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## Digital Property Cycles

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# Digital Property Cycles

Joshua Fairfield\*

## *Abstract*

*The present downturn in non-fungible token (“NFT”) markets is no cause for immediate alarm. There have been multiple cycles in both the legal and media focus on digital intangible property, and these cycles will recur. The cycles are easily explainable: demand for intangible property is constant, even increasing. The legal regimes governing ownership of these assets are unstable and poorly suited to satisfying the preferences of buyers and sellers. The combination of demand and poor legal regulation gives rise to the climate of fraud that has come to characterize NFTs, but it has nothing to do with the value of the technology, the legitimacy of the demand to own intangible property, or even the value of the assets themselves. Rather, fraud and exploitation are entirely avoidable and predictable outcomes of a situation in which buyers and sellers value assets highly but enjoy little to no protection of their interest in their investment. The solution is not more public service announcements indicating that all NFTs are fraudulent; this is neither true nor to the point. Rather, the only solution is to vindicate investor and purchaser rights in intangible property, so that the legitimate demand for intangible property is channeled into the regular economy instead of gray markets.*

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## INTRODUCTION

From their peak in 2021, non-fungible token (“NFT”) sale prices have dropped by as much as 90 percent.<sup>1</sup> NFTs are, for the present moment, synonymous with grift.<sup>2</sup> As with other areas of development of distributed ledger technologies, the field is rife with fraudsters who believe that new technologies open new spaces free from regulation in which to practice their scams.<sup>3</sup> This Essay grapples with the speed and meaning of this downturn, and whether it reflects a fundamental unsoundness in the technology or demand for these assets, or whether there is something else at play.

If NFT fraudsters assume that law will not develop to capture and penalize their behavior, they have chosen the wrong field. Analogies in the blockchain space move quickly and law develops rapidly. The analogies of cryptocurrency to money were entirely sufficient to apply the Bank Secrecy Act to crypto operations that were acting as money transmitters; the criminal law was quite sufficient to jail operators of drug marketplaces

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1. See Paul Vigna, *NFT Sales are Flatlining*, WALL ST. J. (May 2, 2022), <https://perma.cc/96ZY-G3B6> (“The sale of nonfungible tokens, or NFTs, fell to a daily average of about 19,000 this week, a 92% decline from a peak of about 225,000 in September, according to the data website NonFungible.”).

2. See Philip Kennicott, *Trump NFTs are Not Art, Unless You Consider Grifting an Art Form*, WASH. POST (December 17, 2022), <https://perma.cc/F9QY-B9MB> (“The joke, in the end, will unfortunately be at the expense of people who pay \$99 for his NFTs, which, despite what appears to be an initial surge of interest, are likely to be extremely risky as a long-term investment.”).

3. See Chris Katopis, *Next Picasso, Ponzi Scheme, or IP Boom? Nfts in the Eyes of the Beholder*, 14 LANDSLIDE 30, 31 (2021) (“The fundamental characteristic of digital media is that it can be duplicated with a virtually perfect fidelity, instantaneously, and at practically zero cost.”).

and to target organized North Korean crypto hacking schemes.<sup>4</sup> The IRS had no particular difficulty, beyond the usual institutional clumsiness, taxing crypto assets.<sup>5</sup> The SEC has somewhat infamously cast a very wide net around crypto enterprises, a net that would have caught Kickstarter (and nearly did, necessitating enabling legislation) in its ongoing attempt to protect consumers against scams.<sup>6</sup>

Crypto is an analogy-rich space. Rich analogies permit the near-real-time extension of legal principles to new technology. The richer the analogy, the quicker the extension: no one would seriously argue that turning off someone's pacemaker by hacking it does not constitute murder. Where analogies are rich and bad actors are profiting from them, for example by treating digital assets as property (there may be older human instincts than the desire to own property, but few are printable), and then defrauding counterparties out of value given in exchange, we may expect to see explosive and rapid development in the law.

Bad actors getting caught under entirely predictable extensions of the law is the very engine of the common law. As Napster learned to its chagrin, online environments are not analogy-free, and the fact that something is new does not at all mean that the human uses of the system or technology are not entirely predictable.<sup>7</sup> They usually are. As Second Life learned after the Ginko Financial crisis,<sup>8</sup> merely saying that something

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4. See, e.g., *North Korean Hackers Target Gamers in \$615m Crypto Heist*, BBC NEWS (Apr. 15, 2022), <https://perma.cc/7SR8-AP2R> ("A United Nations panel that monitors sanctions on North Korea has accused Pyongyang of using stolen funds to support its nuclear and ballistic missile programmes as a way to avoid international sanctions.").

5. See Jason Stauffer, *Everything You Need to Know About Filing Crypto Taxes—Especially if Your Exchange Went Bankrupt*, CNBC (Feb. 17, 2023), <https://perma.cc/ZTG6-Q6PB> ("Cryptocurrency is classified as property by the IRS. That means crypto income and capital gains are taxable and crypto losses may be tax deductible.").

6. See *Crypto Assets and Cyberenforcement Actions*, SEC. & EXCH. COMM'N., <https://perma.cc/7RWA-26NF> (listing current SEC filings).

7. See Tom Lamont, *Napster: The Day The Music Was Set Free*, THE GUARDIAN (Feb. 23, 2013) <https://perma.cc/SQ79-KPTS> (describing the rise and IP-based fall of a website that allowed people to download music directly from the hard drives of other users).

8. See Erica Naone, *Financial Woes in Second Life*, MIT TECH. REV. (Oct. 15, 2007), <https://perma.cc/YAP7-2U6R> ("[A] bank run triggered the collapse of a bank, Ginko Financial, that offered high interest rates on virtual dollars

is new technology is absolutely not a bar to the extension and development of legal rules to new technologies.<sup>9</sup> On the contrary, as the operators of the Silk Road drugs-for-crypto marketplace found out,<sup>10</sup> or as the earliest crypto exchanges that attempted to evade U.S. financing and banking laws found out, the claim that a technology is so new that legal rules simply do not apply is the battle cry of the soon-to-be-arrested.

