

A Conceptual Framework for Digital-Asset Securities: Tokens and Coins as Debt and Equity

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**A CONCEPTUAL FRAMEWORK FOR DIGITAL-ASSET
SECURITIES: TOKENS AND COINS AS DEBT AND EQUITY**

YULIYA GUSEVA*

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A. INTRODUCTION

Blockchain technology,¹ fintech,² and cryptoassets (also called “digital assets”)³ have become universal economic phenomena. Capital markets have witnessed sales of digital assets in the form of digital securities, tokens, and coins distributed by private entities and even by the World Bank.⁴ The importance of cryptoassets and blockchain technology is hard to

1. A blockchain is “a cryptographically-secured digital ledger, and a blockchain’s protocol is the software that governs rules, operations, and communications between computers interacting with the blockchain.” Simply Vital Health, Inc., Exchange Act Release No. 10671, at 2 (Aug. 12, 2019), <https://www.sec.gov/litigation/admin/2019/33-10671.pdf>. A “distributed ledger” (which is the underlying feature of “distributed ledger technology” or “DLT”) can be described as “a large, decentralized database that is maintained on a network of computers rather than a single server, and that is updated in real-time.” Hilary J. Allen, *Is Bitcoin?*, 76 MD. L. REV. 877, 886 (2017). See also Carla L. Reyes, *Conceptualizing Cryptolaw*, 96 NEB. L. REV. 384, 390–91 (2017) [hereinafter Reyes, *Conceptualizing Cryptolaw*]; Angela Walch, *The Bitcoin Blockchain as Financial Market Infrastructure: A Consideration of Operational Risk*, 18 N.Y.U. J. LEGIS. & PUB. POL’Y 837, 843–44 (2015).

2. “Fintech” refers to the integration of financial services and technology. See, e.g., Chris Brummer & Yesha Yadav, *Fintech and the Innovation Trilemma*, 107 GEO. L.J. 235, 241 n.18 (2019) (defining the “broad definition of fintech” as “the use of digital technologies in finance”); U.S. GOVERNMENT ACCOUNTABILITY OFFICE, FINANCIAL TECHNOLOGY: INFORMATION ON SUBSECTORS AND REGULATORY OVERSIGHT 1 (2017), <https://www.gao.gov/assets/690/684187.pdf> (noting that “[f]intech products and services include small business financing, education refinancing, mobile wallets, virtual currencies, and platforms to connect investors and start-ups”).

3. The term “refers to an asset that is issued and transferred using distributed ledger or blockchain technology, including, but not limited to, so-called ‘virtual currencies,’ ‘coins,’ and ‘tokens.’” SEC, FRAMEWORK FOR “INVESTMENT CONTRACT” ANALYSIS OF DIGITAL ASSETS (last modified Apr. 3, 2019), <https://www.sec.gov/files/dlt-framework.pdf> [hereinafter THE SEC FRAMEWORK]. Cryptoassets are “an entry in a ledger that specifies that a particular user [can] . . . exercise a discrete set of powers.” Shaanan Cohny, David Hoffman, Jeremy Sklaroff & David Wishnick, *Coin-Operated Capitalism*, 119 COLUM. L. REV. 591, 602 (2019).

4. See *infra* Section B; Steven Gatti, David Adams, Peter Chapman, Laura Nixon, Paul Landless, Jack Hardman & Brian Harley, *Fintech in 2019, Five Trends to Watch*, NYU: PROGRAM ON CORP. COMPLIANCE & ENF’T (Feb. 7, 2019), https://wp.nyu.edu/compliance_enforcement/2019/02/07/fintech-in-2019-five-trends-to-watch/.

overestimate.⁵ These innovations have been closely watched by foreign⁶ and U.S. regulators.⁷ 2019 and the first three quarters of 2020 produced as many as five bills in Congress and one major proposal—Rule 195—by an SEC Commissioner who is a leading expert on technology and digital assets.⁸ In turn, legal scholarship has examined how to fit blockchain-based entities and digital assets within the corporate and securities law frameworks.⁹

5. Among other things, blockchain technology can reduce compliance and contracting costs and improve transaction verification mechanisms, record keeping, shareholder voting, contract performance, and title transfers, although it also poses a series of risks. See, e.g., Carla L. Reyes, *If Rockefeller Were a Coder*, 87 GEO. WASH. L. REV. 373, 379–88 (2019) [hereinafter Reyes, *Rockefeller*]; Hilary J. Allen, *Driverless Finance*, 10 HARV. BUS. L. REV. 157, 158–161 (2020); David Yermack, *Corporate Governance and Blockchains*, 21 REV. OF FIN. 7, 7–8 (2017); Joshua A.T. Fairfield, *Bitproperty*, 88 S. CAL. L. REV. 805, 808–09 (2015); Federico Panisi, Ross P. Buckley & Douglas W. Arner, *Blockchain and Public Companies: A Revolution in Share Ownership Transparency, Proxy Voting and Corporate Governance?*, 2 STAN. J. BLOCKCHAIN L. & POL'Y 1, 2–4 (2019); Brummer & Yadav, *supra* note 2, at 272; Letter from Trey Hollingsworth, Darren Soto, Bill Foster, Tom Emmer, Ted Budd, Josh Gottheimer & David Schweikert, Members, U.S. House of Representatives, to Lawrence Kudlow, Dir., Nat'l Econ. Council (May 24, 2019), https://hollingsworth.house.gov/uploadedfiles/hollingsworth_soto_blockchain_letter.pdf.

6. See, e.g., AMERICAN BAR ASSOCIATION, DIGITAL AND DIGITIZED ASSETS: FEDERAL AND STATE JURISDICTIONAL ISSUES 39–200, 227–29, 236–80 (2019), https://www.americanbar.org/content/dam/aba/administrative/business_law/buslaw/committees/C620000pub/digital_assets.pdf [hereinafter ABA, DIGITAL ASSETS]; Brief for Chamber of Digital Commerce as Amici Curiae Supporting Plaintiff, SEC v. Telegram Inc. & Ton Issuer Inc., No. 1:19-cv-09439-PKC, 2020 WL 61528, at *5 n.10 (Jan. 21, 2020) [hereinafter Chamber's Brief].

7. See, e.g., U.S. DEPARTMENT OF JUSTICE, CRYPTOCURRENCY ENFORCEMENT FRAMEWORK (2020), <https://www.justice.gov/ag/page/file/1326061/download>; FINANCIAL STABILITY BOARD, ADDRESSING THE REGULATORY, SUPERVISORY AND OVERSIGHT CHALLENGES RAISED BY "GLOBAL STABLECOIN" ARRANGEMENTS: CONSULTATIVE DOCUMENT (2020), <https://www.fsb.org/2020/04/addressing-the-regulatory-supervisory-and-oversight-challenges-raised-by-global-stablecoin-arrangements-consultative-document/>. See generally Yuliya Guseva, *The SEC, Digital Assets, and Game Theory*, J. CORP. L. (forthcoming 2021) [hereinafter Guseva, *Game Theory*].

8. Securities Clarity Act, H.R. 8378, 116th Cong. (2020), https://emmer.house.gov/_cache/files/d/e/de97d89a-a652-42e9-a436-b36fd541933f/E5FEB0CE89638FF4E5C649E1AC916FC5.emmer-041-xml.pdf; Keep Big Tech Out of Finance Act, H.R. 4813, 116th Cong. (2019); Token Taxonomy Act of 2019, H.R. 2144, 116th Cong. (2019); Crypto-Currency Act of 2020, H.R. 6154, 116th Cong. (2020); Managed Stablecoins are Securities Act of 2019, H.R. 5197, 116th Cong. (2019); Hester M. Peirce, Comm'r, SEC, *Running on Empty: A Proposal to Fill the Gap Between Regulation and Decentralization* (Feb. 6, 2020), <https://www.sec.gov/news/speech/peirce-remarks-blockress-2020-02-06> [hereinafter Peirce Speech and Proposal] (proposing Rule 195).

9. The following is by no means an exhaustive list of scholarly publications on these issues. See, e.g., Reyes, *Conceptualizing Cryptolaw*, *supra* note 1; Usha R. Rodrigues, *Law and the Blockchain*, 104 IOWA L. REV. 679 (2019) (discussing the incomplete nature of new smart contracts and applying it to business organizations law); Eric C. Chaffee, *Securities Regulation in Virtual Space*, 74 WASH. & LEE L. REV. 1387 (2017); Brummer & Yadav, *supra* note 2; Lewis Rinaudo Cohen, *Ain't Misbehavin': An Examination of Broadway Tickets and Blockchain Tokens*, 65 WAYNE L. REV. 81 (2019); Panisi et al., *supra* note 5; William Magnuson, *Regulating Fintech*, 71 VAND. L. REV. 1167 (2018) (reviewing fintech challenges from the perspective of financial regulation and Dodd-Frank in particular); Shlomit Azgad-Tromer, *Crypto Securities: On the Risks of Investments in Blockchain-Based Assets and the Dilemmas of Securities Regulation*, 68 AM. U.

This Article contributes to the growing literature on crypto and fintech and discusses two distinct stages in cryptoasset capital raising. Securities law is crucial in the first stage but essentially irrelevant in the second stage. Academic commentary has either missed or misinterpreted when this second stage begins and what the rights and obligations of the affected parties are. Most importantly, two recent judicial decisions—*Telegram*¹⁰ and *Kik*¹¹—suggest that federal district courts struggle with distinguishing and conceptualizing the discrete stages in the development of crypto projects.

The first stage (“Stage One”) is mainly about raising capital: Firms acting as issuers offer and sell securities to investors, often on the promise to deliver a functioning and marketable product, i.e., digital assets, as a form of return.¹² With the exception of the financial instruments issued by decentralized autonomous organizations (“DAOs”) and certain governance tokens,¹³ many digital assets do not confer voting rights or other equity-like rights with respect to issuers, nor do they trigger fiduciary duties typically associated with equity.¹⁴

L. REV. 69 (2018); Wulf A. Kaal, *Initial Coin Offerings: The Top 25 Jurisdictions and Their Comparative Regulatory Responses (as of May 2018)*, 1 STAN. J. BLOCKCHAIN L. & POL’Y 41 (2018); Kevin Werbach, *Trust, but Verify: Why the Blockchain Needs the Law*, 33 BERKELEY TECH. L.J. 487 (2018); Aaron Wright & Primavera De Filippi, *Decentralized Blockchain Technology and the Rise of Lex Cryptographia* 1 (Mar. 20, 2015) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2580664 (presenting one of the first accounts on decentralized autonomous organizations and smart contracts); Kelsey Bolin, *Decentralized Public Ledger Systems and Securities Law: New Applications of Blockchain Technology and the Revitalization of Sections 11 and 12(A)(2) of the Securities Act of 1933*, 95 WASH. U. L. REV. 955, 955 (2018) (reviewing the federal and state law); Dmitri Boreiko, Guido Ferrarini & Paolo Giudici, *Blockchain Startups and Prospectus Regulation*, 20 EUR. BUS. ORG. L. REV. 665 (2019); J. Brad Bernthal, *The Evolution of Entrepreneurial Finance: A New Typology*, 2018 BYU L. REV. 773, 773–74 (2018) (discussing emerging forms of startup financing and the decreasing role of corporate law and proposing a new typology of financial instruments that are outside the debt-equity divide); Jonathan Rohr & Aaron Wright, *Blockchain-Based Token Sales, Initial Coin Offerings, and the Democratization of Public Capital Markets*, 70 HASTING L.J. 463, 470–85 (2019); Carol Goforth, *Securities Treatment of Tokenized Offerings Under U.S. Law*, 46 PEPP. L. REV. 405, 416–17 (2019) [hereinafter Goforth, *Securities Treatment of Tokenized Offerings*]; Carol R. Goforth, *How Blockchain Could Increase the Need for and Availability of Contractual Ordering for Companies and Their Investors*, 94 N.D. L. REV. 1, 1 (2019) [hereinafter Goforth, *Contractual Ordering*].

10. SEC v. Telegram Group, Inc., No. 19-cv-9439 (PKC), 2020 U.S. Dist. LEXIS 53846 (S.D.N.Y. Mar. 23, 2020) [hereinafter Court Order].

11. SEC v. Kik Interactive, No. 19 Civ. 5244 (AKH), 2020 WL 5819770, at *8 (S.D.N.Y. 2020).

12. See *infra* Sections B & C.

13. An example of governance tokens is the tokens recently issued by decentralized finance protocol Uniswap. Paddy Baker, *Uniswap’s Newly Launched UNI Token Has Already Doubled in Price*, COINDESK (Sept. 18, 2020), <https://www.coindesk.com/uniswap-uni-token-price>. For a discussion of DAOs, see *infra* Section E.

14. See *infra* Section E (discussing DAOs); Section B.1 (examining token classifications); see also *infra* note 285 and accompanying text. Some scholars discuss various financial tokens under a broad heading of “equity tokens.” See, e.g., Dirk A. Zetsche, Ross P. Buckley, Douglas W. Arner

If we narrow down the capital structure of all firms and projects to only two general categories of debt and equity, many digital assets in Stage One will default to debt securities such as bonds or unsecured debentures.¹⁵ Both are commonly combined under the umbrella term of “bonds”—diverse and variegated debt securities that are creatures of contract¹⁶ and a subclass of financial instruments.¹⁷ Viewed in this light, offering documents—including whitepapers and, in some cases, purchase agreements for future tokens along the lines of the “SAFT” framework¹⁸—may be examined as de facto bond indentures, prospectuses, and offering memoranda.

As developed further in this Article, the key parties in Stage One are the initial purchasers (the “Initial Investors” or “Initial Token-Holders”) of future tokens and the developer (or “issuer-developer”)¹⁹ with its intra-firm governance mechanisms. It is logical that the Initial Token-Holders providing debt financing are investors giving (1) their capital (2) to a

& Linus Föhr, *The ICO Gold Rush: It's a Scam, It's a Bubble, It's a Super Challenge for Regulators*, 60 HARV. INT'L L.J. 267, 275 (2019) (“Currency tokens are characterized by a token reflecting a right in another currency, whether crypto or otherwise. Equity tokens represent the right to a share in a cash flow generated by some underlying asset. Among the equity tokens, some ICOs confer participation of token holders in an asset pool in a non-segregated manner, while in other cases the token allows participation in one single asset, separable from other assets.”). This Article examines only decentralized autonomous organizations’ tokens as equity-like financial instruments. These tokens give token-holders the rights to, *inter alia*, vote and receive income directly tied to the operations of a DAO.

15. ALAN S. GUTTERMAN, BUSINESS TRANSACTIONS SOLUTIONS § 155:79 (2020) (“Debentures are generally ‘unsecured’ and the indebtedness of the corporation evidenced by a debenture is backed solely by the overall financial condition and creditworthiness of the corporation.”).

16. RICHARD A. BREALEY, STEWART C. MYERS & FRANKLIN ALLEN, PRINCIPLES OF CORPORATE FINANCE 351–53 (10th ed. 2011).

17. MERRITT B. FOX, LAWRENCE R. GLOSTEN & GABRIEL V. RAUTERBERG, THE NEW STOCK MARKET: LAW, ECONOMICS, AND POLICY 11 (2019) (“A *financial instrument* . . . is essentially a contract that provides the contract holder with some kind of claim to the cash flows and/or control of a business.”).

18. See, e.g., Thomas Bourveau, Emmanuel T. De George, Atif Ellahie & Daniele Macciocchi, Initial Coin Offerings: Early Evidence on the Role of Disclosure in the Unregulated Crypto Market 3 (July 2018) (unpublished manuscript), https://www.marshall.usc.edu/sites/default/files/2019-03/thomas_bourveau_icos.pdf (explaining that a whitepaper is “an unaudited marketing document that might contain information such as the business proposition for the crypto-token, addressable market opportunity, technology, proof-of-concept case studies, expected progress timeline, identity and background of the team, ICO process and platform, token distribution, vesting restrictions, use of proceeds, etc.”); JUAN BATIZ-BENET, MARCO SANTORI & JESSE CLAYBURGH, THE SAFT PROJECT: TOWARD A COMPLIANT TOKEN SALE FRAMEWORK (2017), <https://saftproject.com/static/SAFT-Project-Whitepaper.pdf>.

19. I use the terms “developer,” “issuer-developer” and “firm-developer” interchangeably and primarily to describe promoters of crypto-projects. After an open-source project’s launch, however, these original firm-developers may join the community of other developers, i.e., third-party developers. For a review of relevant parties in open-source decentralized projects, see Carla L. Reyes, *(Un)Corporate Crypto-Governance*, 88 FORDHAM L. REV. 1875, 1886–88 (2020) [hereinafter Reyes, *(Un)Corporate Crypto-Governance*].

common enterprise (3) with the expectation to earn profit (4) from the efforts of the developer. These four characteristics are the backbone of the Supreme Court's *Howey* test, which is typically applied by the Securities and Exchange Commission ("SEC") to digital assets that are deemed "investment contracts" and, therefore, securities.²⁰ This Article will examine digital assets as new types of bonds, apply the *Howey* test to these instruments, and show why and how securities law is crucial in Stage One but not in Stage Two of cryptoasset projects.

The second stage ("Stage Two") begins with the launch of a decentralized platform, DAO, or decentralized application ("Dapp") and the delivery of fully functional digital assets. At this point, the status of tokenholders and the nature of the assets, as well as the need for and applicability of securities law, become less clear. The facts in *Telegram* underscore these dilemmas and the discreteness of the two-stage process.

