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ARTICLE

DEBT TOKENS

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The worlds of crypto and bankruptcy have collided. Once-prominent, fast-growing, and even politically influential platforms for trading cryptocurrencies have imploded spectacularly. Gone are the glossy advertisements, celebrity endorsements, and proclamations that blockchain operates as a law unto itself. Instead, insolvent crypto businesses—including the crypto exchange giant FTX—find themselves in bankruptcy court, no different from any other failed enterprise. These bankruptcies reveal a startling reality: individual investors who placed their trust in these platforms have been stripped of their digital assets. In their stead, they hold hard-to-collect claims against these defunct platforms.

Amid the chill of the crypto winter, bankruptcy has unexpectedly emerged as a crucible for innovation, giving rise to a new digital asset: debt tokens. *Entrepreneurs have responded to the tidal wave of trade debts arising from the insolvencies of crypto platforms by embarking on a mission to create blockchain-based digital assets that represent bankruptcy claims. They present debt tokens as cutting-edge devices for swiftly and advantageously liquidating these distressed assets. Yet, the pressing question is this: are these debt tokens actually useful innovations or yet another hollow promise?*

This Article offers the first comprehensive analysis of debt tokens, making three seminal contributions. First, we scrutinize existing debt token offerings, laying bare

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their inherent flaws and casting doubt on their legitimacy. Second, we explore the potential for genuine debt tokens within the framework of the recently adopted 2022 amendments to the Uniform Commercial Code. Lastly, we delve into the broader socio-economic implications of widespread debt token adoption. Specifically, we anticipate debt tokens fostering more effective collective action and improved exit opportunities, particularly for those creditors who traditionally fare the worst in bankruptcy due to having fewer resources and pressing financial needs. However, we also caution against the looming risks of irrational speculation and the exploitation of inexperienced retail investors blinded by the bright lights of innovation.

INTRODUCTION

The worlds of crypto and bankruptcy have collided.[1] The days of Gisele Bündchen and Tom Brady announcing that they are "in" on crypto and Matt Damon praising the bravery of crypto investors in a Super Bowl commercial have come to an abrupt halt.[2] The recent collapses of Voyager,[3] Celsius,[4] FTX,[5] and other former crypto giants have shown a hard truth: insolvent crypto businesses end up in bankruptcy court just like any other enterprise.

As these bankruptcies unfold, they have forced courts to confront a range of unresolved issues.[6] A major uncertainty was whether persons who deposited their crypto retained a property interest in these digital assets, or whether they had a mere contractual right against the platform.[7] To the consternation of many account holders of Voyager, Celsius, and FTX,

1 *See* Diane Lourdes Dick & Christopher K. Odinet, *The Questionable Virtues of Chapter 11 in the FTX Bankruptcy*, CLS BLUE SKY BLOG (Dec. 7, 2022) [hereinafter Dick & Odinet, *Questionable Virtues*], https://clsbluesky.law.columbia.edu/2022/12/07/the-questionable-virtues-of-chapter-11-in-the-ftx-bankruptcy [https://perma.cc/E9D7-EL73] (detailing the convergence of bankruptcy law and crypto in the FTX bankruptcy proceedings); *see also* Diane Lourdes Dick & Christopher K. Odinet, *The Public and the Private of the FTX Bankruptcy*, HARVARD BANKR. ROUNDTABLE (Jan. 31, 2023) [hereinafter Dick & Odinet, *The Public and the Private of the FTX Bankruptcy*], https://bankruptcyroundtable.law.harvard.edu/2023/01/31/crypto-bankruptcy-series-the-public-and-the-private-of-the-ftx-bankruptcy [https://perma.cc/R6H4-K4QW] (reviewing the impact of the FTX bankruptcy proceedings).

2 *See* Erin Griffith & David Yaffe-Bellany, *How Tom Brady's Crypto Ambitions Collided with Reality*, N.Y. TIMES (July 6, 2023), https://www.nytimes.com/2023/07/06/technology/tom-brady-crypto-ftx.html [https://perma.cc/SJW8-ELBC] (highlighting how the phase of celebrity crypto endorsements has ended).

3 *See* Voluntary Petition for Non-Individuals Filing for Bankruptcy, *In re* Voyager Digit. Holdings, Inc., No. 22-10943 (Bankr. S.D.N.Y. July 5, 2022).

4 *See* Voluntary Petition for Non-Individuals Filing for Bankruptcy, *In re* Celsius Network LLC, No. 22-10964 (Bankr. S.D.N.Y. July 13, 2022).

5 *See* Voluntary Petition for Non-Individuals Filing for Bankruptcy, *In re* FTX Trading Ltd., No. 22-11068 (Bankr. D. Del. Nov. 11, 2022).

6 *See* Dick & Odinet, *The Public and the Private of the FTX Bankruptcy*, *supra* note 1 (noting several complex questions raised by the FTX bankruptcy case).

7 *See id.*

bankruptcy courts called upon to consider the issue have largely concluded that these customers hold no more than an unsecured trade claim.[8]

Yet, in the darkest hour of the crypto winter, bankruptcy has unexpectedly become a crucible for innovation, forging a new type of digital asset: *debt tokens*.[9] The insolvencies of Voyager, Celsius, FTX, and others have unleashed a tsunami of bankruptcy claims, leaving their holders in a state of limbo, as the slow and ponderous wheels of justice turn to deliberate their fate. Keen to capitalize on this situation, crypto entrepreneurs are attempting to create blockchain-based tokens representing these distressed debts.[10] Their declared aim is to create a novel digital medium through which creditors can efficiently and rapidly realize value from their claims.[11]

To be sure, the trading of bankruptcy claims is not itself a novel practice—indeed, in the United States, it has roots that go as far back as the American Revolution.[12] At its core, claims trading is a market-driven, private ordering solution that allows creditors to avoid the delays and uncertainty of insolvency proceedings, enabling those who seek immediate liquidity to sell their claims on the open market at prevailing prices.[13] Investors, in turn, buy these claims, anticipating that the eventual payout from the bankruptcy will

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8 *See, e.g.*, Dietrich Knauth, *U.S. Judge Says Celsius Network Owns Most Customer Crypto Deposits*, REUTERS (Jan. 5, 2023, 12:50 PM), https://www.reuters.com/business/finance/us-judge-says-celsius-network-owns-most-customer-crypto-deposits-2023-01-05 [https://perma.cc/7JB4-H4XK] ("Earn customers will be treated as unsecured creditors in Celsius' bankruptcy . . . ."); Max Dilendorf, *Voyager's Bankruptcy*, DILENDORF L. FIRM, https://web.archive.org/web/20230925022908/https://dilendorf.com/blockchain-crypto/voyagers-bankruptcy-creditors-protection.html (last visited Jan. 26, 2025) ("Voyager's Account Holders have been classified as General Unsecured Creditors under Chapter 11 of the Bankruptcy Code . . . ."); Brendan G. Best, *Recent FTX Email Notices Raise Basic Questions for Customers*, VARNUM (Apr. 7, 2023), https://www.varnumlaw.com/insights/recent-ftx-email-notices-raise-basic-questions-for-customers [https://perma.cc/UTY7-XTKE] (explaining that FTX customers were listed as unsecured creditors).

9 *See HTX Will List FUD (FTX Users' Debt) on February 5, 2023*, HTX (Feb. 4, 2023), https://htx.com/support/94929888216783 [https://perma.cc/2Y94-6EZ9] (introducing the concept of a debt token).

10 *See infra* Part II. For a discussion of the legal meaning of tokenization, see Juliet M. Moringiello & Christopher K. Odinet, *The Property Law of Tokens*, 74 FLA. L. REV. 607, 609-27 (2022).

11 *Overview*, OPNX, https://web.archive.org/web/20231130101300/https://support.opnx.com/en/articles/7966491-overview (last visited Jan. 26, 2025).

12 *See infra* Part I (discussing the history of bankruptcy claims trading); *see also* Allan L. Gropper, *Comments on the Articles of Professors Baird and Janger*, 4 BROOK. J. CORP. FIN. & COM. L. 59, 61 (2009) ("[C]laims trading is as old as our nation . . . .").

13 John Folkerth, *Contemplating Claims Tradings at the Margins*, 34 EMORY BANKR. DEVS. J. 723, 731 (2018) (noting that claims trading can benefit creditors by giving them liquidity in the market).

leave them room for profit.[14] By providing liquidity, flexibility, and optionality, claims trading contributes to the overall bankruptcy ecosystem.[15]

According to their proponents, debt tokens have the potential to fundamentally reshape the realm of bankruptcy claims trading.[16] Technologically, debt tokens harness all the benefits of blockchain: speed, immediate finality, real-time trackability, transparency, disintermediation, and cryptographic security.[17] The transformation of bankruptcy claims into digital tokens could usher "a public marketplace for claims onboarding and trading," featuring reduced trading costs due to "[t]ransparent market-based pricing" and "[f]air price discovery," coupled with "[m]inimized counterparty risk and fraudulent transactions."[18] Furthermore, evangelists of debt tokens preach that tokenization will democratize bankruptcy claims trading, which has traditionally been challenging and costly for individual creditors.[19] If they can instead convert their claims into blockchain tokens, aggrieved creditors can immediately "unleash their locked claims" or use them "as margin capital," marking a stride towards "building an open, transparent and accessible financial world."[20]

Despite being a nascent concept, debt tokens are gaining momentum. For example, in early 2023, a decentralized autonomous organization known as DebtDAO issued a crypto token called "FTX Users' Debt (FUD)."[21] This token purportedly represented a bond or debt instrument connected to the obligations owed by the now-bankrupt FTX to its "highest quality creditors," amounting to tens of millions of dollars.[22] The promise behind the FUD token was that its holders would have a right to receive a portion of the payout that FTX's bankruptcy estate would eventually distribute to creditors.[23] And

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14 *See infra* Part I; *see also* Douglas G. Baird, *The Bankruptcy Exchange*, 4 BROOK. J. CORP. FIN. & COM. L. 23, 23 (2009) (noting that bankruptcy "has become a marketplace for claims.").

15 *See infra* Part I; *see also* Bruce S. Nathan & Scott Cargill, *Last in Line:* KB Toys*: Risk Allocation in Bankruptcy Claims Trading,* AM. BANKR. INST. J., Oct. 2012, at 24, 24 (explaining how claims trading can supply liquidity for creditors); Jared A. Ellias, *Financial Statements: What Is Bankruptcy Claims Trading? Evidence from Bond Trading*, AM. BANKR. INST. J., Dec. 2018, at 28, 29 (suggesting the transfer of risk through claim trading can be seen as a tool for increasing creditor liquidity).

16 *See infra* Part II.

17 *See infra* Part II.

18 *Our Story*, OPNX [hereinafter OPNX, *Our Story*], http://web.archive.org/web/20240206014201/https://opnx.com/en/about-us (last visited Jan. 26, 2025); *How to Transform Your Bankruptcy Claim into a Valuable Asset*, OPNX [hereinafter OPNX, *How to Transform Your Bankruptcy Claim*], https://web.archive.org/web/20231130104336/https://opnx.com/en/learn/how-to-transform-your-bankruptcy-claim-into-a-valuable-asset [https://perma.cc/BPX5-C69F] (last visited Jan. 26, 2025).

19 *See infra* Parts I–II.

20 *See* OPNX, *Our Story*, *supra* note 18.

21 *See HTX*, *supra* note 9.

22 *Id.*

23 *Id.*

this is not the only initiative of this sort.[24] Most recently, the crypto exchange OPNX (short for Open Exchange) started offering creditors in the Celsius and FTX bankruptcies the opportunity to convert their claims into debt tokens that could be bought and sold on the OPNX platform.[25] The company promised that the "tokenization of . . . bankruptcy claims in this manner is a groundbreaking innovation in the crypto industry, providing users with an unprecedented level of control over their locked funds."[26]

In this Article, we provide the first exhaustive analysis of debt tokens and make three original contributions to the existing body of commercial law scholarship. First, we offer a case study analysis of the only recently active debt token offerings in the market, with a particular focus on OPNX. We examine closely the legal and promotional materials provided by this company and expose fundamental flaws in its chosen transactional structure. Prior to shutting down its operations on February 14, 2024 (a period not long after this paper became publicly available), OPNX purported to tokenize bankruptcy claims when it actually pooled and transferred ownership of these assets to an opaque trust. Token holders merely held rights against OPNX, rather than against the bankruptcy estate of the insolvent entity in question. Crucially, no true "tokenization" of bankruptcy claims was ever occurring. In the eyes of the law, these tokens did not actually embody the right to receive a distribution in the related bankruptcy. The touted tokenization was a mere illusion.

Second, having exposed the flaws of these market practices, we show that it *is* indeed possible to create true debt tokens. To do this, we delve into the newly enacted 2022 Amendments to the Uniform Commercial Code and show that the recently introduced category of *controllable accounts* can be used to create digital assets that *in law* really do tokenize bankruptcy trade claims. We analyze in detail the legal regime of this novel device, highlighting its strengths while also underscoring that it is subject to stringent conditions and mandatory limitations.

Third, we consider the possible implications that the widespread adoption of debt tokens in the form of controllable accounts might have on the holders of trade debts and the bankruptcy ecosystem. For trade creditors, we foresee

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24 *See* Oliver Knight, *Three Arrows Founders' Bankruptcy Exchange to Offer Claims as Portfolio Margin*, COINDESK (May 9, 2023, 4:10 AM), https://www.coindesk.com/business/2023/03/09/three-arrows-founders-bankruptcy-exchange-to-offer-claims-as-portfolio-margin/?utm_medium=referral&utm_source=rss&utm_campaign=headlines [https://perma.cc/8J8E-6FS4] (highlighting an example of a platform which allowed investors to buy claims with the hope of receiving a portion of the bankruptcy payout).

25 Oliver Knight, *FTX, Celsius Bankruptcy Claims Can Now Be Sold on OPNX*, COINDESK (July 14, 2023, 8:00 AM), https://www.coindesk.com/business/2023/07/14/ftx-celsius-bankruptcy-claims-can-now-be-sold-on-opnx [https://perma.cc/EM8Y-6H74].

26 OPNX, *supra* note 11.

enhanced flexibility to divest their claims via more liquid markets with superior exit opportunities. However, risks like irrational speculation necessitate prudent safeguards for less sophisticated investors. Regarding the bankruptcy process as a whole, we hypothesize that tokenization could facilitate more effective collective action among trade debt holders, providing them with a stronger voice in the process. This is an especially notable benefit considering that trade debt holders are often the class of creditors that can least afford a protracted and costly judicial process. Tokenization might also bolster creditor concentration as individual trade creditors assign their claims to distressed-debt specialists, potentially leading to streamlined bankruptcy negotiations and boosting the post-reorganization performance of the insolvent entity.

This Article proceeds in four parts. In Part I, we lay the foundation for bankruptcy claims trading with tokens by providing a broad overview of current crypto bankruptcies and the ways in which players are creating side markets using cryptography and blockchain technology to facilitate the buying and selling of claims. In Part II, we dig into the details by analyzing a hand-collected set of offering documents and associated materials related to the debt tokens currently being offered on the market by the now-defunct crypto exchange company OPNX. In doing so, we examine the legal structures inherent in these offerings to show the mismatch between what was promised and what the law actually allows. In Part III, we show that tokenization of bankruptcy claims is possible, albeit within the bounds of a defined system of rules. We delve into the 2022 UCC Amendments, Article 12, and controllable accounts, explaining how this new body of rules can be used to create debt tokens. Our analysis lays the groundwork for best practices, highlighting the strengths of this novel legal route as well as its inherent limitations and difficulties. Finally, in Part IV, we explore the socioeconomic and legal reverberations potentially stemming from the advent of tokenized bankruptcy claims. While we anticipate this innovation may hold promise for trade creditors and the bankruptcy ecosystem, we also recognize dangers like malfeasance and exploitation of unsophisticated investors. As such, we advocate treading cautiously, underscoring the need for further empirical study and close monitoring of intra-creditor and creditor-debtor dynamics.

I. Crypto Bankruptcies and the Rise of Debt Tokens

On the morning of Saturday, November 12, 2022, customers of the global crypto giant FTX woke up to find that—despite feverish overnight tweets by then-CEO and wunderkind Sam Bankman-Fried stating that everything was

"fine"[27]—their user accounts were frozen.[28] Customers were locked out, unable to access their crypto investments or withdraw their money.[29]

Unbeknownst to its customers, investors, and celebrity endorsers, FTX had filed for bankruptcy in Delaware, no longer able to conceal the gaping $8.7 billion chasm between its liabilities and assets.[30] The ensuing bankruptcy case opened a Pandora's box of legal challenges, leaving the bankruptcy court, major stakeholders, and law enforcement agencies to grapple with a myriad of contentious issues. FTX customers were told they no longer owned the digital assets in their accounts and instead held only a bankruptcy claim of indeterminate value.[31]

Unwilling or unable to wait, many anxious and frustrated customers attempted to sell their claims in a desperate attempt to recoup some of their losses.[32] Lying in wait and ready to pounce was a ravenous pack of distressed debt investors eager to profit from FTX's collapse.[33] By December 2023, commentators noted that "the market for FTX claims [had] exploded."[34]

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27 Allison Morrow, *Here's What Happened Today in Sam Bankman-Fried's Trial*, CNN BUS. (Oct. 30, 2023, 5:19 PM), https://www.cnn.com/business/live-news/sbf-crypto-fraud-trial-10-30/h_e43a35d03c2550ce9bf1872980e825dd [https://perma.cc/KX8K-FDY5].

28 *See* Max Zahn, *A Timeline of Cryptocurrency Exchange FTX's Historic Collapse*, ABC NEWS (Mar. 28, 2024, 12:08 PM), https://abcnews.go.com/Business/timeline-cryptocurrency-exchange-ftxs-historic-collapse/story?id=93337035 [https://perma.cc/6QE9-VS77]; *see also* Daniel Arkin, *They Put Their Trust in FTX. Now Their Money Is Frozen—and Maybe Wiped Out.*, NBC NEWS (Nov. 17, 2022, 11:31 AM), https://www.nbcnews.com/tech/crypto/put-money-ftx-now-money-frozen-maybe-wiped-rcna57251 [https://perma.cc/CP85-V6WB].

29 *See* Arkin, *supra* note 28.

30 *See* Voluntary Petition for Non-Individuals Filing for Bankruptcy, *In re* FTX Trading Ltd., No. 22-11068 (Bankr. D. Del. Nov. 11, 2022); Nina Bambysheva, *FTX's $8.7 Billion Balance Sheet Hole About Equal to What Alameda Owes It*, FORBES (Mar. 3, 2023, 2:40 PM), https://www.forbes.com/sites/digital-assets/2023/03/03/ftxs-9-billion-balance-sheet-hole-about-equal-to-what-alameda-owes-it [https://perma.cc/J9TN-2DEJ]. *See generally* Dick & Odinet, *The Public and the Private of the FTX Bankruptcy*, *supra* note 1.

31 *See* Dietrich Knauth, *FTX Cleared to Repay Billions to Customers After Bankruptcy Plan Approval*, REUTERS (Oct. 8, 2024, 6:23 AM), https://www.reuters.com/legal/crypto-exchange-ftxs-liquidation-plan-receives-court-approval-2024-10-07 [https://perma.cc/CVC3-KX3G].

32 Alexi Horowitz-Ghazi, *Vulture Investors Who Bought Up Bankruptcy Claims from FTX Could See Huge Returns*, NPR (May 3, 2024, 6:56 PM), https://www.npr.org/2024/05/03/1249036600/vulture-investors-who-bought-up-bankruptcy-claims-from-ftx-could-see-huge-return [https://perma.cc/F2CD-4MLK].

33 *See About Xclaim*, XCLAIM, https://www.x-claim.com/about [https://perma.cc/YWM5-4GBB] (last visited Jan. 26, 2025) ("Rather than waiting years to recover funds from bankruptcy court, account holders can receive immediate liquidity from interested buyers.").

34 David Yaffe-Bellany & Matthew Goldstein, *The Hot New Market in Crypto? Trading FTX's Carcass*, N.Y. TIMES (Dec. 20, 2023), https://www.nytimes.com/2023/12/20/technology/crypto-trading-ftx-bankruptcy.html [https://perma.cc/BGD2-WH54].

As FTX claims trading caught fire, it sparked a transformation in the "bankruptcy exchange."[35] First, online platforms emerged, dedicated to the trading of these claims. Next came the crypto entrepreneurs; they proposed blending blockchain technology with bankruptcy claims trading to create novel digital assets: *debt tokens*.

Understanding debt tokens requires a preliminary exploration of two areas set forth in this Part I. We start by offering a primer on bankruptcy claims trading. But first, a warning: dense and technical bankruptcy and commercial law concepts lie ahead! Rest assured—this legwork pays dividends in our subsequent analysis of the legal issues underlying debt tokens.

Then, with the technical foundation laid, the second half of this Part I shifts focus to the examination of three high-profile bankruptcies of once-prominent crypto platforms: Voyager, Celsius, and—most notoriously—FTX. Our objective is not to scrutinize exhaustively all the private law and regulatory issues raised by these insolvencies. Instead, we aim to pinpoint the factors that ignited the rise of debt tokens.

A. *Bankruptcy Claims Trading*

Bankruptcy claims trading has a long history, evolving over the past three centuries from a niche practice into a large, established market.[36]

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35 *See* Baird, *supra* note 14, at 23 (using the expression "bankruptcy exchange" broadly to describe the bankruptcy claims market).

36 *See, e.g.*, Douglas G. Baird & Robert K. Rasmussen, *Antibankruptcy*, 119 YALE L.J. 648, 659-60 (2010) [hereinafter Baird & Rasmussen, *Antibankruptcy*] (highlighting the rise in claims trading subsequent to significant deregulation in 1991 and the parallel rise in hedge funds as active investors); Gropper, *supra* note 12, at 60-61 (noting that the "large and active" bankruptcy claims trading market is "as old as our nation"); Baird, *supra* note 14, at 23 (conceding that claims trading "has become a fundamental feature of bankruptcy"); Adam J. Levitin, *Bankruptcy Markets: Making Sense of Claims Trading*, 4 BROOK. J. CORP. FIN. & COM. L. 67, 68 (2009) (describing the "robust" bankruptcy claims trading market as the "single most important development" since the Bankruptcy Code in 1978); Glenn E. Siegel, *Introduction: ABI Guide to Trading Claims in Bankruptcy: Part 2 ABI Committee on Public Companies and Trading Claims*, 11 AM. BANKR. INST. L. REV. 177, 177 (2003) (explaining that claims trading is present in almost every bankruptcy, regardless of size); Frederick Tung, *Confirmation and Claims Trading*, 90 NW. U. L. REV. 1684, 1685-86 (1996) (estimating the size of the claims trading market at $300 billion); Joy Flowers Conti, Raymond F. Kozlowski, Jr. & Leonard S. Ferleger, *Claims Trafficking in Chapter 11—Has the Pendulum Swung Too Far?*, 9 BANKR. DEVS. J. 281, 281-82 (1992) (noting the practice of bankruptcy claims trading from the 1930s on and its recent surge); W. Andrew P. Logan III, Note, *Claims Trading: The Need for Further Amending Federal Rule of Bankruptcy Procedure 3001(e)(2)*, 2 AM. BANKR. INST. L. REV. 495, 495-96 (1994) (explaining that the market for bankruptcy claims trading has "evolved into a multi-billion dollar industry"); Michael H. Whitaker, Note, *Regulating Claims Trading in Chapter 11 Bankruptcies: A Proposal for Mandatory Disclosure*, 3 CORNELL J.L. & PUB. POL'Y 303, 303-06 (1994) (documenting the growth of bankruptcy from the thirteenth century to the boom in the 1980s, leading to a lucrative claims trading market); William Beranek & Steven L. Jones, *The Emerging Market for Trade Claims of*

Concurrently, the legal framework for these transactions has changed significantly, reflecting both the view that insolvencies are ordinary events inherent in capitalist economies and the willingness of capital allocators to invest in distressed assets. This interplay of social change and economic opportunity has made bankruptcy claims trading the subject of intense debate among both practitioners and academics. In the sections that follow, we explore each of these dynamics.

