger or data structure that are not controlled as to their supply by any single person or group of

Troubleshooting Legal Malfunction: Lexmark and Consumer Standing Under the Lanham Act, 48 JOHN MARSHALL L. REV. 453 (2015).

³⁵² See *Lexmark Intern., Inc. v. Static Control*, 572 U.S. 118, 132 (2014) (“A consumer who is hoodwinked into purchasing a disappointing product may well have an injury-in-fact cognizable under Article III, but he cannot invoke the protection of the Lanham Act—a conclusion reached by every Circuit to consider the question.”); *Halicki v. United Artists Commc’ns, Inc.*, 812 F.2d 1213, 1214 (9th Cir. 1987) (holding that to bring suit for false advertising, plaintiff must be a competitor injured in business that directly competes with false advertiser).

³⁵³ See 15 U.S.C.A. § 1117 (West).

³⁵⁴ See 15 U.S.C.A. § 45 (West).

³⁵⁵ See CAROLYN CARTER, NATIONAL CONSUMER LAW CENTER, CONSUMER PROTECTION IN THE STATES 42 (2018), <https://www.nclc.org/images/pdf/udap/udap-report.pdf>. Among other divergences that could be harmonized, some states do not extend private standing to consumers, cap treble damages, impose procedural hurdles, or require proof of individualized reliance. See *id.* at 42–45.

³⁵⁶ Cf. *American Exp. Co. v. Italian Colors Rest.*, 570 U.S. 228, 252–53 (2013) (Kagan, J., joined by Breyer, J., and Ginsburg, J., dissenting) (urging that class action waivers in arbitration clauses be declared incompatible with or at least unprotected by federal arbitration law when they threaten to deprive plaintiffs of “any effective opportunity” of challenging a violation of substantive federal law, due to cost of hundreds of thousands dollars in proving a claim worth tens of thousands); Br. of Am. Antitrust Inst. as Amicus Curiae in Support of Respondents at 16, *American Exp. Co. v. Italian Colors Rest.*, 570 U.S. 228 (2013) (No. 12-133) (urging similar result when class action waivers undermine a role of a “private damages remedy” such as treble damages in antitrust law to “serve[] its intended function of deterring antitrust violations and compensating victims”).

³⁵⁷ Cf., e.g., *Amchem Prods., Inc. v. Windsor*, 521 U.S. 591, 617 (1997).

persons “under common control.”³⁵⁸ The *Howey* test is outdated and has generated tremendous uncertainty even as applied to traditional business enterprises.³⁵⁹ Its roots lie in a state supreme court decision from 1920, purportedly viewed by Congress as a helpful addition to the word “security” to cover “booster agent” contracts involving the sale of goods, i.e., “investment contracts.”³⁶⁰ While there are some similarities between cosmetics salespersons and crypto coin users, the dissimilarities are arguably more significant.

The cost of registering securities with the SEC has been called “tremendous” and disproportionate in the case of startups.³⁶¹ According to two researchers at Tallinn Law School, smart contracts supported by crypto coins could replace modes of ecommerce or financial or insurance transactions that are “restrictive, antagonistic, contentious, competitive, divisive and costly, [with new modes that are] participative, responsible, responsive and collaborative.”³⁶² For example, they could slash the transaction fees on micropayments, international remittances, and wire transfers, and reduce financial-industry collusion.³⁶³ New

³⁵⁸ H.R. 7356, 115th Cong. §§1–3 (2018); *see also* H.R. 2144, 116th Cong. (2019); H.R. 1628, 117th Cong. (2021).

³⁵⁹ *See, e.g.*, Maura Monaghan, *An Uncommon State of Confusion: The Common Enterprise Element of Investment Contract Analysis*, 63 *FORDHAM L. REV.* 2135, 2171 (1994); Ronald J. Coffey, *The Economic Realities of a “Security”: Is There a More Meaningful Formula?*, 18 *W. RES. L. REV.* 367, 377 (1967); James D. Gordon III, *Defining a Common Enterprise in Investments Contracts*, 72 *OHIO ST. L.J.* 59, 73–74 (2011).

³⁶⁰ *See SEC v. Koscot Interplanetary*, 497 F.2d 473, 480 (5th Cir. 1974).

³⁶¹ *See* Carol Goforth, *Why Limited Liability Company Membership Interests Should Not Be Treated As Securities and Possible Steps to Encourage This Result*, 45 *HASTINGS L.J.* 1223, 1285 (1993) (collecting sources).

³⁶² María Claudia Solarte-Vásquez & Katrin Nyman-Metcalf, *Smart Contracting: A Multidisciplinary and Proactive Approach for the EU Digital Single Market*, 7 *BALTIC J. EUR. STUD.* 208, 233 (2017).