Had Telegram been allowed to distribute its tokens and launch the new blockchain, anyone would be able to build on the platform (viz., it was open source), the code underlying the assets could not be unilaterally changed by the original promoter-developer (i.e., Telegram), and the promoter would not have the means to singlehandedly impact the platform and the assets, including their supply, demand, and valuation.²¹ These factors infer that project governance would effectively metamorphose into a decentralized and autonomous system. This point of metamorphosis (provided it is discernable)²² should work as the cutoff point where conventional securities law becomes largely irrelevant as crypto-market mechanisms take over.

At the same time, as this Article will demonstrate, this cutoff point does not either alter the rights of the Initial Investors or destroy the original "indenture."²³ The root cause is that neither token delivery nor platform launch is determinative of the expiration or maturity of the original bonds. Determining the bonds' term to maturity becomes key to understanding the nature of the transactions, the Initial Investors' rights, and the firm-developer's obligations.²⁴

The term to maturity does three things. First, bonds are securities. Their continuous existence in both Stages One and Two, i.e., even after fully-

20. SEC v. W. J. Howey Co., 328 U.S. 293 (1946). For the most recent application of the test, see SEC v. Kik Interactive, No. 19 Civ. 5244 (AKH), 2020 WL 5819770, at *5–8 (S.D.N.Y. 2020).

21. See *infra* Sections B & C.

22. In *Kik*, for instance, Stages One and Two were obscure because the developer conducted both a private placement of bonds and a public distribution of the digital assets (called "Kin") approximately at the same time and, as the district court concluded, for the same purposes of developing the Kin Ecosystem leading to an integration of the offerings. *Kik Interactive*, No. 19 Civ. 5244 (AKH) at *6–8 (S.D.N.Y. 2020).

23. See *infra* Sections B & C.

24. *Id.*

functional tokens are delivered and platforms are launched, extends the application of the Supreme Court's *Howey* test²⁵ and thus the U.S. federal securities law post-launch and post-asset-delivery. Second, it points toward two distinct and separate types of assets—a non-security-token (or coin) and a bond—simultaneously circulating *after* the project has been deployed and tokens distributed.

Third, the two groups of asset purchasers—the Initial Investors who own tokens post-delivery and post-platform-launch and the subsequent token purchasers (“Public Token-Holders” or “Subsequent Token-Holders”)—exist concurrently. These two cohorts of market participants have completely divergent expectations concerning the role of the issuer in the operation of a platform or a Dapp and the valuation of digital assets. The issuer-developer, on its part, has different obligations to each. Only the bondholders can bring claims under securities law against the issuer in Stage Two.²⁶

This conceptual framework both differs from and contributes to the previous scholarship in the following way. Some commentators have examined the hybrid nature of digital assets, which simultaneously present securities and non-securities attributes.²⁷ Another notable view was expressed by Director Hinman in his consequential speech on digital assets, as well as by SEC Chairman Clayton: a digital-asset security can evolve into a non-security.²⁸ It is also possible that because transactions are typically

25. *SEC v. W. J. Howey Co.*, 328 U.S. 293 (1946). *See also* *Reves v. Ernst & Young*, 494 U.S. 56, 61 (1990); *SEC v. Edwards*, 540 U.S. 389, 393 (2004); H.R. REP. NO. 73–85, at 11 (1933).

26. *See infra* Section B.

27. Boreiko et al., *supra* note 9; Rohr & Wright, *supra* note 9, at 488. A “token could be deemed both a security and a means of payment.” AMERICAN BAR ASSOCIATION, *supra* note 6, at 252. APOLLINE BLANDIN, ANN SOFIE CLOOTS, HATIM HUSSAIN, MICHEL RAUCHS, RASHEED SALEUDDIN, JASON GRANT ALLEN, BRYAN ZHANG & KATHERINE CLOUD, GLOBAL CRYPTOASSET REGULATORY LANDSCAPE STUDY 21 (2019), https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternative-finance/downloads/2019-04-ccaf-global-cryptoasset-regulatory-landscape-study.pdf (describing “cryptoasset” as “an umbrella term to describe an array of tokens that exhibit a wide range of characteristics”). Hybrid financial instruments are a known quantity in securities law and typically call for case-by-case analysis. *See, e.g.*, *United States v. Leonard*, 529 F.3d 83, 88–89 (2d Cir. 2008) (citing *Reves*, 494 U.S. at 62) (discussing a need for a case-by-case analysis of hybrids, such as diverse interests in LLCs, under *Howey*).

28. William Hinman, Dir., Div. of Corp. Fin., SEC, Digital Asset Transactions: When *Howey* Met Gary (Plastic) (June 14, 2018), <https://www.sec.gov/news/speech/speech-hinman-061418> [hereinafter *Hinman Speech*] (“[T]he analysis of whether something is a security is not static and does not strictly inhere to the instrument.”); Nikhilesh De & Mahishan Gnanaseharan, *SEC Chief Touts Benefits of Crypto Regulation*, COINDESK (Apr. 5, 2018, 4:16 PM), <https://www.coindesk.com/sec-chief-not-icos-bad>; Cohen, *supra* note 9, at 102–06; Joseph H. Nesler, *When it Comes to Analyzing Utility Tokens, the SEC Staff’s ‘Framework for ‘Investment Contract’ Analysis of Digital Assets’ May Be the Emperor Without Clothes (Or, Sometimes an Orange Is Just an Orange) (Part I)*, WINSTON & STRAWN LLP: CRYPTO LAW CORNER (Oct. 28, 2019), <https://www.winston.com/en/crypto-law-corner/index.html>. *See also* REGULATING BLOCKCHAIN: TECHNO-SOCIAL AND LEGAL CHALLENGES 253 (Phillip Hacker, Ioannis Lianos,

“evaluated on the basis of the content of the instruments in question, the purposes intended to be served, and the factual setting,”²⁹ a project that started off as an investment could be reevaluated and transform into a non-security. In that case, some elements of the *Howey* test would no longer apply to a project or platform.³⁰

The U.S. District Court for the Southern District of New York elaborated on the third view in *SEC v. Telegram Group, Inc.*³¹ This March 2020 decision, which granted a preliminary injunction at the SEC’s request, held that the same security can be distributed to the Public Token-Holders by the Initial Investors acting as “underwriters.”³² The affiliated hypothesis is that there is a single financial instrument—a digital token—that is sold throughout this securities distribution scheme. Similarly, in *Kik Interactive*, the Southern District of New York articulated a somewhat similar position by suggesting that

Purchasers in the two sales [, a private placement of securities and a public sale of tokens,] received the same class of securities, fungible Kin that were equal in value. It is true that they received them via different instruments with different rights. However, the ultimate result was distribution of identical assets.³³

This Article seeks to resolve these issues by offering a workable framework that can assist factfinders, regulators, and market participants in determining when a relationship involving securities ends and commodity trading and use begins, as well as the parties involved. Whereas digital assets can be securities, they also may be commodities or something else entirely.³⁴ Investment contracts are not cryptocurrency-commodities;³⁵ and

Georgios Dimitropoulos & Stefan Eich, eds., 1st ed. 2019) (comparing the Hinman Speech and the SAFT approach).

29. *Marine Bank v. Weaver*, 455 U.S. 551, 560 n.11 (1982) (“Each transaction must be analyzed and evaluated on the basis of the content of the instruments in question, the purposes intended to be served, and the factual setting as a whole.”).

30. *See, e.g.*, THE SEC FRAMEWORK, *supra* note 3, at 5 (listing, *inter alia*, the following questions: “Whether or not the efforts of an AP, including any successor AP, continue to be important to the value of an investment in the digital asset. Whether the network on which the digital asset is to function operates in such a manner that purchasers would no longer reasonably expect an AP to carry out essential managerial or entrepreneurial efforts. Whether the efforts of an AP are no longer affecting the enterprise’s success.”).

31. Court Order, *supra* note 10.

32. *See id.* at *3; 15 U.S.C. § 77b(a)(11).

33. *SEC v. Kik Interactive*, No. 19 Civ. 5244 (AKH), 2020 WL 5819770, at *8 (S.D.N.Y. 2020).

34. *See* Chamber’s Brief, *supra* note 6, at 9 (“Because a digital asset is merely an electronic record, the digital asset may be data that represents a security, a commodity, or something else.”); *see also infra* Section B.

35. *See, e.g.*, *SEC v. Koscot Interplanetary, Inc.*, 497 F.2d 473, 475 (5th Cir. 1974); *Sinva, Inc. v. Merrill, Lynch, Pierce, Fenner & Smith, Inc.*, 253 F. Supp. 359, 367 (S.D.N.Y. 1966).

cryptocurrencies native to open source decentralized blockchains, similar to the one at issue in *Telegram*, are typically considered commodities, not securities.³⁶ Conflating distinct asset classes—commodities and securities³⁷—may entail doctrinal inconsistencies and adverse market consequences, such as restricting beneficial innovation,³⁸ as well as blur the jurisdictional boundaries between the SEC’s regulation of securities and the Commodity Futures Trading Commission’s (“CFTC”) oversight of commodity markets.³⁹

This Article develops as follows. Section B reviews the taxonomy of digital assets and offerings.⁴⁰ It also lays out the two-stage process implicated by cryptoasset capital raising. Section C examines an example of the two-stage process—the *Telegram* case.⁴¹ Section D applies the two-stage framework to other examples of non-native and native tokens.⁴² Section E discusses equity-like crypto-instruments used in decentralized autonomous organizations, including The DAO and MakerDAO.⁴³ Section F emphasizes the major concerns inherent during the project development phase and makes

36. Court Order, *supra* note 30, at *3–4 (“In the abstract, an investment of money in a cryptocurrency utilized by members of a decentralized community connected via blockchain technology, which itself is administered by this community of users rather than by a common enterprise, is not likely to be deemed a security under the familiar test laid out in *S.E.C. v. W.J. Howey Co.* The SEC, for example, does not contend that Bitcoins transferred on the Bitcoin blockchain are securities.”); Press Release, Commodity Futures Trading Commission, Release Number 8051-19 (Oct. 10, 2019), <https://www.cftc.gov/PressRoom/PressReleases/8051-19>; *see also* Commodity Futures Trading Commission v. My Big Coin Pay, Inc., 334 F. Supp. 3d 492, 498 (D. Mass. 2018) (quoting Commodity Future Trading Commission v. McDonnell, 287 F. Supp. 3d 213, 228 (E.D.N.Y. 2018)) (“Virtual currencies can be regulated by CFTC as a commodity.”).

37. *United Hous. Found., Inc. v. Forman*, 421 U.S. 837, 858 (1975) (“What distinguishes a security transaction . . . is an investment where one parts with his money in the hope of receiving profits from the efforts of others, and not where he purchases a commodity for personal consumption . . .”).

38. *See, e.g.,* Peirce Speech and Proposal, *supra* note 8; Chamber’s Brief, *supra* note 6, at 6–9, 11, 17.

39. *In re BFXNA Inc.*, CFTC No. 16-19, at 5–6 (June 2, 2016), https://www.cftc.gov/sites/default/files/idc/groups/public/@lrenforcementactions/documents/legal_pleading/enfbfxnaorder060216.pdf (“[V]irtual currencies are encompassed in the [CEA] definition and properly defined as commodities”); *In re Coinflip, Inc.*, CFTC No. 15-29, at 3 (Sept. 17, 2015), https://www.cftc.gov/sites/default/files/idc/groups/public/@lrenforcementactions/documents/legal_pleading/enfcoinfliporder09172015.pdf (“The definition of a ‘commodity’ is broad. *See, e.g. Board of Trade of City of Chicago v. SEC*, 677 F.2d 1137, 1142 (7th Cir. 1982). Bitcoin and other virtual currencies are encompassed in the definition and properly defined as commodities.”); *Commodity Futures Trading Commission v. McDonnell*, 287 F. Supp. 3d 213, 228 (E.D.N.Y. 2018) (“Virtual currencies can be regulated by CFTC as a commodity.”).

40. *See infra* Section B.

41. *See infra* Section C.

42. *See infra* Section D.

43. *See infra* Section E.

a case for the important role securities law has to play in Stage One.⁴⁴ Section G concludes the paper.⁴⁵

B. AN OVERVIEW OF TOKENS

1. *Token Taxonomy*

This Section outlines the short taxonomy of tokens and coins. Their classifications are constantly evolving as new cryptocurrencies and other digital instruments are being developed. The following discussion, albeit by no means an exhaustive anthology, lays out the main currently existing asset classes.

1.1. *Native and Non-native Tokens*

Many digital assets are “coins” and “tokens.” The traditional view is that “coins” are payment-related digital assets, native to the blockchains on which they operate. For example, Bitcoin blockchain has Bitcoin, Ethereum has Ether, Ripple has its XRP Ledger and XRP, a coin, and Telegram has developed Grams.⁴⁶ Some experts refer to these assets as “native tokens” or “native assets,” i.e., tokens native to the underlying base layer protocols.⁴⁷ Ether, for instance, may be described as the “native token” of Ethereum blockchain. Just like Bitcoin, it is also a digital currency (or “cryptocurrency”) and a commodity.⁴⁸ A native token, however, may also be utilized for purposes other than payments, unit of account, or store of value.

Ether, for instance, is used to pay for “gas”⁴⁹ to power all transactions and smart contracts⁵⁰ (i.e., sets of code commands that are the core business

44. See *infra* Section F.

45. See *infra* Section G.

46. BITCOIN, <https://bitcoin.org/en/> (last visited Nov. 22, 2020); ETHEREUM, <https://ethereum.org/what-is-ethereum/> (last visited Nov. 22, 2020); *XRP: The Best Digital Asset for Global Payment*, RIPPLE, <https://ripple.com/xrp/> (last visited Nov. 22, 2020); Court Order, *supra* note 10.

47. A protocol is “a set of instructions for the compilation and interaction of objects.” ALEXANDER R. GALLOWAY, *PROTOCOL: HOW CONTROL EXISTS AFTER DECENTRALIZATION* 75 (2004).

48. Press Release, Commodity Futures Trading Commission, *supra* note 36.

49. See VITALIK BUTERIN, *A NEXT GENERATION SMART CONTRACT & DECENTRALIZED APPLICATION PLATFORM*, GITHUB (2013), <https://ethereum.org/en/whitepaper/> [hereinafter *Ethereum White Paper*] (discussing the use of gas).

50. Smart contracts are algorithms enabling automatic transaction execution. See, e.g., Nick Szabo, *The Idea of Smart Contracts*, NICK SZABO’S ESSAYS, PAPERS AND CONCISE TUTORIALS (1997),

http://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/smart_contracts_idea.html; Reyes, *Rockefeller*, *supra* note 5, at 379–88; Saule T. Omarova, *New Tech v. New Deal: Fintech as a Systemic Phenomenon*, 36 YALE J. ON

logic of decentralized applications (also “Dapps”) and decentralized autonomous organizations (“DAOs”)⁵¹ on Ethereum. This Article discusses examples of Dapps and DAOs in Sections D and E, respectively.⁵²

Many developers working on smart contracts, Dapps, and DAOs economize on their resources by building their projects on established blockchains such as Ethereum. Ethereum has the resources enabling smart contract development and non-native token offerings.⁵³ In layman’s terms, Ethereum provides a platform for building non-native digital tokens and deploying smart contracts, Dapps, and DAOs; gas is similar to a transaction fee compensating for computational expenses and validation of transactions executed on Ethereum. Tokens, in turn, give their holders the right to access Dapps and DAOs and to effect various transactions, including purchases and sales of goods and services, voting on projects, consumption of goods, etc.⁵⁴

1.2. Functional and Regulatory Classifications

Tokens are often distributed during or after crowdfunding events such as Initial Coin Offerings (“ICO”) and Security Token Offerings (“STO”).⁵⁵ For instance, Telegram planned to deliver native tokens after an ICO.⁵⁶ These crowdfunding events ended up on the radar of capital market regulators across the globe as novel and exoteric securities offerings.

Some regulators have taxonomized tokens into “investment tokens” or “security tokens,” which are self-explanatory sobriquets; a less exact appellation of “utility tokens” granting access to, *inter alia*, products, services and networks; and tokens used strictly for payment and exchange

REG. 735, 744 n.30 (2019) (discussing smart contract applications); Wright & De Filippi, *supra* note 9, at 10–12.

51. See, e.g., Christoph Jentzsch, Decentralized Autonomous Organization to Automate Governance 1–2 (2016) (unpublished manuscript), [https://blog.ethereum.org/2014/05/06/daos-dacs-das-and-more-an-incomplete-terminology-guide/](https://www.coursehero.com/file/45767105/IT4pdf/_Reyes, Rockefeller, supra note 5, at 379–89; Wright & De Filippi, supra note 9, at 3, 19–20; Vitalik Buterin, DAOs, DACs, DAs and More: An Incomplete Terminology Guide, ETHEREUM BLOG (May 6, 2014), <a href=); Kevin Werbach & Nicolas Cornell, *Contracts Ex Machina*, 67 DUKE L.J. 313, 350–51 (2017) (discussing Ethereum and The DAO).

52. See *infra* Sections D & E.

53. Ethereum White Paper, *supra* note 46.

54. See, e.g., BLANDIN ET AL., *supra* note 27, at 14–21; see *infra* Sections C & D.

55. See, e.g., Michael Mendelson, *From Initial Coin Offerings to Security Tokens: A U.S. Federal Securities Law Analysis*, 22 STAN. TECH. L. REV. 52 (2019); STEVE DAVIES, HENRI ARSLANIAN, KRIS KERSEY, GÜNTHER DOBRAUZ, JONAS HEYDASCH, HENRIK OLSSON, JOHN SHIPMAN & RAPHAEL EBELING, 6TH ICO/STO REPORT: A STRATEGIC PERSPECTIVE, PWC 2, 6 (2020), https://www.pwc.com/ee/et/publications/pub/Strategy&_ICO_STO_Study_Version_Spring_2020.pdf.