1. Historical Perspectives

The practice of trading claims against insolvent debtors is ingrained deeply in the fabric of the American bankruptcy landscape.[37] In the years following the Revolutionary War, members of the First Congress of the United States purchased debentures issued by the original thirteen states, several of which had become financially insolvent due to the war effort.[38] In a move characterized by opportunistic foresight and moral ambiguity, Congressmen acquired these distressed claims for mere fractions of their nominal value, while concurrently drafting legislation that would mandate the nascent federal government to assume these debts and repay them in full.[39] This historical episode vividly illustrates the economic incentives behind the trading of bankruptcy claims, while also underscoring the risks posed by information asymmetries and the abuse of positions of trust.

Throughout the nineteenth and early twentieth centuries, the trading of bankruptcy claims gradually became well established, albeit a niche practice.[40] Though this market experienced its ebbs and flows, with a notable upturn following the Great Crash of 1929, transactions generally occurred on a smaller scale compared to contemporary standards throughout this period.[41] Dealings were often idiosyncratic, and the sector was dominated by a select

Bankrupt Firms, FIN. MGMT., Summer 1994, at 76, 76 (1994) (noting the growing market for claims trading); Chaim J. Fortgang & Thomas Moers Mayer, *Trading Claims and Taking Control of Corporations in Chapter 11*, 12 CARDOZO L. REV. 1, 2-3 (1990) (discussing the reemergence of trading in claims against corporations in Chapter 11 bankruptcy).

37 *See* CLAUDE G. BOWERS, JEFFERSON AND HAMILTON: THE STRUGGLE FOR DEMOCRACY IN AMERICA 43-48 (1925) (addressing claims trading of the debt certificates originally issued to Revolutionary War soldiers and farmers).

38 *See* Fortgang & Moers Mayer, *supra* note 36, at 25-26 (1990).

39 *See id.* James Madison publicly condemned this breach of public trust and introduced legislation that would pay only soldiers and original debt holders the full face value of the debentures in question. However, Madison's bill was rejected by the House of Representatives. *Id.*

40 *See, e.g.*, *id.* at 8, 26 & n.134 (noting inter alia that Major Wall Street houses traded claims and stock for profit in the early 1930s).

41 *See generally id.* at 10, 62, 75, 94 (discussing the 1930s spike in bankruptcy claims trading as a strategy to gain control of distressed companies).

group of specialized practitioners and investors.[42] This business segment was predominantly out of the public eye, driven by the few who had both the acumen to overcome its complexities and the risk tolerance to navigate what was then a relatively uncharted financial territory.[43] Overall, the legal and financial ecosystem for bankruptcy claims trading was underdeveloped, partly due to a lingering societal stigma surrounding insolvency.[44]

The 1990s witnessed fundamental transformations in the realm of bankruptcy claims trading. A blend of legislative reforms, finance industry developments, and technological advancements injected unprecedented dynamism into this market.[45] The enactment of the Bankruptcy Code of 1978[46] simplified the legal framework governing the trading of bankruptcy claims and enhanced the predictability of insolvency proceedings, rendering distressed assets more enticing for investors.[47] This period also marked the rise of hedge funds and investors specializing in distressed assets, both of which injected capital and expertise into the bankruptcy claims market, boosting transaction velocity, volume, and overall value.[48]

Today, the market for bankruptcy claims is broad, international, and liquid.[49] It is populated by an array of distressed assets and managed by sophisticated and well-resourced participants.[50] Estimates peg the annual market size at $50–300 billion, although it is hard to arrive at a precise figure due to the private nature of many of these dealings and fluctuations in

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42 *See* 2 SEC. & EXCH. COMM'N, REPORT ON THE STUDY AND INVESTIGATION OF THE WORK, ACTIVITIES, PERSONNEL AND FUNCTIONS OF PROTECTIVE AND REORGANIZATION COMMITTEES 1-10 (1937) (discussing the role of investors in bankruptcy claims within the ambit of Section 77B proceedings).

43 *See* Fortgang & Moers Mayer, *supra* note 36, at 4-5 (describing bankruptcy claims trading as a field often occurring behind-the-scenes and requiring "investors to take two chances").

44 *Cf.* DAVID A. SKEEL, DEBT'S DOMINION: A HISTORY OF BANKRUPTCY LAW IN AMERICA 134-35 (2001) (noting that the bankruptcy ecosystem was characterized by a "faintly undesirable status" and influenced by antisemitic sentiments).

45 *See* Jared A. Ellias, The Law and Economics of Investing in Bankruptcy in the United States 6 & n.25 (Mar. 2, 2021) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3578170 [https://perma.cc/YR6J-LYRG] (noting "'the face of bankruptcy' had been altered by 'the newfound liquidity in claims' over the 1990s," facilitated in part by 1991 amendments to Bankruptcy Rule 3001(1)(e)).

46 Bankruptcy Reform Act of 1978, Pub. L. No. 95-598, 92 Stat. 2549 (codified as amended in scattered sections of 11 U.S.C.).

47 SKEEL, *supra* note 44, at 131, 132-59; *see infra* subsection I.A.2.

48 *See* Baird & Rasmussen, *Antibankruptcy*, *supra* note 36, at 659-61 (describing the entry and role of hedge funds and specialized investors in bankruptcy claims trading).

49 *See* KAROL K. DENNISTON, DISTRESSED DEBT TRADING: UNDERSTANDING INTERNATIONAL AND DOMESTIC SECONDARY MARKETS 7-8 (2000) (describing debt trading's increasingly international and flexible nature).

50 *See* Baird & Rasmussen, *Antibankruptcy*, *supra* note 36, at 659-61.

transaction volumes driven by the economic cycle.[51] Almost all large corporate bankruptcies involve some trading of claims against the insolvent entity, although volumes vary significantly across cases.[52] Empirical evidence shows that trading can have the effect of consolidating claims into the hands of distressed debt investors who have become pivotal players in bankruptcy cases, influencing both liquidations and reorganizations.[53]

2. Legal Framework

The legal framework for the trading of bankruptcy claims is formed by two streams of law—federal bankruptcy law and the rules governing the *commercial circulation* of each type of claim.[54]

Under federal law, the Bankruptcy Code of 1978 takes a *laissez-faire* approach to trading bankruptcy claims.[55] This statute defines "creditor" as a person with a claim against the debtor that arises at or before the order for relief[56] and a "claim" as any right to payment regardless of its status.[57] Neither definition draws a distinction between an original claim holder and subsequent acquirers. This is reinforced by Section 501 under which all "creditors"—whether they are the original obligee or a secondary purchaser—may file a "proof of claim" once insolvency proceedings have commenced.[58]

Federal Rule of Bankruptcy Procedure 3001(e) is the sole provision lightly regulating the bankruptcy exchange. Rule 3001(e)(1) provides: "If a claim has been transferred . . . before proof of the claim has been filed, the proof of

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51 *See, e.g.*, Ellias, *supra* note 15, at 28 (estimating an aggregate market value of approximately $280 billion for Chapter 11 bonds); Levitin, *supra* note 36, at 76-77 (2009) (noting that the over-the-counter nature of claims trading results in no central exchange data on overall trade volume); Adam J. Levitin, *Finding* Nemo*: Rediscovering the Virtues of Negotiability in the Wake of* Enron, 2007 COLUM. BUS. L. REV. 83, 86 (2007) ("Although the exact size of the corporate bankruptcy claims trading market is unknown, it was estimated to be in the hundreds of billions of dollars about a decade ago . . . .").

52 *See* Levitin, *supra* note 36, at 83-84 (noting the ubiquity of claims trading, even prior to bankruptcy).

53 *See* Ellias, *supra* note 15, at 28 (discussing a "new type of investor" who buys creditors' claims, creating a secondary market of activist investors); Victoria Ivashina, Benjamin Iverson & David C. Smith, *The Ownership and Trading of Debt Claims in Chapter 11 Restructurings*, 119 J. FIN. ECON. 316, 317 (2016) (identifying a rise in "creditor concentration" over the duration of bankruptcy proceedings as a result of consolidation of claims via purchases from trade creditors, leading to faster restructurings and a decreased likelihood of liquidation).

54 We use "commercial circulation" to indicate both the transfer of ownership and use as collateral.

55 Notably, the Bankruptcy Code of 1978 omitted the provisions of Sections 212 and 249 of the former Bankruptcy Act of 1898, as well as former Bankruptcy Rules 10-211 and 10-215(c)(4). *See* Gropper, *supra* note 12, at 61.

56 11 U.S.C. § 101(10)(A).

57 *Id.* § 101(5)(A).

58 *Id.* § 501(a).

claim may be filed only by the transferee . . . ."[59] If a claim is traded *after* the proof of claim is filed, Rule 3001(e)(2) requires transferees to file evidence of the transfer, effectively making the transaction visible to the debtor and giving public notice.[60] Yet, even this limited filing requirement has significant restrictions. It does not apply to the trading of claims "based on a publicly traded note, bond, or debenture"—effectively leaving all corporate bonds outside of its scope.[61] Moreover, it does not impose a specific time frame for the filing and does not apply when only the beneficial interest in the claim is transferred, as opposed to the claim itself.[62]

While federal bankruptcy law provides a relatively unconstrained environment for trading bankruptcy claims, it is crucial to recognize that the legal framework governing these transactions also includes the rules applicable to the commercial circulation of these assets. In corporate insolvencies,[63] bankruptcy claims can be divided into three primary groups: corporate bonds or bond debts, bank debts, and trade debts.[64] The transfer of ownership and use as collateral of each is subject to a specific regime with significant implications.

For instance, corporate bonds are debt securities issued to raise capital.[65] Their commercial circulation falls under the purview of UCC Article 8, wherein they are classified as *financial assets*.[66] This statute seeks to facilitate their assignment and use as collateral, offering robust protections to good faith "[p]rotected purchasers" and, thus, cloaking these assets in the mantle of negotiability.[67]

Bank debt refers to loans extended by financial institutions to a corporation.[68] The commercial circulation of these assets is governed by UCC Article 9 as a *payment intangible*.[69] This statute provides that the transfer and use as collateral of these payment rights requires a signed agreement between the parties that adequately describes the debt in question.[70] Differing from

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59 FED. R. BANKR. P. 3001(e)(1).

60 *Id.* 3001(e)(2).

61 *Id.*

62 *Id.*

63 The picture is different for personal insolvencies, but this topic lies outside the scope of this Article. *See* Levitin, *supra* note 36, at 81-86.

64 *See* Levitin, *supra* note 36, at 86. A fourth category, tort debt, is outside the scope of this Article. *See id.*

65 Charles T. Doyle, Note, *The Name Is Bond, Corporate Bond: Remedies for Breach of Bond Indentures After the Alarming* Cash America *Ruling*, 108 IOWA L. REV. 1403, 1406 (2023).

66 *See* U.C.C. § 8-102(a)(9) (AM. L. INST. & UNIF. L. COMM'N 2022).

67 *Id.* § 8-303.

68 *See generally* ADRIEN CUDBY, COMMERCIAL LENDING: PRINCIPLES AND PRACTICE (2018) (describing lending by depository and other financial institutions to commercial firms).

69 U.C.C. § 9-102(a)(61).

70 *See id.* §§ 1-201(b)(35), 9-102(a)(28), (73).

corporate bonds, bank debts are not highly negotiable; rather, they are subject to a strict *nemo dat* rule with minimal protections for good faith purchasers.[71] This implies that investors interested in this type of bankruptcy claim must exercise caution and carry out due diligence, as they acquire the debt with all its existing conditions and potential encumbrances.

Trade debts are obligations owed to suppliers and customers for goods and services provided.[72] Their commercial circulation is again governed by UCC Article 9 as *accounts*.[73] Under these rules, the transfer and use as collateral of these assets require a written and signed agreement between the parties, and third-party effectiveness of these transactions is conditional upon filing a notice in the applicable public registry at the location of the debtor.[74] Moreover, priority is established on a strict first-to-file basis.[75] This entails that, if the holder of a bankruptcy trade debt in the form of an account has previously granted a security interest over all their present and future assets, any subsequent disposition of that account results in its purchaser acquiring their interest subordinate to that of the secured creditor.

The legal distinctions between the rules governing the commercial circulation of each type of bankruptcy claim significantly affects their trading activity. Due to being highly negotiable, corporate bonds tend to be traded more actively and at high velocity.[76]

Typically, bank debt is either "syndicated, participated, or both," and trades in tranches, primarily among large financial institutions and hedge

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71 The *nemo dat* rule, a fundamental principle in property law, dictates that one cannot transfer a better title than one possesses. Under this rule, if the seller has a defective title to an asset, they cannot confer a valid title to the purchaser, even if the purchaser buys the asset in good faith and without knowledge of the defect. Consequently, assets subject to a strict application of the *nemo dat* rule do not circulate easily in the market, as potential buyers are at risk of acquiring a void or voidable title if the original owner's title is flawed. *See* Barthelmess v. Cavalier, 38 P.2d 484, 490 (Cal. Ct. App. 1934) ("Title, like a stream, cannot rise higher than its source.").

72 *See First Report of the Select Advisory Committee on Business Reorganization*, 57 BUS. LAW. 163, 237 (2001).

73 U.C.C. §§ 9-102(a)(1)–(2).

74 *See* U.C.C. §§ 9-203, 9-310.

75 *Id.* § 9-322(a).

76 *See generally* Jared A. Ellias, *Bankruptcy Claims Trading*, 15 J. EMPIRICAL LEGAL STUD. 772, 778-82 (2018) (finding that Chapter 11 corporate bonds are among the most heavily traded bonds in the corporate bond market, with turnover often exceeding 100% of face value during the bankruptcy process and trading at the eighty-fourth percentile of the overall corporate bond market). By contrast, Victoria Ivashina, Benjamin Iverson and David C. Smith report significantly lower trading activity for trade debts and limited representation of bond trading due to their reliance on Rule 3001(e) data, which excludes transfers of publicly traded securities. *See* Ivashina et al., *supra* note 53, at 318-19. This difference in liquidity supports our proposition that the negotiability of corporate bonds under UCC Article 8 facilitates secondary market trading, as compared to trade debts, which are generally classified as "accounts" under UCC Article 9 and are non-negotiable.

funds.[77] Trade debts are, in relative terms, the least actively traded of these three types of bankruptcy claims, which stems from their associated higher counterparty risks and diligence requirements.[78] The chart in Figure 1 depicts claim types and various characteristics.

77 *See* Levitin, *supra* note 36, at 87-88; OFF. OF THE COMPTROLLER OF THE CURRENCY, OCC BULL. NO. 2020-81, CREDIT RISK: RISK MANAGEMENT OF LOAN PURCHASE ACTIVITIES (2020), https://www.occ.gov/news-issuances/bulletins/2020/bulletin-2020-81.html [https://perma.cc/BMH9-HNVX] (providing guidance on how banks should manage risks when purchasing loans, including conducting independent credit analysis, performing due diligence, establishing policies aligned with strategic plans, maintaining effective credit administration practices, carefully structuring recourse arrangements, and implementing appropriate controls and monitoring systems for loan portfolio and pool purchases).

78 *See* Levitin, *supra* note 36, at 88-89 (explaining that valuing trade debt is difficult because there could be underlying, unknown contract claims that could alter the value of the debt post-transaction, and the lower value of trade debt makes them less attractive investments to large, sophisticated firms that target bonds or bank debt).

Figure 1: Bankruptcy Claim Types, Legal Regimes, and Trading Activity

Type of Bankruptcy Claim	Rule 3001(e) Applicability	Commercial Circulation Regime	Trading Activity
Corporate Bonds	Not applicable (excludes claims based on publicly traded notes, bonds, or debentures)[79]	Governed by UCC Article 8;[80] provides strong protection for good faith purchasers, making these assets highly negotiable[81]	Higher
Bank Debt	Applicable (requires filing of transfer evidence post-proof of claim)[82]	Governed by UCC Article 9 as "payment intangibles";[83] assignment and use as collateral require a signed agreement for transfer, subject to strict *nemo dat* rule[84]	Intermediate

79 *See* Ivashina et al., *supra* note 53, at 318 ("Rule 3001(e) reporting requirements explicitly exclude transfers in ownership of publicly traded debt securities (notes and bonds) . . . .").

80 *See* U.C.C. § 8-101 ("This Article may be cited as Uniform Commercial Code—Investment Securities."). UCC Article 8 defines "security" as

> an obligation of an issuer or a share, participation, or other interest in an issuer or in property or an enterprise of an issuer: (i) which is represented by a security certificate in bearer or registered form, or the transfer of which may be registered upon books maintained for that purpose by or on behalf of the issuer; (ii) which is one of a class or series or by its terms is divisible into a class or series of shares, participations, interests, or obligations; and (iii) which: (A) is, or is of a type, dealt in or traded on securities exchanges or securities markets; or (B) is a medium for investment and by its terms expressly provides that it is a security governed by this Article.

Id. § 8-102(a)(15).

81 *See id.* § 8-303(a) (defining "protected purchaser" as "a purchaser of a certificated or uncertificated security, or of an interest therein, who: (1) gives value; (2) does not have notice of any adverse claim to the security; and (3) obtains control of the certificated or uncertificated security."). A protected purchaser acquires its interest in the security free of any adverse claim. *Id.* § 8-303(b).

82 While trading in bank debts, in principle, is covered by Rule 3001(e), such transaction can circumvent the rule in practice. *See* Levitin, *supra* note 36, at 77-78.

83 *See* U.C.C. § 9-102(a)(61) ("'Payment intangible' means a general intangible under which the account debtor's principal obligation is a monetary obligation. The term includes a controllable payment intangible.").

84 *See* U.C.C. § 9-317 cmt. 4 ("[I]f a secured party had filed a financing statement, but the debtor had not entered into a security agreement and value had not yet been given, an intervening lien creditor whose lien arose after filing but before attachment of the security interest acquired rights that are senior to those of the secured party who later gives value. This result comported with

Trade Debts	Applicable (requires filing of transfer evidence post-proof of claim)	Governed by UCC Article 9 as "accounts";[85] assignment and use as collateral require a written agreement and filing for third-party effectiveness	Lower

3. Scholarly Perspectives

Bankruptcy claims trading has been the object of an impassioned debate among practitioners and academics. One view is that this practice hinders the bankruptcy process by disrupting the symbiotic relationship between debtors and creditors.[86] The general concern is that the frantic turnover of creditors will destabilize bankruptcy negotiations, increase intra-creditor conflict, spur litigation, and delay the reorganization of insolvent entities.[87] There is also a specific, long-standing fear that activist investors aggressively trade in and out of the debtors' capital structures to generate short-term gains, harming other creditors and the debtor.[88] Proponents of this view do not suggest that bankruptcy claims trading should be barred altogether, but rather argue in favor of reforms to heighten the level of disclosure that purchasers must

the *nemo dat* concept: When the security interest attached, the collateral was already subject to the judicial lien.")

85 *See id.* § 9-102(2) ("'Account' . . . means a right to payment of a monetary obligation, whether or not earned by performance, (i) for property that has been or is to be sold, leased, licensed, assigned, or otherwise disposed of, (ii) for services rendered or to be rendered, ...").

86 *See, e.g.*, Kenneth A. Rosen, *Claims Trading Warps the Bankruptcy System*, WALL ST. J. (Jan. 14, 2016, 12:02 PM) https://www.wsj.com/articles/BL-BANKB-21676 [https://perma.cc/5SPX-R5FL] (arguing that allowing claims to trade at their face value when they were acquired for a fraction of that value distorts the bankruptcy process, making it harder to "achieve the societal goals of chapter 11"); Baird & Rasmussen, *Antibankruptcy*, *supra* note 36, at 659-92 (discussing various claims trading tactics laced with ulterior motives that artificially modify the bankruptcy process, including attempts by some claim buyers to use the process to seize corporate control, not just make a financial profit); Tung, *supra* note 36, at 1686 ("Unfortunately, claims trading has the potential to impede reorganization, imposing costs on the debtor company and its creditors."); Gropper, *supra* note 12, at 59 ("[N]ot only do the bankruptcy judge's decisions affect the trades, but the trades can affect the judge's decisions as well.").

87 *See* Tung, *supra* note 36, at 1718-23 (discussing the importance of stable relationships and communication in the bankruptcy process which, when destroyed through the exit and entry of participants involved in claims trading, can lead to destructive and selfish behavior).

88 *See* Harvey R. Miller, *Chapter 11 Reorganization Cases and the Delaware Myth*, 55 VAND. L. REV. 1987, 2016 (2002) ("Chapter 11 now provides fertile opportunities for speculators. In that environment, distressed debt traders may sacrifice the long-term viability of a debtor for the ability to realize substantial and quick returns on their investments.").

provide and advocate for greater court powers to either avoid transactions or subordinate claims.[89]

A contrasting view is that claims trading makes the bankruptcy bargaining process more efficient.[90] Consolidating claims among fewer parties simplifies negotiations and enables faster reorganizations.[91] Selling claims also provides an exit for creditors wishing to avoid the reorganization process.[92] In this way, claims trading "provides . . . claimants an alternative to forced participation in the reorganization,"[93] allowing them to liquidate their claim immediately and avoid the uncertainties of bankruptcy. Preserving this exit opportunity affects capital availability and cost, especially for higher-risk debtors.[94] "To the extent that creditors are worried about being trapped into a bankruptcy, it will reduce their willingness to lend, resulting in less credit availability and[] higher costs," possibly "forc[ing] marginal borrowers into bankruptcy."[95] Specifically regarding activist investors,[96] proponents of this thesis suggest

89 *See, e.g.*, Conti et al., *supra* note 36, at 282-83 (advocating for a uniform disclosure requirement in claims trading as being beneficial to buyers, sellers, and the bankruptcy process); Logan, *supra* note 36, at 503-05 (suggesting a disclosure requirement); Baird & Rasmussen, *Antibankruptcy*, *supra* note 36, at 696 (asking for the clarification of rules that govern claims trading and their associated disclosures as a means of properly identifying stakeholders with the goal of improving the bankruptcy process); Gropper, *supra* note 12, at 61 (hypothesizing that the explosive growth of the claims trading market is due to the complete lack of regulation and at least a minimal level of oversight is essential); Whitaker, *supra* note 36, at 336-39 (advocating for structured disclosure regulations that would be more effective at protecting the efficacy of the bankruptcy process against ad hoc and inconsistent judicial regulation of claims trading). *But see* MICHELLE M. HARNER, AM. BANKR. INST., COMMISSION TO STUDY THE REFORM OF CHAPTER 11: 2012-2014 FINAL REPORT AND RECOMMENDATIONS 246 (2014), http://commission.abi.org/final-report [https://perma.cc/3QAQ-XRQ6] (finding only nominal value in recent revisions to claims trading disclosure requirements and recommending that no additional revisions be made in the potential reforms of Chapter 11).