³⁶³ *See* Andreessen, *supra* note 101; *see also* BPP Illinois, LLC v. Royal Bank of Scotland Grp. PLC, 859 F.3d 188 (2d Cir. 2017) (alleging potential rigging of benchmark interest rate); *Contant v. Bank of Am. Corp.*, 385 F. Supp. 3d 284 (S.D.N.Y. 2019) (alleging potential rigging of currency exchange rates); *In re Commodity Exch., Inc., Gold Futures & Options Trading Litig.*, 328 F. Supp. 3d 217 (S.D.N.Y. 2018) (alleging potential rigging of precious metals prices, specifically gold); *Levy v. BASF Metals Ltd.*, 917 F.3d 106 (2d Cir. 2019) (alleging manipulation of precious metals prices, specifically platinum); *In re LIBOR-Based Fin. Instruments Antitrust Litig.*, 299 F. Supp. 3d 430 (S.D.N.Y. 2018) (alleging similar fraud as preceding case); *In re London Silver Fixing, Ltd., Antitrust Litig.*, 213 F. Supp. 3d 530 (S.D.N.Y. 2016) (alleging potential rigging of precious metals prices, specifically silver); *In re Foreign Exch. Benchmark Rates Antitrust Litig.*, 74 F. Supp. 3d 581 (S.D.N.Y. 2015) (alleging similar rigging as *Contant*); *In re Moody’s Corp. Sec. Litig.*, 599 F. Supp. 2d 493 (S.D.N.Y. 2009) (alleging potential misrepresentations involving rating of collateralized debt and mortgage-backed securities as investment-grade securities); *In re Stock Exchanges Options Trading Antitrust Litig.*, No. 99 CIV. 0962 (RCC) (S.D.N.Y. Dec. 4, 2006) (involving collusion in marketing of stock exchange options in settlement of suit); DEAN BAKER, *RIGGED: HOW GLOBALIZATION AND THE RULES OF THE MODERN ECONOMY WERE STRUCTURED TO MAKE THE RICH RICHER* (2016); Janith Aranze, *Visa and MasterCard Interchange Fees Restricted Competition, English Court Rules*,

ecosystems would arise, with new pro-democratic possibilities for promoting economic and environmental sustainability.³⁶⁴ Socially responsible investing objectives or automatic divestment upon specified breaches of corporate social responsibility principles could be encoded.³⁶⁵ In contrast to traditional forms such as private equity and the like, open-source smart contract investments could be examined by consumers, investors, and regulators to gauge compliance with various ethical or political norms.³⁶⁶ Unlike traditional financial firms and social media giants, crypto coins enable privacy preservation through emerging anonymous trading systems and applications.³⁶⁷

There is reason to be hopeful about disruption when it comes to loans, interest on deposits, business capital, remittances, and even insurance, selling creative works, and renting out cars, devices, and houses. The fintech firm, SoFi, has saved borrowers about two billion dollars in what would have been excessive interest charges.³⁶⁸ The use of the Ripple token for remittances could save the poor and the middle class billions of dollars in

SCOTT+SCOTT: GLOBAL COMPETITION REVIEW (July 4, 2018), <http://scott-scott.com/visa-and-mastercard-interchange-fees-restricted-competition-english-court-rules/> [<http://perma.cc/9RN5-7WG7>] (describing anti-competitive cross-border payment card fees in Europe); Richard Jones et al., *MasterCard in £19bn UK Interchange Fees Class Action*, LEXOLOGY (July 26, 2014), <http://www.lexology.com/library/detail.aspx?g=c58d7828-e845-4d43-9222-02eebcec57fc> [<http://perma.cc/5XX4-RXAL>] (describing similar anti-competitive interchange fees as Janith Aranze); *Antitrust: Commission Welcomes Court Judgment Confirming that MasterCard's Payment Card Interchange Fees are Anti-Competitive*, EUROPEAN COMMISSION (Sept. 11, 2014), http://europa.eu/rapid/press-release_MEMO-14-528_en.htm [<http://perma.cc/BSQ4-5PHW>].