56. See *infra* Section C.

purposes.⁵⁷ Security tokens are digital assets that have security-like characteristics, i.e., those that are the “same as or akin to traditional instruments like shares, debentures or units in a collective investment scheme.”⁵⁸ A related category is “governance tokens,” which enable participants of a digital project to have a voice in its governance by voting on various proposals and changes associated with the project.⁵⁹ They may be roughly analogized with partnership interests or memberships in limited liability companies.⁶⁰

These classifications are not ironclad because some virtual assets can be used as a means of exchange *and* function as currencies or participation and voting rights.⁶¹ To wit, these assets may combine features of several asset classes⁶² and represent hybrids.⁶³ Some assets may lose certain characteristics at various stages of a business project.⁶⁴

1.3. Fungible and Non-Fungible Tokens

Governance tokens, utility tokens, coins, and security-tokens are “fungible” assets, just like U.S. dollars, shares of common stock of IBM, or identical bricks of gold. Many fungible non-native tokens are built using Ethereum’s ERC-20 standard and deployed on Ethereum, the base layer

57. UK FINANCIAL CONDUCT AUTHORITY, GUIDANCE ON CRYPTOASSETS 35–44 (July 2019), <https://www.fca.org.uk/publication/policy/ps19-22.pdf> [hereinafter FCA GUIDANCE]; BLANDIN ET AL., *supra* note 27, at 18–20, 37; L. LIB. OF CONG., REGULATION OF CRYPTOCURRENCY AROUND THE WORLD (2018), <https://www.loc.gov/law/help/cryptocurrency/cryptocurrency-world-survey.pdf>.

58. FCA GUIDANCE, *supra* note 57, at 15.

59. Alexis Collomb, Primavera De Fillippi & Klara Sok, *Blockchain Technology and Financial Regulation: A Risk-Based Approach to the Regulation of ICOs*, 10 EUR. J. RISK REG. 263, 263–64, 280–81 (2019); Alexandra Sims, *Blockchain and Decentralised Autonomous Organisations (DAOs): The Evolution of Companies?*, 28 N.Z. U. L. REV. 423, 440–41 (2020) (discussing examples). *See also* Del Wright Jr., *Quadratic Voting and Blockchain Governance*, 88 UMKC L. REV. 475,484–94 (2019) (discussing distributed governance).

60. *See infra* Section E.

61. *See generally supra* note 59.

62. Rohr & Wright, *supra* note 9, at 493.

63. Collomb et al., *supra* note 59. For a review of distinctions among various digital asset types, *see also* Rohr & Wright, *supra* note 9, at 470–85; Philipp Hacker & Chris Thomale, *Crypto-Securities Regulation: ICOs, Token Sales and Cryptocurrencies under EU Financial Law*, 15 EUR. CO. & FIN. L. REV. 645 (2018); SATIS GROUP, CRYPTOASSET MARKET COVERAGE INITIATION: NETWORK CREATION 6, 16 (2018), https://research.bloomberg.com/pub/res/d28giW28tf6G7T_Wr77aU0gDgFQ (summarizing several examples of tokens); Goforth, *Securities Treatment of Tokenized Offerings*, *supra* note 9, at 416–18, 434–36.

64. *See, e.g., In re Gladius Network LLC*, Exchange Act Release No. 10608, 2019 WL 697993, at 1–4 [hereinafter *Gladius Order*] (discussing the nature of the tokens and the process of raising capital).

protocol.⁶⁵ As mentioned above, Ethereum has designed standards for the issuance and operation of non-native tokens. ERC-20 is one of the first and main code standards.

The ERC-20 standard ensures uniform performance of non-native tokens and their transferability.⁶⁶ ERC-20 tokens have some convenient standard functions, including transferring from one account to another, storing the tokens, checking the balances of token-owners, and setting and monitoring the total supply of the tokens.⁶⁷ ERC-20 tokens can also have additional, non-standard functions specific to a project. To summarize, ERC-20 is a set of terms that a smart contract (which at its core is encoded commands) should include. The result, in simple terms, is akin to creating bricks of gold, bonds, shares of stock, or other assets online and letting some computer code do the distribution, check the balances, and serve as a transfer agent for these assets.

ERC-20 was among the first and most basic code standards. More recently, the plethora of ERC-1400 tokens emerged.⁶⁸ These technological developments went hand in hand with laws and regulations that either encouraged digital asset innovation or constrained it, thereby incentivizing the developers to work on finding solutions. For instance, it is possible that digital asset developers saw an opportunity in corporate law reforms such as the 2017 amendments to the Delaware General Corporation Law concerning issuance of tokenized shares.⁶⁹ At the same time, the SEC actions against ICO-issuers who failed to comply with federal securities law⁷⁰ posed serious regulatory challenges and moved developers toward thinking about innovations in compliance: A group of crypto-firms created the ERC-1400 standards with the objective of accommodating the needs of firms seeking to issue and transfer equity and/or debt securities using on-chain and off-chain data.⁷¹

65. See, e.g., Dafan Zhang, *Security Tokens: Complying with Security Laws and Regulations Provides More than Token Rewards*, 88 UMKC L. REV. 323, 340–44 (2019).

66. *Id.*; see also Michael J. O'Connor, *Overreaching Its Mandate? Considering the SEC's Authority to Regulate Cryptocurrency Exchanges*, 11 DREXEL L. REV. 539, 551–52 (2019); Azgad-Tromer, *supra* note 9, at 82; Cohny et al., *supra* note 3, at 605; Tonya M. Evans, *Cryptokitties, Cryptography, and Copyright*, 47 AIPLA Q.J. 219, 247–48 (2019).

67. Fabian Vogelsteller & Vitalik Buterin, *EIP 20: ERC-20 Token Standard*, ETHEREUM: ETHEREUM IMPROVEMENT PROPOSALS (2015), <https://eips.ethereum.org/EIPS/eip-20>.

68. Zhang, *supra* note 65, at 341–42.

69. DEL. CODE ANN. tit. 8, § 224.

70. Guseva, *Game Theory*, *supra* note 7.

71. THE SECURITY TOKEN STANDARD, <https://polymath.network/erc-1400> (last visited Nov. 22, 2020); Tim Fries, *How the ERC-1400 Has Evolved Into a Suite of Interoperable Security Token Standards*, TOKENIST (last updated Sept. 15, 2019), <https://thetokenist.io/how-the-erc-1400-has-evolved-into-a-suite-of-interoperable-security-token-standards/>.

For instance, instead of doing a conventional public offering, a firm could follow these standards and issue security-tokens. The ERC-1400 developers have promised that the standards would help ensure compliance with securities law. Such security-tokens would be similar to good old shares of stock or bonds except their new blockchain wrapping. Conveniently, these standards are backward-compatible with ERC-20.⁷²

As a final wrinkle, fungible ERC-20 or other tokens differ from nonfungible tokens and “identity tokens” that are based on different standards: (1) ERC-721,⁷³ and (2) ERC-725 and ERC-735,⁷⁴ respectively. In short, ERC-721 enables developers create unique digital assets and sell collectibles.⁷⁵ Identity tokens (ERC-725 and ERC-735) have emerged to store data about an individual, a group, or a firm and to verify information about potential counterparties.⁷⁶ Identity tokens help to streamline information verification in various contracts and transactions. For instance, these innovations may facilitate creation of peer-to-peer marketplaces, such as Airbnb, except that there is no Airbnb, as such, to verify the identities of a renter and an owner.

To summarize, tokens and coins are constantly evolving because blockchain is merely an umbrella technology that may be adapted for multiple and heterogeneous business purposes. The rest of this Article discusses the assets that fall under the headings of fungible coins and tokens, including security, utility, and governance tokens. These tokens enable users to, among other things, access applications, vote on projects, enjoy financial dividend-like or interest-like return on their investments, validate transactions, purchase goods and services on the network, or store value.

2. *The Two Stages of Digital Asset Markets*

A developer working on a smart contract, a new blockchain, a DAO or a Dapp, naturally needs to raise capital.⁷⁷ Like any other entrepreneur, a crypto-firm could seek funding from venture capital firms and other

72. Adam Dossa, Pablo Ruiz, Fabian Vogelsteller & Stephane Gosselin, Comment to *ERC 1400: Security Token Standard*, GITHUB (Sept. 13, 2018), <https://github.com/ethereum/eips/issues/1411>.

73. See, e.g., Evans, *supra* note 66, at 248.

74. See ERC-725 ALLIANCE, <https://erc725alliance.org/>.

75. Evans, *supra* note 66, at 253–54.

76. See ERC-725 ALLIANCE, *supra* note 74.

77. Promoters use technology to raise capital and start new businesses. Rodrigues, *supra* note 9, at 721 (“So far most ICOs and DAOs have not organized purely on the blockchain. Instead they have opted for some identifiable group of promoters.”); Rohr & Wright, *supra* note 10, at 485 (“In effect, the distributive power of the Internet is being combined with the raw power of a blockchain to manage and transfer assets globally. This combination has extraordinary potential for capital formation, streamlining a once cumbersome process of raising funding while holding out the hope of democratizing access to capital by unleashing untapped entrepreneurship.”).

sophisticated investors.⁷⁸ It could do a private placement or conduct a public offering of securities.⁷⁹ This is when Stage One of the project begins.

A firm-developer would issue and sell “digital-asset securities”⁸⁰ to investors either in two-party transactions involving only the issuer and the investors (i.e., ICOs⁸¹ and STOs⁸²) or through third-party intermediaries, popularly called “crypto-exchanges,” in Initial Exchange Offerings (“IEOs”).⁸³

78. See, e.g., Jonathan Cardenas, *The Rise of the Crypto Asset Investment Fund: An Overview of the Crypto Fund System*, in BLOCKCHAIN & CRYPTOCURRENCY REG. 149–155 (Josias Dewey ed., 2019).

79. By December 2018, ICOs raised about \$20 billion. See Justina Lee, *How Much Have ICOs Raised in 2018? Depends on Who You Ask*, BLOOMBERG (Nov. 4, 2018, 7:00 PM), <https://www.bloomberg.com/news/articles/2018-11-05/how-much-have-token-sales-raised-in-2018-depends-on-who-you-ask>; see also Paul Vigna, *Raising Money in the Crypto World Has Gotten a Lot Harder*, WALL ST. J. (Mar. 31, 2019, 9:00 AM), <https://www.wsj.com/articles/raising-money-in-the-crypto-world-has-gotten-a-lot-harder-11554037201>; Zetzsche et al., *supra* note 12 (arguing that many ICOs were scams and that ICOs arose in response to inadequate start-up financing).

80. This term has been used by the SEC in ICO cases in relation to cryptoassets. See, e.g., Complaint at 1, SEC v. Telegram Group Inc., No. 9-cv-09439-PKC (S.D.N.Y. Oct. 11, 2019), <https://www.sec.gov/litigation/complaints/2019/comp-pr2019-212.pdf>.

81. See, e.g., Complaint at 7–8, SEC v. Blockvest LLC, 3:18-cv-02287-GPC-BLM (S.D. Cal. 2018), <https://www.sec.gov/litigation/complaints/2018/comp-pr2018-232.pdf> [hereinafter Blockvest Complaint] (“[D]igital assets issued in an ICO entitle holders to certain rights related to a venture underlying the ICO, such as rights to profits, shares of assets, rights to use certain services provided by the issuer, and/or voting rights. These digital assets may also be listed on online platforms, often called virtual currency exchanges, and tradeable for virtual or fiat currencies.”); *Investor Bulletin: Initial Coin Offerings*, U.S. SECURITIES & EXCH. COMM’N: INV. ALERTS AND BULLS. (July 25, 2017), https://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_coinofferings. On the ICO structure and regulations, see, e.g., Moran Ofir & Ido Sadeh, *ICO vs. IPO: Empirical Findings, Information Asymmetry and the Appropriate Regulatory Framework*, 53 VAND. J. TRANSNAT’L L. 525 (2019) (summarizing about a hundred empirical papers); Kaal, *supra* note 9; Boreiko et al., *supra* note 9; Philipp Maume & Mathias Fromberger, *Regulation of Initial Coin Offerings: Reconciling U.S. and E.U. Securities Laws*, 19 CHI. J. INT’L L. 548 (2019); Guseva, *Game Theory*, *supra* note 7; Collomb et al., *supra* note 59; Sabrina T. Howell, Marina Niessner & David Yermack, *Initial Coin Offerings: Financing Growth with Cryptocurrency Token Sales* 33 (Nat’l Bureau of Econ. Rsch., Working Paper No. 24774, 2019), <http://www.nber.org/papers/w24774>.

82. On sales of security tokens, see, e.g., Goforth, *Contractual Ordering*, *supra* note 9, at 18–20 (discussing examples); Goforth, *Securities Treatment of Tokenized Offerings*, *supra* note 9; Collomb, et al., *supra* note 59, at 294–96; *Complete Guide to Security Tokens*, TOKENIST (2018), <https://thetokenist.io/security-tokens-explained/>; Joshua A. Klayman, *Mutually Assured Disruption: The Rise of the Security Token*, in BLOCKCHAIN & CRYPTOCURRENCY REG. 60 (Josias Dewey ed., 2019) (discussing a pertinent example).

83. *Investor Bulletin: Initial Exchange Offerings (IEOs) – Investor Alert*, U.S. SECURITIES & EXCH. COMM’N: INV. ALERTS AND BULLS. (Jan. 14, 2020), https://www.sec.gov/oiea/investor-alerts-and-bulletins/ia_initialexchangeofferings (“IEOs are being touted as an innovation on ICOs because they are offered directly by online trading platforms on behalf of companies—usually for a fee—to provide immediate trading opportunities for the digital assets.”).

The issuer needs to offer some form of financial instruments ensuring return on the investment to the parties providing capital. If the developer offers instruments that are not equity, the obvious alternative is debt securities, which have infinite variations.⁸⁴ Regardless of titles appended thereto,⁸⁵ the SEC generally considers these financial instruments securities under federal securities law.⁸⁶ This approach is bolstered by the broad statutory interpretation of investments⁸⁷ and by some economic research suggesting that when firms raise capital through token sales, these offerings exhibit properties characteristic of securities issuances.⁸⁸

The offering documents would typically promise return in the form of tokens. The Initial Investors would receive tokens in exchange for their investment either during project development or at project completion and launch. The rest of the market would often get access to the tokens sold in public sales by the issuer after the launch or through secondary market trading.⁸⁹

The native or non-native tokens would thereafter be used for various purposes: to enable the exchange of goods and services, to effect payments, to vote on projects, to participate in project governance, to stake tokens and validate transactions, to access the network, to deploy and run Dapps and DAOs, to store value, and many others.⁹⁰ Token-holders may also be entitled to a share of fees from transactions and services executed on a platform, Dapp, or DAO after its launch.⁹¹

84. See BREALEY ET AL., *supra* note 16.

85. *United Hous. Found., Inc. v. Forman*, 421 U.S. 837, 848 (1975) (“(I)n searching for the meaning and scope of the word ‘security’ in the Act(s), form should be disregarded for substance and the emphasis should be on economic reality’ . . .” (quoting *Tcherepnin v. Knight*, 389 U.S. 332, 336 (1967))).

86. For discussion of relevant case law and no-action letters, see, e.g., Guseva, *Game Theory*, *supra* note 7.

87. *SEC v. Edwards*, 540 U.S. 389, 393 (2004) (“‘Congress’ purpose in enacting the securities laws was to regulate *investments*, in whatever form they are made and by whatever name they are called.”) (quoting *Reves v. Ernst & Young*, 494 U.S. 56, 61 (1990) (emphasis in original)).

88. See, e.g., Evgeny Lyandres, Berardino Palazzo & Daniel Rabetti, *Do Tokens Behave like Securities? An Anatomy of Initial Coin Offerings 3* (Apr. 2019) (unpublished manuscript) <https://www.idc.ac.il/en/schools/business/annual-conference/documents/2019-annual-conference/do-tokens-behave-like-securities-lyandres.pdf> (finding similarities between the behavior of digital assets issued in ICOs and equity securities but also cautioning that “this comparison does not imply that issuing public equity is a viable alternative to an ICO”).

89. For examples, see *infra* Sections C & D. See also Howell et al., *supra* note 81; Ofir & Sadeh, *supra* note 81.

90. See *supra* Section B.1.

91. *Id.* For specific examples, see Gladius Order, *supra* note 64; Blockvest Complaint, *supra* note 81; Blockstack PBC, Offering Circular 8–11 (July 11, 2019), https://www.sec.gov/Archives/edgar/data/1693656/000110465919039908/a18-15736_1253g2.htm [hereinafter Blockstack Circular]. See also *Introducing UNI*, UNISWAP (Sept. 16, 2020), <https://uniswap.org/blog/uni/> (discussing governance tokens distribution).

There are several cases where, post-launch and post-asset-delivery, the issuer-developer ceases functioning as the central and sole locus of governance for the project. For instance, consider first the blockchains which are decentralized, open-source, and permissionless. Any third-party developer, to wit, not merely the issuer-developer, can build upon these platforms, while transaction validation and decision-making are determined by broad consensus protocols.⁹² Changes in such blockchains are not within the sole control of the issuer-developer.

By way of example, the offering documents for the first ever Regulation A offering of digital-asset securities by Blockstack PBC and its subsidiary specifically anticipated such scenarios. The offering documents projected that there could be “a new security and new token which Blockstack has not issued, claims no responsibility over, and will not support with upgrades” if, without its approval, through upgrades and hard forks,⁹³ a different network was created.⁹⁴ The issuer-developer thus expected (and the market was on notice) that after capital-raising, platform development and launch, the issuer could lose its initial position as the locus of governance with respect to the platform and tokens.