90 *See* Beranek & Jones, *supra* note 36, at 80 (identifying multiple valid reasons why claim trading is beneficial for both the process and original claim holders); Levitin, *supra* note 36, at 98 (arguing greater liquidity in claims trading is beneficial due to the exit flexibility it allows for claim holders and its encouragement of the entry of parties with expertise and financing to speed along reorganization).

91 *See* Ivashina et al., *supra* note 53, at 334 (providing empirical evidence that companies entering bankruptcy with a greater concentration of large creditors emerge from the process faster and more successfully and that claim trading is an effective tool during bankruptcy to concentrate otherwise dispersed claims that further enhances the speed and effectiveness of the reorganization).

92 Levitin, *supra* note 36, at 93 (recognizing creditors may have a variety of reasons for wanting to exit a bankruptcy, "including liquidity constraints, administrative hassle, conflicts of interest with current customers (including the debtor), and expense or regulatory risk").

93 Beranek & Jones, *supra* note 36, at 76.

94 Levitin, *supra* note 36, at 93.

95 *Id.*

96 By activist investor, we mean those who invest in distressed debt through a bankruptcy proceeding and then seek to use their debt position to influence the bankruptcy outcome. This is compared to the term as it is used in the corporate governance literature. *See* David W. Roberts,

that these market participants "generally have a salutary impact on the residual actor problem of bankruptcy by expediting business reorganizations and protecting going-concern enterprise values."[97] These proponents conclude that the law "should encourage, rather than interfere with, the market in order to facilitate the significant benefits that claims trading offers in bankruptcy."[98]

In recent years, this debate has somewhat subsided. Empirical data appears to suggest that claims trading does not cause the feared effects[99] and may actually provide benefits.[100]

Analyzing the flows of corporate bonds of companies in Chapter 11, Jared Ellias has concluded that the negative impact of these transactions on bankruptcy outcomes is "overstated."[101] "When activist investors are present, they tend to . . . already own most of the bond issue . . . . [and] remain stable over the bankruptcy case, neither losing nor gaining members on average."[102] This dynamic facilitates stable and consistent negotiations between debtors and creditors. Furthermore, the evidence demonstrates that disruptive activist behavior—which could undermine the process—is the exception rather than the rule.[103]

In a similar vein, Victoria Ivashina, Benjamin Iverson, and David Smith have studied the effect of trade debts trading in bankruptcy, concluding that activist investors have a positive effect by consolidating these assets into fewer hands and, possibly, by encouraging better outcomes following reorganizations.[104] This empirical data suggests that bankruptcy judges and lawyers have been largely up to the challenges that claims trading has spawned, and that the American business landscape is, at the very least, better off for having a robust cohort of investors that provide liquidity to the markets for distressed assets.

Agreement in Principle: A Compromise for Activist Shareholders from the UK Stewardship Code, 48 VAND. J. TRANSNAT'L L. 543, 559 (2015).

97 Paul M. Goldschmid, Note, *More Phoenix than Vulture: The Case for Distressed Investor Presence in the Bankruptcy Reorganization Process*, 2005 COLUM. BUS. L. REV. 191, 193 (2005).

98 Robert K. Rasmussen & David A. Skeel, Jr., *The Economic Analysis of Corporate Bankruptcy Law*, 3 AM. BANKR. INST. L. REV. 85, 104 (1995).

99 Ellias, *supra* note 76, at 795 ("[T]he results in this article do strongly support the view that claims trading's disruption to bankruptcy negotiations is less severe than many critics feared.").

100 *Id.* at 795 ("Bonds . . . benefit from a strong preexisting trading infrastructure . . . .").

101 *Id.* at 773.

102 *Id.*

103 *Id.* at 774 ("[A]ctivist groups tend to appear early in the bankruptcy case and to remain stable over time.").

104 Ivashina et al., *supra* note 53, at 317 ("[O]ur results suggest that more concentrated capital structures are associated with better restructuring outcomes.").

B. *Crypto Bankruptcies*

Moving from the broader landscape of bankruptcy claims trading, we now delve into the tumultuous world of crypto bankruptcies. This Section spotlights three major cases: *Voyager*,[105] *Celsius*,[106] and *FTX*.[107] Our goal here is to describe the complexities inherent in these crypto firm failures and identify how they have forged the necessary conditions for the emergence of debt tokens.

1. Voyager Digital Holdings, Inc.

The cryptocurrency platform Voyager Digital Holdings, Inc. filed for Chapter 11 bankruptcy in July 2022.[108] Allegedly, events were precipitated by a "'run on the bank' due to the downturn in the cryptocurrency industry generally,"[109] as well as a default on a $645 million dollar loan to the cryptocurrency hedge fund Three Arrows Capital.[110] At the time of the filing, Voyager had approximately 3.5 million customers and held over $5.9 billion of crypto assets.[111]

The company entered bankruptcy with its own stalking horse proposal: a standalone restructuring plan that contemplated restoring account access and distributing to each account holder a mix of cryptocurrencies, common equity shares in the reorganized company, Voyager's own "liquidity token"—named VGX[112]—and the right to share in any recovery from Three Arrows Capital's defaulted loan.[113] A press release issued in the earliest days of the case explained that the plan might allow customers to "elect the proportion of common equity and crypto they will receive, subject to certain maximum

105 *In re* Voyager Digit. Holdings, Inc., No. 22-10943 (Bankr. S.D.N.Y. filed July 5, 2022).

106 *In re* Celsius Network LLC, No. 22-10964 (Bankr. S.D.N.Y. filed July 13, 2022).

107 *In re* FTX Trading Ltd., No. 22-11068 (Bankr. D. Del. filed Nov. 11, 2022).

108 *See* Voluntary Petition for Non-Individuals Filing for Bankruptcy, *supra* note 3, at 1.

109 Declaration of Stephen Ehrlich, Chief Executive Officer of the Debtors, in Support of Chapter 11 Petitions and First Day Motions at 1, *In re* Voyager Digit. Holdings, Inc., No. 22-10943 (Bankr. S.D.N.Y. July 6, 2022) [hereinafter Declaration of Stephen Ehrlich].

110 *Id.* at 4, 13.

111 *Id.* at 9.

112 A liquidity token is a type of digital asset created by cryptocurrency platforms to facilitate and incentivize trading activities within their ecosystems. Since 2017, Voyager had issued and administered its own token, Voyager Token (VGX). Through the company's loyalty program, customers received rewards and perks for using VGX. *See id.* at 11-12; *see also* Voyager Token Price History, COINLORE, https://www.coinlore.com/coin/voyager-token/historical-data [https://perma.cc/3PAX-5A4U] (last visited Jan. 27, 2025).

113 Declaration of Stephen Ehrlich, *supra* note 109, at 25.

thresholds."[114] Concurrently, the company solicited competing proposals from financiers and acquirors.[115]

Early in the Chapter 11 proceedings, Voyager agreed to a $1.42 billion sale to the cryptocurrency platform FTX,[116] yet this deal evaporated[117] when the latter also became insolvent.[118] Voyager then negotiated a $1.02 billion sale to the crypto exchange Binance.US.[119] The additional consideration was presumably for valuable intangible assets, such as customer information, intellectual property, and other rights and causes of action.[120]

Under the proposed sale to Binance.US, Voyager customers would have received a mix of cryptocurrency and cash,[121] with Voyager actively trading crypto assets, including VGX, to facilitate efforts to balance and settle accounts.[122] However, the U.S. Securities and Exchange Commission (SEC) objected to this plan, asserting that it might violate U.S. securities laws as an

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114 Press Release, Voyager Digit. Ltd., Voyager Digital Commences Financial Restructuring Process to Maximize Value for All Stakeholders (July 6, 2022), https://www.prnewswire.com/news-releases/voyager-digital-commences-financial-restructuring-process-to-maximize-value-for-all-stakeholders-301581177.html [http://perma.cc/LM6J-UPSN].

115 *Id.*

116 *Crypto Exchange FTX to Acquire Bankrupt Voyager's Assets*, REUTERS (Sept. 27, 2022, 6:42 AM), https://www.reuters.com/technology/crypto-exchange-ftx-acquire-bankrupt-voyagers-assets-2022-09-27 [https://perma.cc/C8PD-LPMU].

117 *See* Joint Stipulation and Agreed Order Between the Debtors and FTX US at 3, *In re* Voyager Digit. Holdings, Inc., No. 22-10943 (Bankr. S.D.N.Y. Dec. 9, 2022) (declaring the asset purchase agreement terminated); *see also* Press Release, Voyager Digit. Ltd., Voyager Digital and Voyager Official Committee of Unsecured Creditors Provide Update on Reorganization Plan (Nov. 11, 2022), https://www.prnewswire.com/news-releases/voyager-digital-and-voyager-official-committee-of-unsecured-creditors-provide-update-on-reorganization-plan-301675969.html [https://perma.cc/7U4M-KAKP] (announcing that the no-shop provision of the asset purchase agreement became invalid once FTX filed for Chapter 11).

118 On the FTX failure, see Dick & Odinet, *Questionable Virtues*, *supra* note 1.

119 Press Release, Voyager Digit. Ltd., Voyager Announces Agreement for Binance.US to Acquire Its Assets (Dec. 19, 2022), https://www.prnewswire.com/news-releases/voyager-announces-agreement-for-binanceus-to-acquire-its-assets-301706065.html [https://perma.cc/4HYJ-J43F]; *see also* Notice of Hearing on Debtors' Motion for Entry of an Order (I) Authorizing Entry into the Binance US Purchase Agreement and (II) Granting Related Relief at 2, *In re* Voyager Digit. Holdings, Inc., No. 22-10943 (Bankr. S.D.N.Y. Dec. 21, 2022).

120 *Id.* at 13-14.

121 Notice of Filing of Third Amended Joint Plan of Voyager Digital Holdings, Inc. and Its Debtor Affiliates Pursuant to Chapter 11 of the Bankruptcy Code at 23-25, *In re* Voyager Digit. Holdings, Inc., No. 22-10943 (Bankr. S.D.N.Y. Mar. 5, 2023) [hereinafter Voyager Third Amended Plan].

122 Objection of the U.S. Securities and Exchange Commission to Final Approval of the Adequacy of the Debtors' Disclosure Statement and Confirmation of the Chapter 11 Plan at 3 n.5, *In re* Voyager Digit. Holdings, Inc., No. 22-10943 (Bankr. S.D.N.Y. Feb. 22, 2023) [hereinafter Voyager Objection of the SEC] ("For example, as part of the Debtors' 'Rebalancing Exercise,' Voyager will buy and sell crypto assets, including the VGX token issued by Voyager, activity which may constitute the unregistered offer or sale of securities under federal law.").

"unregistered offer, sale, or delivery after sale of securities."[123] The regulatory risk was significant because the plan contemplated granting Voyager the authority to execute trades of various types of cryptocurrency to ensure that the proper types and ratios of coins would be available for distribution to each customer.[124] The SEC placed the burden of persuasion squarely on Voyager, asserting that "it is the Debtors' burden to present credible evidence that the provisions of the Plan are feasible and not in violation of applicable law."[125]

In March 2023, the bankruptcy court challenged the SEC's stance. It demanded that the agency provide its own legal opinion on whether the proposed plan complied with U.S. securities laws.[126] Counsel for the SEC initially declined to take a position,[127] yet subsequently clarified that "although the [SEC] itself was still unable to take a position, the SEC's 'staff' believed the VGX token may be a security," although such opinions could not "bind" the SEC at this time.[128]

Faced with the SEC's indecision, Voyager proposed that the draft plan and confirmation order should be amended to provide that distributions would be exempt from securities laws[129] and that the parties responsible for these transactions would be exempt from liability.[130] In response, the SEC filed a supplemental objection complaining about the debtor's attempts "to enjoin the SEC's exercise of its police and regulatory powers, and . . . to have the Court preemptively immunize certain securities transactions . . . ."[131] The agency proposed that the court grant the parties time to fully analyze the law and brief the court on the relevant issues.[132]

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123 *Id.* at 3.

124 Voyager Third Amended Plan, *supra* note 121, at 32.

125 Voyager Objection of the SEC at 4 (citing *In re* Gramercy Twins Assocs., 187 B.R. 112, 126 (Bankr. S.D.N.Y. 1995); *see also* 11 U.S.C. § 1129 (establishing the conditions under which the court may confirm a proposed bankruptcy plan, including the specific requirement under section 1129(a)(3) that the plan shall be confirmed only if it complies with federal law).

126 *See* Jack Schickler, *Voyager Bankruptcy Judge Says He Is 'Absolutely Shocked' by SEC Objection to Binance.US Deal*, COINDESK (Mar. 2, 2023, 11:16 AM), https://www.coindesk.com/policy/2023/03/02/voyager-bankruptcy-judge-says-he-is-absolutely-shocked-by-sec-objection-to-binance-us-deal [https://perma.cc/LEC5-SRE5].

127 Supplemental Declaration of Mark A. Renzi in Support of Confirmation of the Third Amended Joint Plan of Voyager Digital Holdings, Inc. and Its Debtor Affiliates Pursuant to Chapter 11 of the Bankruptcy Code at 2, *In re* Voyager Digit. Holdings, Inc., No. 22-10943 (Bankr. S.D.N.Y. Mar. 5, 2023).

128 *Id.*

129 Specifically, the debtor asserted the protections offered by 11 U.S.C. § 1145. *See id.* at 3 (noting Voyager had decided "to make clear that . . . the distributions pursuant to the Plan are exempt from applicable securities laws pursuant to 11 U.S.C. § 1145").

130 *Id.* at 4.

131 Supplemental Objection of the U.S. Securities and Exchange Commission to Final Approval of the Adequacy of the Debtors' Disclosure Statement and Confirmation of the Chapter 11 Plan at 1, *In re* Voyager Digit. Holdings, Inc., No. 22-10943 (Bankr. S.D.N.Y. Mar. 6, 2023).

132 *Id.* at 4.

Unmoved by the SEC's objections, the court entered an order confirming Voyager's sale to Binance.US.[133] Commentators surmised that the judge was frustrated by the SEC's vague, eleventh-hour objections,[134] which served to threaten a restructuring plan that enjoyed the support of approximately ninety-seven percent of account holders.[135] In the wake of the plan confirmation, VGX's trading price soared,[136] yet celebrations would be short-lived. In April 2023, Binance.US terminated the asset purchase agreement, citing an "unpredictable operating environment" caused by a "hostile and uncertain regulatory climate."[137]

Voyager is currently focusing on winding down operations. Under its confirmed plan, customers would be credited with a mix of digital currencies, VGX, and stablecoins.[138] The company initially predicted a thirty-five percent recovery for account holders, with additional contingent distributions generated via subsequent settlements with Three Arrows Capital and FTX.[139]

2. Celsius Network LLC

Celsius Network LLC was a cryptocurrency decentralized bank, lender, bitcoin miner, and retail investment platform with 1.7 million customers and

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133 *See* Corrected and Amended Order (I) Approving the Second Amended Disclosure Statement and (II) Confirming the Third Amended Joint Plan of Voyager Digital Holdings, Inc. and Its Debtor Affiliates Pursuant to Chapter 11 of the Bankruptcy Code at 6, 24-25, *In re* Voyager Digit. Holdings, Inc., No. 22-10943 (Bankr. S.D.N.Y. Mar. 10, 2023).

134 Nina Bambysheva, *Binance Deal for Voyager Assets Threatened by U.S., New York Regulators*, FORBES (Feb. 23, 2023, 4:33 PM), https://www.forbes.com/sites/ninabambysheva/2023/02/23/binance-deal-for-voyager-assets-threatened-by-us-new-york-regulators/?sh=341ecad53516 [https://perma.cc/XYP9-E5KG].

135 Declaration of Leticia Sanchez Regarding the Solicitation and Tabulation of Votes on the Third Amended Joint Plan of Voyager Digital Holdings, Inc. and Its Debtor Affiliates Pursuant to Chapter 11 of the Bankruptcy Code at 13 n.10, *In re* Voyager Digit. Holdings, Inc., No. 22-10943 (Bankr. S.D.N.Y. Feb. 28, 2023).

136 *See* Michael Bodley, *Voyager's VGX Token Soars as Bankruptcy Judge Signs Off on Binance.US Plan*, BLOCKWORKS (Mar. 7, 2023, 5:42 PM), https://blockworks.co/news/judge-approves-voyager-binance-plan [https://perma.cc/Y62U-GRUT] ("As word of the new deal percolated on Tuesday . . . VGX jumped again . . . up 25.8% on the day through early Tuesday evening.").

137 Caitlin Ostroff, *Binance.US Terminates Deal to Buy Voyager Assets*, WALL ST. J. (Apr. 25, 2023, 6:31 PM), https://www.wsj.com/livecoverage/stock-market-today-dow-jones-04-25-2023/card/binance-us-terminates-deal-to-buy-voyager-assets-JsMijeVAzLdwhw5CcH42 [https://perma.cc/BW3P-U7MW].

138 For a rich discussion of stablecoins, see generally Kara Bruce, Christopher K. Odinet & Andrea Tosato, *The Private Law of Stablecoins*, 54 ARIZ. ST. L.J. 333 (2023).

139 *See* Dietrich Knauth, *Bankrupt Crypto Lender Voyager Digital Predicts 35% Customer Payout*, REUTERS (May 17, 2023, 5:55 PM), https://www.reuters.com/technology/bankrupt-crypto-lender-voyager-digital-predicts-35-customer-payout-2023-05-17 [https://perma.cc/5BP6-K3LE] ("Crypto lender Voyager Digital said Wednesday that customers will soon recover about 35% of their cryptocurrency deposits . . . . Any distribution beyond the initial 35% would depend on the result of future litigation.").

deposits worth approximately eight billion dollars.[140] It also sought bankruptcy protection in July 2022.[141] Its Chapter 11 filing came approximately one month after the company froze withdrawals and transfers from customer accounts due to extreme market conditions.[142]

For the present inquiry into debt tokens, the Celsius bankruptcy is noteworthy for bankruptcy Judge Glenn's precedent-setting January 2023 decision. In that decision, Judge Glenn held that the debtor (rather than its customers) owns most of the cryptocurrency held pursuant to its "Earn" program.[143] This means that customers not only do not own the assets themselves, but they have only general unsecured claims to recover the value of the assets they deposited into interest-earning accounts on the Celsius platform.[144]

This decision sent shockwaves through the industry because it stripped away the protections customers believed they were entitled to in the event of a cryptocurrency exchange or retail platform bankruptcy.[145] In effect, the decision highlighted the fact that, in the absence of the special rules and protections afforded to traditional banking and brokerage accounts, customers bear the insolvency risk associated with crypto platforms. In some cases, this allocation of risk is simply the chosen business model; in others, it is the result of ignorance and/or oversight, as the crypto platform could have legally structured itself in such a way that account holders would be vested with a property interest that would be safe from creditors' claims.

Following the January 2023 decision, Celsius, much like Voyager, spent its time in Chapter 11 working to identify a suitable acquirer that would enable it to restructure and preserve value for its customers and creditors. In September 2023, Celsius creditors approved a reorganization plan under which company assets would be sold to Fahrenheit LLC, with an estimated

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140 Jim Probasco, *The Celsius Withdrawal Pause Rattles Crypto World*, INVESTOPEDIA (June 13, 2022), https://www.investopedia.com/crypto-lender-celsius-pauses-withdrawals-5409545 [https://perma.cc/7LLD-8EMQ].

141 *See* Voluntary Petition for Non-Individuals Filing for Bankruptcy, *supra* note 4.

142 *See* Tom Wilson, Hannah Long & Elizabeth Howcroft, *Crypto Contagion Fears Spread After Celsius Network Freezes Withdrawals*, REUTERS (June 14, 2022, 1:55 AM), https://www.reuters.com/technology/crypto-firm-celsius-pauses-all-transfers-withdrawals-between-accounts-2022-06-13 [https://perma.cc/V55J-PK4X].

143 Memorandum Opinion and Order Regarding Ownership of Earn Account Assets at 4, *In re* Celsius Network LLC, No. 22-10964 (Bankr. S.D.N.Y. Jan. 4, 2023).

144 *Id.* at 6, 30.

145 *See* Ronit J. Berkovich, Jessica Liou & John Marinelli, *Winter Wears On: Celsius Court Rules That Certain Customer Deposits are Property of the Bankruptcy Estate*, WEIL RESTRUCTURING BLOG (Jan. 6, 2023), https://restructuring.weil.com/cryptocurrency-issues/winter-wears-on-celsius-court-rules-that-certain-customer-deposits-are-property-of-the-bankruptcy-estate [https://perma.cc/6BJM-MTGB].

creditor recovery between sixty-seven percent and eighty-five percent.[146] Concurrently, Celsius would relaunch itself as a bitcoin mining company.[147]

3. FTX Trading, Ltd.

Founded in 2019 by Sam Bankman-Fried, FTX quickly rose to prominence in the world of digital assets.[148] Its activities covered the whole gamut of crypto finance, encompassing a major exchange, derivatives and options trading, and an NFT marketplace.[149] It operated in multiple jurisdictions and had a significant U.S. presence.[150] At its height, FTX had over one million users worldwide and a valuation of over thirty-two billion dollars.[151]

FTX's growth was propelled by multiple factors: an opaque relationship with Alameda Research, a trading firm indirectly controlled by Bankman-Fried, investments from renowned venture capital firms, and an aggressive marketing campaign[152] that included naming rights to a Miami stadium and celebrity endorsements of crypto broadly and FTX specifically from the likes of Matt Damon, Reese Witherspoon, and Kim Kardashian.[153] The company and its founder were notably active in philanthropic initiatives and U.S. politics, making substantial donations to political candidates and engaging with regulators.[154]

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146 Notice of Successful Bidder and Backup Bidder at 3, *In re* Celsius Network LLC, No. 22-10964 (Bankr. S.D.N.Y. May 25, 2023); *see also* Josh Adams, *Celsius 2.0: Creditor Refunds Timeline as Fahrenheit Hatches New Plan for Failed Crypto Lender*, CCN (Jan. 2, 2024, 11:44 AM) https://www.ccn.com/celsius-2-0-creditor-refunds-timeline-as-fahrenheit-hatches-new-plan-for-failed-crypto-lender [https://perma.cc/5E2D-UWY7]; Amaka Nwaokocha, *Fahrenheit Wins Bid to Acquire Assets Of Crypto Lender Celsius*, COINTELEGRAPH (May 25, 2023), https://cointelegraph.com/news/fahrenheit-wins-bid-to-acquire-assets-of-crypto-lender-celsius [https://perma.cc/62S9-M99L].

147 *See* Adams, *supra* note 146.

148 *See generally* MICHAEL LEWIS, GOING INFINITE: THE RISE AND FALL OF A NEW TYCOON (2023); ZEKE FAUX, NUMBER GO UP: INSIDE CRYPTO'S WILD RISE AND STAGGERING FALL (2023).