Law, by and large, regulates bad outcomes. Mutually beneficial and successfully performed contracts are not litigated. Successful property exchanges are not charged as robbery or fraud. The overwhelming majority of satisfied human preferences do not require a legal remedy. When we look to caselaw to diagnose a phenomenon, we are looking at the sick to diagnose the healthy. To be clear, I am not saying that the crypto space is not rife with fraud—it is.<sup>11</sup> But just as quackery surrounds medicine, fraud surrounds transactions that humans view as enormously and mutually beneficial.<sup>12</sup>

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convertible to real ones (Second Life’s “Linden dollars” trade against the U.S. dollar at 270 to 1).”).

9. See Todd Ehret, *U.S. Regulators Face Looming Risks Associated with Non-Fungible Tokens*, 26 No. 6 FINTECH L. REP. NL 2 (2021)

Building a regulatory framework for digital assets is a complex task and may stretch traditional financial services rules into new areas. Although cryptocurrencies, crypto-trading exchanges, and token offerings are squarely in the regulatory crosshairs, other areas such as non-fungible tokens (“NFTs”) remain a question mark, as they have been noticeably absent from the policy debate thus far. The expanding universe of digital assets stretches far beyond bitcoin to other digital and blockchain-related applications, including stablecoins, NFTs, and even central bank digital currencies. The regulatory challenge of applying existing regulations, many first drafted 90 years ago, may require one of the most extensive legislative and regulatory overhauls since the Dodd-Frank Act of 2010.

10. See *Bitcoin: \$1bn Seized from Silk Road Account by US Government*, BBC NEWS (Nov. 5, 2020), <https://perma.cc/23UM-ENTC> (“Silk Road creator Ross Ulbricht is currently serving two life sentences in prison after being found guilty of money laundering, computer hacking, and conspiracy to traffic narcotics.”).

11. See *supra* note 2 and accompanying text.

12. See Andrew Duke, *Oil from Snakes: Health Fraud in the Age of Information*, THE PRINCETON PROGRESSIVE (Dec. 19, 2022), <https://perma.cc/5MSD-KBWQ>

Alternative medicine, sometimes referred to as complementary, holistic, or integrated medicine, encompasses a wide range of

By contrast, harmless (or entirely mutually beneficial) activities that have never been seen before are the areas at greatest risk for slow or uneven extension. Here we see the roots of the current NFT crisis.<sup>13</sup> NFTs are not at fault for the fact that fraud is rampant in the crypto space; unclear legal rights that make it possible to pull the rug out from under consumers are.<sup>14</sup> The basic NFT fraud is that a user does not own anything after purchasing an NFT.<sup>15</sup> This fraud is primarily the fault of the legal system, which has, for decades, permitted overreaching intellectual property rights to crowd out and undermine personal property interests online.<sup>16</sup> That this environment is ripe for fraud lies firmly at our feet as lawyers, judges, legislators, and other legal actors.<sup>17</sup>

Fortunately, the common law is correcting our failings in near-real time. There is no question that NFTs are devisable and descendible, that the hacking of an NFT account is simple theft,<sup>18</sup> that the taking of one at gunpoint is robbery, and so nearly infinitely on. State law on conversion is in the middle of

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treatments, from those which may have some validity despite not having yet been fully vetted by the medical community, all the way to treatments that have no medical worth whatsoever and that are actually harmful to the patient, or intended to treat non-existing conditions.

13. See *supra* note 9 and accompanying text.

14. See Edmund P. Daley et al., *NFTs: A Flash in the Crypto Pan or Virtual Gold? Regulatory Considerations for the Next Generation of NFTs*, WESTLAW TODAY (Sept. 22, 2022), <https://perma.cc/Y3Y7-ZDS9> (“NFTs have raised novel legal issues involving intellectual property rights, privacy, and anti-money laundering—and now, most prominently, securities concerns. As with most digital assets, a looming issue on the minds of NFT enthusiasts is how federal regulators will classify and regulate NFTs.”).

15. See *supra* note 3 and accompanying text.

16. See generally AARON PERZANOWSKI & JASON SCHULTZ, *THE END OF OWNERSHIP: PERSONAL PROPERTY IN THE DIGITAL ECONOMY* (Laura DeNardis & Michael Zimmer eds., 2016).

17. See Sofia Aizenman, *The Art World of Digital Assets: How Non-Fungible Tokens Create a Loophole in Anti-Money Laundering Regulations*, 44 CARDOZO L. REV. 1179, 1180–1182 (2023) (examining novel ramifications of the NFT market in exacerbating money laundering in the art industry).

18. See Henry Zaytoun, *Crypto Pickpockets: Blockchain, Cryptocurrency, and the Law of Theft*, 97 N.C. L. REV. 395, 416 (2019) (explaining legal approaches to Bitcoin theft).

a shift to cover intangible assets,<sup>19</sup> and conversion claims for crypto assets make regular appearances in filings.

The only difficulty arises when personal property interests in NFTs come up against the intellectual property interests in, say, an online piece of digital art. Here, the true difficulty emerges. As in *Kremen v. Cohen*<sup>20</sup> and a myriad of other cases covering intangible personal property, personal property interests in intangibles are entirely unremarkable and ubiquitous as long as intellectual property interests are not in play.<sup>21</sup> Which should be no obstacle, since the personal property interest in the physical copy of a painting is quite distinct from the intellectual property interest held by the artist. But as countless articles and cases have demonstrated in excruciating detail, courts remain confused on the point.<sup>22</sup>

This Essay lays out several lessons learned from the current NFT meltdown. First, bad actors stimulate legal development, a process already underway for blockchain technologies. Second, the present crisis can, in some part, be laid at the feet of a multi-decade history of stripping citizens of their right to own intangible property in favor of protecting intellectual property interests. Third, if NFTs succeed in providing a robust example of how a personal property interest in an online asset—an interest in the token—can coincide with an intellectual property interest, the result will complete a set of analogies permitting courts to return stolen intangible property, prosecute theft of that online property, and much more.<sup>23</sup>

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19. See Joshua A.T. Fairfield, *Give It Back: The Evolution of Property Rights in Scarce and Unique Intangible Property*, in *CAMBRIDGE HANDBOOK OF EMERGING ISSUES AT THE INTERSECTION OF COMMERCIAL LAW AND TECHNOLOGY* (Stacy-Ann Elvy & Nancy Kim eds., forthcoming 2023).