Another commonplace expectation in crypto is that digital asset transactions would be immutable, and the issuer-developers would not be able to modify the underlying code.⁹⁵ To be sure, these representations and expectations can be false in some cases. Immutability of DLT is a possibility that “is definitely not yet firmly established.”⁹⁶ Immutability depends, *inter alia*, on validation and consensus protocols, while smart contracts can be upgradable by a developer.⁹⁷ The rationale behind the modifications of a

92. For a discussion of governance systems, see, e.g., Angela Walch, *The Path of the Blockchain Lexicon (and the Law)*, 36 REV. BANKING & FIN. L. 713, 735–45 (2017) [hereinafter Walch, *Blockchain Lexicon*]; Patrick Murck, *Who Controls the Blockchain?*, HARV. BUS. REV. (Apr. 19, 2017), <https://hbr.org/2017/04/who-controls-the-blockchain>; Reyes, *(Un)Corporate Crypto-Governance*, *supra* note 19, at 1886–88, 1913–14.

93. “Hard fork” is essentially a split of a blockchain. Murck, *supra* note 92.

94. Blockstack Circular, *supra* note 91, at 11.

95. See, e.g., Cohny et al., *supra* note 3, at 615–17; 630–38 (discussing the claims and realities of code modifiability); Azgad-Tromer, *supra* note 9, at 98 (“Unlike traditional contracts that are subject to enforcement by courts, smart contracts are technically immutable: automatically enforced according to their original code with no allowance for ex post discretion.”); Kyung Taeck Minn, *Towards Enhanced Oversight of “Self-Governing” Decentralized Autonomous Organizations: Case Study of the Dao and its Shortcomings*, 9 NYU J. INTELL. PROP. & ENT. L. 139, 152 (“The purpose of the Ethereum blockchain and The DAO, after all, was to provide an immutable transactional record and host smart contracts that would solve the principal-agent problem.”).

96. Walch, *Blockchain Lexicon*, *supra* note 92, at 743. For a related discussion, see *id.* at 735–45.

97. See, e.g., Cohny et al., *supra* note 3, at 630–38 (discussing modifiability of smart contracts). For an overview of Ethereum “hard fork,” see, e.g., Murck, *supra* note 92; Rodrigues, *supra* note 9, at 705–706.

smart contract may be economically efficient and legitimate, including discovering a bug and vulnerability in the code⁹⁸ or new use cases for a particular app. In a modified smart contract, the existing variables, functions, and data should remain, but some new data or functions may be added. Limitations on updating may, of course, be encoded in a smart contract.

The next example is representations (or misrepresentations)⁹⁹ in whitepapers stating that the prices and trading of digital assets would be determined by formulas encoded in smart contracts, auctions, independent price-setting oracle feeds, or the forces of supply and demand,¹⁰⁰ i.e., not by the issuer-developer. Even when developers retain a certain number of tokens,¹⁰¹ which may affect the supply and/or give the developer more voting power, these transgressions are often kept in check through lockup agreements and vesting conditions imposed on the developer's team in the offering materials.¹⁰²

In *toto*, the ultimate expectations are that transactions in digital assets be immutable and transparent, and the code "independent" of the developers because users do not want to trust issuer-developers in a trustless system based on code.¹⁰³ As the promoter's governance role diminishes or becomes

98. See *infra* Section E(1) (discussing problems with The DAO).

99. Research and SEC enforcement actions demonstrate that contrary to issuer representations, issuers could influence the functionality, supply, and value of their assets after the sales. See, e.g., Press Release, U.S. Dep't of Justice, Manhattan U.S. Attorney Announces Charges Against Leaders of "Onecoin," a Multibillion-Dollar Pyramid Scheme Involving the Sale of a Fraudulent Cryptocurrency (Mar. 8, 2019), <https://www.justice.gov/usao-sdny/pr/manhattan-us-attorney-announces-charges-against-leaders-onecoin-multibillion-dollar>; Complaint at 3–14, United States v. Konstantin Ignatov, No. 1:17-cr-00630-ER (S.D.N.Y. Mar. 6, 2019), <https://www.justice.gov/usao-sdny/press-release/file/1141986/download>; Complaint, SEC v. AriseBank, No. 3:18-cv-00186-M (N.D. Tex. Jan. 25, 2018), <https://www.sec.gov/litigation/complaints/2018/comp-pr2018-8.pdf>; SEC v. Blockvest, LLC, No. 18CV2287-GPB(BLM), 2018 U.S. Dist. LEXIS 200773, at *9 (S.D. Cal. Nov. 27, 2018); SEC v. Blockvest, LLC, No. 18CV2287-GPB(BLM), 2019 U.S. Dist. LEXIS 24446, at *12 (S.D. Cal. Feb. 14, 2019); Cohny et al., *supra* note 3, at 630–38, 640.

100. See, e.g., Gladius Order, *supra* note 64; Blockvest Complaint, *supra* note 81; Blockstack Circular, *supra* note 91; MAKERDAO, THE MAKER PROTOCOL: MAKERDAO'S MULTI-COLLATERAL DAI (MCD) SYSTEM, [https://makerdao.com/whitepaper/White%20Paper%20The%20Maker%20Protocol_%20MakerDAO's%20Multi-Collateral%20Dai%20\(MCD\)%20System-FINAL-%20021720.pdf](https://makerdao.com/whitepaper/White%20Paper%20The%20Maker%20Protocol_%20MakerDAO's%20Multi-Collateral%20Dai%20(MCD)%20System-FINAL-%20021720.pdf) [hereinafter MakerDAO Whitepaper]; Metronome, *Owner's Manual*, GITHUB (Aug. 15, 2018), https://github.com/autonomoussoftware/documentation/blob/master/owners_manual/owners_manual.md (discussing "daily auctions that provide an on-going token supply mintage"); Bridget Marsh & Josias Dewey, *The Loan Market, Blockchain, and Smart Contracts: The Potential for Transformative Change*, in BLOCKCHAIN & CRYPTOCURRENCY REG. 6–8 (Josias Dewey ed., 2019).

101. This is a usual practice. See, e.g., Metronome, *Owner's Manual*, *supra* note 100 (the founders retained 20% of the initial auction supply); Court Order, *supra* note 10, at *14–16.

102. See, e.g., *infra* Section C; Cohny et al., *supra* note 3, at 614, 627–28.

103. See, e.g., Cohny et al., *supra* note 3, at 612 ("[I]t is the immutable, transparent code that enables (and creates) a trustless but trusted market."); Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, <https://bitcoin.org/bitcoin.pdf>; Ofir & Sadeh, *supra* note 81, at 9;

nonexistent, the autonomous and decentralized Stage Two begins. Logically, the next question is: What happens to the original debt securities and their holders during Stage Two?

3. *Howey and Bonds*

As the issuer-developer's role in project governance tapers off, do the original bonds still exist and do securities laws apply? As discussed in the Introduction, in determining whether a digital asset is a security, the SEC and federal courts routinely apply the Supreme Court's infinitely malleable *Howey* test.¹⁰⁴ The never passé 80-year-old *Howey* consists of four prongs: (1) investment of money (2) in a common enterprise (3) with a reasonable expectation of profits (4) derived from the efforts of others.¹⁰⁵ Put simply, the test presumes that there is a firm, the locus of governing authority in which investors place their trust and invest money to generate future cash flows and return on investment. For securities law, *Howey* is old Weltanschauung. For nearly eight decades, *Howey* has been regarded as a blanket economic reality test that fills the interstices left in the statutory framework and between more common securities such as shares of stock, notes, and others.¹⁰⁶

For the purposes of this analysis and the two-stage process, the most important prongs of *Howey* are (1) a reasonable *expectation* of profits, which are (2) derived through managerial efforts of *others*.¹⁰⁷ The SEC and commentators writing on digital assets often focus on these prongs, particularly, the *efforts of others*.¹⁰⁸ Henderson and Raskin dubbed it “the Bahamas test”:¹⁰⁹ would management's decamping to the Bahamas undermine the underlying enterprise? Similarly, speeches by the SEC staff¹¹⁰

Rodrigues, *supra* note 9, at 682 (“Once the code is released into the world, its programmers can no longer unilaterally alter it—unless the widely-dispersed, anonymous blockchain community can be convinced to do so. Because of the decentralized, distributed nature of the blockchain ledger, changes in the code will be rejected unless the code itself contemplates subsequent modifications.”).

104. SEC v. W. J. Howey Co., 328 U.S. 293 (1946); *Reves v. Ernst & Young*, 494 U.S. 56, 61 (1990); SEC v. Edwards, 540 U.S. 389, 389–90 (2004).

105. *Howey*, 328 U.S. at 301.

106. *Id.* at 299; *Reves*, 494 U.S. at 61; *Edwards*, 540 U.S. at 389–90.

107. *Howey*, 328 U.S. at 301; *United Hous. Found., Inc. v. Forman*, 421 U.S. 837, 852 (1975).

108. The DAO Report, for instance, focused on the promoters' pre-offering efforts and their post-offering efforts. Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO, Exchange Act Release No. 81207, 14–15 (July 25, 2017) [hereinafter *The DAO Report*], <https://www.sec.gov/litigation/investreport/34-81207.pdf>.

109. M. Todd Henderson & Max Raskin, *A Regulatory Classification of Digital Assets: Toward an Operational Howey Test for Cryptocurrencies, ICOs, and Other Digital Assets*, 2 COLUM. BUS. L. REV. 443, 461 (2019).

110. Hinman Speech, *supra* note 28 (laying out thirteen additional factors, many of which are related to the efforts of promoters).

and the April 2019 Framework developed by the SEC Strategic Hub for Innovation and Financial Technology (“FinHub”) underscore the “efforts of others” as an important factor in finding a digital asset is a security.¹¹¹

The inquiry, however, should not stop there because *Howey* is a holistic test.¹¹² To the extent that it focuses on the *expectations* of investors, it is crucial to run the following inquiry: What should happen if and when an investor no longer *expected* that the firm’s management would generate the return on her original investment? In this case, as the efforts of other prongs collapsed, *Howey* would be rendered inapplicable. Therefore, in finding a security, one must look at the *timing* of the *expectations* of investors.¹¹³ Put another way, *when* might an issuer “decamp to the Bahamas” without undermining the expectations of the investors under an investment agreement?

Let us examine this idea through the example of debt securities. In a typical offering, bondholders (or debenture-holders) get either regular coupon payments or one single payment at maturity. In the latter case, the debt instruments are “zero-coupon” bonds.¹¹⁴ There are typically multiple covenants in a prospectus describing the issuer and the securities and an indenture stipulating the contractual obligations of the contracting parties. Often, there is also a trustee to guard the rights of bondholders.¹¹⁵

In crypto, by contrast, Initial Investors often receive the digital assets (tokens or coins) the developer was working on instead of either regular coupon payments or the implicit interest on a zero-coupon bond, as well as

111. THE SEC FRAMEWORK, *supra* note 3, at 3 (“[T]he main issue in analyzing a digital asset under the *Howey* test is whether a purchaser has a reasonable expectation of profits (or other financial returns) derived from the efforts of others.”).

112. *Howey*, 328 U.S. at 293, 299–300.

113. *See, e.g.*, THE SEC FRAMEWORK, *supra* note 3, at 8 (suggesting the need for this analysis but not specifying the exact timing).

114. BREALEY ET AL., *supra* note 16; Stewart M. Robertson, *Debenture Holders and the Indenture Trustee: Controlling Managerial Discretion in the Solvent Enterprise*, 11 HARV. J.L. & PUB. POL’Y 461, 463 (“The typical debenture holder can expect a fixed semi-annual payment of interest on his investment and the return of his principal. The rights of the debenture holder are ascertained at the time of his investment.”); Michael Hartzmark et al., *Fraud on the Market: Analysis of the Efficiency of the Corporate Bond Market*, 2011 COLUM. BUS. L. REV. 654, 668 (2011).

115. *See, e.g.*, Hartzmark et al., *supra* note 114, at 674 (listing examples of covenants); James Gadsden, *Introduction to the Annotated Trust Indenture Act*, 67 BUS. LAW. 977, 985–87, 981–82, 989 (2012) (discussing indentures and duties of trustees); James J. Park, *Bondholders and Securities Class Actions*, 99 MINN. L. REV. 585, 592–93 (2014) (observing that both the use of covenants and the trustees are not fully efficient); Yakov Amihud, Kenneth Garbade & Marcel Kahan, *A New Governance Structure for Corporate Bonds*, 51 STAN. L. REV. 447, 470 (1999) (suggesting a supertrustee to solve problems with trustees); Steven L. Schwarcz, *Rethinking Corporate Governance for a Bondholder Financed, Systemically Risky World*, 58 WM. & MARY L. REV. 1335, 1339 (2017).

the principal paid in a fiat currency.¹¹⁶ The terminal value of these digital assets and their yield to maturity, if measured in a fiat currency, would be highly uncertain at the time when a bondholder entered into this agreement.

What is the timing for the performance of this investment contract and what is the term to maturity? Maturity of the underlying bonds may have at least two meanings. One meaning of maturity is the delivery of fully functional tokens or coins to the Initial Investors. Indeed, this is what happens in conventional bond offerings: when a bond reaches maturity, the investor receives the terminal payment and the contractual relationship is at an end.

Alas, this conventional term to maturity is inapplicable in crypto because the “coupon” and principal are repaid in tokens. The contractual investment relationship does not necessarily terminate (or expire) on token delivery if the issuer has yet to complete certain obligations under the indenture. In that case, even when a platform is open source and decentralized and assets are fully functional, the Initial Investors may reasonably *expect* the issuer-developer to build on the platform, advertise the assets, improve the token ecosystem, and contribute to digital asset appreciation.¹¹⁷ Depending on the *timing* of this *expectation* and the relevant efforts of the issuer-developer, the *Howey* test may apply post-delivery and post-launch.

Maturity of debt securities thus may be determined in relation to investment contract performance. The timing of the promised contractual performance would mark the point in time when a reasonable investor (which is an objective test)¹¹⁸ would no longer *expect* the firm-developer to provide services to promote the digital asset and/or its ecosystem. There is no reason why this contractual expectation would not survive the delivery of functional tokens and/or launch of a platform.

By contrast, the rest of the market is not party to this bilateral relationship between the Initial Investors and the issuer-developer. The latecomers generally receive access to already fully functional tokens (or coins). These Subsequent Token-Holders are supposed to use the ultimate tokens (or coins) for their intended purposes, including exchange of goods and services, building applications, and others.¹¹⁹

The original indenture has no bearing on the expectations and purposes of the Subsequent Token-Holders. To them, the original issuer-developer

116. See *infra* Sections C & D. On the variety of ICOs, see, e.g., Zetzsche et al, *supra* note 14, at 276-77.

117. For related analysis and arguments, see, e.g., Court Order, *supra* note 10, at *15, *52; SEC v. Kik Interactive, No. 19 Civ. 5244 (AKH), 2020 WL 5819770, at *3, *5, *7 (S.D.N.Y. 2020).

118. See *infra* note 192.

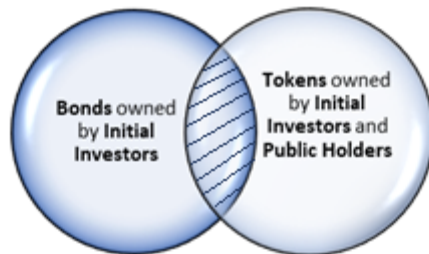
119. Chamber’s Brief, *supra* note 6, at 4.

owes no additional contractual obligations under the investment agreements, nor should they reasonably expect any extra efforts from it to support the platform. Unless an Initial Investor sold their bonds or assigned the interest under the bonds to the Subsequent Token-Holders, the latter's view on what the issuer-developer is obligated to do under the indenture and the corresponding timing of performance would be entirely irrelevant.

If the Initial Investor continued to own the delivered tokens post-launch, they and the late-coming Subsequent Token-Holders would use the tokens for similar purposes and value the same asset and platform qualities, such as token utility, third-party developer activity, network functionalities, liquidity, user-base externalities, and transaction activity, among others.¹²⁰ All the while, however, the Initial Investor would also expect profit from and have claims under the indenture against the issuer-developer.

As a result, the two cohorts of market participants overlap in the post-launch public market for delivered tokens, and the two asset classes (a bond and a token) exist concurrently until the bonds' maturity date. To reiterate, for the Subsequent Token-Holders, it is always the post-launch fully functional, autonomous, decentralized, and, depending on circumstances, permissionless and open-source Stage Two that does not trigger securities law. The debt securities of the Initial Investors, however, still do give rise to the application of securities regulation.¹²¹

Stage 1 Stage 2



120. See, e.g., Howell et al., *supra* note 81, at 3–4, 30 (finding that survival and employment of ICO issuers is related to asset utility and liquidity); Lin William Cong, Ye Li & Neng Wang, *Tokenomics: Dynamic Adoption and Valuation* 8–12 (Becker Friedman Inst., Working Paper No. 2018-49, 2018), at 8–12, https://bfj.uchicago.edu/wp-content/uploads/WP_2018-49.pdf; see also Expert Rebuttal Report of Stephen B. McKeon, Ph.D., SEC v. Telegram Group Inc., No. 1:19-cv-09439-PKC (S.D.N.Y. Jan. 10, 2020), at 17 [hereinafter McKeon Report].

121. This conclusion comports with the *Howey* analysis. See THE SEC FRAMEWORK, *supra* note 3, at 5–6. This proposed conceptual understanding differs from the SAFT Framework, which does not fully acknowledge an overlap in the stages one and two and the perspectives of different types of asset purchasers.