149 Timothy Smith, *What Was FTX? An Overview of the Exchange*, INVESTOPEDIA (June 7, 2024), https://www.investopedia.com/ftx-exchange-5200842 [https://perma.cc/3ZSE-9973].

150 *Id.*

151 *See* Zahn, *supra* note 28.

152 *See, e.g.*, FTX, *FTX Unveils First Luxury Fashion Campaign Featuring Gisele Bündchen and Sam Bankman-Fried and Their Shared Passion for Philanthropy*, PR NEWSWIRE (Apr. 28, 2022, 9:00 AM), https://www.prnewswire.com/news-releases/ftx-unveils-first-luxury-fashion-campaign-featuring-gisele-bundchen-and-sam-bankman-fried-and-their-shared-passion-for-philanthropy-301534352.html [https://perma.cc/B92U-BAU8].

153 Lora Kelly, *Which Celebrities Are Facing Backlash for Crypto Promotion?*, N.Y. TIMES (Mar. 23, 2023), https://www.nytimes.com/2023/03/23/style/crypto-sec-lindsay-lohan-jake-paul.html [https://perma.cc/EW44-6TAK].

154 *See* Caitlin Reilly, *FTX Leaders' Political Donations Topped $1M Weeks Before Bankruptcy*, ROLL CALL (Feb. 23, 2023, 5:30 AM), https://www.rollcall.com/2023/02/23/ftx-leaders-political-

The collapse of FTX began on November 2, 2022, when a CoinDesk article alleged that the company was using customer funds to cover the losses of its affiliate company Alameda.[155] This sparked a wave of customer panic that accelerated on November 6 when Changpeng Zhao, the CEO of rival exchange Binance, tweeted that his firm would sell off all their FTX holdings.[156] As withdrawals mounted, FTX approached Binance for a buyout, but the deal collapsed on November 9.[157] With FTX facing an expanding blackhole on its balance sheet, Sam Bankman-Fried resigned two days later.[158] That same day, the company filed for bankruptcy protection in Delaware and entered into similar proceedings in the Bahamas a day later.[159]

Shielded by Chapter 11 bankruptcy protection, FTX underwent a series of hearings and motions to consolidate corporate assets, establish creditor committees, and appoint new leadership.[160] The new management's mandate involved stabilizing operations, cooperating with investigators, and maximizing creditor recovery. Throughout the proceedings, judges, examiners, and international law enforcement worked to unravel FTX's intricate web of over one hundred corporate entities.[161] Their investigations centered on allegations of misused customer funds, market manipulation, and political donation irregularities.[162]

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donations-topped-1m-weeks-before-bankruptcy [https://perma.cc/ERF8-CRZG]; Thalia Beaty & Glenn Gamboa, *FTX Bankruptcy Also Endangers Founder's Philanthropic Gifts*, ASSOCIATED PRESS (Nov. 14, 2022, 1:11 PM), https://apnews.com/article/cryptocurrency-technology-business-philanthropy-9617e597560e5d5ee3b322a2c09c2520 [https://perma.cc/W85U-G3CQ].

155 *See* Ian Allison, *Divisions in Sam Bankman-Fried's Crypto Empire Blur on His Trading Titan Alameda's Balance Sheet*, COINDESK (Aug. 16, 2023, 5:56 PM), https://www.coindesk.com/business/2022/11/02/divisions-in-sam-bankman-frieds-crypto-empire-blur-on-his-trading-titan-alamedas-balance-sheet [https://perma.cc/F6WT-ZBX6].

156 Steven Zeitchik, *This Enigmatic Billionaire Just Took Down a Crypto Rock Star*, WASH. POST (Nov. 9, 2022, 2:14 PM), https://www.washingtonpost.com/business/2022/11/08/binance-ftx-crypto-zhao [https://perma.cc/ZP83-374T].

157 MacKenzie Sigalos & Kate Rooney, *Binance Backs out of FTX Rescue, Leaving the Crypto Exchange on the Brink of Collapse*, CNBC (Nov. 10, 2022, 7:58 AM), https://www.cnbc.com/2022/11/09/binance-backs-out-of-ftx-rescue-leaving-the-crypto-exchange-on-the-brink-of-collapse.html [https://perma.cc/K4VZ-2C9Y].

158 *See* Zahn, *supra* note 28 ("Nov. 11 . . . Bankman-Fried resigned as CEO and was replaced by John J. Ray III . . . .").

159 *See id.*; *FTX Digital Markets Ltd. (in Official Liquidation) ("FTX Digital")*, PWC, https://www.pwc.com/bs/en/services/business-restructuring-ftx-digital-markets.html [https://perma.cc/R8DR-5JBE] (last visited Jan. 27, 2025).

160 PWC, *supra* note 159.

161 Scott Nover, Amanda Shendruk & Nate DiCamillo, *The Scrollable, Annotated, Incredibly Complex Org Chart of FTX and Sam Bankman-Fried's Fallen Empire*, QUARTZ (Nov. 17, 2022), https://qz.com/ftx-bankruptcy-filing-reveals-a-remarkably-convoluted-c-1849797496 [https://perma.cc/JV2A-U666].

162 *See generally* Matthew Goldstein & David Yaffe-Bellany, *FTX Inquiry Expands as Prosecutors Reach Out to Former Executives*, N.Y. TIMES (Feb. 4, 2023),

The FTX bankruptcy proceedings have been extremely complex, giving rise to an array of novel legal issues that will require extensive scholarly analysis in the years to come.[163] For present purposes, however, we want to concentrate our attention exclusively on the bankruptcy claims trading aspect. First, from the early days of the FTX insolvency proceeding, it became readily apparent that a huge number of individual investors and customers held unsecured claims against FTX.[164] Notably, the Delaware bankruptcy court developed a special proof-of-claim process for "customer claims," defined to mean those claims "arising out of or related to (a) any cash, cryptocurrency, digital assets or other assets held by such person or entity in an account on any FTX Exchange as of the Petition Date . . . or (b) any other investment or trading activities on any FTX Exchange . . . ."[165] The special process gave customers a more generous filing date[166] and facilitated the submission of sensitive personal and financial information through a customer claims portal rather than via publicly available filings.[167]

Second, as we noted at the beginning of this Part, individual creditors have been eager to dispose of their FTX bankruptcy claims. In the days immediately following the collapse, there were reports of claims of individual depositors being actively traded for between five to eight cents on the dollar.[168] Within months after FTX filed for bankruptcy, approximately $91.7 million in individual customer claims were already listed on the claims trading platform Xclaim.[169] Concurrently, other creditors were selling their claims via another online firm, Cherokee Acquisition, for eight to twelve

https://www.nytimes.com/2023/02/04/business/ftx-sbf-inquiry-executives.html [https://perma.cc/SU4L-T26R].

163 For an initial overview, see Dick & Odinet, *The Public and the Private of the FTX Bankruptcy*, *supra* note 1.

164 *See FTX and the Serengeti of Bankruptcy*, NPR: PLANET MONEY (Apr. 19, 2024, 6:30 PM), https://www.npr.org/transcripts/1197958783 [https://perma.cc/J2E2-Y6DB].

165 Order (I)(A) Establishing Deadlines for Filing Customer Proofs of Claim, (B) Approving Procedures for Submitting Proofs of Claim and (C) Approving the Form and Manner of Notice Thereof and (II) Granting Related Relief at 2, *In re* FTX Trading Ltd., No. 22-11068 (Bankr. D. Del. June 28, 2023).

166 *Id.* at 3.

167 *Id.* at 5-6.

168 Joe Weisenthal, *People are Already Buying Depositor Claims on FTX*, BLOOMBERG (Nov. 17, 2022, 4:36 PM), https://www.bloomberg.com/news/articles/2022-11-17/people-are-already-buying-depositor-claims-on-ftx [https://perma.cc/N5FE-FVBG]; Yaffe-Bellany & Goldstein, *supra* note 34.

169 *See* Sam Reynolds, *FTX Creditor Claims Going for 13 Cents on the Dollar on Bankruptcy Marketplace Xclaim*, COINDESK (May 9, 2023, 4:05 AM), https://www.coindesk.com/business/2023/01/11/ftx-creditor-claims-going-for-13-cents-on-the-dollar-on-bankruptcy-marketplace-xclaim [https://perma.cc/TX9G-LUC6].

cents on the dollar.[170] This bankruptcy trading activity has not abated. Court records show that distressed debt specialist hedge funds—including Farallon Capital, Silver Point Capital, Hudson Bay, Contrarian Capital Management, and Canyon Partners—steadily acquired claims during the first twelve months of the case.[171] More recently, one of FTX's original fundraisers "started an online claims trading platform for FTX customers and began buying some smaller claims for himself . . . ."[172] This frenzied bankruptcy claims trading activity reflects an eagerness by creditors to salvage value and by speculators to profit from the crypto exchange's remains.

4. The Forging of Debt Tokens

Collectively, the bankruptcies of Voyager, Celsius, and FTX created a unique set of conditions, as we set forth below, that catalyzed the emergence of debt tokens.

First, a huge number of individual customers of crypto platforms unexpectedly and suddenly found themselves locked out of their accounts and unable to access their valuable digital assets. Shortly thereafter, they were informed that they had become creditors in bankruptcy proceedings.

Second, these bankruptcies have proven to be especially contentious and tortuous. They are rife with substantive and procedural legal issues, attract considerable public and regulatory scrutiny, and involve digital assets that are illiquid and highly volatile.

Third, a large number of these creditors want to liquidate their bankruptcy claims without waiting for the legal proceedings to play out and are keen to use electronic platforms and blockchain technology to do so.

Against this backdrop, entrepreneurs familiar with distributed ledger technology sought to engage with this cohort of distressed crypto creditors by offering them a crypto-based solution. During the early stages of the Celsius bankruptcy, rumors circulated that the platform was exploring a so-called "tokenized recovery," pursuant to which Celsius customers would receive distributions in the form of a newly-created debt token.[173] According to these reports, "[t]okens would essentially represent a ratio of what

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170 Sarah Jansen, *This Firm Offers 8 to 12 Cents on a Dollar of FTX User Deposit Claims*, NEWSBTC (Dec. 9, 2022), https://www.newsbtc.com/news/this-firm-offers-8-to-12-cents-on-a-dollar-of-ftx-user-deposit-claims [https://perma.cc/2ULQ-U9LP].

171 Yaffe-Bellany & Goldstein, *supra* note 34.

172 *See id.*

173 *See, e.g.*, Paige Tortorelli & Kate Rooney, *Celsius Has a Hail Mary Bankruptcy Plan: Turn Its Debt into a New Cryptocurrency*, CNBC (Sept. 23, 2022, 1:12 PM), https://www.cnbc.com/2022/09/23/celsius-has-a-hail-mary-bankruptcy-plan-turn-its-debt-into-a-new-cryptocurrency-.html [https://perma.cc/S732-AW5G].

customers are owed and what the firm has left on its balance sheet."[174] However, these rumors never turned into a concrete offering.

Then, in early 2023, a decentralized autonomous organization known as DebtDAO issued a crypto token called FUD.[175] This token purportedly represented a bond or debt instrument connected to the obligations owed by the now-bankrupt company FTX to its "highest quality creditors," amounting to tens of millions of dollars.[176] The promise behind the FUD token was that its holders would have a right to receive a portion of the payout that FTX would eventually distribute to its creditors.[177] Notably, on February 17th, 2023, FTX issued a warning, stating that they had not issued any debt tokens and that any such offering was unauthorized.[178] The value of FUD tokens subsequently collapsed, inflicting heavy losses on early investors.[179]

Most recently, in April 2023, a fledgling platform known as OPNX (short for Open Exchange) launched its debt token offering to meet the needs of "over 20 [million] users who currently have $20 billion of claims trapped in bankruptcy proceedings."[180] The company boasted that its platform would "allow individuals with no other solution to easily register their claims, then sell them directly into crypto on orderbooks at fair prices, or use their claim as portfolio margin."[181] It stated that it accomplished the so-called "tokenization" of bankruptcy claims through "a membership model based on staking bankruptcy claims to derive benefits such as zero-fee trading."[182] With plans to eventually tokenize the claims of all active crypto bankruptcy cases, the company aimed to launch its first bankruptcy tokenization product for Celsius customers in late May 2023.[183]

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174 Jamie Redman, *Celsius Floats Possibility of Debt Token to Repay Creditors; Secures Court Approval to Process Customer Withdrawals*, BITCOIN.COM NEWS (Jan. 25, 2023), https://news.bitcoin.com/celsius-floats-possibility-of-debt-token-to-repay-creditors-secures-court-approval-to-process-customer-withdrawals [https://perma.cc/45XG-JLPP].

175 HTX, *supra* note 9.

176 *Id.*

177 *Id.*

178 FTX (@FTX_Official), TWITTER (Feb. 17, 2023, 10:30 AM), https://twitter.com/FTX_Official/status/1626605058698752001?s=20 [https://perma.cc/8M3F-LWB5].

179 Oluwapelumi Adejumo, *FTX User Debt (FUD) Tokens Decline 10% as 18M Burn Becomes Imminent*, CRYPTOSLATE (Feb. 7, 2023, 4:41 PM), https://cryptoslate.com/ftx-user-debt-fud-tokens-decline-10-as-18m-burn-becomes-imminent [https://perma.cc/T87N-XZNH].

180 *See Make the Most of Your Crypto on OPNX*, OPNX, http://web.archive.org/web/20230601175731/https://opnx.com [https://perma.cc/B32K-A8A5] (last visited Jan. 27, 2025).

181 *Id.*

182 Samuel Wan, *OPNX Opening Its Bankruptcy Claims Product for Celsius Users Soon*, CRYPTOSLATE (May 24, 2023, 6:41 PM), https://cryptoslate.com/opnx-opening-its-bankruptcy-claims-product-for-celsius-users-soon [https://perma.cc/2HL3-H44C].

183 *Id.*

In press coverage, OPNX cited liquidity as the key benefit for Celsius customers: "The product provides an alternative to the lengthy bankruptcy administration process, which can take many years to resolve."[184] As to what prompted the company to choose Celsius as the first set of bankruptcy claims to tokenize, the company cited the availability of Celsius user data: "Celsius has a completely unredacted database, so it's very easy to mine that information, parse it in the way you need and make sense of it to work towards a seamless validation."[185] In essence, the accessibility of the company's database helped create an opportunity for major financial market innovation.

This unfolding narrative sets the stage for a detailed examination of the debt tokens offered by OPNX—an examination which we provide subsequently in Part II.

II. STUDY OF DEBT TOKENS IN BANKRUPTCY CLAIMS MARKETS

In an effort to better understand current practices involving the use of tokens in bankruptcy claims trading, we undertook a study of the offering of such debt tokens by the crypto exchange company Open Technology Markets Ltd. (often referred to as OpenExchange or simply OPNX).[186] OPNX, which was formed under the laws of the Republic of Seychelles,[187] aimed to offer a public marketplace for the trading of bankruptcy claims arising from the insolvencies of crypto companies[188]—specifically the FTX and Celsius bankruptcies.[189] By studying the offering materials made available to interested investors, we can gain insight into how the idea of using crypto technologies to increase liquidity in bankruptcy claims trading is being implemented.

We note that this is but one example of a debt token program. OPNX's products may not be representative of other companies' offerings. But while a handful of others purport to offer or be on the verge of offering debt tokens,[190] OPNX was the only issuer that had readily accessible information

184 Samuel Wan, *OPNX Explains Why Celsius Was Prioritized Over FTX, Others for Bankruptcy Tokenization*, CRYPTOSLATE (July 11, 2023, 1:51 AM), https://cryptoslate.com/opnx-explains-why-celsius-was-prioritized-over-ftx-others-for-bankruptcy-tokenization [https://perma.cc/856N-D95E].

185 *Id.*

186 OPNX, *supra* note 180.

187 *See Terms of Service*, GITHUB, https://github.com/opnx-github/opnx-policies/blob/main/Terms%20of%20Service.md [https://perma.cc/C65J-G8JC].

188 *OPNX*, *Our Story*, *supra* note 18.

189 Knight, *supra* note 25.

190 Patricia Zamwana, *FUD (FTX User Debt), a Strange Token*, COINPRI (Feb. 9, 2023), https://coinpri.com/news/cryptocurrency/fud-ftx-user-debt-a-strange-token [https://perma.cc/V49P-UNYA].

from which an analysis of the underlying scheme and related transactions could be developed and through which debt tokens of this kind could be readily transacted.[191] For this reason, OPNX's transactional documents provide the most useful window into the nascent world of debt tokens.

We also note that our study of the OPNX terms is a snapshot in time. The discussion below represents the legal documents as they existed when we studied them from August 4–8, 2023. Like so many crypto firms, OPNX changed their terms of service periodically.[192] What follows is a description of OPNX's structure and its approach to the Celsius and FTX bankruptcy claims, followed by an analysis of its debt token offering documents, related white papers, and public-facing modules.

Finally, we draw attention to the fact that this paper, in substantially final form, was made publicly available online on January 16, 2024.[193] Subsequently, in early February 2024, OPNX declared its intention to discontinue all services.[194] The platform instructed its users to resolve all open positions by February 7 and remove their assets from the platform by February 14.[195] After this date, withdrawals would no longer be possible.[196]

A. *Token Issuer and Offering Materials*

OPNX declared that "in the wake of [crypto] insolvencies" where "user accounts were frozen/inaccessible, with claims payouts likely to take many years," it had come up with a solution: the creation of "a public marketplace for claims onboarding and trading on order books."[197] Through their platform,

191 In early April 2023, OPNX posted a series of offering documents to the online portal GitHub. *See OPNX-Github/OPNX-Policies*, GITHUB, https://github.com/opnx-github/opnx-policies [https://perma.cc/2QAH-3GKS] (last visited Jan. 27, 2025) (providing legal policy documents, such as terms of service and risk disclosures).

192 *See History for OPNX-Policies / Terms of Service.md*, GITHUB, https://github.com/opnx-github/opnx-policies/commits/main/Terms%20of%20Service.md [https:// https://perma.cc/3ZUW-DPVS] (last visited Feb. 13, 2025) (showing changes made from the original terms on April 1, 2023, April 3, 2023, April 6, 2023, May 31, 2023, June 1, 2023, and most recently on June 2, 2023).

193 *See* Diane Lourdes Dick, Christopher K. Odinet & Andrea Tosato, *Debt Tokens*, 173 U. PA. L. REV. (forthcoming 2025), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4694629 [https://perma.cc/J6LF-PNYP] (noting the SSRN date of first posting).

194 Tom Mitchelhill, *Three Arrows Capital Co-Founders' OPNX Exchange Is Shutting Down*, COINTELEGRAPH (Feb. 1, 2024), https://cointelegraph.com/news/three-arrows-capital-opnx-exchange-shutting-down-february [https://perma.cc/8FSN-UYNQ]. This included taking down the OPNX website, prompting us to rely on archived internet snapshots—where they exist—in addition to our personal files for the purposes of publishing this Article in early 2025.

195 *Id.*

196 *Id.* While we cannot establish a causal link between our analysis and OPNX's demise, our study uncovered several crucial flaws with their debt token offerings and was downloaded over 2,000 times on SSRN shortly after its release, as well as being widely discussed on X. *See* Lourdes Dick et al., *supra* note 193.

197 OPNX, *Our Story*, *supra* note 18.

crypto bankruptcy claim holders could "immediately unleash their locked claims directly into crypto or use them as margin capital."[198] Taken together, OPNX stated that it was building "an open, transparent and accessible financial world."[199]

At least that was the promise. In the following sections, we interrogate these statements by analyzing the front-facing materials on OPNX's website and accompanying blog material and exploring, in depth, what the company promised, how it conceived of the idea of tokenizing bankruptcy claims, and how it designed the tokenization process for those holding FTX claims. We also overlay this background with a deep dive into the assortment of legal documents that OPNX had released to the public through the website GitHub,[200] specifically analyzing how they comported (or did not comport) with the promises that the company made in their public-facing marketing materials.

1. OPNX, the Issuer and Exchange Platform

We start with some background on OPNX itself. The company was launched in April 2023 as a platform for trading bankruptcy claims related to crypto company insolvencies—a market valued at around twenty billion dollars.[201] OPNX was created by the founders of the now-bankrupt crypto hedge fund, Three Arrows Capital,[202] and the co-founders of the now-bankrupt Hong Kong-based crypto exchange Liquidity Technologies, Ltd. (more commonly known as CoinFLEX).[203]

At the start, the company offered claims related to the FTX bankruptcy and the bankruptcy of CoinFLEX.[204] Initially, OPNX issued CoinFLEX's FLEX as its liquidity token to encourage trading of various cryptocurrencies—such as Bitcoin and Ether—on its platform.[205] For

198 *Id.*

199 *Id.*

200 GITHUB, *supra* note 191.

201 Shaurya Malwa, *OPNX Exchange, Which Offers FTX Claims Trading, Led by Three Arrows Founders, Is Now Live*, COINDESK (Apr. 4, 2023, 6:11 PM), https://www.coindesk.com/markets/2023/04/04/opnx-exchange-which-offers-ftx-claims-trading-led-by-three-arrows-founders-is-now-live [https://perma.cc/G66D-BTT2].

202 Tom Mitchelhill, *OPNX CEO Scolds Claimed Backers After Some Deny Investing in the Firm*, COINTELEGRAPH (Apr. 24, 2023), https://cointelegraph.com/news/opnx-ceo-scolds-claimed-backers-after-they-deny-investing-in-the-firm [https://perma.cc/52NS-CMGA].

203 Malwa, *supra* note 201; Tom Blackstone, *CoinFLEX Creditors Dissatisfied with Restructuring to OPNX: Report*, COINTELEGRAPH (Nov. 24, 2023), https://cointelegraph.com/news/coin-flex-creditors-unsatisfied-with-restructuring-process-to-opnx [https://perma.cc/F6LY-BDMS].

204 Malwa, *supra* note 201.

205 *Id.* For a discussion of OPNX's rebalancing mechanism for FLEX, see *FLEX Transparency*, OPNX (Apr. 3, 2023), https://web.archive.org/web/20240202224312/https://news.opnx.com/16962-flex-transparency [https://perma.cc/8XNC-LLSB].

example, customers using FLEX instead of other payment methods would receive a "50% discount on trading fees."[206] Subsequently, OPNX introduced a second token, OX, crafted to serve dual functions as both a liquidity and governance token.[207] OX was intended to play a crucial role in the tokenization process of bankruptcy claims.[208] As noted above, the firm started in April 2023 and continued to operate until its eventual shuttering in the middle of February 2024, coinciding with continued legal troubles surrounding the downfall of FTX.[209]

2. Representations About Tokenizing Bankruptcy Claims

In their offering materials, OPNX made a number of claims about the notion of tokenization, its potential uses and implications, and how tokens may be utilized to represent bankruptcy claims. This information was contained in a portion of the OPNX website titled "Learn: Crypto and Claims 101," where one could access a series of modules and white papers ranging from understanding the basics of the FTX bankruptcy, to information for Celsius creditors, to the tokenization of claims, and more.[210] We combed through each of these modules, as well as accompanying white

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206 Malwa, *supra* note 201. For information on the sliding scale for trading fee discounts using FLEX, see *Changes to Fee Schedule*, OPNX (May 14, 2023), https://web.archive.org/web/20240225150259/https://news.opnx.com/19946-changes-to-fee-schedule [https://perma.cc/HC96-NW4U].