20. 377 F.3d 1024 (2003).

21. See generally *id.* (determining that personal property rights obtain in any asset capable of being carefully described, susceptible of unique possession, and to which the claimant establishes a legitimate claim).

22. See, e.g., Courtney W. Franks, Comment, *Analyzing the Urge to Merge: Conversion of Intangible Property and the Merger Doctrine in Wake of Kremen v. Cohen*, 42 HOUS. L. REV. 489, 510 (2005) (examining the development of common-law conversion theory in the context of digital assets).

23. See generally Peter Willsey et al., *NFT Litigation: Shaping IP Rights in the Metaverse*, Westlaw Today (July 12, 2022), <https://perma.cc/5LYM-3WAP>.

## I. VIRTUAL PROPERTY CYCLES

The present downturn in the reputation of NFTs is part of a regular cycle in which a constant and valid demand for consumer and investor ownership of scarce or unique digital assets is met first with claims of disbelief that people would actually want to purchase and own the asset. It is then met with stubborn intransigence from intellectual property holders who wish to arrogate to themselves a disproportionate share of any emerging market. This creates instability in the law: legitimate demand is met with unstable and oscillating legal regimes, which then collapse under the weight of the serious value that buyers and investors wish to pump into the system.

The cycle caused by constant demand and an unstable legal regime is not the fault of the constant demand. It is the fault of the unstable legal regime. When money pours into an area of unstable, shifting, and often, frankly, contradictory legal rights, fraud flourishes. Worse, stakeholders and lawmakers mistake the problems they see as ones inherent in ownership of digital assets. This has the ironic effect of reducing legal protections for digital personal property, often extending to outlawing the assets themselves or only tolerating legally unsupported gray markets.

As the following subparts demonstrate, this cycle has both positive and negative aspects. On the positive front, there is little risk that the current meltdown in cryptocurrency in general or NFTs in particular will affect the demand for scarce, unique, or valuable digital assets. That demand has remained constant and is in fact growing through several boom-and-bust cycles. On the negative front, the boom-and-bust nature of investment in digital property causes legal regimes to double down on precisely the issue that caused rampant fraud in the first place: unstable and unclear legal rights in digital property.

A. *History of Virtual Property Cycles*

Claims that buyers own—or should own—their fully bought and paid-for digital assets have surfaced, submerged, and resurfaced over the past two decades.<sup>24</sup> These cycles have three

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24. See Joshua A.T. Fairfield, *Virtual Property*, 85 B.U. L. REV. 1047, 1050 (2005) [hereinafter *Virtual Property*] (noting that countries like China,



components. First, there is a constant demand for intangible assets. Humans' associations with resources have always been a matter of information. Ownership of a Gucci handbag, a famous painting, or a prime section of real estate have always had important intangible, reputational, and informational components. Ownership of these assets says something about the owner, and people are willing to purchase assets that convey those informational and reputational advantages, even when the asset itself is intangible. Ownership of an Action Comics #1 or a Black Lotus Magic: The Gathering card is hardly about the value of the pulp paper or the cardboard. Rather, these items sit at a complicated locus of human valuation that includes community desire for the asset, reputation, perceived scarcity, association, and more.

The second part of the virtual property cycle is that legal experts and market commentators raise questions about whether the assets have intrinsic value.<sup>25</sup> As with the current focus on NFT-as-fraud, the question is posed as whether consumers should value what they do value. Much ink is spilled over whether NFTs are intrinsically worth anything, that is, whether the entire concept is a something-for-nothing scam.<sup>26</sup>

Doubt about the intrinsic value or essence of digital assets is a familiar part of the pattern. It is largely unconvincing. Stocks have no intrinsically valuable essence, yet are clearly personal property—ask the IRS. Money is the same. The underlying aesthetic judgment regarding what should be valued—a prime example is the scorn in which the essence of NFTs is widely held under the belief that people should not be willing to pay money for them because they are intangible—does

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Taiwan, and Korea have made strides in protecting ownership interests in virtual property).

25. See, e.g., Benjamin Golze, *MMORPG Currency Exchange Defrauded for \$3000*, GAMESPOT (June 23, 2004), <https://perma.cc/5VM6-UYGC> (discussing difficulties of a gaming company in seeking legal redress for loss of intangible digital property); Mike Krahulik & Jerry Holkins, *Good Luck*, PENNYARCADE (June 25, 2004), <https://perma.cc/P8UA-NLT4> (depicting humorously the plight of digital property owners seeking legal redress for assets the legal system deems valueless in comic book form).

26. See Alexander Hobbs, *Beyond the NFT Hype: Why NFT Technology is Flawed and Buyers Must Beware*, FORKAST (June 15, 2021), <https://perma.cc/Q7YL-YDBV> (explaining the ownership dilemma concerning the value of NFTs).

not hold economic water. Tickets to the concert of the century are no less valuable because they represent an intangible right, and so on.

The earliest pushes for ownership of intangible digital assets were steeped in this essentialist scorn, because some of the earliest environments to create deep value in scarce or unique digital assets were games.<sup>27</sup> Commentators and analysts considered games to be essentially frivolous, despite the fact that, even in the early years, the money involved in the gaming industry outstripped Hollywood.<sup>28</sup> Still, the gaming stigma has persisted and has formed a part of the regular essentialist discounting of digital assets whenever buyers of digital property make serious claims to ownership.

The third element, and the more serious challenge to the entire project of ownership of unique digital assets, is the role of intellectual property in overshadowing and restricting the development of interests in digital property. The most damning indictment is this: where intellectual property interests are not in play, interests in personal property for digital assets are entirely uncontroversial. As the seminal decision in the sex.com domain name case, *Kremen v. Cohen*, indicated, any interest that (1) can be carefully defined; (2) is susceptible of unique possession; and (3) to which a claimant can make a legitimate claim to that exclusive possession, is properly subject to personal property rights.<sup>29</sup> Notably, the domain name in *Kremen* involved the domain sex.com, an utterly un-trademarkable name due to its generic nature. Where a domain name bears on or includes trademarked terms, the intellectual property interest in the trademark completely overshadows the personal property interest in the domain name.