³⁶⁴ See Merlinda Andoni et al., *Blockchain Technology in the Energy Sector: A Systematic Review of Challenges and Opportunities*, 100 RENEWABLE & SUSTAINABLE ENERGY REVS. 143, 158–60 (2019) (describing potential for tokenized clean energy trading); Ryan Browne, *Sustainable Energy: IBM Joins Forces with a Start-up to Combine Crypto with Environmental Credit Trading*, CNBC (May 15, 2018, 8:00 AM), <http://www.cnn.com/2018/05/15/ibm-veridium-team-up-on-blockchain-enabled-carbon-credit-trading.html> [<http://perma.cc/2QF3-BSP6>] (describing potential for carbon-trading tokens to trade with less friction than traditional carbon/energy credits); Miriam Denis Le Sève et al., *Delivering Blockchain's Potential for Environmental Sustainability*, ODI BRIEFING NOTE 3, 5–6 (Oct. 2018), <http://www.odi.org/sites/odi.org.uk/files/resource-documents/12439.pdf> [<http://perma.cc/28U2-7FX8>] (describing how the Sun Exchange token use could, at least partially, enable financing conversion of buildings to solar power).

³⁶⁵ See Massimo Lomuscio, *Smart Social Contracts, Unstoppable Promises on the Blockchain*, MEDIUM (Feb. 4, 2018), <http://medium.com/reason/what-are-smart-social-contracts-the-new-business-model-for-the-blockchain-d3a27025fc4b> [<http://perma.cc/6A3F-5QJR>].

³⁶⁶ See *id.* But cf. Alfred C. Aman Jr. & Landyn W. Rookard, *Private Government and the Transparency Deficit*, 71 ADMIN. L. REV. 437, 472, 484 (2019) (noting that opacity as to practices of private equity firms is expected by the public, and actually results).

³⁶⁷ See Azgad-Tromer, *supra* note 272.

³⁶⁸ SoFi saved borrowers \$1.45 billion by mid-2017, and has grown tremendously since then, more than doubling the total loan volume since the end of 2016. See Michael Bartlett, *Digital or Doomed? What Credit Unions Need to Be Top of Wallet*, AMERICAN BANKER (July 26, 2017, 8:00 AM), <http://www.americanbanker.com/creditunions/news/digital-or-doomed-what-credit-unions-need-to-be-top-of-wallet> [<http://perma.cc/6K8R-FDS2>].

excessive fees for international transfers of their own money to family members or others in need.³⁶⁹ The average interest rate on U.S. savings accounts was about a quarter of a percentage point at a time when a crypto account could offer a fixed rate of seven percent or more, and when investments in tokens such as Bitcoin earned well in excess of 100% a year.³⁷⁰ The average U.S. equity fund investor earns less than a five percent return per annum over 10 to 20 years, but the average crypto investor through mid-2018 earned double-digit returns in a matter of days or months.³⁷¹ Based on a mid-2020 technical analysis, a \$1,000 investment in Bitcoin in late 2016 might be worth \$20,000 four years later, or a 210% annual return.³⁷²

Blockchain-based asset trading systems could democratize value exchanges by disrupting the financial system's models for extracting value from disempowered "users."³⁷³ The Lightning Network and Hyperledger are examples of sustained, high-level collaboration among sophisticated players to achieve efficient and fairly reliable mechanisms of commerce over blockchains.³⁷⁴ In blockchain-based content monetization systems, artists or other creators designate rights information, which eMusic encodes into "smart contracts" so

³⁶⁹ See Andreessen, *supra* note 101 (referring to Bitcoin); *In Latin America, Ripple Makes Remittance Waves*, PYMNTS (Aug. 22, 2019), <http://www.pymnts.com/news/b2b-payments/2019/in-latin-america-ripple-makes-remittance-waves/> [<http://perma.cc/723Y-UDQE>]; *Santander Becomes First U.K. Bank to Use Ripple for Real-time Cross-border Payments*, RIPPLE (2019), http://ripple.com/files/case_study_santander.pdf [<http://perma.cc/4ACP-H2JH>] (predicting billions of dollars in savings, at first for financial institutions in their cross-border payments); Billy Bambrough, *Former Hedge Fund Billionaire Makes the Case for \$20,000 Bitcoin Price by the End of 2020*, FORBES (July 28, 2020, 7:10 PM), <http://www.forbes.com/sites/billybambrough/2020/07/28/former-hedge-fund-billionaire-makes-the-case-for-20000-bitcoin-price-by-the-end-of-2020/#2d1072842f76> [<http://perma.cc/ND46-L5T7>].

³⁷⁰ See *Mohammed v. Central Driving Mini Storage, Inc.*, 128 F. Supp. 3d 932, 956 (E.D. Va. 2015) (estimating an average interest rate of less than two-tenths of a percentage point between January 2011 and November 2014); Valerie Ashton, *See Interest Rates Over the Last 100 Years*, GOBANKINGRATES (July 14, 2017), <http://www.gobankingrates.com/banking/interest-rates/see-interest-rates-last-100-years/> [<http://perma.cc/PVK4-KVTS>] (showing the rate has steadily declined to less than one-tenth of a percent); *A New Way to Borrow and Lend Money* <http://nebeus.com>, COMMUNICATIONS TEAM@NEBEUS (Apr. 25, 2016), <http://medium.com/@Nebeus/a-new-way-to-borrow-and-lend-money-874a10754e97> [<http://perma.cc/8P42-M44E>] (claiming that peer to peer lenders could set their own interest rates, and borrowers could save with lower rates, with the platform taking a 10% cut).