C. EXAMINING THE *TELEGRAM* CASE1. *Facts and History*

This Section dissects the two-stage process using the example of the offering of native tokens (“Grams”) by Telegram. This gigantic global offering of digital assets has been the subject of a 2019-20 battle in the Southern District of New York.¹²²

As background, Telegram intended to develop a new “TON Blockchain”¹²³ with Grams serving as its native tokens. In 2018, Telegram conducted an ICO and successfully raised approximately \$1.7 billion. The offering was—allegedly—conducted under the exemptions from registration under Regulation D¹²⁴ and Regulation S.¹²⁵ Investors entered into “Gram Purchase Agreements” (“GPAs”) that, as Telegram admitted, were investment contracts.¹²⁶ The contracts stipulated that Telegram would deliver “Grams,” a new cryptocurrency, by the end of October 2019. Telegram claimed that these ultimate Grams would be a cryptocurrency and a native token of its new TON Blockchain, while the first GPAs were securities.¹²⁷

The SEC took exception to this approach and argued that the to-be-developed and delivered cryptocurrency would also be a security. On October 11, 2019, the SEC filed an emergency application for a temporary restraining order (“TRO”) in the Southern District of New York preventing Telegram from delivering Grams to investors under the GPAs.¹²⁸ Telegram

122. Order to Show Cause, Temporary Restraining Order, and Order Granting Expedited Discovery and Other Relief, *SEC v. Telegram Inc.*, No. 1:19-cv-09439-PKC (S.D.N.Y. Oct. 11, 2019).

123. Brief of TON Community Foundation as Amici Curiae Supporting Defendants Telegram Group Inc. & Ton Issuer Inc., No. 1:19-cv-09439-PKC (S.D.N.Y. Feb. 14, 2020), at 8 [hereinafter TON Foundation Brief] (“[T]he TON Blockchain is just a back-end distributed computing device that executes numerous programs performing arbitrary computations . . . Grams as well as other Currencies are managed in TON as the so-called Currency Collections. But all Grams will be located in smart contracts so in a way TON is the smart contract platform more than a cryptocurrency one.”).

124. 17 C.F.R. § 230.506.

125. 17 C.F.R. §§ 230.901 *et seq.*

126. Defendant’s Memorandum of Law (1) In Support of Their Motion for Summary Judgment and (2) in Opposition to Plaintiff’s Application for a Preliminary Injunction, *SEC v. Telegram, Inc.*, No. 1:19-cv-09439-PKC (S.D.N.Y. Jan. 15, 2020), at 39 [hereinafter Jan. 15 Memorandum].

127. Defendants’ Answer, Defenses, and Affirmative Defenses to Plaintiff’s Complaint, No. 1:19-cv-09439-PKC (S.D.N.Y. Nov. 12, 2019), ¶¶ 3, 46, 50, 51, 52; Brief for Defendants-Appellants, *SEC v. Telegram Group, Inc.*, No. 20-1076 (2d Cir. Mar. 27, 2020), at 11 [hereinafter Appellants’ Brief] (describing Grams).

128. Order to Show Cause, Temporary Restraining Order, and Order Granting Expedited Discovery, and Other Relief, *SEC v. Telegram Inc.*, No. 1:19-cv-09439-PKC (S.D.N.Y. Oct. 11, 2019).

vigorously disputed that the Grams, as opposed to the GPAs, were securities.¹²⁹ At the end of March 2020, after hearing argument on the parties' motions, the District Court granted the SEC's motion for a preliminary injunction.¹³⁰

The court agreed with the SEC's view that the whole transaction, i.e., both the sale of the GPAs and the future distribution of Grams, was a single offering.¹³¹ The court stated that the Initial Investors in the GPAs were underwriters in the public offering of the Grams.¹³² The Grams were deemed financial instruments—securities¹³³—that would “come to rest” in the hands of the public, and their resales would represent “an integral part of the sale of securities without a required registration statement.”¹³⁴ The court stated that the “case present[ed] a ‘scheme’ to be evaluated under *Howey* that consists of the full set of contracts, expectations, and understandings centered on the sales and distribution of the Gram.”¹³⁵

2. *Distribution, Grams & “Scheme”*

The economic nature of transactions, including the parties' objective expectations, “must be examined as of the time that the transaction took place.”¹³⁶ Looking at the “scheme” to distribute the Grams at the time of the sale of the GPAs to the Initial Investors, the District Court emphasized that Telegram admittedly had not filed a registration statement for the offering of either “the Gram Purchase Agreements *or* Grams.”¹³⁷ Although the statement was written in the disjunctive, the court applied the *Howey* analysis mainly to the Initial Purchasers and the GPAs, not the future Gram-holders and Grams.¹³⁸ In short, the court addressed the transactions at issue *only* from the perspective of the Initial Investors under *Howey*.¹³⁹

129. Defendants' Response in Opposition to Plaintiff's Emergency Application for Preliminary Injunction at 1–2, SEC v. Telegram Inc., No. 1:19-cv-09439-PKC (S.D.N.Y. Oct. 16, 2019).

130. Court Order, *supra* note 10.

131. *Id.* at *27.

132. *Id.* at *62–64.

133. See also Plaintiff Securities and Exchange Commission's Memorandum of Law in Support of its Motion for Summary Judgment at 2, SEC v. Telegram Inc. & Ton Issuer Inc., No. 1:19-cv-09439-PKC (S.D.N.Y. Jan. 15, 2020) [hereinafter SEC Memorandum] (“Grams will remain investment contracts upon delivery.”).

134. Court Order, *supra* note 10, at *4, *61.

135. *Id.* at *60.

136. SEC v. Aqua-Sonic Products Corp., 524 F. Supp. 866, 876 (S.D.N.Y. 1981) (subsequent events may only to a limited degree “give rise to inferences that are relevant to the economic reality of the transactions at the time they occurred”).

137. Court Order, *supra* note 10, at *61 (emphasis added).

138. *Id.* at *26–27.

139. *Id.* (“The economic reality of Telegram's course of conduct is straightforward and rather easily understood. Telegram entered into agreements and understandings with the Initial Purchasers

This syncopated approach ignores some crucial economic realities of this case. A “distribution” is synonymous with a *public* offering of securities¹⁴⁰ and covers “the entire process by which in the course of a public offering the block of *securities* is dispersed and ultimately comes to rest in the hands of the investing public.”¹⁴¹ Persons who distribute the securities are underwriters. The statute defines an “underwriter” in connection with distribution of “any security.”¹⁴² So does case law, including the cases cited by the District Court.¹⁴³

This suggests the following conclusions. The underwriters (i.e., the private investors who have entered into the GPAs allegedly to distribute Grams to the public)¹⁴⁴ must ultimately distribute unregistered *securities* to public investors.¹⁴⁵ It is these public investors who are presumed unable to “fend for themselves”¹⁴⁶ and in need of the securities law disclosure and liability rules.¹⁴⁷ Such public investors would be the future, post-launch

who provided upfront capital in exchange for the future delivery of a discounted asset, Grams, which, upon receipt (and the expiration of the lockup periods for Round One Purchasers), would be resold in a public market with the expectation that the Initial Purchasers would earn a profit. A reasonable Initial Purchaser understands and expects that they will only profit if the reputation, skill, and involvement of Telegram and its founders remain behind the enterprise, including through the sale of Grams from the Initial Purchasers into the public market. The Gram Purchase Agreements and the future delivery and resale of Grams are viewed in their totality for the purpose of the *Howey* analysis”).

140. *Id.* at *23–24 (citing *Gilligan, Will & Co. v. SEC*, 267 F.2d 461, 466 (2d Cir. 1959); *Berkeley Inv. Grp. v. Colkitt*, 455 F.3d 195, 215 (3d Cir. 2006)).

141. *Id.* at *24 (citing *R. A. Holman v. SEC*, 366 F.2d 446, 449 (2d Cir. 1966)) (emphasis added).

142. 15 U.S.C. § 77b(a)(11).

143. *See, e.g., Gilligan*, 267 F.2d at 468 (in a case involving debentures, the court agreed that “the intention to retain the debentures only if Crowell-Collier continued to operate profitably was equivalent to a ‘purchased . . . with a view to . . . distribution’ within the statutory definition of underwriters in § 2(11). To hold otherwise would be to permit a dealer who speculatively purchases an unregistered *security* in the hope that the financially weak issuer had, as is stipulated here, ‘turned the corner,’ to unload on the unadvised public what he later determines to be an unsound investment without the disclosure sought by the securities laws, although it is in precisely such circumstances that disclosure is most necessary and desirable.”) (emphasis added); *Geiger v. SEC*, 363 F.3d 481, 487–88 (D.C. Cir. 2004) (concerning shares); *Wyo. St. Treasurer v. Moody’s Inv’rs Serv.* (In re *Lehman Bros. Mortg.-Backed Sec. Litig.*), 650 F.3d 167, 177 (2d Cir. 2011) (“[T]o qualify as an underwriter under the participation prongs of the statutory definition, a person must participate, directly or indirectly, in purchasing *securities* from an issuer with a view to distribution, in offering or selling *securities* for an issuer in connection with a distribution, or in the underwriting of such an offering.”) (emphasis added).

144. SEC Memorandum, *supra* note 133, at 28 (“Telegram’s offers and sales were but an intermediary step towards its ultimate, indisputable goal—the worldwide distribution of Grams . . .”).

145. Court Order, *supra* note 10, at *41, *66–67. Indeed, the court cited *Geiger*, 363 F.3d at 487–88, which applied to shares. *Id.* at *64.

146. *SEC v. Ralston Purina Co.*, 346 U.S. 119, 125 (1953) (“An offering to those who are shown to be able to fend for themselves is a transaction ‘not involving any public offering.’”).

147. *Ralston Purina Co.*, 346 U.S. at 125; *SEC v. Platforms Wireless Int’l. Corp.*, 617 F.3d 1072, 1085–86 (9th Cir. 2010) (“When a company fails entirely to register its securities and nonetheless

Gram-holders because the contractual language of the GPAs (which were unregistered investment contracts) restricted GPA resales, assignments or other disposition.¹⁴⁸ The Initial Investors effectively could resell only the Grams and only *after* the launch of the TON Blockchain.¹⁴⁹

As the SEC correctly pointed out in its motion, the transactional structure, timing, and “the economic inducements of the transaction [assist courts in determining] whether the *security* was intended to ‘come to rest’ with a private purchaser or, in reality, with public investors at large.”¹⁵⁰ Consequently, it is imperative to inquire into the nature of the financial assets that would be distributed to and come to rest in the hands of public investors. Furthermore, the economic realities and expectations of *all* parties involved, not just the Initial Investors and Telegram at the time when they entered into the investment agreements, must be examined.

3. *The Two-Stage Process*

This Section studies the facts and economic realities of the Telegram transaction through the lens of a hypothetical. Imagine that Telegram is Goldgram, a wealthy gold-mining company. It wants to mine more gold and mint beautiful coins. To finance building the mine, Goldgram seeks capital from wealthy accredited investors.¹⁵¹ These “Initial Investors” will be compensated with the newly minted gold coins,¹⁵² perhaps with a rare picture of the most respected President of the United States. Goldgram also promises the Initial Investors that large swaths of the public would love to have these coins and would like nothing better than to use these coins to purchase sundry services and goods on the market or to power their own applications and business ventures.¹⁵³

Goldgram states that the coins will be distributed and circulate on a decentralized open source platform on which all participants, including Goldgram, can build, and that Goldgram will not control.¹⁵⁴ Goldgram

proceeds to sell them generally to the public, however, the entire system of mandatory public disclosure is evaded to public detriment.”); *SEC v. Cavanagh*, 445 F.3d 105, 115 (2d Cir. 2006) (“Registration exemptions are construed strictly to promote full disclosure of information for the protection of the investing public.”).

148. Appellants’ Brief, *supra* note 127, at 15; Jan. 15 Memorandum, *supra* note 126, at 7–8, 15–16, 43–45.

149. Court Order, *supra* note 10, at *3; Jan. 15 Memorandum, *supra* note 126, at 15–16.

150. SEC Memorandum, *supra* note 133, at 30 (emphasis added).

151. Jan. 15 Memorandum, *supra* note 126, at 7, 11–12, 46.

152. *Id.* at 4 (“Grams will not entitle purchasers to any income, any dividends, or any interests in Telegram (or any other entity), nor do they resemble stock or any other form of equity.”).

153. *Id.* at 10–11, 15, 27.

154. *Id.* at 11, 17; Appellants’ Brief, *supra* note 127, at 11. In open-source blockchain protocols, developers are no longer running the show because updates and changes to the protocol are approved

already has a useful membership services platform that can help popularize the coins—“Messenger.”¹⁵⁵ It also initially promises to employ Messenger and to add a digital wallet in order to help future public users receive, use, and sell the coins more efficiently.¹⁵⁶

Once the Initial Investor receives their return on investment in the form of the coins, what could they do with them? The Initial Investor could exchange them for Bitcoin or U.S. dollars, hold them for speculative purposes, buy a fashionable asset with it, build a Dapp, access a private golf club, or do whatever else money can buy.¹⁵⁷ Naturally, the newly minted coins would be more valuable to them because Goldgram had already established Messenger, which could be used as a mechanism to promote the coins. The Initial Investor knows that a high level of public attention is associated with better returns in this market,¹⁵⁸ and that the value of money and assets similar to these gold coins depends on their use and the network effect.¹⁵⁹

They want Goldgram to continuously improve the quality of its distribution network,¹⁶⁰ particularly in case they are reluctant to sell or use their coins right away and would like to hold them for speculative or investment purposes.¹⁶¹ That is why our Initial Investor is glad that

by the community, and changes depend on full nodes operators. See Reyes, *(Un)Corporate Crypto-Governance*, *supra* note 19, at 1913–1914.

155. Jan. 15 Memorandum, *supra* note 126, at 9–10.

156. SEC Memorandum, *supra* note 133, at 6–8.

157. Jan. 15 Memorandum, *supra* note 126, at 26–27; TON Foundation Brief, *supra* note 123, at 23–24 (listing the services and tools developers have created for the TON Blockchain); Reyes, *(Un)Corporate Crypto-Governance*, *supra* note 19, at 1902 (“[W]hen cryptocurrency owners purchase cryptocurrency, some do so for the purpose of making an investment in the protocol for which they will receive a proportionate measure of profit or loss. But not all cryptocurrency holders purchase cryptocurrency for such speculative investment purposes.”).

158. Yukun Liu & Aleh Tsyvinski, *Risks and Returns of Cryptocurrency* 23–27 (Nat’l Bureau of Econ. Rsch., Working Paper No. 24877, 2018), <https://www.nber.org/papers/w24877.pdf>.

159. See, e.g., SEC v. Shavers, No. 4:13-CV-416, 2013 WL 4028182, at *2 (E.D. Tex. 2013); Cong et al., *supra* note 120, at 10–11; see also Craig Calcaterra, Wulf A. Kaal & Vadhindran Rao, *Stable Cryptocurrencies: First Order Principles*, 3 STAN. J. BLOCKCHAIN L. & POL’Y 62, 75 (2020) (“A cryptocurrency would have intrinsic worth if there are genuine economic transactions that are reliably being performed with its tokens . . .”).

160. Jan. 15 Memorandum, *supra* note 126, at 18–19 (discussing the role of the TON Foundation and Telegram’s services).

161. For a similar scenario, see SEC v. Belmont Reid & Co., Inc., 794 F.2d 1388, 1391 (9th Cir. 1986) (“The difficulty we have with this analysis is its ready applicability to any sale-of-goods contract in which the buyer pays in advance of delivery and the ability of the seller to perform is dependent, in part, on both his managerial skill and some good fortune . . . As we view it, the prepayment plan purchasers in this case had as their primary purpose to profit from the anticipated increase in the world price of gold . . . To the extent the purchasers relied on the managerial skill of CMC they did so as an ordinary buyer, having advanced the purchase price, relies on an ordinary seller. We therefore agree with the district court that ‘[p]rofits to the coin buyer depended upon the fluctuations of the gold market, not the managerial efforts of CMC . . .’) (citations omitted).

Goldgram’s shareholders and developers have promised to keep some coins for themselves, have signed a lockup agreement, and will have the right to sell the coins only several years later.¹⁶² This way, the Initial Investor is certain that Goldgram’s economic interests will be aligned with theirs. Having Goldgram as a fellow coin-holder will ensure Goldgram’s incentives to continue improving the platform, even though third parties can also do that in a decentralized open source system. The benefits of making the system more efficient will inure to everyone: the Initial Investors, Goldgram, and the public.

Since the coins are traded in public markets as a commodity, their prices will depend on the law of supply and demand, as well as, in certain cases, a predetermined formula.¹⁶³ The higher the demand, the higher the price of the commodity. A better demand increases the differential between the Initial Investor’s investment costs and the coins’ market price. This difference is their sole return on investment. Indeed, they will not get any other payments from Goldgram.¹⁶⁴ All they worry about is coin appreciation.

In contrast to the Initial Investor, the subsequent coin-purchasers are not party to the Initial Investor’s arrangement with Goldgram. Rather, the subsequent coin-purchasers are motivated by the simplicity and cost-efficiency of transacting with these fancy coins and using them primarily as a currency.¹⁶⁵ They also understand that the platform on which the coins trade is decentralized and open source,¹⁶⁶ which means that Goldgram does not have “superior rights” or exercise control over coin circulation, supply, demand, and valuation.¹⁶⁷

From the perspective of the subsequent coin-holders, what Goldgram originally promised to the Initial Purchasers is irrelevant. These arguments unequivocally demonstrate what the *investment contract* is in this scenario. It is only the first part involving capital raising. Who is the investor? Only the Initial Investor as a capital provider.

4. *Contract Interpretation and Bond Maturity*

The District Court in *Telegram* seems to have missed that the two classes of asset purchasers—the Initial Investors and the Subsequent Token-Holders—could coexist in the post-launch environment and that their

162. Court Order, *supra* note 10, at *12–17; Appellants’ Brief, *supra* note 127, at 14–18.

163. McKeon Report, *supra* note 120, at 8–9, 11 (discussing “the Reference Price” mechanism and other experts’ opinions).