Perhaps in trademark law, this is as it should be—perhaps every domain name that mentions a trademark (even those which clearly are critical of the trademark holder and are conveying valuable information about the service, like verizonsucks.com) generates consumer confusion, but that is hardly the point. A trademark on a piece of personal property

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27. See generally Greg Lastowka & Dan Hunter, *The Laws of the Virtual Worlds*, 92 CAL. L. REV. 1 (2004).

28. See generally EDWARD CASTRONOVA, *EXODUS TO THE VIRTUAL WORLD: HOW ONLINE FUN IS CHANGING REALITY* (2007).

29. *Kremen*, 337 F.3d at 1030.

designates its origin, it does not eviscerate personal property interests. An Apple iPhone is very much subject to personal property ownership even though it has the trademark apple with a bite taken out on the superbly designed back cover. Patents do not prevent personal property ownership when a piece of personal property practices the patent. The entire point of patent law is to permit the patent holder to practice and eventually sell instances of her invention, which are fully subject to personal property ownership by the buyer.

Copyright is the largest offender here. A full review of the problems of copyright online are well beyond the scope of this Essay, but a few key features stand out. First, courts' early decisions that every computer operation involves making a copy of copyrighted materials, even though those copies are in no way marketable or a replacement for real copies that make an economic impact on the market, has disrupted the balance between ownership of a copy and ownership of a copyright. So, for example, playing a video game while not following the "don't cheat" rules of the game constitutes copyright infringement, whereas playing a nonstandard version of Monopoly does not implicate copyright at all. Cursing at someone in World of Warcraft is copyright infringement. Money on Free Parking is not. As Aaron Perzanowki, Jason Schultz, and others have regularly written, the reproduction right has, in the electronic context, largely overpowered limits on the rights of copyright holders' power to destroy personal property interests.<sup>30</sup> eBay exists, after all, because the seller of a t-shirt with a copyrighted pattern on the front cannot prevent resale of the shirt after the first sale.<sup>31</sup> There is no eBay for used MP3s because of court decisions indicating that any attempt to transfer the asset must

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30. See PERZANOWSKI & SCHULTZ, *supra* note 16, at 42 (describing section 117 of the Copyright Act, which gives users the right to reproduce copies of digital software for a variety of purposes); see also Aaron Perzanowki & Jason Schultz, *Digital Exhaustion*, 58 UCLA L. REV. 889, 935 (2011) ("The evolution of patent exhaustion reflects an overarching goal to allow owners of good embodying patented inventions to use and redistribute them without patent holder permission.").

31. See Perzanowski & Schultz, *supra* note 30, at 909 (discussing the Supreme Court's decision in *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339 (1908), which was swiftly adapted by Congress into statute, creating the "first sale" doctrine).

make a copy, not merely distribute something that has already been sold.<sup>32</sup>

But what if one actually desired a secondary market? What if creators wanted to sell assets that attracted investors and collectors, and so on? The present intellectual property framework invites fraud in digital assets. The fundamental truth of the online digital market is that where intellectual and personal property coincide in the same asset, they do not coexist to create a harmonious division between IP right and personal property right. Rather, the IP right overshadows the personal property right, the locus of collection and investment, and the asset becomes immobile, or radically less valuable, in the stream of commerce.<sup>33</sup>

It is too flippant to say that such a market is easily craftable through license terms and smart contract provisions that mimic personal property.<sup>34</sup> Property law is not truly about the parties to a transaction, who already know the features and assets of what they are buying. Rather, it is about the prospective buyer, the prospective investor, the third party who does not know what deal she is getting.<sup>35</sup> As information costs rise, and as search costs for finding out what potential bombs are hidden in license agreements or smart contract code grow, the drag of transaction costs grinds down the gears of commerce.<sup>36</sup> And these search costs are presently quite high.<sup>37</sup> Every piece of

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32. See *Capitol Records, LLC v. ReDigi Inc.*, 910 F.3d 649, 659 (2d Cir. 2018) (finding that an attempt to effectuate a secondary market sale of a digital music download was an unauthorized copying of the asset, not a redistribution of the same asset, because it encoded the information on a new location).

33. See *supra* note 30 and accompanying text.

34. See PERZANOWSKI & SHULTZ, *supra* note 16, at 58 (describing licensing agreements and private regulatory schemes as more similar to a conditional grant of access than a property right).

35. See Thomas Merrill & Henry Smith, *Optimal Standardization in the Law of Property, the Numerus Clausus Principle*, 110 YALE L.J. 1, 8 (2000) (discussing and then rebutting critiques of the “*numerus clausus*” feature of property law).

36. See *id.* (giving a positive argument in favor of the generally maligned *numerus clausus* on the basis of economics).

37. See *How to Audit a Smart Contract*, CHAINLINK BLOG (Feb. 22, 2023), <https://perma.cc/99AA-QDCB> (listing the cost of a smart contract audit, the process of fully testing and understanding the computer code of certain digital programs, as costing on average between \$5,000 and \$15,000).

digital property is different, not in its features (this virtual painting versus that, or this piece of waterfront virtual property versus that digital skyscraper), but in its legal characteristics. Already there are firms dedicated to code audits of smart contracts, which are sufficiently complex that bugs in smart contract code have cost investors hundreds of millions of dollars.<sup>38</sup>

High-speed, high-frequency trades in digital assets are simply not possible when one must research the individual license and coding provisions undergirding each investment.<sup>39</sup> This is all the more ironic given that the entire purpose of linking assets to a publicly verifiable distributed database was to eliminate the search costs and uncertainty inherent in chain-of-title searches.<sup>40</sup> A Merkle-tree blockchain provides easy and obvious verifiability of ownership.<sup>41</sup> But uncertainty in license provisions and smart-contract code simply reinserts search and verification costs that the system had worked so hard to eliminate.

In short, we should expect to see exactly what we have: constant and increasing demand for unique and scarce digital assets growing until the pressure causes the poorly designed and unstable legal container into which these transactions are forced to explode.