207 *See Introducing $OX Token*, OPNX (May 31, 2023), https://web.archive.org/web/20240225155128/https://news.opnx.com/21528-introducing-ox-token [https://perma.cc/6YZE-FURQ] (explaining how holders of OX participate in governance and benefit from reduced trading fees); Oliver Knight, *Bankruptcy Claims Exchange OPNX Issues New Governance Token, FLEX Rises 16%*, COINDESK (June 1, 2023, 12:31 PM), https://www.coindesk.com/business/2023/06/01/bankruptcy-claims-exchange-opnx-issues-new-governance-token-flex-rises-16 [https://perma.cc/2SER-5FHM] (noting the increase in trading volume and liquidity on the platform since the release of the governance token).

208 *Introducing $OX Token: Stake to Trade for Free*, OPNX, https://web.archive.org/web/20231209152304/https://opnx.com/en/learn/ox-token-opnx [https://perma.cc/4N5Y-66TP] (last visited Jan. 28, 2025) ("We're tokenizing traditionally inaccessible assets to enhance their liquidity and price transparency, starting with crypto bankruptcy claims . . . .").

209 Nick Baker, *OPNX, the Exchange Built by Founders of Doomed Hedge Fund Three Arrows, Is Shutting Down*, COINDESK (Feb. 1, 2024, 9:47 PM), https://www.coindesk.com/business/2024/02/01/opnx-the-exchange-build-by-founders-of-doomed-hedge-fund-three-arrows-is-shutting-down [https://perma.cc/E253-ZX4N]; *see also* Vince Quill, *FTX Creditors Object to Bankruptcy Reorganization Plan*, COINTELEGRAPH (June 6, 2024), https://cointelegraph.com/news/ftx-creditors-object-to-bankruptcy-reorganization-plan [https://https://perma.cc/27HJ-7FNL] (referring to the February 2024 lawsuit filed by FTX Creditors against Sullivan & Cromwell, the law firm overseeing FTX's bankruptcy).

210 *Learn About OPNX Crypto*, OPNX, https://web.archive.org/web/20231209160829/https://opnx.com/en/learn [https://perma.cc/X5NC-LX49] (last visited Jan. 28, 2025); OPNX, *supra* note 208.

papers, in order to find out the most salient information regarding the creation and trading of debt tokens.

OPNX described tokenization as "turning an asset (typically, but not necessarily, a financial instrument) into a digital certificate stored on a piece of immutable blockchain data."[211] It included "converting financial instruments or real assets, such as property or art, into digital tokens that have a financial value."[212] The company stated that tokenization "has many advantages over traditional methods of ownership" in that it provides superior "fungibility, transparency, and liquidity."[213] OPNX promised that tokenization, "through the use of blockchain technology," is a "game-changing technology" that "provides a secure and transparent way to track ownership and transactions."[214]

In terms of fungibility, OPNX explained that tokenization of an asset allows one to create tokens that "represent a fraction of an asset's value" which are backed by OPNX pooling all claims and trading them on order books.[215] This pooling, the company argued, reduces transactions costs and allows small and large claims to be traded through the benefits of scale.[216]

In terms of benefits, OPNX stated that creditors who use the platform to trade their bankruptcy claims would enjoy "[m]inimized counterparty risk and fraudulent transactions," "[t]ransparent market-based pricing," "[f]air price discovery," "[l]ow trading costs," and "[a]dded utility by using claims as collateral to trade crypto futures."[217] For investors who sought to purchase these claims, OPNX offered "[p]ooled liquidity and buying claims in size," "[a]bility to easily resell claims," "[l]ower trading costs," and the ability to use the claims for crypto futures trading collateral.[218]

3. Describing OPNX's Bankruptcy Tokens

Beyond presenting itself as a cryptocurrency exchange, OPNX conspicuously purported on its website that its customers could buy claims

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211 *Tokenizing Bankruptcy Claims: A Revolutionary Approach to Maximizing Claim Utility*, OPNX, https://web.archive.org/web/20231203032307/https://opnx.com/en/learn/tokenizing-bankruptcy-claims [https://perma.cc/4YND-UGGC] (last visited Jan. 28, 2025).

212 *Id.*

213 *Id.*

214 *Id.*

215 *Id.* Fungibility refers to how each tokenized claim can be freely exchanged for another of equal value, similar to how one dollar bill can be swapped for any other dollar bill without affecting its worth or utility. *Id.*

216 *Id.*

217 OPNX, *How to Transform Your Bankruptcy Claim*, *supra* note 18.

218 *Id.*

from the FTX and Celsius bankruptcies.[219] Concurrently, OPNX also advertised to FTX creditors that they could access "immediate liquidity" by converting their bankruptcy claims "into reOX tokens or oUSD."[220] The company underscored that holders of these tokens could then use them as collateral to engage in various crypto derivative trades through the OPNX platform.[221]

Typically, the expectation would be that a holder of these tokens should be able to receive a distribution when the insolvency proceedings of the relevant entity are finalized. As described above, bankruptcy claims trading is premised on the notion that investors purchase these distressed debts at a price that is lower than the distribution which they expect to receive when the insolvency proceedings conclude.[222] For example, a claim could be worth $60,000 at par value, an investor could buy it for $15,000 from its original holder, and ultimately receive a distribution of $25,000 at the end of the bankruptcy, for a profit of $10,000. In a separate white paper, OPNX explained the differences between the reOX and oUSD tokens. It described these digital assets as "collateral choices" and "distinct avenues to unlock value from claims."[223] Crucially, however, the reOX and oUSD tokens did not operate in such a simple fashion.

First, as to the reOX tokens (known more technically as *Reborn OX* tokens), OPNX described them as "unlocked" OX tokens—which, as explained above, are a type of governance token that could be obtained by redeeming FLEX tokens.[224] They were unlocked in the sense that they could be liquidated with OPNX once "the preference risk for a claim is settled."[225] However, we found this description to be confusing, if not wholly ambiguous. The white paper did not specify what settling the preference risk claim entailed nor the timing of such an event.[226] In bankruptcy jargon, the term "preference risk" typically refers to payments made by the debtor to creditors

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219 *Unlocking Liquidity for FTX Claimants*, OPNX (July 14, 2023) [hereinafter OPNX, *Unlocking Liquidity*], https://web.archive.org/web/20240202220918/https://news.opnx.com/25196-unlocking-liquidity-for-ftx-claimants [https:// perma.cc/8ALF-R4L3]; *Meet the OPNX App*, OPNX (June 9, 2023), https://web.archive.org/web/20240202220543/https://news.opnx.com/22344-meet-the-opnx-app [https://perma.cc/EBP6-WS23].

220 OPNX, *Unlocking Liquidity*, *supra* note 219.

221 *Id.*

222 *See supra* Section I.A.

223 *Claims as Collateral: reOX vs. USD*, OPNX, https://web.archive.org/web/20240302021509/https://support.opnx.com/en/articles/8182068-claims-as-collateral-reox-vs-ousd [https://perma.cc/MFT2-W9ZL] (last visited Jan. 28, 2025).

224 *Id.*; *see* OPNX, *supra* note 207.

225 OPNX, *supra* note 223.

226 *See generally id.*

before the bankruptcy filing.[227] In this scenario, however, the bankruptcy would already have been initiated, and the tokens issued in connection with filed proofs of claim.

Returning to the white paper's description, OPNX priced a reOX token's value at the "current value of the claim according to [over-the-counter] price live-feeds sourced from Claims Market."[228] As of March 2024, OPNX noted that the over-the-counter price for FTX claims was $0.30, meaning that the discount was seventy percent compared to the par value of the claim.[229] Additionally, OPNX provided a bonus system whereby a claim holder could choose to multiply their reOX, with the multiplier decreasing linearly over time starting at the point of claim conversion. Availing oneself of the bonus during the first month earned a 100% bonus, which declined to zero percent after one year.[230] Thus, one who took advantage of the bonus would end up having more reOX tokens (and subsequently more OX tokens once the preference risk was settled—whatever that might mean). However, we would like to highlight that exchanging a claim for reOX tokens did not involve a distribution of actual dollars from the bankruptcy estate. Rather, it was just OPNX acquiring the claim and, in return, minting a varying number of reOX tokens, based on its own arbitrary discount valuations and bonus multipliers.

Interestingly, OPNX noted that the reOX token was ideal for a claim holder who wanted "immediate liquidity" and "an opportunity to leverage their claims" but who had a certain risk tolerance for fluctuations in the value of OX tokens.[231] While the latter part is true (indeed, one may have been surprised to learn that the reOX tokens were worth little to nothing after taking advantage of the bonus), the former is certainly untrue. The OX (and reOX, for that matter) tokens had limited liquidity—they could only be sold if there was a ready buyer. Moreover, the supply of OX tokens was totally controlled by OPNX, thereby placing the market value entirely in the hands of the platform. Taking advantage of the bonus system to multiply one's reOX (or choosing not to) was all based on a gamble as to the eventual scarcity of the OX token in the future and thus its trading value. As we explain below, the other type of claim token—the oUSD token—was the more liquid option, but even this is a stretch.

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227 *See* 11 U.S.C. § 547(b) (defining "preferences" as transfers by an insolvent debtor to a creditor on account of antecedent debt, made within the ninety days prior to filing, or 365 days if the creditor was an insider).

228 OPNX, *supra* note 223.

229 *Id.*

230 *Id.*

231 *Id.*

Alternatively, an OPNX user could choose an oUSD token.[232] As with reOX, OPNX determined the amount of oUSDs a person could receive in return for their bankruptcy claim. However, this token, so said OPNX, served as a more stable choice because the oUSD token is held "relative[ly]" stable with the U.S. dollar, as opposed to the OX token's price fluctuating based on supply and demand.[233] Specifically, OPNX offered that the holder of an oUSD could have it "swapped or redeemed for USDT, a stablecoin that is pegged 1:1 with the U.S. dollar."[234] This essentially made oUSD a type of stablecoin. OPNX lauded the token as being particularly suitable for futures traders and those "who prefer near-stable value and the ability to fully mobilize their claims."[235] As we explain more fully in our results analysis below, this promise of stability and liquidity was illusory.[236]

4. Describing OPNX's Tokenization Process

To initiate the tokenization process, an FTX creditor was instructed to create accounts with both OPNX and the FTX Customer Claims Portal,[237] which was a system for submitting a proof of claim in FTX's Chapter 11 proceeding.[238] Notably, OPNX did not allow individuals in the United States to create OPNX accounts,[239] even though U.S. customers of FTX accounted for 1.2 million claim holders as of 2022.[240] After creating accounts, users were informed that they "c[ould] easily verify and trade their claims thanks to [OPNX's] swift onboarding process."[241] The process for Celsius-related bankruptcy claims was roughly the same.[242]

Once the OPNX system verified a user's claim and the user signed a "transfer agreement," the user could convert their claim into either reOX or

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232 *Id.*

233 *Id.*

234 *Id.*

235 *Id.*

236 *See infra* subsection II.B.3 (finding that oUSD was not as liquid as was advertised).

237 *Customer Claims Portal*, FTX, https://claims.ftx.com/welcome [https://perma.cc/D48U-6XPZ] (last visited Jan. 28, 2025).

238 OPNX, *Unlocking Liquidity*, *supra* note 219.

239 *See Affiliate Program Services Agreement*, GITHUB (Apr. 3, 2023), https://github.com/opnx-github/opnx-policies/blob/main/Affiliate%20Terms.md [https://perma.cc/QP2B-PLTD].

240 André Beganski, *Three Arrows Founders Roll Out Bankruptcy Claims Exchange—But US Residents Are Barred*, DECRYPT (Feb. 9, 2023), https://decrypt.co/120982/three-arrows-bankruptcy-claims-exchange-us-barred [https://perma.cc/X4NH-FR5V].

241 OPNX, *Unlocking Liquidity*, *supra* note 219.

242 *See Bankruptcy Update: What Celsius Creditors Need to Know*, OPNX, https://web.archive.org/web/20240226163045/https://opnx.com/en/learn/bankruptcy-update-what-celsius-creditors-need-to-know [https://perma.cc/K9CZ-FWN3] (last visited Jan. 28, 2025) (describing how a user could "onboard [their] Celsius claim to OPNX").

oUSD tokens, as noted above.[243] A "tokenization solution provider" called Heimdall[244] partnered with OPNX to provide what appeared to be the back-end technology for the tokenization. Tellingly, the OPNX blog describing this process noted that the transfer agreement was what "initiate[s] the claim transfer process."[245]

OPNX further explained that "[w]ith the understanding that claims come with large variation and a variety of associated risks, Heimdall collates claims into dedicated trusts, which derisks standalone creditors."[246] Then, once the claims are held in "dedicated trusts," tokens "are issued against the vehicle, which are liquid and made tradeable on OPNX.[247] OPNX offered that "[t]his process extracts the legal headache around managing the claim as the holder transfers their legal ownership of the underlying claim to the trust, whilst maintaining the economic rights attached to the token."[248]

Below, we examine these statements in detail. However, it is important to highlight that the transactional structure in question leaves little doubt that the bankruptcy claims were *assigned* to OPNX, rather than the bankruptcy creditors retaining ownership of their claims and creating a debt token to represent them with OPNX's facilitation.

B. *Analysis and Results*

Crypto enthusiasts often invoke, knowingly or unknowingly, the words of Professor Lawrence Lessig: "Code is law."[249] They contend that when a "smart contract"—a term frequently used to describe software running on blockchain networks—performs a transaction between two parties, it is the code of this program that dictates the terms of their engagement.[250] In their eyes, black-letter law is irrelevant in the realm of these digitally coded arrangements.

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243 *See supra* subsection II.A.3 (describing that OPNX appealed to FTX creditors because they could immediately convert their claims into reOX or oUSD tokens); *see also* OPNX, *Unlocking Liquidity*, *supra* note 219.

244 The link on OPNX's blog to Heimdall only links to the company's Twitter account. *See* OPNX, *supra* note 211; *see also* Heimdall (@heimdallrwa), TWITTER, https://twitter.com/heimdallrwa [https://perma.cc/WE53-KL9Y] (last visited Feb. 11, 2025).

245 OPNX, *Unlocking Liquidity*, *supra* note 219.

246 OPNX, *supra* note 211; *see infra* subsection II.B.2 (discussing the implications of pooling creditors' claims).

247 OPNX, *supra* note 211.

248 *Id.*

249 LAWRENCE LESSIG, CODE AND OTHER LAWS OF CYBERSPACE 6 (1999); *see, e.g.*, *Code Is Law*, ETHEREUM CLASSIC (Feb. 22, 2022), https://ethereumclassic.org/why-classic/code-is-law [https://perma.cc/D7UQ-MSEJ] (providing an example of crypto enthusiasts making use of this term).

250 *See* ETHEREUM CLASSIC, *supra* note 249; Juliet M. Moringiello & Christopher K. Odinet, *Blockchain Real Estate and NFTs*, 64 WM. & MARY L. REV. 1131, 1154-57 (2023) (defining the concept of "smart contract").

In our examination of the aforementioned materials, we noticed a discernible "code is law" ethos. But, just as it has never been true that crypto-related transactions and structures exist outside of the law, it was not true with the OPNX platform. Below, we highlight how the legal agreements and related front-facing materials for these debt tokens overlook essential principles of private law, generating significant legal risks and uncertainties. In some instances, these shortcomings and flaws are so pronounced that they completely undermine, or even betray, the professed objectives of tokenizing bankruptcy claims. Before we go into detail, we note a striking paradox. OPNX's *Our Story* webpage remarked that, for the last few years, the crypto industry operated as a "black box of obscured risk, leverage, and non-custody."[251] OPNX, or rather its founders and their now-defunct companies, "bet big and rel[ied] too much on trust"—a stance that resulted in them learning "hard lessons."[252] In reality, the worst scams and failures in the crypto industry have been caused by a glaring lack of transparency, combined with a complete disregard for the private law rules designed to protect customers from fraud and insolvency risk.[253] The irony, as we detail more fully below, is that OPNX repeated these very design errors in their debt tokens.

1. Claims About Tokenization

We begin our analysis with a critical observation drawn from these various documents, modules, and white papers: a number of OPNX's claims about tokenizing debts are at best misleading, and at worst, fundamentally inaccurate. In its module titled *Tokenizing Bankruptcy Claims: A Revolutionary Approach to Maximizing Claim Utility*, OPNX suggested that through its platform one could "turn[] an asset . . . into a digital certificate" and thereby "convert[] financial instruments . . . into digital tokens" that "represent a fraction of an asset's value."[254] OPNX further articulated tokenization as superior compared to "traditional methods of ownership" because of its "fungibility, transparency, and liquidity."[255]

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251 OPNX, *Our Story*, *supra* note 18.

252 *Id.*

253 *See* Press Release, Sherrod Brown, Chair, Senate Comm. on Banking, Hous., & Urb. Affs., Brown: Crypto Markets' Lack of Transparency Hurts Americans (Sept. 14, 2023), https://www.banking.senate.gov/newsroom/majority/brown-crypto-markets-lack-transparency-hurts-americans [https://perma.cc/WC6B-TPXB] ("The current lack of full disclosure about digital assets products and platforms leaves the public vulnerable to fraud and scams . . . ."); *see also* David Hamilton, *Top 10 Crypto Fails of All Time*, SECURITIES.IO (Jan. 12, 2024), https://www.securities.io/top-crypto-fails [https://perma.cc/H75T-FBHR] (describing the reasons for the downfall of major crypto companies, many of which include activities that were not disclosed to investors).

254 OPNX, *supra* note 211.

255 *Id.*

Yet, the notion of tokenization referenced here is not as easily accomplished—from a legal perspective—as these statements and those of others in the crypto industry suggest. Tokenization has a long history in the law.[256] It refers to the concept, sometimes referred to as reification,[257] of a single instrument embodying rights in another domain.[258]

Perhaps the most obvious example is that of negotiable instruments.[259] This body of law—originally case-based and later codified—allows parties to confer credit rights into a piece of paper that would not otherwise be available under simple contract law.[260] A person who contracts a debt using a negotiable instrument[261] rather than a mere contract reifies the right to demand payment in the paper instrument itself.[262] The paper is not a mere receipt or evidence of the right to collect on the debt, but rather the paper is the right itself.[263] Today in the United States, this law is embodied in Article 3 of the Uniform Commercial Code (UCC),[264] which allows for these payment rights to be easily transferred and highly liquid.[265] But notably, negotiable instruments cannot be conjured by contract alone—rather, it is the statutory commercial law of UCC Article 3 that makes them possible.[266]

Another salient example of tokenization is in securities law.[267] Dating back to the small city-states of Italy, the French *Société des Moulins du Bazacle*, and the Dutch East India Company, parties have long desired to cause paper

256 Moringiello & Odinet, *supra* note 10.

257 *See* MATTHIAS HAENTJENS, FINANCIAL COLLATERAL 14 (2020) ("According to [the concept of reification], the intangible rights that a certificate refers to are incorporated in the certificate itself.").

258 Moringiello & Odinet, *supra* note 10, at 615 (describing "doctrinal tokenization" as "a single thing [that] can be configured to actually represent rights, such as property rights, in something else").

259 *See* Frederick Read, *The Origin, Early History, and Later Development of Bills of Exchange and Certain Other Negotiable Instruments*, 4 CANADIAN BAR REV. 440, 440 (1926) ("[E]ven in very early times the great advantage of a system of representative money had made itself apparent . . . ."); *see also* Moringiello & Odinet, *supra* note 10, at 615.

260 *See* Moringiello & Odinet, *supra* note 10, at 615-16.

261 *See* U.C.C. § 3-104 (AM. L. INST. & UNIF. L. COMM'N 2022) (providing the form requirements for creating a negotiable instrument).

262 Moringiello & Odinet, *supra* note 10, at 615-16 ("Article 3 of the Uniform Commercial Code (UCC) reifies payment rights in such paper, providing that a person who possesses the paper has the right to enforce the payment right evidenced by that instrument.").

263 *Id.*; James Steven Rogers, *Negotiability as a System of Title Recognition*, 48 OHIO ST. L.J. 197, 200 (1987) ("[T]he writings become the indispensable embodiments of the liabilities of the parties.").

264 *See* U.C.C. § 3-301.

265 FREDERICK H. MILLER & ALVIN C. HARRELL, THE LAW OF MODERN PAYMENT SYSTEMS § 1.3[1][a] (2d ed. 2017); *see also* Moringiello & Odinet, *supra* note 10, at 615-16 (stating that negotiable instruments written on paper can demonstrate "not only evidence of a debt owed, but evidence of a debt that is easily transferrable and highly liquid").

266 *See id.* at 615-18.

267 *See id.* at 618-22 (discussing the history and current law surrounding the tokenization of securities).

certificates to serve as representations of rights (typically governance and economic rights) in business entities.[268] The late 1800s saw the enactment of laws that specifically authorized these legal arrangements, whereby the rights in a corporation would be reified in a paper share certificate.[269] This certificate, in turn, could be easily transferred from one party to another, thereby transferring the rights as well.[270] Today in the United States, Article 8 of the Uniform Commercial Code and various business entity laws provide the rules that authorize this tokenization of rights in a business entity.[271]

These are a few examples; we could provide more such as bills of lading, deeds, and vehicle title certificates.[272] Common to all of these is a specific law that authorizes the tokenization.[273] In this way, tokenization follows a *numerus clauses* principle—the idea that there are a limited number of property forms.[274] It aims to respect the notion, as articulated by Professors Smith and Merrill, that "property is required to come in standardized packages that the layperson can understand at low cost."[275] This means that property rights, including those that arise from tokenization, come "in a fixed, mandatory menu of forms, in contrast to contracts that are far more customizable."[276]

Thus, to truly embody a legal claim (like a claim in bankruptcy) in a digital asset like a cryptographic token, one must point to a specific legal regime that sanctions such a transformation. As we explain in Part III below, there are is a specific regime under U.S. law that allows for the tokenization of debts in the fashion that OPNX suggests—Article 12 of the UCC. Yet, judging from OPNX's publicly available materials—both its front-facing explainers and legal agreements through the web-based document platform GitHub—this method was not deployed here.

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268 *Id.* at 618-19; *see also* John P. Shelton, *The First Printed Share Certificate: An Important Link in Financial History*, 39 BUS. HIST. REV. 391, 397-400 (1965) (discussing whether the Dutch East India Company's certificates can be viewed as an early analogue to modern company shares).

269 HAENTJENS, *supra* note 257, at 14.

270 Moringiello & Odinet, *supra* note 10, at 619.

271 *See* U.C.C. § 8-102(a)(4) (AM. L. INST. & UNIF. L. COMM'N 2022).

272 *See* Moringiello & Odinet, *supra* note 10, at 622, 624-26 (discussing other types of legal frameworks as examples of tokenization, primarily certificates of title for automobiles).

273 *Id.*

274 *See* Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clauses Principle*, 110 YALE L.J. 1, 9 (2000) ("[C]ourts and commentators behave as if we have a property system characterized by a limited number of forms not subject to contractual or judicial modification.").