164. Jan. 15 Memorandum, *supra* note 126, at 4, 13.

165. Appellants’ Brief, *supra* note 127, at 39–41, 45.

166. *Id.* at 16.

167. *Id.* at 11.

expectations concerning the assets and the issuer-developer could diverge. Instead, the court focused primarily on the Initial Investors alone.

For instance, it spent considerable time demonstrating that the Initial Investors had an investment intent and that they expected the issuer to ensure their return on investment.¹⁶⁸ It is hard to question that they did: the Initial Investors must have believed that the GPAs, which did not give the right to any explicit coupon payments or dividends,¹⁶⁹ would be more valuable than the cost of purchasing the right to receive the coins under the GPAs. Otherwise, they would not have entered into these investment agreements.

These sophisticated and wealthy investors had agreed to absorb the significant downside risk when they entered into the GPAs.¹⁷⁰ They purchased debt instruments with an uncertain repayment in the form of future coins that might or might not be worth *something* on delivery and hopefully would appreciate in value at some point after their delivery.¹⁷¹ Such broad reading of profit is supported by Supreme Court precedent.¹⁷²

It does not matter whether the Initial Investors planned on using the coins for consumptive purposes later on:¹⁷³ the more valuable the assets are in the hands of their holder, the more the holder can get for their money. The critical factual inquiry, instead, is whether the Initial Investors had a *reasonable* expectation that Telegram would continue to work on improving the value of the coin ecosystem.¹⁷⁴

This expectation is premised on the interpretation of the contractual language of the GPAs and Telegram's promises. Did Telegram have this contractual obligation or did it effectively disclaim in the offering materials

168. Court Order, *supra* note 10, at *26–27, *36–47.

169. Appellants' Brief, *supra* note 127, at 20, 50.

170. Court Order, *supra* note 10, at *46; Jan. 15 Memorandum, *supra* note 126, at 5, 15; McKeon Report, *supra* note 126, at 6–7.

171. The Initial Purchasers would receive their money back less Telegram's expenses if the issuer was unable to develop TON blockchain and Grams. Court Order, *supra* note 10, at *34. The court also cites subjective views of investors. *Id.* at *44–46.

172. SEC v. Edwards, 540 U.S. 389, 394 (2004) (“[W]hen we held that ‘profits’ must ‘come solely from the efforts of others,’ we were speaking of the profits that investors seek on their investment, not the profits of the scheme in which they invest. We used ‘profits’ in the sense of income or return, to include, for example, dividends, other periodic payments, or the increased value of the investment.”); United Hous. Found., Inc. v. Forman, 421 U.S. 837, 852–853 (1975).

173. See Court Order, *supra* note 10, at *36–37 (discussing investor intent); Jan. 15 Memorandum, *supra* note 126, at 26 (claiming consumptive purposes of Grams); McKeon Report, *supra* note 126, at 4, 6, 12–14 (discussing SEC expert reports); Appellants' Brief, *supra* note 127, at 39–41 (underscoring that Grams were designed to have consumptive utility).

174. See, e.g., Edwards, 540 U.S. at 395 (“We identified the ‘touchstone’ of an investment contract as “the presence of an investment in a common venture premised on a reasonable expectation of profits to be derived from the entrepreneurial or managerial efforts of others. . . .” (quoting *Forman*, 421 U.S. at 852)); THE SEC FRAMEWORK, *supra* note 3, at 2–10 (describing the factors that bear on the analysis of the “efforts of others” prong).

(and/or after the offering) any responsibility for post-launch and post-delivery services?¹⁷⁵ *Howey* demands an “objective inquiry into the character of the instrument or transaction offered based on what the purchasers were ‘led to expect.’”¹⁷⁶ In other words, the central question of fact is whether the contractual language of the investment agreements extended Telegram’s obligations beyond the delivery date.¹⁷⁷

What was the term of the GPAs?¹⁷⁸ Maturity of bonds is generally included in offering materials. The resultant expectation is that the issuer would generate interest payments (coupon) until the bondholder received the final payment consisting of a coupon and principal on the bond. This standard timeline, however, does not reflect the terms of the transaction at issue.¹⁷⁹ Instead, one can infer the following important assumption from the court decision itself: the District Court essentially presumed some *implied* maturity that depended on *when* the expectation of support and promotion by the issuer ceased to exist in the minds of the bond purchasers.

This assumption indeed has merit. If the “bonds” did not have an express maturity date tied to the coin delivery date, the investment term could be until well after the launch of the TON Blockchain.¹⁸⁰ The *expected* return would remain contingent and dependent on the continuous efforts of Telegram. Such a broad post-delivery reading of the contract performance term comports with the longstanding precedent on investors’ pre- and post-purchase dependence on entrepreneurs.¹⁸¹

In *Telegram*, at least two events and contractual terms could assist in determining the maturity of the GPAs. One is the completion of the initially

175. Court Order, *supra* note 10, at *5, *16, *56. Cf. Appellants’ Brief, *supra* note 127, at 16, 42 (discussing Telegram’s promises and actions, as well as pertinent case law on issuer promises); Jan. 15 Memorandum, *supra* note 126, at 14, 17, 20, 26, 28–29; McKeon Report, *supra* note 126, at 13–14 (discussing an SEC expert report and emphasizing that third-party developers would act for their own benefit, independently of Telegram).

176. *Warfield v. Alaniz*, 569 F.3d 1015, 1021 (9th Cir. 2009).

177. Court Order, *supra* note 10, at *5 (observing that “Telegram, as a matter of fact rather than legal obligation, will be the guiding force behind the TON Blockchain for the immediate post-launch period...”). Cf. Jan. 15 Memorandum, *supra* note 126, at 14 (citing offering documents stating to the contrary and Telegram’s statements to investors).

178. This timing also factors into the *Howey* test’s common enterprise analysis that the court applied under the horizontal and strict vertical commonality criteria. If the GPA investors were bondholders under the proposed framework, and the term to maturity extended beyond the delivery and launch date, the post-delivery commonality entails naturally. Court Order, *supra* note 10, at *31–36. See, e.g., *Revak v. SEC Realty Corp.*, 18 F.3d 81, 87–88 (2d Cir. 1994) (summarizing case law on horizontal and vertical commonality).

179. The District Court in *Telegram* correctly rejected it. Court Order, *supra* note 10, at *28–39.

180. Compare SEC Memorandum, *supra* note 133, at *8–9 with Appellants’ Brief, *supra* note 127, at 13, 16.

181. See *Living Benefits Asset Mgmt., L.L.C. v. Kestrel Aircraft Co.* (In re Living Benefits Asset Mgmt., L.L.C.), 916 F.3d 528, 537–39 (5th Cir. 2019) (summarizing 14 years of case law on the matter).

promised (but later disclaimed) integration of Telegram’s Messenger and a wallet (“TON Wallet”) to be developed by Telegram to facilitate Gram circulation.¹⁸² The other is the expiration of the lockup agreements with the firm’s shareholders and the developers.¹⁸³ Both were post-launch and post-delivery events.

A third and perhaps less cogent timing option is the transfer of the remaining Grams to third parties— including an independent foundation entrusted with limited central-bank-like and advisory tasks¹⁸⁴—as well as an incentive program targeting the users of Messenger and motivating them to use the coins and interact with the TON Blockchain.¹⁸⁵ Although either of these events could impact the supply and valuation of Grams, the offering materials purported to take this additional supply out of Telegram’s hands.¹⁸⁶ If Telegram had no decision-making power over future token distributions, these terms would not factor in Telegram’s obligations to the Initial Purchasers.

To summarize, the first two options (*scilicet*, issuer representations and the lockup agreements) are relevant benchmarks pegging bond maturity to contract performance. It is plausible that the investment contract created the expectations in the minds of the Initial Investors that Telegram would continue to contribute to the improvement of the TON Blockchain’s ecosystem and Gram valuation. The obligations of Telegram to the Initial Investors could have survived the token delivery and platform launch dates. Using the court’s reference to the “Bahamas test,” the Initial Investors would have been harmed if the issuer’s management decamped to the Bahamas¹⁸⁷ until one of these two events had come to pass.

Note, however, that this conclusion has no bearing on the Subsequent Purchasers’ expectations and uses of Grams. Telegram admitted that it had

182. SEC Memorandum, *supra* note 133 at *7; Court Order, *supra* note 10, at *53–58.

183. Court Order, *supra* note 10, at *13–14, *57.

184. Court Order, *supra* note 10, at *16–17, *39–40; *cf.* Appellants’ Brief, *supra* note 127, at 17–18, 52. Based on the evidence on record, these provisions in the offering materials are not necessarily applicable to the maturity analysis. For one, these extra coins would be priced according to a preset formula reflecting market supply and volatility. Court Order, *supra* note 10, at *10–11; McKeon Report, *supra* note 126, at 8; Appellants’ Brief, *supra* note 127, at 18 n.2. The issuer proposed to set up an independent non-profit foundation to enable this central-bank-like function. Court Order, *supra* note 10, at *16. About a third of the total supply of the coins would be assigned for this purpose. These coins would not be used for voting or staking purposes in validating transactions and, if the non-profit was never established, could be permanently locked up. Appellants’ Brief, *supra* note 127, at 17–18, 52. Consequently, this extra cache of coins would lay dormant except instances of market volatility harmful to all market participants, including Initial and Subsequent Token-Holders.

185. Court Order, *supra* note 10, at *53–54.

186. *Id.* For example, Messenger users would receive the coins primarily on “a first-come, first-served basis.” *Id.* at 53.

187. Henderson & Raskin, *supra* note 109.

sold securities to the Initial Investors to finance the TON Blockchain project.¹⁸⁸ *Howey* applied to the GPAs at the time of sale.¹⁸⁹ The term “sale” means that the parties incurred an obligation to sell securities for value.¹⁹⁰ This is when the parties’ *expectations* are determined.¹⁹¹ Consequently, to the extent that the maturity of the bonds was unclear, there was merely *a question of fact* concerning when the securities at issue would expire. This question is irrelevant to the inquiry what the Subsequent Token-Holders who were not party to the GPAs expected from Grams, the TON Blockchain, and its developer.

Nothing in the record or the text of the decision seems to suggest that the bonds and tokens, as well as the two classes of asset purchasers could not exist concurrently after the launch. To the extent that there were issues of fact concerning whether a *reasonable* investor¹⁹² would have a *reasonable* expectation¹⁹³ at the time of the investment agreements about the timing of the completion of Telegram’s essential managerial efforts, it did not necessarily extend the application of *Howey* to the Grams sold to Subsequent Purchasers.

Instead, the facts in *Telegram* explicate the two-stage process: the issuer-developer offers debt-like instruments giving their holders a right to receive some digital assets which represent the implicit coupon of uncertain value and the principal. The assets’ value *on* delivery and *after* the delivery depends on how successful the issuer is and will be in developing and promoting the underlying project. The rest of the market proceed to use the assets regardless of the contractually stipulated obligations of the Initial Investors and the issuer-developer.

D. *KIK INTERACTIVE*, DAPPS, AND NON-NATIVE TOKENS

1. *Dapps*

Let us examine the two-stage process through another illustration. In crypto, many products and services are a code that creates Dapps, related

188. Court Order, *supra* note 10, at *25–26; Appellants’ Brief, *supra* note 127, at 29.

189. Court Order, *supra* note 10, at *28–29.

190. 15 U.S.C. §77b(a)(3).

191. SEC v. Aqua-Sonic Products Corp., 524 F. Supp. 866, 876 (S.D.N.Y. 1981).

192. The reasonable investor standard is objective. Russian Hill Capital, LP v. Energy Corp. of Am., 2016 WL 1029541, at *5 (N.D. Cal. 2016) (citing Berson v. Applied Signal Tech., Inc., 527 F.3d 982, 985 (9th Cir. 2008)).

193. SEC v. Edwards, 540 U.S. 389, 395 (2004); Warfield v. Alaniz, 569 F.3d 1015, 1023 (9th Cir. 2009); Court Order, *supra* note 10, at *37–38 (“The inquiry is an objective one focusing on the promises and offers made to investors; it is not a search for the precise motivation of each individual participant.”) (citation omitted).

tokens, and platforms on which they circulate.¹⁹⁴ To expound the nature of Dapps, let us think about a typical web application. In a regular web application, there are two parties: a front-end client and a back-end server, which exchange messages on http. Dapps are similar, except that a blockchain performs the functions of a back-end server; i.e., there is not a centralized hosting service. While we, the end-users, may not even notice any changes, on the efficiency and security side, the blockchain is arguably more secure than centralized servers mainly because it is hard to take down a whole network and all its nodes or to change personal and transaction information when it is distributed, meaning that it is not stored in one single place or server.¹⁹⁵

When an entrepreneur needs capital to develop a Dapp, their project fits within the two-stage framework, and once a platform and tokens are fully developed, the developer may be expected to surrender their governance rights and step aside. Take the February 2019 cease-and-desist order concerning Gladius Network LLC.¹⁹⁶ Gladius was developing a network, a marketplace of sorts, whose participants “could rent spare bandwidth and storage space on their computers and servers to others for use in defense against certain types of cyberattacks and to enhance their content delivery speed.”¹⁹⁷ The idea that, instead of using Dropbox’s or Google Drive’s network, participants would share their disk space is not new and reminds of other projects for decentralized storages, such as Ethereum’s Swarm.¹⁹⁸ Gladius, similarly, proposed renting extra bandwidth and storage space to others.

Gladius issued tokens to be used as payment for these services. The tokens could be purchased either from Gladius itself or on secondary markets. As is often the case with ICOs, Gladius first sought funds to develop the tokens and the network before they could become fully functional and independent.¹⁹⁹ The ultimate system at Stage Two was designed as autonomous and decentralized:

The network was designed so that once it was operational, content providers would be able to organize and manage their own pools of nodes [i.e., groups organizing and negotiating the transactional

194. See, e.g., Reyes, *Rockefeller*, *supra* note 5, at 383, 387, 411 (discussing definitions and the application of business trusts to DLT).

195. In addition, backing up data is necessary in a centralized system, while blockchain is *ab initio* built on redundancies, the data will “survive” somewhere, on multiple nodes within the blockchain.

196. The following discussion is based on Guseva, *Game Theory*, *supra* note 7.

197. Gladius Order, *supra* note 64, at 1.

198. SWARM, <https://swarm.ethereum.org/> (last visited Nov. 22, 2020).

199. Gladius Order, *supra* note 64, at 3 (“[T]he funds raised would go towards “completing” the development of the network . . .” and marketing).

details, such as bandwidth, etc., on the network], and Gladius itself would not have to participate in negotiations or transactions between content providers, pool managers, or nodes.²⁰⁰

From a purely transactional perspective, Gladius sold an instrument providing access to a marketplace where commodities would be exchanged for commodities or services in cashless transactions. The developer offered owners of spare storage space and bandwidth an opportunity to rent their spare capacity to others. By way of analogy, this was just like Airbnb participants offering their apartments for rent to others. As Friedrich Engels observed in his *Origin of the Family, Private Property and the State*, private property in products leads to exchanges transforming *all* products into commodities.²⁰¹ This particular Dapp was an example of this economic transformation.

Gladius' offering documents represented that the proceeds from the offering would cover mostly R&D and promotional expenses during Stage One.²⁰² The offering materials also included a contractual provision whereby "purchasers . . . warrant[ed] that ownership of . . . [tokens] granted access to the Gladius Network, but conferred no equity or other rights (including ownership rights) as to Gladius."²⁰³ The tokens served as a form of return on investments, and participants could help Gladius promote the network and thus earn more tokens to use on the network.²⁰⁴

The transactions in *Gladius* can be simplified as the whitepaper-indentures offering bonds with an uncertain stream of income. These were highly risky zero-coupon bonds. The return in the form of new tokens depended on the success of the efforts of the developers and, to a lesser extent, on the promotion activity of the token-holders. In later project stages, the developers would take a back seat and let token circulation and use determine valuation.

Gladius promised that in Stage Two, once it had created and marketed their products, which essentially included the tokens and the underlying platforms, it would not have any governance role. Within the parameters of the code-based governance, platform participants would determine the details and terms of their peer-to-peer transactions. These token-holders would not be security holders.

200. *Id.* at 2.

201. FRIEDRICH ENGELS, *ORIGIN OF THE FAMILY, PRIVATE PROPERTY AND THE STATE* 87 (1884). *Id.* at 62 ("The rise of private property in herds and articles of luxury led to exchange between individuals, to the transformation of products into commodities . . .").

202. Gladius Order, *supra* note 64, at 4.

203. *Id.*

204. *Id.* at 4 ("Gladius promoted a bounty program . . .").

2. *The Case of Kik Interactive: Blurring the Boundaries of the Two-Stage Token Distribution*

It is vital for digital asset entrepreneurs and investors to understand *when* Stage One segues into Stage Two. This determination establishes which parties are security holders and, consequently, may bring claims against the issuer under securities law. By the same token, factfinders need this information to establish who the security holders (i.e., bondholders) are and *when* their expectations, as well as the related obligations and liability of the issuer, cease to exist.