### B. *Prior Cycles*

There have been multiple previous boom-and-bust cycles for digital and virtual property. Two are worth mentioning: the virtual property boom of the mid 2000s<sup>42</sup> and the augmented

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38. *See id.* (detailing over \$5 billion worth of smart contract hacks to date).

39. *See* Merrill & Smith, *supra* note 35, at 26 (describing the goal of maintaining a cost of measurement of rights, which increases with time and complexity, as low as possible relative to the potential gain of the transaction).

40. *See id.* at 47 (theorizing that the creation of networks would be an inevitable self-emergent process to keep search costs down).

41. *See* Emily Knight, *Blockchain Jenga: The Challenges of Blockchain Discovery and Admissibility Under the Federal Rules*, 48 HOFSTRA L. REV. 519, 527 (2019) (“[A] blockchain is a ledger in its most basic form.”).

42. *See Virtual Property, supra* note 24, at 1053 (“Virtual property shares three legally relevant characteristics with real world property: rivalrousness, persistence, and interconnectivity. Based on these shared characteristics,

reality push that followed.<sup>43</sup> There are of course many more—the point here is to provide examples of the regular cycles that constant and growing demand plus unstable legal regimes creates in markets for digital assets.

Earlier cycles of claims to personal property interests in intangibles included addresses, domain names, and so-called OG account handles, or early attempts to create single ledger-based digital currencies.<sup>44</sup> The Chinese government's struggles with QQ coins were particularly instructive.<sup>45</sup> QQ coins were a social-media-based currency, used originally to purchase “shows,” or animated features for users' personal pages. However, the coins soon gained broader popularity because vendors discovered they could exchange the coins for renminbi.<sup>46</sup> By extension, the coins became a general-purpose medium of exchange. The government response was one that will become familiar in these cycles: it banned the exchange of QQ currency for real currency and declared the problem solved, until precisely the same issue blindsided regulators again with the rise of cryptocurrency.<sup>47</sup> This is the cycle of virtual property—demand is met by regulatory indifference or hostility, causing the next cycle to grow in intensity.

The large prior rise in interest around virtual assets and personal property interests came during mid-2000s surge in the popularity of virtual worlds. News stories about \$60,000

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subsequent sections will show that virtual property should be treated like real world property under the law.”).

43. See Scott R. Peppet, *Freedom of Contract in an Augmented Reality: The Case of Consumer Contracts*, 59 UCLA L. REV. 676, 681 (2012) (discussing the application of contract law to the augmented reality space).

44. See *Kremen v. Cohen*, 337 F.3d 1024, 1035 (9th Cir. 2003) (finding that a domain name was a type of intangible property under California law). There were also so called “cybersquatting” disputes, involving the Anti-cybersquatting Consumer Protection Act. See 15 U.S.C. § 1125(d) (providing a cause of action for trademark holders against domain name registrants with “confusingly similar” names).

45. See David Barboza, *In China, New Limits on Virtual Currency*, N.Y. TIMES (June 30, 2009), <https://perma.cc/N5E8-E77P> (describing QQ Coins, a digital currency produced by Chinese company Tencent); Jeffrey Fowler & Juying Qin, *QQ: China's New Coin of the Realm?*, WALL ST. J. (March 30, 2007), <https://perma.cc/V3HP-SU8L> (describing the QQ coin as China's fastest growing currency).

46. See Barboza, *supra* note 45.

47. See *id.*

spaceships in *Eve Online* or valuable magic swords regularly broke through into mainstream media coverage.<sup>48</sup> This emerging and very valuable market had two phases. The first involved gray markets in the currency and valuable items that were obtainable by playing the game.<sup>49</sup> Gold sellers and item traders emerged in the space between law.<sup>50</sup> Players were extremely willing to trade real dollars for virtual items and currency.<sup>51</sup> The lack of any law supporting the ownership interests in those assets did not deter the market; it merely raised costs and engendered heavy risk of fraud.<sup>52</sup> In fact, the gray market for virtual currency and virtual items created a direct parallel to the current spate of hacks stealing cryptocurrency (the Mount Gox or DAO hacks come to mind) or digital items (high-profile thefts of Bored Apes, for example) and then reselling them over smart contract markets.<sup>53</sup>

Cryptocurrency itself served as a boon to the development of property interests in intangibles. Digital investment and legacy became major themes.<sup>54</sup> Investors wanted not only to own and earn from the rise in value of virtual items, but they quite understandably wanted to pass on their assets after death.<sup>55</sup> The unremarkableness of passing crypto-assets at death has served as a bedrock for understanding intangible interests as

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48. See Simon Parkin, *Eve Online: How a Virtual World Went to the Edge of Apocalypse and Back*, THE GUARDIAN (May 12, 2015), <https://perma.cc/L62A-864G> (describing the early days of the massive online roleplaying game in which many items cost large amounts of real money); see also Sam White, *Eve Online: Inside the Most Elaborate Virtual World Ever Created*, GQ MAGAZINE (May 5, 2017), <https://perma.cc/7U5Q-WXKR> (describing an online fantasy battle that destroyed virtual property in excess of \$330,000 in real world value spent to acquire it).

49. See Parkin, *supra* note 48.

50. See *id.*

51. See *id.*

52. See *id.*

53. See *What Was the DAO?*, CRYPTOPEDIA (March 16, 2022), <https://perma.cc/EQT3-33BG> (describing the hack of the DAO, essentially an investment fund, that once owned 14 percent of all ether, a digital currency).

54. See Michael Abramowicz, *Cryptocurrency-Based Law*, 58 ARIZ. L. REV. 359, 360 (2016) (“Bitcoin . . . has attracted extraordinary interest as a financial innovation.”).