³⁷¹ See Thane Stenner, *Why the Average Investor Is So Bad at It*, THE GLOBE AND MAIL (July 1, 2016), <http://www.theglobeandmail.com/globe-investor/globe-wealth/why-the-average-investor-is-so-bad-at-it/article30728320/> [<http://perma.cc/Z2QN-R69H>]; Hugo Benedetti & Leonard Kostovetsky, *Digital Tulips? Returns to Investors in Initial Coin Offerings*, BOSTON COLLEGE 1, 35–36 (May 20, 2018), <http://www.ssrn.com/abstract=3182169> [<http://perma.cc/D2C-Z5LY>].

³⁷² See Thane, *supra* note 362; see also Benedetti & Kostovetsky, *supra* note 362.

³⁷³ TAPSCOTT & TAPSCOTT, *supra* note 31, at loc 61.

³⁷⁴ See *id.* at loc 69.

that streams or sales result in faster, more open and “autonomous” payments of both the streaming or download provider, the performers, the songwriters, and the label(s).³⁷⁵ The operation of such systems is rich with informative speech:

Rather than erecting walls and aiming to create artificial scarcity, we view decentralization as a means to break walls down and enable more open re-use that aligns with the way information propagates on the internet. Leveraging content identification technology we can make information about the work—who made it, where it was published, and what people are saying about it—discoverable anywhere media is found. This is a prerequisite to enabling value to flow. It starts with attention (attribution), gratitude, analytics, and can lead to financial exchange, directly through media itself.³⁷⁶

Thus, content monetization systems express an idea about democratization, and implement that idea by attempting to multiply and propagate truthful information about the underlying speech. Another way of saying this is that such systems express opposition to intermediary interference in speech flows, and that they do so by conveying more information to the benefit of participants and by structuring that information in more efficient and transparent ways.³⁷⁷

V. CONCLUSION

Blockchain-fueled software and Internet innovation have rekindled debate about how crypto coins are regulated. The global Internet lends itself to a combination of proprietary and multistakeholder governance strategies, with the corporate tech giants coexisting with a variety of foundations, consortia, and open source software and digital content projects such as the Linux Foundation, the Wikimedia Foundation, and Creative Commons. Cryptocurrencies incentivize Internet users to contribute processing power and applications to new economic and social networks. The laws governing the registration of investments, primarily securities investments but also commodities futures and other investments, could erect giant

³⁷⁵ *eMusic, Press Release, eMusic Building a Blockchain Platform to Fix a Broken Music Industry*, CISION PR NEWSWIRE (July 31, 2018: 3:00 PM), <https://www.prnewswire.com/news-releases/emusic-building-a-blockchain-platform-to-fix-a-broken-music-industry-300688788.html> [<http://perma.cc/M8XR-WN8U>]; George Howard, *Mediachain Facilitates Automatic Attribution Using Blockchain and Machine Learning*, FORBES (July 29, 2016), <https://www.forbes.com/sites/georgehoward/2016/07/29/mediachain-facilitates-automatic-attribution-using-blockchain-and-machine-learning> [<http://perma.cc/8KXD-6D8V>].

³⁷⁶ Howard, *supra* note 375.

³⁷⁷ See *eMusic, Press Release, eMusic Building a Blockchain Platform to Fix a Broken Music Industry*, *supra* note 375.

hurdles to these incentive structures. By requiring the registration of crypto coin white papers and sales, they deter truly decentralized economic and cultural cooperation.

This Article has argued that the freedom of expression protects crypto coin software and related economic and technical speech from being treated like a simple offering of stock in a bank or an oil company. Crypto coin white papers are not strictly commercial speech, and blockchain networks are not traditional corporations or limited partnerships with passive investors in need of transparency and active managers who control the enterprise and dictate its future. Instead, crypto coins and their white papers promote information sharing, open source software, insights in computer science and peer-to-peer networking technologies, and new socio-economic and political models of decentralized collaboration. They promise alternatives to the often slow, costly, and unequal schemes by which corporations organize exchanges of value, whether on or off the Internet. Unless they are marketed using false statements of existing fact, crypto coins deserve to be exempt from civil liability and especially from preregistration requirements. By statute and under the Constitution, crypto coin promotion is a human right.