An important elucidative example of the two-stage process is the September 2020 *Kik Interactive* decision.²⁰⁵ This first, and for this reason momentous, precedent examines a similar two-stage structure and underscores the need for a doctrinal analysis of the contractual expectations of investors and issuers. The facts were similar to the previously discussed cases: Kik planned to build a cryptocurrency on Ethereum, i.e., the firm built non-native digital assets and applications on the Ethereum blockchain. The issuer projected that the assets, called “Kin,” would offer interoperability and be used, *inter alia*, to buy and sell digital products across various applications.²⁰⁶

The fact patterns in the two Southern District of New York cases—*Telegram* and *Kik*—share some similarities but also differ in several respects. Kins were first sold via a private sale that was structured in a way similar to the bond-like instruments sold in *Telegram*.²⁰⁷ Then, Kik almost immediately proceeded with a public distribution of its assets to the putative users of Kin. This public sale took place one day after the private sale and before the applications and ecosystem for Kin were sufficiently developed.²⁰⁸ In contrast to Kik, Telegram planned to wait until its blockchain was ready for launch and token distribution. In this sense, *Telegram* bears a clear imprint of the two-stage process.

The timing inconsistencies, however, do not undermine the application of the two-stage template to *Kik*. The facts in *Kik* merely suggests that both the private placements of Kik’s quasi-bonds and the public distribution of Kins took place during Stage One, i.e., during the asset development stage. In fact, both transactions were one. Judge Hellerstein of the Southern District of New York quite easily connected and integrated the sales as “part of a

205. SEC v. Kik Interactive, No. 19 Civ. 5244 (AKH), 2020 WL 5819770 (S.D.N.Y. 2020).

206. *Id.* at *1–2.

207. *Id.* at *2.

208. At the time of the offering and distribution of Kin, “no goods or services were available for sale to holders of Kin.” *Id.* at *3. “[N]one of this ‘consumptive use’ was available at the time of the distribution. It would materialize only if the enterprise advertised by Kik turned out to be successful.”). *Id.* at * 7.

single plan of financing . . . made for the same general purpose. Proceeds from both sales went toward funding Kik’s operations and building the ecosystem for Kin.”²⁰⁹

The District Court examined the integration doctrine to support its conclusion that the private placement exemption was inapplicable.²¹⁰ The analysis, however, should not stop there because integration is conceptually relevant to the contractual obligations of Kik to the purchasers of Kin and to the *expectations* of the Kin purchasers. Collapsing the private placement into the public offering effectively implies that the contractual obligations of Kik from the private placement memoranda bear on the issuer’s *obligations* and the respective *expectations* of the public purchasers of Kin. Both categories of purchasers expected Kik to carry on as the locus of project development for the Kin ecosystem that was crucial to the value of Kins. This understanding of integration from the position of investor *expectations* comports with the language of *Howey* that states that investors should expect profits from the actions of a third party.²¹¹ Both parties, the private and the public purchasers, were the Initial Investors participating in Stage One.

Stage Two in *Kik* would mean that Kik’s obligations to all purchasers, including private and public sales, would no longer have valid contractual expectations that Kins, a cryptocurrency, would be supported by Kik and derive value from Kik’s efforts. The quasi-bonds issued by Kik would thus expire.

E. THE SPECIAL CASE OF EQUITY

So far, our discussion has focused on the financial instruments that are not equity. Some digital assets, however, do have equity-like characteristics. The two-stage process that schematizes bond offerings is not fully applicable to equity. Therefore, the objective of this Section is not to provide an ultimate framework for crypto-equity but to raise questions about the transition of equity *securities* to partnership-like interests depending on the level of project decentralization.

I have already briefly discussed “governance tokens” in the Token Taxonomy Section.²¹² This Section sketches the contours of a pertinent example of equity in DAOs. By definition, a code-based decentralized “organization” seems to be the first candidate to trigger either securities law

209. *Id.* at *8.

210. *Id.*

211. *SEC v. W. J. Howey Co.*, 328 U.S. 293, 299–300 (1946) (observing that investors are “led to expect profits” from a promoter or a third party and that “[a] common enterprise managed by respondents or third parties with adequate personnel and equipment is therefore essential if the investors are to achieve their paramount aim of a return on their investments.”).

212. *See supra* Section B.

or corporate law analysis.²¹³ DAOs are *quasi-organizations* governed by smart contracts, self-enforcing protocols through majority consensus, i.e., confirmations of transactions and related decisions from parties on a network.²¹⁴

The two-stage process and the nature of the securities involved here are different from those in ICOs like the *Telegram* case. First, DAO-token-holders are similar to equity-holders. These “equity-holders” vote on all projects within the parameters set forth by the underlying code. In this sense, DAOs differ from more traditional business organizations because no intermediaries such as executives or boards of directors are required. This is an example of direct equity-holder democracy where DAOs embody the ultimate corporate contract: DAOs automatize the main question facing entrepreneurs (and investors), which is making believable promises accompanied by their automatic enforcement.²¹⁵ Equity interests in DAOs may also be substantively analogous to those in partnerships.²¹⁶

Second, DAOs’ capital raising and origination often follow the templates of traditional business organizations: there are the initial promoters who are supposed to cede governance authority to equity-holders as the project matures.²¹⁷ Once a DAO is deployed, its transactions should be transparent (and stored on blockchain), and the initial developer must not be able to censor the system.²¹⁸ In some cases, however, the original developer can in the interim retain certain support functions before the project becomes fully decentralized.²¹⁹

The developer of the underlying source code may be an entity registered with or incorporated in one of the U.S. states or in a foreign jurisdiction, while the ultimate product of its efforts is, at least in theory, independent and decentralized. Put differently, the developer may be a firm with a locus of corporate authority, whereas the DAO does not need one. From a business

213. The concept of decentralization is not uniform. For example, there are “decentralized organizations,” in which humans interact via code-based protocols on blockchain, and autonomous code-based organizations. See Vitalik Buterin, *supra* note 51; see also Lynn M. LoPucki, *Algorithmic Entities*, 95 WASH. U. L. REV. 887, 889–90, 898–901 (2018) (discussing entities based on algorithms and not requiring conventional human intervention).

214. For definitions, benefits, and descriptions, see Reyes, *Rockefeller*, *supra* note 5, at n.22; Adam J. Kolber, *Not-So-Smart Blockchain Contracts and Artificial Responsibility*, 21 STAN. TECH. L. REV. 198, 210–11 (2018); Rodrigues, *supra* note 9, at 680, 699–702.

215. Frank H. Easterbrook & Daniel R. Fischel, *The Corporate Contract*, 89 COLUM. L. REV. 1416, 1420–21 (1989); FRANK H. EASTERBROOK & DANIEL R. FISCHEL, *THE ECONOMIC STRUCTURE OF CORPORATE LAW*, 36 (1991).

216. Partnership is “[a] voluntary association of two or more persons who jointly own and carry on a business for profit.” *Partnership*, BLACK’S LAW DICTIONARY (11th ed. 2019).

217. See *infra* Section E.1–2.

218. See, e.g., *Ethereum Whitepaper*, *supra* note 49.

219. See *infra* Section E.2.

organizations law’s perspective, a DAO may be unregistered or registered as a corporation, an LLC, or any other form of business organization.²²⁰ It may have features of business trusts, cooperatives, partnerships, and member-managed LLCs.²²¹

While in the above-discussed offerings of bonds both the issuer and the original investors do not dominate future cryptoassets, their circulation, pricing, and platforms, equity-holders in DAOs remain in charge as the developer’s role diminishes. Depending on the control investors have over the business, an argument can be made that no equity *securities* are involved in the fully decentralized phase.²²² Since the purpose of this Section is merely to raise questions for future research, let me very briefly set forth two scenarios illustrating how DAOs can function and why their equity may not be securities.

1. *The DAO*

This is how it can operate. First, a firm-developer solicits funds in some cryptocurrency or fiat currency. Second, the currency is transferred to “systems of smart contracts,” which represent a DAO with its own set of code-based governance rules.²²³ Third, the DAO may, for instance, invest the capital in income-generating assets upon approval of the investments by token-holders.²²⁴ The nature of the assets is irrelevant; they can be digital or non-digital, including real estate, diamonds, commodities, and others. Fourth, the token-holders receive return from the project.

The most famous and infamous case of a DAO was “The DAO,” a code developed by a German startup.²²⁵ The founders raised capital through the

220. A related project for DAOs is “LAO.” LAO OPERATING AGREEMENT, <https://lib.openlaw.io/web/default/template/LAO%20Summoner%20Form%20F0%9F%91%BE> (last visited Nov. 22, 2020); The LAO, *The LAO: A For-Profit, Limited Liability Autonomous Organization*, MEDIUM (Sept. 3, 2019), <https://medium.com/openlawofficial/the-lao-a-for-profit-limited-liability-autonomous-organization-9eae89c9669c>; see also Reyes, (*Un*)Corporate Crypto-Governance, *supra* note 19, at 1882.

221. Reyes, (*Un*)Corporate Crypto-Governance, *supra* note 19, at 1882.

222. This determination depends, *inter alia*, on tests like the *Williamson* test. *Williamson v. Tucker*, 645 F.2d 404, 423–24 (5th Cir. 1981). See also *Gordon v. Terry*, 684 F.2d 736, 741 (11th Cir. 1982) (“An investor who has the ability to control the profitability of his investment, either by his own efforts or by majority vote in group ventures, is not dependent upon the managerial skills of others.”).

223. Reyes, *Rockefeller*, *supra* note 5, at 387–88, 416–17.

224. See, e.g., The DAO Report, *supra* note 108. Some promoters (and scammers) also advertised that investments would be determined by experts. Press Release, Litigation Release No. 24081: SEC v. REcoin Group Foundation (Mar. 26, 2018), <https://www.sec.gov/litigation/litreleases/2018/lr24081.htm>.

225. Werbach & Cornell, *supra* note 51, at 350–52; Rodrigues, *supra* note 9, at 680–82; The DAO Report, *supra* note 108, at 6.

sale of The DAO tokens, to be used for investments in other projects. Profits, referred to as “rewards,” would be shared with token-holders.²²⁶

The SEC launched an investigation into The DAO and issued a Section 21(a) report in July 2017. It was the first SEC statement emphasizing that “the U.S. federal securities law may apply to various activities, including [DLT] . . . without regard to the form of the organization or technology used to effectuate a particular offer or sale.”²²⁷ The threshold inquiry in The DAO was the application of the “investment contract” definition under *Howey*.²²⁸

The SEC showed that The DAO was only partially decentralized because, although its token-holders could vote on how to spend the contributed capital without involvement of third-party managers or boards of directors,²²⁹ the developer’s pre-offering and post-offering efforts were substantial. The original developers envisioned that there would be a group of sophisticated persons, “curators,” whitelisting investment proposals for submission to token-holders for approval.²³⁰ They also selected the original curators.

Consequently, once The DAO was deployed, pseudonymous and dispersed across many jurisdictions, equity-holders were not well-positioned to effectively oppose either the co-founders or the curators. They, at least according to the SEC, depended on the governance decisions and policies emanating from one single node of authority—the promoter-firm and/or its selected agents.²³¹ This locus of corporate authority, among other *Howey* factors, allowed the SEC to find a security.

These *Howey* distinctions, however, are immaterial in the long term: a DAO may be completely decentralized if the technology allows. For instance, a code could select “curators” based on preset objective criteria, equity-holders holding a certain amount of tokens could propose investment projects, or third-party community members could be allowed to put forward investment projects.²³² Subsequent investment decisions could be reached by member consensus, and all profits distributed according to the terms embedded in a smart contract without much human intervention. A relevant example would be TheLAO, a venture fund launched in April 2020.²³³ Any

226. Werbach & Cornell, *supra* note 51, at 350–51; The DAO Report, *supra* note 108, at 5–6, 16.

227. The DAO Report, *supra* note 108, at 10.

228. SEC v. W. J. Howey Co., 328 U.S. 293 (1946).

229. The DAO Report, *supra* note 108, at 7.

230. *Id.* at 14.

231. *Id.* at 14–15. This conclusion, however, is not uncontroversial. See, e.g., Rodrigues, *supra* note 9, at 681, 700–702; Randolph A. Robinson II, *The New Digital Wild West: Regulating the Explosion of Initial Coin Offerings*, 85 TENN. L. REV. 897, 939–40 (2018).

232. See *infra* Section E(3).

233. THELAO, <https://www.thelao.io/> (last visited Nov. 22, 2020).

Ethereum-based project could submit a proposal that a member of TheLAO could thereafter put up to a vote of the members.²³⁴

2. *MakerDAO*

Another case in point is MakerDAO, an evolving decentralized governance system and an open-source Ethereum project that runs one of the largest Dapps on the Ethereum blockchain—the Maker Protocol.²³⁵ The two-stage process in this case is different, and no bond-like financial instruments are involved.

The purpose of the Maker Protocol is to enable users to create and acquire the Dai stablecoin that reduces price volatility that plagues Bitcoin.²³⁶ MakerDAO achieves this goal by over-collateralizing Dai by other cryptoassets, including Ether and, more recently, USDC, which is a centralized stablecoin.²³⁷ Users can either generate Dai by depositing collateral in a “vault” or purchase Dai on exchanges, such as Coinbase. MakerDAO operates as a decentralized and permissionless credit system. A user can also deposit (“lock”) their Dai in the Maker Protocol and earn interest on this savings account (“Dai Savings Rate”).²³⁸

The Maker Foundation, a non-profit organization, has built and currently runs the Maker Protocol.²³⁹ The Foundation interacts with the MakerDAO community that helps to govern the project and has announced its plan to self-liquidate to transfer the reins to a decentralized governance system. When this happens, the governance of the Maker Protocol will be fully in the hands of the holders of MKR—the governance tokens.²⁴⁰

234. TheLAO, *Building a Permissionless Silicon Valley: The LAO Launches on April 28*, MEDIUM (Apr. 7, 2020) <https://medium.com/@thelaoofficial/building-a-permissionless-silicon-valley-the-lao-launches-on-april-28-25f7837e92c5>.

235. MakerDAO Whitepaper, *supra* note 100.

236. On the nature, risks, and structure of stablecoins, see, e.g., Marco Dell’Erba, *Stablecoins in Cryptoeconomics: From Initial Coin Offerings to Central Bank Digital Currencies*, 22 N.Y.U. J. LEGIS. & PUB. POL’Y 1, 11–23 (2019); Calcaterra et al., *supra* note 159, at 63 (“A currency which maintains a stable store of value is more efficient for an economy than one which does not”). See also David Yermack, *Is Bitcoin a Real Currency? An Economic Appraisal 2*, 11–12 (Nat’l Bureau of Econ. Rsch., Working Paper No. 19747, 2013), <https://www.nber.org/papers/w19747.pdf> (discussing Bitcoin volatility).

237. William Foxley, *MakerDAO Adds USDC as DeFi Collateral Following ‘Black Thursday’ Chaos*, YAHOO! FINANCE (Mar. 17, 2020), <https://finance.yahoo.com/news/makerdao-adds-usdc-defi-collateral-161036456.html>.

238. MakerDAO, Whitepaper, *supra* note 235.

239. *Id.* In 2019, the Foundation transferred intellectual property, including copyrights and trademarks, to a Danish trust; *Maker Foundation Transfers Trademarks and IP to Independent Foundation*, YAHOO! FINANCE (Dec. 31, 2019), <https://finance.yahoo.com/news/maker-foundation-transfers-trademarks-ip-185812915.html>.

240. MakerDAO Whitepaper, *supra* note 100.

Today, MKR-holders vote on the types of assets that can be used as collateral for the Dai Stablecoin, the savings rate, “oracle feeds” that provide information on market prices for the assets used as collateral for the Dai, “emergency oracles” that prevent attacks against the governance system, upgrades to the system, and risk parameters, among other rights.²⁴¹ A fully decentralized MKR can be analogized either with voting partnership interests or LLC members’ equity.²⁴²

One difference between a conventional business organization and MakerDAO’s governance is that the proposals are put to a vote not by a centralized authority such as a board of directors but by the crypto-community as well as equity-holders (i.e., MKR-holders).²⁴³ To summarize, the soon-to-be-liquidated Foundation is a quasi-executive body, MKR-holders are equity-holders, and Dai-holders are either debtors of the Maker Protocol or users with savings accounts.

The two-stage framework for MakerDAO may be conceptualized as follows. First, the Foundation is a single “firm,” a nexus of contracts. The firm seeks external financing to get its project off the ground, coordinates resources, and provides ongoing governance. Second, the “firm” as such dissolves, and the project is fully in the hands of a decentralized self-governing system.

It is important to emphasize that decentralization merely shows that the original developer is no longer in charge of the project. It does not mean that the DAO is a unique nostrum for all the ills of the traditional business organizations. For instance, like any other organization, whether it is a partnership, LLC or corporation, MakerDAO may and does have large equity-holders that possess more voting power than smaller equity-holders.²⁴⁴

241. *Id.*; see also Vanessa Villanueva Collao & Verity Winship, *The New ICO Intermediaries*, 5 ITALIAN L.J. 731, 749 (2019) (“An oracle is a third party (individuals or programs) capable of introducing external data into the smart contract.”).

242. As of the date of this writing, however, the MKR-holders were not fully in control of the DAO, and the Foundation retained limited governance authority. *What Will Maker Governance Look Like After Complete Decentralization?*, MAKER BLOG (Apr. 3, 2020), <https://blog.makerdao.com/what-will-maker-governance-look-like-after-complete-decentralization/>.