55. See Parker F. Taylor et al., *Estate Planning with Cryptocurrency*, 33 PROB. & PROP. 22, 25 (2019) (describing advantages of cryptocurrency as a holder of value that does not need an executor).

property.<sup>56</sup> As it did in the areas of securities law, banking law, and tax, the advent of ledger-based intangibles triggered rapid development in the law of personal property.<sup>57</sup> Those advances are largely hidden because their hallmark is a lack of flashy development. Just as law rapidly encompassed other common problems of crypto-assets under established analogies, the expansion of law around crypto assets has largely been quiet, rapid, unflashy, and for the most part, unheralded. Of course, cryptocurrencies are “money substitutes,” as defined by the Bank Secrecy Act;<sup>58</sup> who thought they wouldn’t be? Of course, crypto-assets are taxable when they grow in value and are sold.<sup>59</sup> And, of course, cryptocurrency passes down to a person’s heirs upon death.<sup>60</sup> In many ways the biggest gains were the quietest, with courts leaving private decisions that treated crypto assets as property in place rather than displacing them.<sup>61</sup> In large part this is because the first cryptocurrencies had no intellectual property interests dogging the development of their legal framework.<sup>62</sup>

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56. See Alex Ankier, *Debugging IRS Notice 2014-21: Creating a Viable Cryptocurrency Taxation Plan*, 85 BROOK. L. REV 883, 883 (2020) (describing the struggles of the IRS to deal with digital currencies).

57. See Ryan W. Beall, *Cryptocurrency in the Law: An Analysis of the Treatment of Cryptocurrency in Bankruptcy*, 35 CAL. BANKR. J. 43, 47 (2019) (describing the debate over whether to treat cryptocurrencies as currencies or commodities for the purposes of bankruptcy law).

58. Pub. L. No. 91-508, 84 Stat. 1114 (1970) (codified as amended in scattered sections of 12 and 31 U.S.C.); see also Angela Habibi, *The Bank Security Act and Cryptocurrency*, MEDIUM, (Jan. 6, 2018), <https://perma.cc/993W-NPWH> (describing the difference between the legal definitions of currency and “convertible virtual currency”).

59. See *Digital Assets*, INTERNAL REVENUE SERV. (Apr. 24, 2023) <https://perma.cc/KC39-X7LA> (“Transactions involving a digital asset are generally required to be reported on a tax return.”).

60. See Taylor, *supra* note 55 (describing the process by which cryptocurrency is devised).

61. See, e.g., Jessica Rizzo, *The Future of NFTs Lies with the Courts*, WIRED (Apr. 3, 2022, 7:00 AM), <https://perma.cc/C7Q3-SUG6> (implying courts would not disturb agreements that treat NFTs as property by stating that courts would not look favorably upon agreements that contracted around the fundamentals of property law).

62. See, e.g., BITCOIN, <https://perma.cc/PSX7-6U9L> (last visited March 30, 2023) (“Bitcoin is open-source; its design is public, nobody owns or controls Bitcoin and everyone can take part.”).



Crypto-entrepreneurs' predilection for decentralization also means that there is often no counterparty to assert overarching intellectual property rights contravening personal property interests in digital assets.<sup>63</sup> A common structure for a crypto-project is that the programmers or entrepreneurs will form a foundation responsible for drafting the code and will pre-mine tokens as a way of turning a profit once the project gains traction.<sup>64</sup> Even though there is no intellectual property interest inherent in many tokens, it would be possible to assert control over the project's participants by requiring licensing of the code for miners, transaction verifiers, or voting managers in proof-of-stake systems. Or, if a project issues software—a wallet, say, in the form of a mobile application—then the end user license agreement (“EULA”) of that software might be used to undermine personal property interests in the output of the project. An analogy might be to the current licensing scheme of AI art generation program MidJourney, which attempts to leverage an EULA into a perpetual, fully paid, universal, nonexclusive license in all of the images created by the AI at the direction of users.<sup>65</sup> This should not work, because, of course, AI-generated art is not original<sup>66</sup> (in both the natural language and term of art senses of the word), but the software EULA is still in place to undermine user ownership and make sure that whatever is owned is licensed to the coders.<sup>67</sup>

This is a rare phenomenon in crypto-projects, not because the law to expropriate user-generated value through EULAs is unclear or unknown, but because of social constraints against

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63. See *id.* (describing the decentralization of Bitcoin).

64. Jie Yee Ong, *What is Cryptocurrency Pre-Mining and How Does It Work?*, MAKE USE OF (Nov. 30, 2021), <https://perma.cc/SG9J-4QGL> (identifying pre-mining as a method of attracting and rewarding early adopters of a cryptocurrency).

65. See *Terms of Service*, MIDJOURNEY, <https://perma.cc/UDY8-3EYM> (last visited March 30, 2023) (“If You are not a Paid Member, You don’t own the Assets You create. Instead, Midjourney grants You a license to the Assets under the Creative Commons Noncommercial 4.0 Attribution International License . . .”).

66. See *Thaler v. Vidal*, 43 F.4th 1207, 1211 (Fed. Cir. 2022) (deciding that, for the purpose of the Patent Act, an “inventor” must be a human being).

67. See *supra* note 65 and accompanying text.

running that kind of centralized control operation.<sup>68</sup> The problem is profound enough that the entrepreneurship foundations often have trouble curtailing the bad actions of their users; they have eschewed the use of incidental copyright as a means of community control. Almost as a side effect, this loss of EULA-level attacks on property interests frees many of these assets from even the argument that a baseless EULA might vitiate individual participants' personal property interests.<sup>69</sup>

The cryptocurrency boom was successful in developing the law from digital legacy to commercial law (the new Article 12, for example).<sup>70</sup> As mentioned above, this is largely because intellectual property interests were not present to confuse the issue.<sup>71</sup> But the presence or absence of intellectual property interests should have no bearing whatsoever on actual ownership. Once the ownership interests become clear, they should be more easy to vindicate in court. Take, for example, an NFT linked to a piece of digital art. Regardless of any rights in the art itself—and there certainly should be some, similar to those an owner of physical art possesses—there is an unquestionable personal property interest in the token.<sup>72</sup>

## II. *NIHIL NOVUM SUB SOLE*

Law has evolved quickly to encompass legal interests in digital property because the analogies are so clean.<sup>73</sup> Banking law moved quickly to encompass digital currency as a “money

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68. See Carla L. Reyes, *(Un)Corporate Crypto-Governance*, 88 *FORDHAM L. REV.* 1875, 1912–13 (2020) (describing a system typical of blockchain projects in which full node operators, rather than core developers, have the greater degree of influence).