275 Thomas W. Merrill & Henry E. Smith, Essay, *What Happened to Property in Law and Economics?*, 111 YALE L.J. 357, 359 (2001).

276 *Id.*

2. Actual Claims Pooling

Moreover, when looking to other portions of OPNX's front-facing materials, it does not appear that tokenization, as articulated in the early parts of the firm's *Tokenizing Bankruptcy Claims* module,[277] was actually what OPNX was doing. Later in that same module, OPNX stated that bankruptcy "claims are pooled and made tradeable on order books."[278] This means that a creditor actually ceased to be the obligee under the bankruptcy claim and someone else becomes the obligee of the debtor, which was supported by OPNX's step-by-step setup guide's reference to signing a transfer agreement.[279]

The nature of the pooling and its relationship to creditors deserves close scrutiny. In its blog entry titled *Unlocking Liquidity for FTX Claimants*, OPNX stated that "Heimdall collates claims into dedicated trusts, which derisks standalone creditors."[280] In its FAQ section, OPNX purported that bankruptcy claims are kept safe because they "are transferred and kept in a separate trust, reducing the risk for individual creditors."[281] Yet, it is unclear exactly in whose favor the trust(s) exist(s). Was there one "separate trust" or were there multiple "dedicated trusts?"

One might think that the trusts were in favor of the individual creditors who then held either oUSD or reOX tokens, but OPNX's terms of service suggested otherwise. First, token holders did not appear to have any direct agreements with Heimdall (OPNX's service provider) and certainly not with any unnamed trusts.[282] This might have been contained in the referenced transfer agreement, but that agreement does not appear to be available for the public to read like the other documents made available on OPNX's website or through GitHub. Second, OPNX's terms of service provided that: "This Agreement is between you and us. No person shall have any rights under or connection with this Agreement under the Contracts (Rights of Third Parties) Act 1999."[283] Additionally, the agreement stated that "[t]he parties are the sole parties to this Agreement which is personal to them and acknowledge that they do not hold the benefit of any provisions on behalf of third parties."[284] The only two parties to the agreement in the introductory

277 OPNX, *supra* note 211.

278 *Id.*

279 CLAIMS FACTSHEET, OPNX (on file with author) ("Digitally sign your transfer agreement to initiate your claim transfer.").

280 OPNX, *supra* note 211.

281 *FAQ*, OPNX, https://web.archive.org/web/20231130100401/https://support.opnx.com/en/articles/7966466-faq [https://perma.cc/F28P-5TH7] (last visited Jan. 28, 2025).

282 GITHUB, *supra* note 187.

283 *Id.* § 22.2.

284 *Id.* § 22.4.

paragraph were OPNX (by its legal name, Open Technology Markets Ltd.) and the user.[285] Therefore, it would appear that there can be no third-party beneficiary rights at play—meaning, no rights in a trust agreement between OPNX or Heimdall and a trustee.

And even with respect to the trusts, the kind of trust and the identity of the trustee (Heimdall or any other party) were also not revealed in these materials. If the trust held the claims for the benefit of OPNX, which then credited each of the users with an interest in the claims on its own books and records, then it may very well be that all the users had was an unsecured claim against OPNX in connection with OPNX's proprietary rights to the bankruptcy claims held in the trust. Consider that OPNX indicated broadly in its terms and conditions that users consent to OPNX commingling any "deposited and traded Cryptocurrency" with "those of other Customers of OPNX in OPNX's Client Account."[286] OPNX defined the term "Cryptocurrency" as "any digital asset . . . which we support on the Platform,"[287] which assumedly included the bankruptcy tokens (either oUSD or reOX) created by the company for claim holders. The term "Client Account," although indicated as a defined term, was not actually defined in the Terms and Conditions Agreement.[288]

If indeed the trust was in favor of OPNX, then claimants could only rely on their contract agreement with OPNX when it came to receiving the benefits of their claims—the claims were now in favor of OPNX and the former claimants were mere OPNX customers. Here again, the Terms and Conditions Agreement was instructive. The company stated in its Risk Disclosure Warning Statement (which was an addendum to its terms and conditions): "We provide no warranty as to the suitability of the Digital Assets traded on OPNX and assume no fiduciary *or any other duty to you in connection with your use of our platform for any purpose whatsoever*."[289]

Even though it seems clear that OPNX was indeed acting as an intermediary—or at least that its service provider Heimdall was doing so—the Risk Warning Disclosure Statement indicated that "OPNX is not your broker, intermediary, agent, or advisor and has no fiduciary relationship or obligation to you in connection with any trades or other decisions or activities affected by you using the services on our platform."[290]

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285 *Id.* § 1.1.

286 *Id.* § 4.10.

287 *Id.* § 1.4.

288 The term is only used once in Section 4.10 and not again. *See id.* § 4.10.

289 *Risk Disclosure Warning Statement*, OPNX (June 8, 2023), https://github.com/opnx-github/opnx-policies/blob/main/Risk%20Disclosure%20Warning%20Statement.md [https://perma.cc/E3YR-LLSN] (emphasis added).

290 *Id.*

All of this is a far cry from claimants actually tokenizing their claims. As noted above, OPNX stated that "[t]his process extracts the legal headache around managing the claim as the holder transfers their legal ownership of the underlying claim to the trust, whilst maintaining the economic rights attached to the token."[291] But in fact, the nature of how these rights were maintained in favor of the claimant remained unclear. Overall, we found the entire trust structure and the role of Heimdall to be worryingly opaque.

3. Frictions in Token Trading

It also did not appear that the debt tokens issued by OPNX were necessarily as liquid as the promotional materials might have suggested.[292] This was lucidly illustrated by the oUSD token. This token was ostensibly a stablecoin that represented a 1:1 relationship between a single oUSD coin and a single U.S. dollar, reduced by OPNX's pre-determined discount rate for FTX claims (assuming this was an FTX claim).[293] OPNX stated that it would allow users to redeem their oUSD, but not for U.S. dollars.[294] Rather, the swap would be one oUSD for one USDT—which, as we noted above, is yet another stablecoin offered by yet another crypto company.[295] But this was not even absolute. In its so-called *litepaper* on oUSD, OPNX stated that "oUSD is not guaranteed to be redeemable for 1 USDT at all times."[296] Instead, OPNX alluded to the fact that it may not actually have enough USDT on hand to meet redemption demand, depending on the level of demand at any given time, and therefore redemptions would only resume "when the redemption quota of USTD becomes available once again."[297] While one might have believed that they turned a claim in the FTX bankruptcy into a token redeemable in USDT, in reality, they simply had a claim against a pool of bankruptcy claims, held by a third-party service provider of OPNX, which OPNX could not guarantee its ability to redeem at any given moment.

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291 *See* OPNX, *supra* note 211.

292 *See* Suvashree Ghosh, *OPNX's $30 Million HodInaut Bid Spurned Due to 'Illiquid' Token*, BLOOMBERG (Sept. 19, 2023, 6:22 AM), https://www.bloomberg.com/news/articles/2023-09-19/opnx-s-30-million-crypto-bid-for-hodlnaut-rebuffed-due-to-illiquid-flex-token [https://perma.cc/2RYY-MDJD].

293 *See* OPNX, *supra* note 223 (listing relative stability as a benefit of oUSD conversion and attributing the near-stable value to redemption dynamics).

294 *See id.* ("If liquidity is your priority, you can choose to redeem oUSD for USDT."); *see also oUSD Litepaper—Credit Currency of OPNX*, OPNX (on file with author) [hereinafter OPNX, *oUSD Litepaper*].

295 *See* OPNX, *oUSD Litepaper*, *supra* note 294; *see also supra* notes 234–235 and accompanying text.

296 *See* OPNX, *oUSD Litepaper*, *supra* note 294.

297 *Id.*

Moreover, even if OPNX did have enough USDT to make good on the redemption, the user still did not have fiat currency. They just had another stablecoin. As written in other work, whether Tether, the issuer of USDT, actually has enough fiat currency to make good on redemption demands by USDT holders is another (questionable) matter entirely.[298] Indeed, in February 2021, Tether entered into a settlement with the Attorney General of New York on account of having made misrepresentations about the reserve assets it actually held in order to make good on USDT redemption promises.[299] In the press release describing the settlement, New York Attorney General Letitia James noted that "Tether's claims that its virtual currency was fully backed by U.S. dollars at all times was a lie."[300]

4. Caveated Token Autonomy

Aside from the issues we raise above regarding the nature of the pooling of the claims in a trust, the OPNX Terms and Conditions Agreement raised questions about how much actual control a user had over the token itself. The terms stated that "OPNX reserves the right to bar transactions from . . . or to suspend or terminate the access to the Platform, or the creation or administration of any Account (including any subaccount)" and may do so for "any reason (or for no reason) at any time."[301]

Moreover, a user's OPNX account could be suspended or revoked "at any time without prior notice . . . ."[302] OPNX also disclaimed any liability for "loss, expense or delay . . . as a result of . . . [a] suspension of the Platform."[303] This was followed by a general waiver of all liability provision whereby users waived any and all warranties that may be imposed on the platform[304] and

298 *See* Bruce et al., *supra* note 138, at 1115 (noting that despite Tether's emphasis on its reserve-backed coins, "some of the assets held in Tether's reserves are extremely volatile").

299 *See* Press Release, Off. of the N.Y. State Att'y Gen., Consumer Alert: Attorney General James Ends Virtual Currency Trading Platform Bitfinex's Illegal Activities in New York (Feb. 23, 2021), https://ag.ny.gov/press-release/2021/attorney-general-james-ends-virtual-currency-trading-platform-bitfinexs-illegal [https://perma.cc/J8M5-H492] ("Bitfinex and Tether Deceived Clients and Market by Overstating Reserves, Hiding Approximately $850 Million in Losses Around the Globe.").

300 *See id.*; *see also* Ryan Brown, *Cryptocurrency Firms Tether and Bitfinex Agree to Pay $18.5 Million Fine to End New York Probe*, CNBC (Feb. 23, 2021, 10:46 AM), https://www.cnbc.com/2021/02/23/tether-bitfinex-reach-settlement-with-new-york-attorney-general.html [https://perma.cc/4QK9-Z8Y3].

301 GITHUB, *supra* note 187, at § 2.3.

302 *Id.* § 2.11.

303 *Id.* § 6.8.

304 *Id.* § 20.1.

any possibility of liability for OPNX and its various affiliate parties,[305] aside from "death or personal injury caused by our negligence, or fraud or fraudulent misrepresentation on our part."[306]

5. Lite on Legal Details about Debt Tokens

Lastly, for all the focus on the ability to use the OPNX platform to tokenize and then trade bankruptcy claims as tokens, the actual, main legal documents—specifically the Terms and Conditions and the Risk Disclosure Warning Statement—were very light on mention of bankruptcy claim-related tokens. Only two clauses addressed the issue at all, and both were contained in the Risk Disclosure Warning Statement.[307] That document first mentioned the concept of "justice tokens," which were described as a type of complex product (not defined) where "the underlying claims in filed lawsuits or arbitration matters are tokenized without our determination of the merits, substance, validity, viability, value or collectability of judgments or awards of such filed claims."[308] On the one hand, justice tokens could have constituted some of the bankruptcy claims to the extent that they related to lawsuits that were already filed against the debtor at the time the bankruptcy commenced. But claims that had not resulted in filed lawsuits yet but remained eligible for filing a proof of claim would not be so-called "justice tokens." It is unclear what the substantive legal relationship between the justice token and the claim actually was with respect to privity between the plaintiff, defendant, and OPNX (or any of its service providers). Even more confusing, a separate white paper on OPNX's website described justice tokens as something quite different.[309] There, justice tokens were explained as "independent meme tokens with no intrinsic value, no backing and no expectation of return."[310] Additionally, the lawsuits that were seemingly related to the tokens (but ostensibly not backed by them) would all relate to defamation claims—with a "focus on OPNX-specific defamation, then expand to non-OPNX cases."[311]

The second place in the Risk Disclosure Warning Statement where bankruptcy tokens are mentioned is in connection with the CoinFLEX

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305 *Id.* § 20.3. The terms also state that if liability is imposed on OPNX despite these waiver provisions, the parties agree that the maximum amount of any liability will "be limited to an amount equal to US$1.00." *Id.* § 20.4.

306 *Id.* § 20.5.

307 *See* OPNX, *supra* note 289.

308 *Id.* This provision also indicates that "[i]n addition to risks inherent in complex product [sic], justice tokens include additional highly significant inherent risks." *Id.*

309 *Justice Token White Paper*, OPNX (on file with author).

310 *Id.*

311 *Id.*

bankruptcy.[312] The document discusses the rvUSD token, which arose out of a reorganization order from the courts of the Republic of the Seychelles.[313] According to the court order, the rvUSD tokens—titled "Recovery Value USD Tokens"—represent a pro rata claim for the assets of a special purpose vehicle (SPV).[314] This SPV has assigned, under the supervision of the Seychelles court, an eighty-four million dollar lawsuit claim against Roger Ver, a CoinFLEX customer whose failure to meet margin call requirements caused "a hole in [CoinFLEX's] balance sheet" that ultimately led to its bankruptcy.[315] The idea behind the token was that "rvUSD holders [would] be able to redeem their tokens on the Platform upon successful recovery of liquid assets from Roger Ver."[316] Essentially, this meant that once the litigation against Roger Ver resulted in sufficient assets, claimants would be able to exchange their tokens for those recovered amounts (presumably in fiat currency). OPNX's Risk Disclosure Warning Statement cautioned that "[t]rading in tokenised debt instruments, such as rvUSD, carries inherent risks," and proceeded to list a series of prototypical risk factors ranging from legal risk, to liquidity risk, to counterparty risk as reasons that "[p]otential investors should [be careful]."[317] The warnings seemed particularly tailored to the CoinFLEX token because they mentioned that the issuer was engaged in ongoing litigation where the debt was in dispute, therefore creating "risks [that] are heightened."[318] None of this, however, pertained to the ability to tokenize the FTX and Celsius claims using the OPNX platform. If anything, these references only cause further confusion.

III. TOKENIZATION OF BANKRUPTCY CLAIMS

In Part II, we examined the current landscape for the tokenization of bankruptcy claims, with a particular focus on OPNX's offering. We explained that the position of creditors who purchase reOX and oUSD is extremely precarious.[319] reOX and oUSD creditors are trading their bankruptcy claims either for an opaque liquidity token—the value of which hinges entirely on

312 *See* OPNX, *supra* note 289 (introducing the concept of the Recovery Value USD token (rvUSD), a digital asset issued by the Supreme Court of Seychelles and posted about on CoinFLEX's blog site).

313 *Id.* ("rvUSD is a Digital Asset which has been issued pursuant to the ruling of the Supreme Court of Seychelles with respect to the restructuring of Liquidity Technologies Ltd . . . .").

314 *See id.*; *see also* Order at 3, *In re* Liquidity Techs. Ltd., [2023] SCSC 175 (Sey.) (granting Final Order pursuant to CoinFLEX's reorganization).

315 *Id.* at 3-4.

316 *Id.* at 4.

317 OPNX, *supra* note 289.

318 *Id.*

319 *See supra* Part II.

the fortunes of OPNX—or for a stablecoin of uncertain substance and liquidity.[320] Even more disconcerting, should OPNX face insolvency, holders of these debt tokens would invariably stand as unsecured creditors.[321]

As serious as these issues are, we believe there is an even more fundamental flaw that undermined OPNX's model, as well as that of other crypto entrepreneurs in this space. Notwithstanding their press releases, promotional materials, and other representations, these entities were not actually tokenizing bankruptcy claims.[322] The tokens they issued did not *in law* represent an ownership interest in the claims of the creditors of FTX, Voyager and Celsius, or any other insolvent crypto firm.[323]

But this is not to say that the tokenization of bankruptcy claims is an outright legal impossibility. Indeed, quite the contrary. In this Part, we explain that there *is* a private law pathway to creating digital assets that *in law* represent rights to payment through the recently adopted 2022 UCC Amendments (the "2022 Amendments") and the new Article 12. The aim of our analysis is threefold. First, we show that the tokenization of bankruptcy claims is possible within the bounds of a defined system of rules. Second, we highlight that this route is narrow and emphasize the legal and commercial difficulties it presents. Third, we suggest best practices to guide market participants in the creation of digital assets that represent bankruptcy claims.

A. *The 2022 Amendments and Article 12*

In 2018, the Uniform Law Commission (ULC) and American Law Institute (ALI) convened a joint committee to study whether amendments to the UCC were necessary to accommodate transactions facilitated by emerging technologies.[324] As the committee engaged with market participants, practitioners, and academics, it recognized that distributed ledger technology (DLT), cryptocurrencies, and other digital assets had created new vibrant markets and business arrangements.[325] However, this assessment also

320 *Id.*

321 *See supra* note 8 and accompanying text (noting that bankruptcy courts in FTX, Voyager, and Celsius, for example, have founds customers' claims to be unsecured trade claims).

322 *See, e.g.*, Cas Piancey, *Zhu Su and Kyle Davies' Exchange OPNX Is Failing*, PROTOS (Oct. 17, 2023, 5:37 PM), https://protos.com/zhu-su-and-kyle-davies-exchange-opnx-is-failing [https://perma.cc/UY82-PK2W].

323 *See* OPNX, *supra* note 281 (clarifying that "[c]laims are transferred and kept in a separate trust").

324 UNIF. L. COMM'N, UNIFORM COMMERCIAL CODE AND EMERGING TECHNOLOGIES 2 (drft. 2022), https://www.uniformlaws.org/viewdocument/2022-annual-meeting-7?CommunityKey=cb5f9e0b-7185-4a33-9e4c-1f79ba560c71&tab=librarydocuments [https://perma.cc/Z8UM-PMKP].

325 *Id.* at 1-3. The interim reports of the Joint Committee are available at https://www.uniformlaws.org/viewdocument/memorandum-electronic-negotiable-

revealed that the private law framework governing the transfer of digital assets, such as blockchain tokens, and their use as collateral was riddled with legal uncertainties.[326] Similarly, there was great confusion surrounding transactions in which digital assets—primarily non-fungible tokens (NFTs)—were being used to identify and represent ownership rights in other assets, including artwork, vintage cars, real estate, securities, and monetary obligations.[327]

Confronted with this landscape, the ULC and ALI agreed that it was necessary to update the UCC.[328] Between 2020 and 2022, proposed amendments were drafted,[329] publicly scrutinized, and revised multiple times based on suggestions and criticisms from a large pool of industry participants, academics, practitioners, and judges.[330]

The resulting 2022 Amendments were adopted by the ALI in May 2022[331] and by the ULC shortly thereafter.[332] In the following months, legislative bills incorporating these changes were introduced in legislatures across several states. Despite some initial political controversy,[333] the 2022 Amendments are

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i?CommunityKey=cb5f9e0b-7185-4a33-9e4c-1f79ba560c71&tab=librarydocuments [https://perma.cc/76WK-YBCS].

326 *See* UNIF. L. COMM'N, *supra* note 324, at 250 ("Uncertainty as to the criteria for resolving [electronic records-related] claims creates commercial risk.").

327 *Id.* at 3 (describing a new UCC Article 12 governing intangible assets such as NFTS).

328 *Id.* ("The Drafting Committee's charge is broad, and the resulting revisions are expansive.").

329 *Id.* The interim drafts of the Drafting Committee are available at https://www.uniformlaws.org/viewdocument/archive-committee-55?CommunityKey=1457c422-ddb7-40b0-8c76-39a1991651ac&tab=librarydocuments [https://perma.cc/5CHN-FXKW].

330 *See* UNIF. L. COMM'N, *supra* note 324, at 1-3 (noting that members of the Drafting Committee solicited advice from the Loan Syndication and Trading Association, the ABA Business Law Section, the American College of Commercial Finance Lawyers, and more).

331 *See ULC Approves ALI Joint Project on UCC and Emerging* Technologies, AM. L. INST. (July 15, 2022), https://www.ali.org/news/articles/ulc-approves-ali-joint-project-ucc-and-emerging-technologies [https://perma.cc/Z9CK-6RAS].

332 *Id.* For the official text of the final amendments, see UNIF. L. COMM'N & AM. L. INST, UNIFORM COMMERCIAL CODE AMENDMENTS (2022), https://www.uniformlaws.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=d5bcf850-366f-b4b5-e7d6-6749ba2382c6 [https://perma.cc/RB3W-AA2J].

333 *See, e.g.*, Emma Davis, *Legislators Divided on Definition of Money in Proposed Update to Commercial Transaction Law*, ME. MORNING STAR (Dec. 7, 2023, 5:47 PM), https://mainemorningstar.com/2023/12/07/legislators-divided-on-definition-of-money-in-proposed-update-to-commercial-transaction-law [https://perma.cc/99QX-VZU7] (reporting on the political difficulties involved in updating the UCC's definition of money); Carla L. Reyes & Andrea Tosato, *Crypto's Future Is at Stake in a Dispute over Commercial Law's Definition of Money*, BARRON'S (Apr. 7, 2023, 4:00 AM), https://www.barrons.com/articles/crypto-commercial-laws-definition-of-money-5fbd8fe4 [https://https://perma.cc/685K-2PGV].

on their way to being enacted across the United States: they have been adopted in twenty-five states and introduced in five more.[334]

B. *Controllable Electronic Records*

The centerpiece of the 2022 Amendments is the new Article 12. This novel branch of the UCC establishes a private law framework for transactions involving a particular subset of digital assets: *controllable electronic records* (CERs). CERs are an entirely new category defined as a "record stored in an electronic medium that can be subjected to control."[335]

This definition is comprised of three elements. The first, *record*, means information stored in a medium, and "retrievable in perceivable form."[336] The second element, *electronic*, broadly encompasses any "technology having electrical, digital, magnetic, wireless, optical, electromagnetic, or similar capabilities."[337] If the definition of CER included only these two elements, its scope would be extremely far-reaching, capturing all file types (e.g., video, music, text, etc.) recorded in any electronic medium, including magnetic (e.g., floppy disks and hard drives), optical (e.g., DVD and Blu-ray), and solid-state (e.g., USB flash drives and memory cards).[338] It is the third element, *control*, that shapes the core of the CER category and demarcates its limits.

An important preliminary point is that the UCC includes different definitions of the word *control* across several of its articles.[339] With regard to CERs, the relevant definition is in Section 12-105. This provision states that control over an electronic record is established only when a person holds three distinct powers over it. First, they must hold the power to "avail [themselves] of substantially all the benefit from the electronic record."[340] Here, *benefit* is a functional and technology-neutral concept. It covers both "the rights that are afforded by the controllable electronic record and [its] uses."[341]

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334 *See* Legislative Bill Tracking, UNIF. L. COMM'N, https://www.uniformlaws.org/committees/community-home?communitykey=1457c422-ddb7-40b0-8c76-39a1991651ac [https://perma.cc/2T4J-P9KH] (last visited Jan. 28, 2025) (providing real-time tracker and updated map of state legislation adopting the 2022 UCC Amendments).

335 U.C.C. § 12-102(a)(1) (AM. L. INST. & UNIF. L. COMM'N 2022).

336 *Id.* § 1-201(b)(31).

337 *Id.* § 1-201(b)(16A).

338 *Id.* § 12-102 cmt. 2.