243. MakerDAO Whitepaper, *supra* note 100.

244. For instance, the Foundation’s team owns a number of governance tokens. The Foundation also sold more than 5% of the total MKR tokens to two venture capital firms as recently as December 2019. These allegations were made in Complaint, *Johnson v. Maker Ecosystem Grp. Holdings, Inc.*, No. 3:20-cv-02569 (N.D. Cal. April 14, 2020), at 14, <https://www.courtlistener.com/recap/gov.uscourts.cand.358097/gov.uscourts.cand.358097.1.0.pdf> [hereinafter *MakerDAO Complaint*]. See also *Maker Foundation Announces \$27.5 Million MKR Sale to Dragonfly Capital Partners and Paradigm*, MAKER BLOG (Dec. 19, 2019), <https://blog.makerdao.com/maker-foundation-announces-27-5-million-mkr-sale-to-dragonfly-capital-partners-and-paradigm/>; Andrey Shevchenko, *A Crypto Venture Fund Bought the Most Tokens at*

Voting power concentration may not only compromise decentralized decision making but also create clusters of authority allowing some players to profit.²⁴⁵ If this happens, minority equity-holders may become vulnerable to the majority's opportunism such as changes in protocol governance or approval of proposals favoring the majority.²⁴⁶

These dynamics do not necessarily bode ill for the future of MakerDAO or other decentralized organizations. Indeed, corporate scholarship is fraught with debates that are yet to be settled. Studies on the alignment of incentives of controlling shareholders, private benefits of control, and the quality of corporate governance differ in their assessment of the costs and benefits of concentrated ownership.²⁴⁷ For instance, controlling equity-holders having a long-term commitment to their firms may increase the value of the firms.²⁴⁸ In addition, governance protocols does not have to be static - they can evolve to control for corruption and respond to failure.²⁴⁹

It is outside the scope of this paper whether DAOs are susceptible to voting power concentration among equity-holders or to other maladies of business organization ownership and governance. The purpose of this Section is merely to set forth the contours of the two-stage process where the original developers promise that they expect to no longer be central to the success of their projects and that they would exit and leave equity-holders in charge of the business.

3. *The Transformation of Equity and the Williamson Test*

This discussion suggests that there can be at least two scenarios. In one, the promoters are *ab initio* raising capital by selling partnership interests in a fully decentralized venture. In another, a DAO becomes fully decentralized, and possibly partnership-like, some time after its launch and raising capital. The promoter should no longer be indispensable to the overall success of the business and to the investors' return on their contributions to the DAO as the project segues from a centralized to a decentralized one.

MakerDAO's Debt Auction, COINTELEGRAPH (Apr. 1, 2020), <https://cointelegraph.com/news/a-crypto-venture-fund-bought-the-most-tokens-at-makerdaos-debt-auction>.

245. Calcaterra et al., *supra* note 159, at 71–72 (discussing this scenario in application to stablecoins).

246. Rodrigues, *supra* note 9, at 703 (reviewing ways to combat this conflict).

247. See, e.g., Ronald Gilson, *Controlling Shareholders and Corporate Governance: Complicating the Comparative Taxonomy*, 119 HARV. L. REV. 1641, 1648–50, 1652–53 (2006); Albert H. Choi, *Concentrated Ownership and Long-Term Shareholder Value*, 8 HARV. BUS. L. REV. 53, 63–66 (2018).

248. Choi, *supra* note 247, at 73–75.

249. Calcaterra et al., *supra* note 159, at 81 (observing that constantly changing rules can prevent corruption and system failure).

It is paramount that the developer community and the investors understand when Stage Two, i.e., the decentralized stage, begins and what its implications are for the equity interests in their ventures, just like they are for bond offerings discussed in Sections C and D. Scholarship needs to examine how the nature of equity may change with the original equity securities disappearing and being replaced with partnership interests. Although this inquiry lies outside the scope of this Article, I would like to point at several instructive cases and avenues for research.

The main relevant precedent is *Williamson*,²⁵⁰ which is a Fifth Circuit case whose approach is adopted in several other circuits.²⁵¹ The *Williamson* court²⁵² and the courts following *Williamson* have found that “[a] general partnership interest is presumed not to be an investment contract because a general partner typically takes an active part in managing the business and therefore does not rely solely on the efforts of others.”²⁵³ Courts have developed a three-prong test to demonstrate when this default presumption does not apply, in which case the equity instruments at issue fall under the definition of an “investment contract” and are examined under *Howey*.²⁵⁴

All three prongs de facto focus on the actual balance of control and the way it is distributed between the partners and the promoters. When the balance of power is upset in favor of the promoters, “[a] general partnership interest may qualify as an investment contract if the general partner in fact retains little ability to control the profitability of the investment”²⁵⁵ and, *inter alia*, remains dependent on the managerial ability of the promoter. This case law and the examples discussed in this Article suggest that more research is needed in the equity space to establish when a security comes to an end.

250. In *Williamson*, the court observed the following: “Although general partners and joint venturers may not individually have decisive control over major decisions, they do have the sort of influence which generally provides them with access to important information and protection against a dependence on others. Moreover, partnership powers are not in the nature of a nominal role in the enterprise which a seller of investment contracts would include in order to avoid the securities laws; on the contrary, one would expect such a promoter to insist on ultimate control over the investment venture. An investor who is offered an interest in a general partnership or joint venture should be on notice, therefore, that his ownership rights are significant, and that the federal securities acts will not protect him from a mere failure to exercise his rights.” *Williamson v. Tucker*, 645 F.2d 404, 422 (5th Cir. 1981).

251. See, e.g., *Koch v. Hankins*, 928 F.2d 1471, 1476–78 (9th Cir. 1991); *SEC v. Merchant Capital, LLC*, 483 F.3d 747, 755–58 (11th Cir. 2007).

252. *Williamson v. Tucker*, 645 F.2d 404, 422–23 (5th Cir. 1981).

253. *SEC v. Merch. Cap., LLC*, 483 F.3d 747, 755 (11th Cir. 2007) (citing *Williamson*, 645 F.2d at 422).

254. *Id.* at 755–56.

255. *Id.* at 755.

F. THE IMPORTANCE OF SECURITIES LAW IN STAGE ONE

Conceptualizing a “digital asset game” in two stages not only provides a convenient roadmap for determining the nature of the relationship between capital providers and developers but also fits well within several corporate law theories such as asset partitioning,²⁵⁶ entity shielding,²⁵⁷ and limited liability.²⁵⁸ Namely, a legal entity (i.e., a developer) promises to create and set aside future assets (viz., future tokens or coins) for the benefit of its creditors, while limited liability protects the firm-developer and its equity-holders in case their efforts to design and deliver the assets are unsuccessful.

Most importantly, the proposed framework emphasizes the centrality of securities law during Stage One. During this first stage, there is an identifiable firm seeking capital, developing the tokens and underlying platform, and performing contractual obligations under investment contracts. Securities law and the underlying theory of the firm, particularly new institutionalism and transaction cost economics, are familiar with the attendant risks, including information asymmetry, agency costs, opportunism, conflicts of interest, the collective action problem, and others.²⁵⁹

As any other financial innovation, cryptoassets supply a new combination of concerns. The two-stage framework is useful in identifying these entwined risks. First, a firm-developer may *anticipate* that its offering is not a repeat, long-term game but rather a finite game with a very limited time horizon because the project is designed to be ultimately decentralized and autonomous (Stage Two) and/or because the issuer does not plan future offerings.²⁶⁰ In that case, the firm-developer’s long-term incentives might

256. Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law*, 110 YALE L.J. 387, 393–96 (2000).

257. Henry Hansmann, Reiner Kraakman & Richard Squire, *Law and the Rise of the Firm*, 119 HARV. L. REV. 1335, 1336–38 (2006).

258. *Id.* For a comparison of blockchains and corporate governance, see Reyes, *(Un)Corporate Crypto-Governance*, *supra* note 19, at 1900–06.

259. *See, e.g.*, MICHAEL DIETRICH, *TRANSACTION COST ECONOMICS AND BEYOND: TOWARD A NEW ECONOMICS OF THE FIRM* (2008); GEOFFREY HODGSON, *ECONOMICS AND INSTITUTIONS: A MANIFESTO FOR A MODERN INSTITUTIONAL ECONOMICS* (1988); OLIVER WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM: FIRMS, MARKETS, RELATIONAL CONTRACTING* (1985); KENNETH J. ARROW, *THE LIMITS OF ORGANIZATION* 68–69 (1974); *see also* Stephen M. Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NW. U.L. REV. 547, 547, 555–64, 578, 604 (2003); Zohar Goshen & Richard Squire, *Principal Costs: A New Theory for Corporate Law and Governance*, 117 COLUM. L. REV. 767, 791–94 (2017).

260. Paul P. Momtaz, *Entrepreneurial Finance and Moral Hazard: Evidence from Token Offerings*, JOURNAL OF BUSINESS VENTURING, at 21 (forthcoming 2020) <https://reader.elsevier.com/reader/sd/pii/S0883902619301867?token=5E86A2C10FC3053D3FE0B2A578B95183E1C67A57730FB2E763646C648597D63DEF908464FE8BF79C9FA1E41930F2C144> [hereinafter Momtaz, *Moral Hazard*] (“Given fierce competition for growth capital and the fact that token offerings are often designed in a such way that ventures can raise funds for a specific

not be aligned with those of the investors.²⁶¹ Consequently, token delivery and platform deployment become the *last period* for the firm and its management where “constraints markets and norms generally exert over the self-serving biases of its directors and managers are likely to fail.”²⁶²

A rational entrepreneur may realize that, since they would soon cease to be the central authority invested in a project’s long-term success, they would not bear the costs, whether reputational, economic, or legal, of its failure. Whereas larger and more established firms could still face reputational and legal ramifications of their actions,²⁶³ smaller issuers and firms located in foreign jurisdictions with more lenient securities enforcement regimes and less private litigation would represent greater risks.²⁶⁴

Second, token developers, particularly firms with fewer resources, with less experienced teams or in early stages of development, may possess incomplete information when they seek funding on the promise to furnish operational assets.²⁶⁵ Yet, in keeping with behavioral economics, these developers may exhibit optimism bias and be overconfident in their projections.²⁶⁶ Experts, regulators, and private litigants have already demonstrated that many developers have overestimated their coding abilities, touted potential but ultimately unsuccessful functionalities, written codes vulnerable to errors and attacks, or overstated their ability to address market risks through decentralized and autonomous governance systems.²⁶⁷

project only once, this may create an incentive to send biased signals to increase the expected funding amount....”); see also Paul P. Momtaz, Kathrin Rennertseder & Henning Schröder, *Token Offerings: A Revolution in Corporate Finance?*, 49 CAPCO INST. J. FIN. TRANSFORMATION 32 (2019); Paul P. Momtaz, *Initial Coin Offerings* 9 (May 22, 2020) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3166709.

261. Alignment of incentives depends, *inter alia*, on the strength of reputational mechanisms. See, e.g., Reyes, *(Un)Corporate Crypto-Governance*, *supra* note 19, at 1919.

262. Sean J. Griffith, *Deal Protection Provisions in the Last Period of Play*, 71 FORDHAM L. REV. 1899, 1950 (2003).

263. Even if the firms are domiciled in foreign jurisdictions, they will face a considerable amount of litigation in the United States. See Yuliya Guseva, *The SEC and Foreign Private Issuers: A Path to Optimal Public Enforcement*, 59 BOS. COL. L. REV. 2055 (2018).

264. *Id.*; see also Douglas S. Eakeley & Yuliya Guseva with Leo Choi & Katarina Gonzalez, *Crypto-Enforcement Around the World*, SOUTH. CALIF. L. REV. POSTSCRIPT (forthcoming 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3713198 (discussing the differences in enforcement in 14 jurisdictions).

265. See, e.g., Brummer & Yadav, *supra* note 2, at 281 (suggesting that small firms “may not possess the institutional resilience to withstand the fallout caused by their error”). For an overview of the studies documenting a positive association between project success and management team’s experience and characteristics, as well as the rate of success and more advanced-stage projects, see, e.g., Ofir & Sadeh, *supra* note 81, at 28–29, 47–49.

266. See Don A. Moore & Paul J. Healy, *The Trouble with Overconfidence*, 115 PSYCHOL. REV. 502 (2008).

267. See, e.g., MakerDAO Complaint, *supra* note 244; The DAO Report, *supra* note 108; see also Cohny et al., *supra* note 3, at 627 (describing Paragon Token); Rocco, *Futility Tokens: A*

Another germane wrinkle is the replicable nature of the technology. Issuers publish not only descriptive whitepapers full of soft information and forward-looking statements but also their source code.²⁶⁸ The code is examined by the crypto-community and industry participants.²⁶⁹ It is possible that as proprietary information is disclosed and examined, the firm's competitive advantages are eroded.²⁷⁰

Entwining these factors with the inevitability of Stage Two and the last period problem is bound to affect the strategic thinking of an average issuer. Issuer-investor conflicts are typical. While every salesman “has an obvious incentive to supply the market with information indicating that the product is worth its asking price,”²⁷¹ and even if many crypto-firms are honest issuers, all salesmen also “stand to benefit by leading the recipient to overvalue the product.”²⁷² If an asset's quality is opaque, and the asset is truly novel,²⁷³ as cryptoassets are, issuers have more room to exaggerate and misrepresent the value of their assets.²⁷⁴ The last period problem and the *ex ante* expectation that an autonomous and decentralized Stage Two is unavoidable only exacerbate these risks.

As a result, securities law has a crucial role to play in digital asset markets during Stage One. In enacting the federal securities statutes, Congress highlighted that issuers could be affected by conflicts of interest and have informational advantages *vis-à-vis* investors.²⁷⁵ Congress mandated disclosure as prescribed by the SEC and enacted extended liability provisions for material misstatements and omissions in public offering documents such as registration statements and prospectuses.²⁷⁶ Issuers and experts retained

Utility-Based Post-Mortem, TOKEN ECON. (Oct. 9, 2018), <https://tokeneconomy.co/futility-tokens-a-utility-based-post-mortem-d7b1712a5a4e>.

268. See, e.g., Ofir & Sadeh, *supra* note 81, at 29–30 (summarizing the related practices and problems associated with source code disclosure).

269. ETHEREUM TESTING TOOLS, <https://www.ethereum.org/developers/#testing-tools>; GITHUB, <https://github.com/features/code-review/> (last visited Nov. 22, 2020); Tatiana Koffman, *Your Official Guide to the Security Token Ecosystem*, MEDIUM (Apr. 13, 2018), <https://medium.com/@tatianakoffman/your-official-guide-to-the-security-token-ecosystem-61a805673db7>; ETHEREUM DEVELOPER PORTAL, <https://ethereum.consensys.net/> (last visited Nov. 22, 2020).

270. See, e.g., Ofir & Sadeh, *supra* note 81, at 54.

271. Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549, 602 (1984).

272. *Id.*

273. For an overview of relating issues, see generally Merritt B. Fox, *Regulating Public Offerings of Truly New Securities: First Principles*, 66 DUKE L.J. 673, 680 (2016).

274. See Momtaz, *Moral Hazard*, *supra* note 260. For an overview of the relevant literature, see, e.g., Ofir & Sadeh, *supra* note 81, at 46–51.

275. H.R. Rep. No. 73-85, at 3–6, 8–10 (1933).

276. For an overview, see, e.g., Elisabeth Keller & Gregory A. Gehlmann, *Introductory Comment: A Historical Introduction to the Securities Act of 1933 and the Securities Exchange Act of 1934*, 49 OHIO ST. L.J. 329 (1988).

by them carefully draft public offering documents to avoid liability. Investors may bring actions, often class actions, under the antifraud provisions of the Securities Exchange Act, as well as for violations of the Securities Act after they have purchased the issued securities.²⁷⁷

Recall that if tokens and coins distributed in crowdfunding events do not give an equity stake to purchasers, they can be analogized with bonds. Bonds are contracts. Bondholders are not owed fiduciary duties and cannot file lawsuits under state law for breach of fiduciary duties, nor do they participate in corporate governance.²⁷⁸ They may protect themselves through trustees and contractual terms; indentures purporting to protect the value of the bonds typically include covenants curbing opportunistic managerial behavior.

The effectiveness of these mechanisms, however, is debatable even in the traditional bond markets let alone “quasi-bond” cryptoasset markets.²⁷⁹ It is of the utmost importance that bondholders, as security-holders, enjoy a private right of action under securities law²⁸⁰ and may rely on SEC oversight and enforcement. Determining to which investors and issuers securities law applies, as well as the relevant *timing* of its application, becomes a pressing concern for the evolution of safe and efficient digital asset markets.

G. CONCLUSION

This Article propounds a novel approach to the threshold questions on the applicability of securities law to digital assets. The clarity of this framework should be useful to courts, regulators, and market participants. The two-stage offering approach amalgamates a contractual view of debt securities with the traditional securities law analysis (*viz.*, *Howey* and its progeny). It centers the analysis on the contractual expectations of the investors and the obligations of the issuer. This conveniently demonstrable analytical roadmap should assist courts and the crypto-community in categorizing technologically complex digital assets. I hope that the two-stage

277. 15 U.S.C. §§ 77k, 77l(a)(2), 78j(b) (2018); 17 C.F.R. § 240.10b-5 (2019).

278. *Simons v. Cogan*, 549 A.2d 300, 304 (Del. 1988) (“Before a fiduciary duty arises, an existing property right or equitable interest supporting such a duty must exist. The obvious example is stock ownership.”). *See also* Park, *supra* note 115 at 628-30 (laying out the basic distinctions between shareholders and bondholders); Schwarcz, *supra* note 115, at 1342-50 (discussing the reasons to include bondholders in corporate governance).

279. *See, e.g.*, Park, *supra* note 115 at 591-93; Schwarcz, *supra* note 115, at 1338-40, 1346-51 (suggesting that in the modern markets, providers of debt capital should participate in corporate governance and discussing limitations of covenants).

280. Park, *supra* note 115, at 631 (“Unlike corporate law, the securities laws provide bondholders with essentially the same causes of action as shareholders. To the extent that securities class actions can be used to challenge corporate misconduct, they provide bondholders with a mechanism for asserting their interests that is not provided by corporate law.”); *see also id.* at 633-36.

template presented in this Article will reduce the regulatory uncertainty and provide much needed clarity to the market, regulators, and factfinders.