69. See *supra* note 65 and accompanying text.

70. See Christopher M. McDermott & Matthew A. Stempler, *New UCC Article 12 Matters to More than Just Cryptocurrency*, 13 *NAT'L L. REV.* 69 (2023), <https://perma.cc/69FK-HAQ2> (discussing the new Article 12 of the Uniform Commercial Code, which recognizes digital assets including cryptocurrency and NFTs).

71. See *supra* note 62 and accompanying text.

72. See *Kremen v. Cohen*, 337 F.3d 1024, 1030 (9th Cir. 2003) (holding that a property right exists if there is an interest capable of precise definition, capable of exclusive possession or control, and to which the putative owner has established a legitimate claim).

73. See *id.* (finding that property interest attaches to a web domain name).

substitute” under the Bank Secrecy Act precisely because the analogy to currency was explicit.<sup>74</sup> People used cryptocurrency as a substitute for money, called it a currency, and used it as a medium of exchange, store of value, and unit of account.<sup>75</sup> The narrative surrounding currency as a means of circumventing the banking system, of replacing fiat currency, formed the uses to which the technology was put and the meaning it occupied within the cultural conversation.<sup>76</sup> The same is true of using pre-mined tokens to jumpstart a business—pretty clearly a security and subject to regulation by the SEC.<sup>77</sup> The IRS lost little time in taxing the gains of a crypto-asset, using further sale as a realization event.<sup>78</sup> And so on.

Even the tangle between intellectual property and digital personal property is a problem of extending two entirely unproblematic concepts, drawn only into tension because of the prior twenty years of intellectual property overreach into electronic technologies.<sup>79</sup> Even the problems of NFTs are nothing new under the sun.<sup>80</sup> They are not caused by a

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74. See Stan Sater, *Do We Need KYC/AML: The Bank Secrecy Act and Virtual Currency Exchanges*, 73 ARK. L. REV. 397, 398–99 (2020) (discussing published guidance from FinCEN that applies the Bank Secrecy Act to digital currency).

75. See I.R.S. Notice 2014-21, 2014-16 I.R.B. 938 (“Virtual currency is a digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value. In some environments, it operates like ‘real’ currency.”).

76. See Abramowicz, *supra* note 54 at 416–17 (discussing the possibility of a cryptocurrency replacing a country’s—presumably failed—fiat currency).

77. See U.S. Secs. & Exch. Comm’n v. Cutting, No. 2:21-cv-00103, 2022 U.S. Dist. LEXIS 178181, at \*3 (D. Idaho Sept. 28, 2022) (noting that digital coin offerings can be recognized as securities and have often run afoul of the SEC).

78. See I.R.S. Notice 2014-21, 2014-16 I.R.B. 938, 939 (affirming that the gains from the sale of crypto assets are taxable upon realization).

79. See Joshua A.T. Fairfield, *Tokenized: The Law of Non-Fungible Tokens and Unique Digital Property*, 97 IND. L.J. 1261, 1266–67 (2022) [hereinafter *Tokenized*] (discussing how the broad expansion of intellectual property law can hinder the recognition of personal property ownership in the digital space).

80. Compare *Capitol Recs., LLC v. ReDigi Inc.*, 934 F. Supp. 2d 640, 655–56 (denying a company that attempted to ethically re-sell “used” MP3s the protection of property law in favor of a copyright framework), with *Tokenized*, *supra* note 79, at 1310 (describing an NFT issuer denying an NFT buyer the

determination that (1) the subject matter under debate is worthless or, properly seen, ought to be considered worthless—as many commentators on intangible property have insinuated over the last twenty or so years—or (2) that the subject matter under discussion is simply too new for existing law to apply—this is the standard “law can’t keep up” trope that one often hears by techno-evangelists seeking to avoid responsible regulation.<sup>81</sup> Indeed, the problem is simply that law almost effortlessly encompasses these new uses, it does not even truly need analogy to do so.<sup>82</sup> Law applies straightforwardly to the run of these cases.

And there is every reason to believe this will continue. Take, for example, claims for conversion, replevin, or detinue of blockchain tokens.<sup>83</sup> Lawsuits have regularly been filed making these assertions, as have prosecutions for stealing crypto-assets.<sup>84</sup> These cases will take some time to develop into a body of common law, but already the doctrine of merger is, for example, expanding to permit digital conversion claims where the record stolen is the manifestation of a legal right.<sup>85</sup> One cannot convert a shareholder’s right to vote, but taking the stock certificate certainly can be conversion,<sup>86</sup> and when the document

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protection of property law in favor of an intellectual property framework in the EULA).

81. See *supra* note 80 and accompanying text.

82. See *Kremen v. Cohen*, 337 F.3d 1024, 1030 (9th Cir. 2003) (applying the elements of property to the ownership of a web domain name to establish that a property interest attaches); see also *Tokenized*, *supra* note 79, at 1300–08 (discussing how Article 2 of the UCC is a good fit for the regulation of NFTs).

83. See, e.g., *People v. Ung*, 304 Cal. Rptr. 3d 923, 925 (Cal. Ct. App. 2023) (upholding an order requiring a defendant guilty of stealing cryptocurrency to make restitution in said cryptocurrency); *Bandyopadhyay v. Obei*, No. 22-cv-22907, 2023 U.S. Dist. LEXIS 33382, at \*10–12 (S.D. Fla. 2023) (finding a defendant liable for conversion who deprived plaintiff access to and transferred cryptocurrency out of plaintiff’s digital wallet); *Lagemann v. Spence*, 18 Civ. 12218, 2020 U.S. Dist. LEXIS 88066, at \*42 (S.D.N.Y. May 18, 2020) (holding a defendant liable for multiple tort claims after he induced plaintiffs to transfer cryptocurrency to him as part of a Ponzi scheme).

84. See cases cited *supra* note 83.

85. See *Bandyopadhyay*, 2023 U.S. Dist. LEXIS 33382, at \*11–12 (holding defendant liable for conversion of cryptocurrency).