339 *See, e.g.*, *id.* § 9-104(a) (defining the factors that demonstrate a secured party has control of a deposit account); *id.* § 9-104 cmts. 1-3 (noting that § 9-104's definition of control is itself "derive[d] from Section 8-106 of Revised Article 8, which defines 'control' of securities and certain other investment property"; *id.* § 9-314 (discussing "perfection of control"); *id.* § 7-106 (defining control of an electronic document of title).

340 *Id.* § 12-105(a)(1)(A).

341 *Id.* § 12-105 cmt. 3.

Determining whether a person has this power requires an investigation into the specifics of the relevant electronic record. With Bitcoin, benefit refers to the ability of a person to hold and transfer these digital assets.[342]

The second power pertains to the ability to "prevent others from availing themselves of substantially all the benefit from the electronic record."[343] A person must have the capacity to exclude all others from enjoying the use of the electronic record and the rights which it affords. Importantly, this is not a determination about whether a person has a *right to exclude*, whereby they may exercise "sole and despotic dominion" over the electronic record in question. Instead, it is a pure assessment of fact. In the most straightforward example, consider an Ether token held in a digital wallet: only the person with the wallet's private key has meets the UCC's definition of 'control'[344] because they enjoy "substantially all" of the token's benefits—even though Ethereum protocols can act on the wallet.[345]

The third power is the ability to transfer the first and second powers to another person, together with the power for that person to further re-transfer them to someone else.[346] In other words, one must be able to confer on another person the capacity to avail themselves of substantially all the benefits of the electronic record,[347] exclude general access to such benefits,[348] and subsequently re-transfer these powers to someone else.[349]

Thus, CERs are a very particular type of intangible asset. Their defining characteristic is that a person can enjoy them directly, without depending on an intermediary. This distinguishes CERs from all those digital assets that are maintained and administered by service providers such as Google, Meta, Apple, or Microsoft. This distinction becomes evident when comparing a Bitcoin, which an individual can spend directly, with Gmail emails or

342 The Bitcoin network enables "owners" to "spend" their bitcoins by controlling private keys that authorize transactions, which involve spending Unspent Transaction Outputs (UTXOs) and broadcasting valid transactions that transfer these UTXOs to new addresses. *See* SATOSHI NAKAMOTO, BITCOIN: A PEER-TO-PEER ELECTRONIC CASH SYSTEM 2-3 (2008), https://bitcoin.org/en/bitcoin-paper [https://perma.cc/MN3P-KSPJ] (explaining, for the first time, the technical and theoretical foundation of Bitcoin and the application of blockchains to digital currencies).

343 U.C.C. § 12-105 (a)(1)(B)(i).

344 The UCC's exclusionary definition of control is qualified to accommodate the highly sophisticated mechanisms that enable technological control. *See, e.g.*, *id.* § 12-105(b) cmts. 2-3, 5 (allowing exclusivity to coexist with system-level protocols, multi-signature arrangements, and similar protocols if substantive power and benefit access is maintained). For the purposes of this Article, these nuances are not critically important because the UCC's core aim is practical control.

345 *Cf.* Moringiello & Odinet, *supra* note 250, at 1150-62 (explaining Ethereum and NFTs).

346 U.C.C. § 12-105(a)(1)(B)(ii).

347 *Id.* § 12-105(a)(1)(A).

348 *Id.* § 12-105(a)(1)(B)(i). *But see id.* § 12-105(b) (providing that a power can still be exclusive even if it is shared with another person).

349 *Id.* § 12-105(a)(1)(B)(ii).

Instagram photos, which require intermediary platforms for access. The concept of control also sets CERs apart from pure intangibles, such as intellectual property rights or carbon emission rights, for which a person depends on state intervention and judicial enforcement to prevent others from access and enjoyment.

C. *Transfer and Negotiability of Controllable Electronic Records*

The 2022 Amendments tacitly imply that CERs are personal property that can be the object of voluntary exchanges.[350] As to the law governing these transactions, Article 12 generally defers to other law.[351] Yet, it establishes two "key tenets"[352] that shape the transfer of property rights when *purchasing* CERs—defined as "taking by sale, lease, discount, negotiation, . . . security interest, issue or reissue, gift, or any other voluntary transaction creating an interest in property."[353]

Enshrined in Section 12-104(d), the first tenet is that "[a] purchaser of a [CER] acquires all rights . . . the transferor had or had power to transfer."[354] Often referred to as the security of property principle, this is one of the cornerstones of the entire conveyancing framework of the UCC.[355] It is rooted

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350 Whether crypto assets are personal property is an intensely debated topic. *See, e.g.*, Juliet M. Moringiello, *False Categories in Commercial Law: The (Ir)relevance of (In)tangibility*, 35 FLA. ST. U. L. REV. 119, 120 (2007) ("[C]ommercial law must discard distinctions based on the physical manifestation of assets and focus instead on the legal qualities of those assets."); Joshua A.T. Fairfield, *Bitproperty*, 88 S. CAL. L. REV. 805, 834-38 (2015) (arguing that virtual and government-issued currencies are fundamentally different and cannot be treated interchangeably); Christopher K. Odinet, *Bitproperty and Commercial Credit*, 94 WASH. U. L. REV. 649, 688 (2017) ("A number of assets, and particularly virtual property assets, are derived from the combination of a series of legal institutions and doctrines that do not lend themselves well to unitary treatment . . . ."); JOSHUA A.T. FAIRFIELD, OWNED: PROPERTY, PRIVACY, AND THE NEW DIGITAL SERFDOM 180-81 (2017) (describing the various ways in which traditional property ownership ledgers and virtual currencies are converging).

351 *See, e.g.*, U.C.C. § 12-104(d) ("Except as provided in this section, law other than this article determines whether a person acquires a right in a controllable electronic record and the right the person acquires."); *id.* § 12-104(f) (deferring to "law other than this article" in whether the purchaser of a CER takes a right to payment relative to the existing property claims).

352 Giuliano G. Castellano & Andrea Tosato, *Commercial Law Intersections*, 72 HASTINGS L.J. 999, 1042 (2021) (defining key tenets as "the dispositive rules and principles that articulate the legal framework necessary to realize the policy aims of a commercial law branch").

353 U.C.C. § 1-201(b)(29).

354 *Id.* § 12-104(d).

355 This principle has ancient roots, reaching back to Roman law. *See* Thomas E. Plank, *Article 9 of the UCC: Reconciling Fundamental Property Principles and Plain Language*, 68 BUS. LAW. 439, 439-42, 442 n.6 & 449 (2012) (establishing the principle's historical lineage to Roman law and its eventual integration into the bedrock of property law and the UCC); John F. Dolan, *The U.C.C. Framework: Conveyancing Principles and Property Interests*, 59 B.U. L. REV. 811, 812-20 (1979). Variations of the 'security of property' principle appear across the UCC in many different contexts. *See, e.g.*, U.C.C. § 2-403(1) (governing good faith purchase of goods); § 3-203(b) (addressing negotiable instrument

in the idea of free alienability: a person who has property rights must be at liberty to convey them to others. One of the corollaries of this principle is that if a transferor has property rights that are free from third-party claims, they can transfer those rights to a transferee, and in doing so shelter the transferee from any conflicting claim.[356] Correspondingly, a transferee cannot derive greater and better rights in property than those which their transferor actually had to give.

The second tenet is a combined product of multiple Article 12 provisions. It establishes that a purchaser "that obtains control of [a CER] for value, in good faith, and without notice of [conflicting claims]" is a "qualifying purchaser."[357] "[Q]ualifying purchaser[s] acquire [their] rights in the [CER] free [from any property rights held by third parties],"[358] and no action may be asserted against such qualifying purchasers, "whether . . . framed in conversion, replevin, constructive trust, equitable lien, or other theory."[359] This tenet, often referred to as the "*take-free rule*," tempers the rigidity of the security of property principle discussed above.[360] Its effect is to make CERs "highly negotiable," closely replicating the regime established by the UCC for negotiable instruments such as checks, promissory notes, and investment securities.[361] For example, a person who acquires a CER from a thief can obtain rights free from third-party claims, provided they satisfy the requirements to be a *qualifying purchaser*.[362] Constituting an exception to the *nemo dat* principle, the thief transfers *greater* rights than they themselves have. In turn, the qualifying purchaser acquires ownership free from the claim of the true owner who is left only with a claim for damages against the thief and cannot demand the return of the CER.

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transfers); § 7-504(a) (regulating transfer of rights associated with titles); § 8-302(a) (managing securities transfers).

356 This is often referred to as the "shelter" principle. *See* U.C.C. § 12-104 cmt. 4 ("Subsection (d) sets forth the familiar 'shelter' principle, under which a purchaser of a controllable electronic record acquires whatever rights the transferor had or had power to transfer."); Menachem Mautner, *"The Eternal Triangles of the Law": Toward a Theory of Priorities in Conflicts Involving Remote Parties*, 90 MICH. L. REV. 95, 97-99 (1991). *See generally* Steven L. Harris, *Using Fundamental Principles of Commercial Law to Decide UCC Cases*, 26 LOY. L.A. L. REV. 637 (1993).

357 U.C.C. § 12-102(a)(2).

358 *Id.* § 12-104(e).

359 *Id.* § 12-104(g).

360 *Id.* § 12-104 cmt. 7.

361 *See id.* (noting that Section 12-104(e) is "derive[d] from Section 3-306," which controls negotiable instruments); *see also id.* §§ 3-201 to -203 (controlling the transfer of negotiable instruments); § 8-303(b) ("A protected purchaser acquires its interest in the security free of any adverse claim.").

362 For more discussion of this example, see *id.* § 12-104 cmt. 7 (exploring the legal outcomes of the transfer of a stolen CER).

Together, these two key tenets produce an unequivocal normative stance. By cloaking CERs in the mantle of negotiability, they bolster the commercial circulation of these assets, reduce title inquiry burdens and administrative verification costs, facilitate transactional certainty and finality, and mitigate transactional vulnerabilities (including ownership disputes).

D. *Use as Collateral of Controllable Electronic Records*

The 2022 Amendments also introduce a special regime for the use of CERs as collateral in secured transactions. The overarching approach is to classify these digital assets as "general intangibles" under UCC Article 9,[363] thereby subjecting them to the general framework applicable to this class of collateral but also establishing asset-specific rules tailored for their unique characteristics. The key policy choice of the 2022 Amendments is that control of a CER is accorded similar legal significance and effects as the possession of a tangible good.

Regarding attachment (the process of making the security interest arise and become effective between the debtor and the creditor), there are two viable avenues. First, a creditor and debtor can enter into a signed agreement that adequately describes the CER collateral, in line with the general rules.[364] The second avenue dispenses with the requirement of a signed security agreement and relies instead on control.[365] This rule implies that control provides adequate evidence of which CERs the parties intended to encumber, satisfying needs of legal certainty both between the parties and for benefit of third parties.[366]

The 2022 Amendments also introduce a special perfection regime for security interests in CERs. Perfection refers to making the security interest, once created, effective against third parties. As with all types of collateral, a creditor can file a financing statement in the relevant public registry.[367] However, under the new rules, a creditor has an additional option: they can perfect by taking control of the CERs either directly or relying on a person

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363 *See id.* § 9-102(a)(42).

364 *See id.* § 9-108.

365 *See id.* § 9-107A ("[For the purposes of attachment, a] secured party has control of a [CER] as provided in Section 12-105."). The parties still need an agreement, but if the creditor takes control of the CER, the formality of a written and signed document is no longer necessary. *See Id.* § 9-104 cmt. 2 ("'Control' . . . may substitute for a signed security agreement as an element of attachment.").

366 *See generally id.* §§ 9-203(b)(2)–(3)(D) (listing criteria for the enforceability of a security interest, including control).

367 *See id.* § 9-310 & cmt. 2 ("Filing a financing statement is necessary for perfection of security interests and agricultural liens. However, filing is not necessary to perfect a security interest that is perfected by another permissible method . . . .").

that takes control on their behalf.[368] Perfecting by control has the obvious practical advantage of being faster and simpler than filing. Moreover, it circumvents the difficulty of having to identify the geographically applicable registry for the debtor's location. Even more significantly, lenders taking security in CERs would be well-advised to perfect their interest through control due to the take-free rule described above.[369]

If they neglect to do so, they face a significant risk. The debtor could dispose of the CER by transferring control to a qualifying purchaser who then would take it free from any competing claim—including the lender's security interest![370]

The significance of the perfection rules for CER is amplified by their integration with a special priority regime. Departing from the Article 9 general scheme that ranks security interests over the same collateral in temporal order (first to file or to otherwise perfect),[371] the 2022 Amendments introduce a non-temporal priority rule for competing security interests over CERs.[372] Specifically, a secured creditor who perfects by control "has priority over [] conflicting security interest[s] held by a secured party that does not have control."[373] Put simply, if Lender 1 perfects a security interest in a CER by filing, but Lender 2 later perfects a security interest in that same CER by control, Lender 2 has priority over Lender 1, even though the latter was first in time.

E. *Controllable Accounts*

The private law framework introduced by the 2022 Amendments for CERs does not extend to tokenizations. As discussed in Part II, tokenization refers to a transactional structure in which a thing (such as a CER) is used to evidence the ownership or another property right in a separate asset.[374]

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368 *See id.* § 9-310(b)(8) ("The filing of a financing statement is not necessary to perfect a security interest . . . which is perfected by control under Section 9-314."); *see also id.* § 9-310 cmt. 3 ("Subsection (b) lists the security interests for which filing is not required as a condition of perfection, because . . . they are perfected by another method, such as by the secured party's taking possession or control (subsections (b)(3), (b)(4), (b)(5), (b)(6), (b)(7), (b)(8), and (b)(8.1)).").

369 *See supra* Section III.C (discussing how the take-free rule can grant a qualifying purchaser who buys property in good faith *more* rights than the seller actually had to give).

370 *See* U.C.C. § 12-102(a)(2).

371 *See id.* § 9-322(a).

372 *See id.* § 9-326A.

373 *Id.*

374 On tokenization, see *supra* Part II. *See also* Moringiello & Odinet, *supra* note 10, at 628-32 (explaining the mechanics of the tokenization process); Steven L. Schwartz, *Next-Generation Securitization: NFTs, Tokenization, and the Monetization of 'Things*,' 103 B.U. L. REV. 967, 980-81 (2023) (same); Christopher K. Odinet & Andrea Tosato, *Response: The Intersection of NFTs and Structured Finance*, 103 B.U. L. REV. 1005, 1018-21 (2023) (describing the two dominant models of tokenization).

Article 12 explicitly states that rights in property evidenced by a CER are governed by "law other than this article."[375] Thus, even if a CER is purported to embody rights in a vintage car, a painting, or a digital image, that asset remains subject to whatever law ordinarily applies to it. The car, painting, or digital image is not governed by the 2022 Amendments regime for CERs.

But there are indeed two notable exceptions in which the 2022 Amendments *do* govern tokenizations: *controllable accounts* and *controllable payment intangibles*.[376] Controllable accounts are salient to our inquiry into the potential tokenization of bankruptcy trade claims. The basic definition starts with that of *accounts*: "a right to payment of a monetary obligation . . . for property that has been or is to be sold, leased, licensed, assigned, or otherwise disposed of . . . [or] for services rendered or to be rendered . . . ."[377] The most common kind of account arises when someone sells a good or provides a service and has not yet been paid for it. For instance, a homeowner might hire a plumber to fix a leaky sink and then be obligated to pay for the service within the two weeks that followed. The right to payment is the account, with the demanding party (the plumber) being the account creditor and the homeowner being the account debtor.[378] A controllable account, then, is an account that is evidenced by a CER and in respect of which the *account debtor* agrees to pay the person in control of that CER. In other words, controllable accounts are CERs that, in law, represent a monetary obligation with payment owed to whomever is in control of the associated CER.

The 2022 Amendments establish a regime for the commercial circulation of controllable accounts that closely mirrors that of CERs. Regarding ownership transfers (in these cases, called assignments), controllable accounts benefit from the same take-free rule applicable to CERs: a "qualified purchaser" acquires a controllable account free from any competing claims.[379] Additionally, the 2002 Amendments allow an account debtor of a controllable account to agree with their original creditor not to assert claims or defenses against subsequent transferees.[380] The combined effect of these rules renders controllable accounts highly negotiable. Thus, qualified purchasers can acquire these assets with confidence that they are obtaining the tokenized rights to payment free from competing claims or defenses, contingent only on the creditworthiness of the account debtor.

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375 U.C.C. § 12-104(f).

376 *See id.* §§ 9-102(a)(27A)–(27B).

377 *Id.* § 9-102(a)(2).

378 "Account debtor" is defined as "a person obligated on an account, chattel paper, or general intangible." *Id.* § 9-102(a)(3).

379 *See supra* Section III.C (discussing the take-free rule for CERs).

380 *See* U.C.C. § 9-403(b).

In line with the rules applicable to CERs, a security interest in a controllable account can be created by way of agreement between the secured party and the debtor.[381] Moreover, a secured party can perfect their interest either by filing a financing statement or by taking control of the controllable account in question.[382] Again, mirroring the priority rules applicable to CERs, a security interest in a controllable account perfected through control has priority over competing security interests perfected by filing.[383]

Importantly, controllable accounts are a paradigm shift. Previously, the UCC only provided for tokenizing payment obligations in paper form, such as promissory notes, checks, and bills of exchange. Rooted in long-standing common law principles, the regime for the circulation of these instruments revolved around their tangibility and possession of the relevant writings.[384] The 2022 Amendments herald a new era of *electronic* negotiable instruments by enabling market participants to use CERs to evidence monetary obligations and bestowing these with a generous take-free rule combined with the option for account debtors to abstain from asserting claims and defenses against transferees. This legal innovation is explicitly acknowledged by the official comments, underscoring that the lack of electronic instruments under the UCC was a significant gap bemoaned by market participants.[385]

In stark contrast with the flawed transactional structures proffered by the now-defunct OPNX and their ilk, it is by properly leveraging controllable accounts and the framework for CERs under the 2022 Amendments that the tokenization of bankruptcy trade claims becomes possible. We explain how to do just that below.

F. *Tokenizing Bankruptcy Claims Under the UCC*

With the foundation now laid, we come to one of the main contributions of this project—explaining how the device of controllable accounts can be used to tokenize bankruptcy claims. Possible structuring options exist along a spectrum based on varying levels of intermediation. At one end lies a *completely disintermediated* approach, while at the other one that is *completely*

381 *See supra* Section III.D (reviewing the CER rules associated with the creditor and debtor agreements).

382 *See supra* note 368 and accompanying text.

383 U.C.C. § 9-326A.

384 *See id.* § 3-104.

385 *See id.* § 12-104 cmt. 10. *See generally* Andrew Lom & Rachael Hashmall, *Bringing the UCC into the Digital Age: Review of the 2022 UCC Amendments and Controllable Electronic Records*, NORTON ROSE FULBRIGHT (Nov. 1, 2022), https://www.nortonrosefulbright.com/en-us/knowledge/publications/8d95e2ed/bringing-the-ucc-into-the-digital-age-review-of-the-2022-ucc-amendments [https://perma.cc/9UXY-UMMC].

intermediated.[386] Though there are potentially infinite permutations, we explore key points along this spectrum below to illustrate these different tokenization options.

First, the tokenization could be done in a fully peer-to-peer manner without reliance on intermediaries. The process could unfold as follows. First, a bankruptcy creditor would enter into an agreement with the bankruptcy trustee whereby they agree that their creditor's claim will be evidenced by a CER soon to be minted and that the trustee will eventually pay the liquidated claim to whoever controls that CER. Ideally, the creditor would also obtain the bankruptcy trustee's agreement not to assert claims or defenses against subsequent transferees of the tokenized claim. Thereafter, the creditor could mint the CER—for instance, an NFT on the Ethereum network or a similar token on another public DLT system—thereby creating a *controllable account*. At this point, the creditor could monetize their claim by assigning it to a purchaser at an agreed price. The proprietary effects of this transaction would be governed by Article 12. Accordingly, upon taking control of the NFT, the purchaser would become entitled to demand payment from the bankruptcy trustee. Moreover, at any time, the first purchaser could reassign the controllable account to another person who could benefit from the take-free rule under Article 12, provided they were a qualifying purchaser.

Second, moving along the intermediation spectrum, the tokenization process could involve a third-party company that facilitates both the creation of the controllable account and its subsequent monetization. For example, such a company could assist creditors by providing technological support to forge a digital asset that is a CER under Article 12, potentially recommending an appropriate token standard and DLT network. This company could also offer digital wallet services to hold the tokenized bankruptcy claim in custody after issuance. When the creditor seeks to monetize the asset, the company could manage the transfer of control to purchasers, either directly transferring control of the CER or acknowledging custodial control for the benefit of purchasers. Moreover, in the event that the claim is eventually paid out, the company could streamline the payment process by interfacing between purchasers of the controllable account and the bankruptcy trustee.

Third, moving further along the spectrum towards greater intermediation, it is possible to envision a scenario in which an entity plays an even greater role in each facet of the tokenization process. For example, a company could establish its own network specifically designed to enable creditors to tokenize their bankruptcy claims and provide a suite of ancillary services. It could act as the creditors' agent in negotiations with the

386 For an overview of the disintermediated and intermediated models of tokenization, see Odinet & Tosato, *supra* note 374, at 1018-21.

bankruptcy trustee to convert their claims into controllable accounts and oversee the technical aspects of minting appropriate CERs. Furthermore, the company could assist in monetization of the tokenized bankruptcy claims by helping creditors identify potential buyers and facilitating these transactions. It could also oversee the transfer of control of the CERs to purchasers and even hold these assets in custodial wallets on their behalf. Additionally, it could interface with the bankruptcy trustee to manage distribution of payments. While this approach would reintroduce a significant degree of intermediation, it might maximize efficiency and reduce friction in the tokenization process.

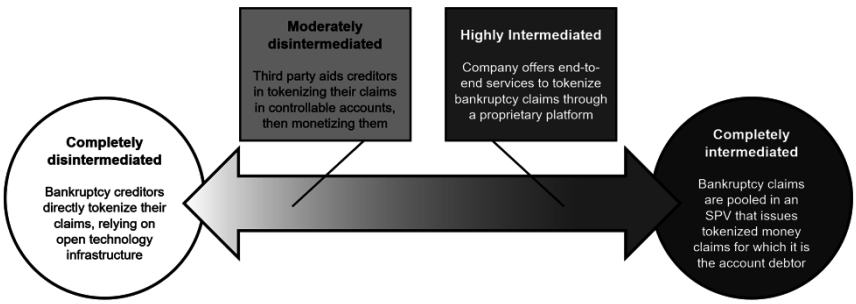
Finally, at the far end of the intermediation spectrum, it is possible to imagine the indirect tokenization of bankruptcy claims. For example, a sponsor could establish a special purpose vehicle (SPV) to acquire bankruptcy claims from creditors of a particular company's bankruptcy.[387] The SPV could potentially even aggregate claims from multiple bankruptcies to diversify risk. Thereafter, the SPV could mint controllable accounts backed by the pool of acquired bankruptcy claims, either by utilizing proprietary technological infrastructure or by leveraging a public DLT network (essentially, by minting a number of NFTs). Each controllable account would entitle its controller to a pro-rata share of distributions from the commingled claims pool. Finally, the SPV could offer the controllable account for sale on cryptocurrency exchanges or over-the-counter markets. This would allow the sponsor to tokenize bankruptcy claims on behalf of creditors without each creditor having to tokenize its individual claim. The bankruptcy claims would be pooled and tokenized collectively. While this transactional structure would entail a high degree of intermediation, it could improve liquidity compared to individual tokenization. Creating a standardized pool of assets in this way would facilitate easier trading and allow investors to readily adjust their positions. Furthermore, it could enhance price discovery through aggregated trading volume and would remove the need for an agreement with the bankruptcy trustee regarding the tokenized claim. It would also not be necessary to enter into an agreement with the bankruptcy trustee whereby they assent to pay the person in control of the tokenized bankruptcy claim.