86. See *McIntyre v. Kavanaugh*, 242 U.S. 138, 142 (1916) (finding that, when the defendant sold a stock certificate the plaintiff gave as collateral and

with which the right is merged is electronic, then seizing the electronic record constitutes conversion in many states.<sup>87</sup> Digital conversion is just one example. It would be hard to imagine a court not requiring the return of a fraudulently taken, stolen, or hacked crypto-asset, merely on grounds that the token is intangible. It is implausible to not have crypto-assets pass by descent and distribution.<sup>88</sup> Prosecutors certainly will not pass on prosecuting cases in which crypto-assets are stolen, whether at gunpoint or in a hack.<sup>89</sup> Theft, replevin, conversion, detinue, and the list goes on—these will join tax and banking law as more or less effortless extensions of the right to own assets online.<sup>90</sup>

The extension of the law of personal property to crypto-assets is in many ways a foregone conclusion.<sup>91</sup> The tangle of personal property with intellectual property remains, and that tangle is a profoundly important one.<sup>92</sup> But it is important not to mistake a local conflict for a global one. More and clearer analogies to the personal property side of the equation can only set the stage for an eventual understanding that personal property rights need not be entirely vitiated by an intellectual property right. Certainly Sotheby's needs that to be the case if they are ever to build a real and sustained digital art market business—and the high end auction market is just the

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withheld the proceeds, the defendant had willfully and maliciously harmed the property of the plaintiff).

87. See *Thyroff v. Nationwide Mut. Ins. Co.*, 864 N.E.2d 1272, 1277–78 (2007) (holding electronic stock certificates that were indistinguishable from printed versions were subject to a conversion claim); see also *Welco Elecs., Inc. v. Mora*, 166 Cal. Rptr. 3d 877, 886 (Cal. Ct. App. 2014) (upholding a claim of conversion of credit card information because it “is not materially different in effect from conversions by taking other instruments such as . . . stock certificates”).

88. See I.R.S. Notice 2014-21, 2014-16 I.R.B. 938, 939 (establishing that, for the purpose of taxation, crypto assets are treated as property with value).

89. See *Ung*, 304 Cal. Rptr. 3d at 925 (describing a criminal sentence of ten years in prison for the theft of cryptocurrency).

90. See cases cited *supra* note 83 (finding liability in tort and criminal law for the taking of crypto-assets).

91. See I.R.S. Notice 2014-21, 2014-16 I.R.B. 938, 939 (taxing cryptocurrency as property).

92. See *Corp. Catering, Inc. v. Corp. Catering, LLC*, No. M1997-00230, 2001 Tenn. App. LEXIS 186, at \*17 (Tenn. Ct. App. Mar. 20, 2001) (“Understanding that intellectual property is intangible personal property matters in this case.”).

tip of the iceberg.<sup>93</sup> The market demand remains constant, as it has through multiple iterations of this cycle.<sup>94</sup> Where serious amounts of money are involved (and there are no arbitration clauses to prevent the eventual creation of caselaw), both the will and the means to litigate disputes over digital property are very much in evidence.<sup>95</sup> As has always been the case, the grist of business failure is the raw material of caselaw.<sup>96</sup> The failure of numerous NFT schemes—and many should fail—will not stop courts from discussing property theories in the ensuing litigation.<sup>97</sup> To the contrary, law will develop here as rapidly as it has elsewhere.

### CONCLUSION

This Essay has argued that the current downturn in NFT valuations and reputation is an entirely predictable part of a cycle in which constant demand for online intangible property meets an unstable legal regime.<sup>98</sup> The creation of token-based assets has created an anchor point for asserting personal property theories, and the meltdown in NFT valuations has provided a context ripe for litigation.<sup>99</sup> Perhaps an analogy would be to an economic recession, where one might expect bankruptcy law to move forward by leaps and bounds.<sup>100</sup> Similarly, the present context in which investors value assets

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93. See 2023, *Metaverse NFT Market Research | 2030*, MARKETWATCH (May 21, 2023), <https://perma.cc/TPN3-3DV8> (“The Global Metaverse NFT market is anticipated to rise at a considerable rate during the forecast period, between 2022 and 2030. In 2021, the market is growing at a steady rate and with the rising adoption of strategies by key players.”).

94. See *id.*

95. See cases cited *supra* note 83 (discussing litigation over crypto-assets).

96. See *M&I Bank v. Cookies on Demand, L.L.C.*, No. 104,737, 2012 Kan. App. Unpub. LEXIS 108, at \*1 (Kan. Ct. App. Feb. 17, 2012) (“When a business fails, lawsuits often follow.”).

97. See cases cited *supra* note 83 (discussing litigation over crypto-assets).

98. See *supra* Part I.

99. See *supra* Part II.

100. See Eli Wald, *Great Recession and the Legal Profession*, 78 *FORDHAM L. REV.* 2051, 2053 (2010) (observing that, while the 2008 recession brought the works of mergers and acquisition lawyers to a near halt, bankruptcy practices saw a surge of demand).

highly and in which fraud is rampant, combined with an out-of-date intellectual property framework, mean that disputes around digital property are highly likely to be generative.

As for the future, the demand for unique and scarce digital assets will remain as constant as it has over the past decade.<sup>101</sup> We can either choose to vindicate these legitimate interests and act to constrain fraud, or we can continue to fuel the cycle. The most likely outcome is a mixture of both. The next high-value digital assets will not be called NFTs; that brand has been tarnished. However, digital assets will continue to command serious market attention, and the flexibility and interoperability offered by blockchain ledgers will prove too difficult to pass up.<sup>102</sup> Whether as digital deeds to houses or means of fractionalizing security interests, token-based intangible property is simply too valuable a way of tracking who owns what. Thus, the demand will remain the same, and the technology will remain largely the same, with perhaps more of a focus on permissioned ledgers rather than the high-cost proof-of-work systems. Whether these are called NFTs or are rebranded to avoid the reputational hit will not matter at all. And when that new round of cases hits the courts, they will in turn rely on the cases and analyses that were the output of the present meltdown.

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101. See Philipp Sandner, *Digital Assets: The Future of Capital Markets*, FORBES (Aug. 24, 2021), <https://perma.cc/7SCB-2WV6> (discussing the historical demand for digital assets).

102. See *supra* note 93 and accompanying text.