As we have explained in this Section and as shown in Figure 2 below, there is a myriad of points along this intermediation spectrum. The variables concern primarily the transactional structure and technological solutions. On the transactional side, the number and types of intermediaries, their relationship with the creditors, and the bankruptcy trustees—as well as the pooling and segmentation of claims—are all sources of diversity. On the

387 For an overview of special purpose vehicles, see John A. Pearce II & Ilya A. Lipin, *Special Purpose Vehicles in Bankruptcy Litigation*, 40 HOFSTRA L. REV. 177, 182-99 (2011).

technology front, there are multifarious options concerning token standards, digital wallets, public versus private networks, direct and indirect control transfers, and interoperability. The legal framework created by the 2022 Amendments opens endless possibilities. What is crucial is that the relevant bankruptcy claims are reified as controllable accounts abiding by the requirements established by Article 12. Compliance with the UCC framework ensures the token holder's rights are anchored to the bankruptcy claim and enforceable against the bankruptcy trustee.

Figure 2: Bankruptcy Claims Tokenization Intermediation Spectrum



IV. Policy Implications

Although, as we discussed in Part III above, it is legally possible to tokenize certain bankruptcy trade claims, the adoption and deployment of crypto technologies in the bankruptcy exchange is poised to have complex ramifications. In this Part IV, we focus on those effects.

We begin by analyzing the impact that the 2022 Amendments and controllable accounts will have on the existing legal framework governing the commercial circulation of this type of claim. Thereafter, we shift our attention to the potential economic and social reverberations that these legislative reforms might bring to holders of trade debts. This is followed by our assessment of the effects that the new body of rules might have on inter-creditor and creditor-debtor dynamics in the bankruptcy process.

But before proceeding, a caveat is in order. The views we express here are predictions—and rather preliminary ones at that, given that the 2022 Amendments have not yet been enacted across all states. As the famous Danish physicist Niels Bohr aptly put it: "prediction is very difficult,

especially about the future."[388] In this forecasting endeavor, however, we have greater confidence in some of our estimations than in others. For example, we have a higher level of conviction regarding our assessment of the prospective changes that the new rules will bring to the regime for the buying and selling of bankruptcy trade claims. Conversely, as we delve into how the tokenization of trade debts might influence the bankruptcy process as a whole, our prognostications are marked by greater uncertainty, prompting us to contemplate a spectrum of potential outcomes. Ultimately, an ex-post examination rooted in robust empirical analysis will be indispensable in identifying actual impacts and evaluating their effects. We hope that our discussions here will spur empiricists to undertake such work.

A. *Legal Paradigm Shift*

The 2022 Amendments, controllable accounts, and the prospective tokenization of trade debts—such as those held by many of the creditors of FTX, Celsius, and Voyager—constitute a legal paradigm shift.

As described in Section I.A, the commercial circulation of bankruptcy trade debts has historically been confined within the metes and bounds of the Article 9 regime for *accounts*.[389] Under these rules, the assignment and use as collateral of these assets require a written and signed agreement between the parties, and third-party effectiveness of these transactions is conditional upon filing a notice in the applicable public registry at the location of the debtor.[390] Moreover, priority is established on a strict first-to-file basis.[391]

It is well documented that the Article 9 framework for accounts has been effective in bringing legal certainty to both their assignment and use as collateral, especially when compared to the pre-UCC regime.[392] However, the need for written and signed agreements, public filings, and the strict temporal priority rule impose extensive due diligence and administrative burdens that slow the circulation of these payment rights and hinder their liquidity. Consider the following example: each time someone wants to purchase a trade debt from a creditor in a bankruptcy, that individual would have to enter into a written agreement with the creditor, search the relevant public registry to determine whether this person has already encumbered their accounts, and, if so, determine whether the purchase is still desirable. In many cases, this

388 PETER HAY, RUSSELL J. WEINTRAUB & PATRICK J. BORCHERS, CONFLICT OF LAWS: CASES AND MATERIALS 6 (14th ed. 2016).

389 *See supra* Section I.A (documenting the historical treatment of bankruptcy claims trading).

390 *See* U.C.C. § 9-310.

391 *See id.* § 9-322(d).

392 *See, e.g.*, 1 GRANT GILMORE, SECURITY INTERESTS IN PERSONAL PROPERTY 308-10 (1965) (explaining how Article 9 clarified and improved the pre-UCC accounts receivable statutes).

due diligence process will significantly slow down trade debt circulation and deter a potentially interested buyer.

This is where the new Article 12 steps in to offer a novel alternative to holders of trade debts. Provided they satisfy the necessary requirements, holders of bankruptcy trade debts can imbue their rights to payment into a CER, opting out of the aforementioned regime for mere *accounts* and into that for *controllable accounts*. In so doing, their bankruptcy trade claim becomes a highly negotiable asset that can circulate at high velocity, as purchasers in good faith, for value, and without notice acquire it with a high degree of certainty that their interest is free from competing claims. The allure of controllable accounts as a vehicle to reify bankruptcy trade debts is also bolstered by the fact that they are digital assets, trackable in real time, transferable instantaneously with almost immediate finality, among parties potentially pseudonymous, non-trusting, and located across multiple jurisdictions.

But all of this comes with some costs, including a learning curve for market participants. As one might imagine, such a legal paradigm shift is unlikely to be without technical difficulties. The introduction of a new commercial law framework always requires adaptation. In the case of the 2022 Amendments, internalizing and growing comfortable with this body of rules might prove to be particularly challenging. CERs are an entirely new category with a complex, multipartite definition. To be sure, the Article 12 notion of control is conceptually not distant from that of possession for tangible goods. Yet it has idiosyncratic features stemming from the intangible nature of the assets to which it applies—digital assets. Similarly, although the take-free rule for digital assets has clear parallels to that for negotiable instruments, it is not without its own peculiarities.

Focusing specifically on the intersection of controllable accounts and bankruptcy trade debts, the scope of application issues (i.e., whether a particular trade debt is actually an Article 9 account), the need for an agreement between the creditor and account debtor to create a controllable account, as well as the notifications necessary for a transferee to collect the monetary obligation in question are all elements likely to require time and practice before they are fully digested by the practicing commercial bench and bar. Overall, a steep learning curve lies ahead for creditors, debtors, practitioners, and judges alike.

Nevertheless, we believe that over time, the markets will embrace and fully harness the 2022 Amendments and the mechanics they furnish for tokenizing bankruptcy trade debts. We anticipate the emergence of standardized transaction structures to facilitate the steps necessary to transform these payment rights into controllable accounts. It should also be

noted that, in some cases, money claims will come into existence as controllable accounts from the outset. Thus, their trading in bankruptcy will be seamless and not require a conversion from accounts to controllable accounts. These developments should eliminate flawed transactional structures, such as the one propounded by OPNX.

B. *Implications for Trade Debts Holders*

The new legal and technological framework for trade debts has the potential to greatly accelerate their commercial circulation. Empirical evidence suggests that, at present, these bankruptcy claims are relatively illiquid.[393] Although a few innovative digital claims-trading platforms have emerged—such as Xclaim[394] and Claims Market[395]—their adoption remains limited. While several factors likely contribute, it is hard to dispute that the current legal regime for trade debts hampers their circulation by requiring prospective transferees and secured parties to undertake exacting due diligence, draft written agreements, make public filings, and then monitor the account debtor's location.[396]

We believe that the combination of the rules that make tokenized trade debts highly negotiable, coupled with the technical advantages of digital assets, has the potential to reshape the status quo. We anticipate a market for tokenized trade claims that is significantly more liquid, driven by lower transaction costs, improved price discovery, and narrower spreads between bid and ask prices. Moreover, these dynamics could be amplified by enhanced record visibility and data availability as bankruptcy trade claims become digital assets traded on electronic, possibly distributed networks.

In addition to greater liquidity, the 2022 Amendments could markedly broaden participation in the market for bankruptcy trade debts. Recent empirical studies show that currently only a subset of trade creditors dispose of their claims. Concurrently, the buyer landscape also reflects concentration, with a small cluster of specialized distressed debt firms exerting outsized interest in absorbing these claims.[397]

But, by making it both legally and technologically simpler to dispose of bankruptcy trade debts, tokenization could stimulate increased participation

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393 *See, e.g.*, Ivashina et al., *supra* note 53, at 324; Edith S. Hotchkiss & Robert M. Mooradian, *Vulture Investors and the Market for Control of Distressed Firms*, 43 J. FIN. ECON. 401, 422-23 (1997); Wei Jiang, Kai Li & Wei Wang, *Hedge Funds and Chapter 11*, 67 J. FIN. 513, 516 (2012).

394 XCLAIM, https://www.x-claim.com [https://perma.cc/AG69-XAJB] (last visited Jan. 25, 2025).

395 *FTX Claims Pricing*, CLAIMS MARKET, https://claims-market.com [https://perma.cc/L6QV-2TR7] (last visited Jan. 25, 2025).

396 *See supra* Section IV.A.

397 *See generally* Ivashina et al., *supra* note 53.

both on the sell and buy side. This would be especially likely if entrepreneurs were to launch platforms tailored specifically to the tokenization and trading of bankruptcy trade debts. These commercial ventures would benefit from high trade volumes and, thus, have an incentive to extend outreach efforts to both claim holders and capital providers, informing them about available options and opportunities. Preliminary evidence that such platforms are likely to be created is found in the eagerness of businesses, such as OPNX, to facilitate the trading of bankruptcy trade debts.

For bankruptcy trade debt holders, the new legal framework might yield substantial benefits. As a preliminary point, it should not be overlooked that the introduction of controllable accounts is inherently positive, as it provides additional optionality and versatility. When this is coupled with the prospect of a market that offers greater liquidity, more competitive pricing, and increased transparency, we predict that bankruptcy trade debt holders will gain access to superior exit opportunities. Prospective trade creditors are often worried about being "trapped into a bankruptcy" process with no palatable exit ramps, tempering their willingness to deal with distressed companies and exacerbating the difficult position of these firms.[398] The revised structure could enhance capital access and financing costs across businesses, particularly for higher-risk enterprises.

But this brighter picture is not without its shadows. The past frenzies observed with cryptocurrencies, stablecoins, and NFTs serve as cautionary tales. The introduction of tokenized trade debts might stir irrational exuberance, leading market participants to conflate the legal and technological advances of controllable accounts with an inherent uplift in the quality and returns of the bankruptcy claims on offer. Highly negotiable digital assets could make the market for trade debts more liquid, yet they cannot, per se, influence the ultimate recovery from a bankruptcy reorganization or liquidation. We worry that without proper guardrails in place, such as disclosure requirements and appraisals of investor competence, there is a risk that unseasoned investors will view tokenized trade debts as an upgrade on the *quality* of the claim, rather than recognizing it as an upgrade to the legal and technological *trading rails* over which it travels.

A particularly concerning scenario would be if retail investors were seduced by the allure of tokenization, making imprudent acquisitions at inflated prices, only to later face bitter disillusionment. Although there are important benefits to be gained from the digitalization and democratization

398 Levitin, *supra* note 36, at 93; *see also* Levitin, *supra* note 51, at 162 ("Purchasers . . . found themselves trapped in positions of uncertain duration.")

of the financial markets and the bankruptcy exchange,[399] recent high-profile financial market events involving retail investors—most notably the AMC and GameStop trading mania in early 2021[400]—highlight that there are also dangers stemming from retail investors channeling their savings into risky assets through highly gamified trading platforms.[401] It is easy to foresee novice investors, enticed by new fintech apps, purchasing bankruptcy debt tokens without careful consideration of the relative risks and potential returns of low-priority unsecured claims. This is particularly the case because they would not have borne the economic harm endured by the original claimant and might be easily swayed by marketing buzz and anecdotal accounts of trading triumphs. The promotional strategies spun by entities like OPNX give us reason for concern, as they paint a rosy picture around their own platform and debt tokens, while sidestepping the fact that their value is anchored to the underlying claim.

Fraud is another looming shadow. The appeal of distributed ledger technology, blockchain, and tokens, as history has shown, often attracts unsavory actors. Although the current market for bankruptcy trade debts is not insulated from malfeasance, the widespread adoption of controllable accounts and tokenization might intensify these threats, especially during the early stages. Conceivable risks span from hackers exploiting digital wallets to platforms commingling client assets or, worse still, misappropriating them outright. We urge consumer protection regulators—such as state attorneys general, the Consumer Financial Protection Bureau, and the Federal Trade Commission—to be vigilant in monitoring this market and bringing enforcement actions when appropriate.

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399 *See* WORLD ECON. F., THE FUTURE OF CAPITAL MARKETS: DEMOCRATIZATION OF RETAIL INVESTING 7 (2022), www3.weforum.org/docs/WEF_Future_of_Capital_Markets_2022.pdf [https://perma.cc/HXP8-V2MG] ("Participating in the capital markets enables people to take ownership of their financial future . . . [and] improve their socioeconomic status."); Sergio Alberto, Gramitto Ricci & Christina M. Sautter, *The Wireless Investors Movement*, U. CHI. BUS. L. REV. 3-5 (Jan. 28, 2022), https://businesslawreview.uchicago.edu/online-archive/wireless-investors-movement [https://perma.cc/MN75-ZB4B] (explaining that wireless investors can produce "lasting changes" in corporate governance and social norms).

400 *See* Jill E. Fisch, *GameStop and the Resurgence of the Retail Investor*, 102 B.U. L. REV. 1799, 1802 (2022) ("The GameStop trading frenzy . . . led to high levels of market volatility and charges of market manipulation."); Sergio Alberto Gramitto Ricci & Christina M. Sautter, *The Corporate Forum*, 102 B.U. L. REV. 1861, 1877 (2022) ("[R]etail investing . . . is set to produce enduring changes in the financial markets, the corporate sector, and society.").

401 *See* Jeremy Baber, *Why Gamification is Fintech's Next Big Disruptive Trend*, FINTECH MAG. (July 23, 2023), https://fintechmagazine.com/articles/why-gamification-is-fintechs-next-big-disruptive-trend [https://perma.cc/J2GJ-4J72] (noting that "gamification" is an "exciting tool" but carries significant risks such as overconsumption).

C. *Implications for the Bankruptcy Process*

The advent of tokenized bankruptcy trade debts is likely to impact both inter-creditor and creditor-debtor dynamics in the bankruptcy process. In our assessment, there are several key junctures that are particularly impacted by the legal regime changes introduced by the 2022 Amendments. However, forecasting the effects with any degree of confidence is challenging given the nascence of these reforms.

First, tokenization could transform how trade debt holders interact with each other, organize, participate, and, ultimately, influence bankruptcy proceedings. Collective action currently presents significant hurdles for holders of these claims despite attempts to coordinate and engage in grassroots advocacy.[402] There are significant organizational challenges and costs associated with establishing reliable communication channels, sharing information, weighing possible strategies, and instituting decision-making procedures to choose a course of action. Consequently, trade creditors operate individually or in isolated silos rather than as a consolidated group in any given bankruptcy. This frequently limits their overall impact on bankruptcy proceedings, even when they collectively hold a sizable portion of the liabilities of the insolvent entity.

This isolation leaves trade claim holders in a difficult position. Bankruptcy is a highly specialized practice area that typically requires experienced counsel and does not lend itself to pro se legal representation. This difficulty is exacerbated in crypto bankruptcies due to the novel and complex issues posed by the business model of the insolvent entities, the assets at stake, and the uncertain legal nature of the relationship between creditors and debtors. Though holders of trade claims sometimes engage in efforts to retain counsel, leading firms are more likely to accept representations of larger stakeholders. Moreover, though it is true that bankruptcy courts, claims agents, U.S. trustees, debtors, and unsecured creditor committees—among other stakeholders—have been receptive to communication from trade claims holders, there are significant limitations.[403] Each individual inquiry by a claim holder places an additional strain on scarce resources and, in the case of high-priced legal professionals, further depletes whatever value remains in the bankruptcy estate. As the case docket grows and major decisions must be

402 *See, e.g.*, Diane Lourdes Dick, *The Case for a Bankruptcy Shareholder Ombudsman*, 41 BANKR. L. LETTER 5-6 (2021) [hereinafter Dick, *The Case for a Bankruptcy Shareholder Ombudsman*] (describing the challenges around communication with individual shareholders in a bankruptcy proceeding); Diane Lourdes Dick, *Grassroots Shareholder Activism in Large Commercial Bankruptcies*, 40 J. CORP. L. 1, 44-47 (2014) (same).

403 For an example of this dynamic in a recent non-crypto commercial bankruptcy case, see Dick, *The Case for a Bankruptcy Shareholder Ombudsman*, *supra* note 402, at 3-4.

made, it becomes increasingly difficult for the court and other parties to focus on the steady stream of questions and correspondence from individual claimants.

Against this backdrop, there is an opportunity for market participants who act as tokenization intermediaries to also support enhanced participation of trade debt holders in bankruptcy. These actors could harness the potential of tokenization, not just as an opportunity to profit from trading activity, but to develop platforms and services that facilitate education, self-empowerment, and collective action. To illustrate, an intermediary could provide digital infrastructure for claimants to coordinate, share information, and discuss strategies. The intermediary could also pool funds from individual holders to retain experienced bankruptcy counsel on their behalf. Over time, as these intermediaries and their legal teams gain expertise and credibility, they could evolve into streamlined channels for effectively voicing the interests of dispersed trade creditors. This could counterbalance the challenges that these individuals typically face in navigating complex proceedings and exerting influence. Furthermore, these intermediaries could potentially play the role of mediators, smoothing the path for negotiations and settlements between trade debt claimants and other bankruptcy stakeholders. Overall, more organized and cohesive action by trade debtors could significantly enhance their voice in insolvency proceedings, thereby benefitting the bankruptcy system as a whole through the inclusion of more diverse creditor perspectives.

Second, controllable accounts and tokenization might affect the number and types of persons who hold trade debts in bankruptcy. As described in Part I, there is a long-standing debate about whether bankruptcy claims trading impedes the reorganization of insolvent entities and diminishes recovery for creditors. Empirical research refutes these propositions, indicating that robust trading of these assets does not correlate with an absence of creditor coalitions or fraught intra-creditor negotiations, nor does it result in negative outcomes. Specifically for trade debts, Victoria Ivashina, Benjamin Iverson, and David C. Smith posit that the commercial circulation of these assets leads to creditor concentration without altering the duration or results of bankruptcy proceedings, often yielding higher recoveries for this creditor class as well as better post-reorganization performance.[404]

The conundrum posed by the 2022 Amendments is whether they will alter the current status quo—and if so, for the better or worse. One potential scenario is that the new rules will make the cohort of trade debt holders more volatile, complicating consensus-building and possibly unsettling the bankruptcy process. This might occur if tokenization renders this creditor class highly fragmented and constantly revolving, due to a greatly expanded

404 *See* Ivashina et al., *supra* note 53, at 334.

pool of speculative investors—potentially even drawing in retail investors—and especially if it led to widespread securitization of these assets and their revenue streams. Alternatively, the 2022 Amendments may bolster creditor concentration. This would occur if the market conditions fostered by tokenization incentivized specialized distressed debt investors to amass trade claims to a greater degree. Yet another scenario is that the advent of controllable accounts neither fragments nor concentrates the cohort of trade debt holders, preserving the current landscape largely unaltered.

It is very hard to make a prediction. The 2022 Amendments are still being adopted, and controllable accounts are yet to be fully understood by practitioners and market participants alike. Nevertheless, on balance, we cautiously hypothesize that tokenization is more likely to tilt the scale toward the concentration of trade debts in fewer hands. At present, it is believed that only one-third of trade debt holders dispose of their claims during bankruptcy.[405] Should tokenization, in fact, facilitate more liquid markets for these assets, complemented by digital platforms that enable frictionless trading, it is plausible that a higher percentage of trade debt holders would divest their claims.

In essence, our forecast is that tokenization is more likely to be a conduit facilitating the transfer of trade debts from original creditors to a select cadre of specialized investors. Though we believe that tokenization is likely to expand the pool of interested buyers,[406] we surmise that the primary acquirers will continue to be highly specialized distressed debt funds. The inherent difficulties in assessing the value of trade debts, navigating the bankruptcy process, and obtaining a timely recovery will not be meaningfully diminished by tokenization and, thus, will continue to discourage many types of investors from dabbling in these assets. In addition, as described above, the potential for original trade creditors to take advantage of tokenization for collective action would further reinforce creditor concentration.

Albeit with a measure of caution, we welcome the prospect of both more structured collective action of original trade creditors and increased concentration of trade debts. Current empirical data seems to suggest that such developments could have a beneficial impact on bankruptcy outcomes and social welfare. Yet the actual trajectory tokenization will trace is a matter warranting empirical scrutiny over an extended period, as controllable accounts transition from abstract concept to tangible reality. We hope that our work prompts such in-depth investigations.

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405 *Id.* at 324.

406 *See supra* Section IV.B.

Conclusion

The epic collapses of former crypto giants such as Celsius, Voyager, and FTX are reminders that bankruptcy court is the inescapable destination for all companies caught in a downward spiral. As these insolvencies come to light, they bring to the fore uncertainties concerning the legal nature of digital assets and the transactions in which they are deployed—often causing significant pain for individual customers of these failed platforms. Yet amid this upheaval, bankruptcy has become a crucible for innovation, giving rise to a new kind of digital asset: *debt tokens*.

As we describe in these pages, the practice of trading bankruptcy claims has a long history in the United States. Yet the introduction of crypto technology, as exemplified by offerings such as that of OPNX, introduces an entirely new dimension into this market. We foresee a landscape rife with both promising opportunities and potential pitfalls.

Our exploration of debt tokens breaks new ground, offering both legal and policy perspectives. In our analysis, we highlight a significant risk: the creation of digital assets that merely purport to represent bankruptcy claims but fail to actually achieve this result, largely due to failings in adherence to principles of commercial and property law, as seen in the case of OPNX's offering. Conversely, our research demonstrates the feasibility of legitimate debt tokens through the innovative use of Article 12 of the UCC, albeit within limits. In terms of policy, debt tokens present the prospect of a more vibrant market for bankruptcy claims, promising benefits such as enhanced liquidity, improved exit strategies for creditors, and broader participation. However, this innovation is not without its challenges, particularly the risk of retail investors making uninformed decisions and the potential for fraud. Despite these concerns, the opportunity for more effective collective action for trade debt holders and the prospect of better outcomes in corporate reorganizations highlight the transformative potential of tokenization of bankruptcy claims.

Debt tokens warrant continued study. Our hope is that our analysis paves the way for future empirical research measuring their impact on the bankruptcy ecosystem.