

SECURING THE RIGHTS OF CRYPTOCREDITORS

by

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Over half a dozen cryptocurrency exchanges filed insolvency proceedings in the United States and Canada during 2022. Many of these bankruptcies were the result of systemic and fraudulent activity by bad actors who used ambiguity in the law to avoid regulation and reporting and misrepresented the risks to investors. In many instances, investors who bought and traded cryptocurrency on these failed exchanges have been treated not as owners, and not as secured creditors, but as general unsecured creditors. This article advocates that persons trading on exchanges need to be classified either as owners, or if that is not possible, then as secured creditors, with respect to their individual cryptocurrency. Article 12 of the Uniform Commercial Code adopts control as the method for establishing status as a secured creditor with cryptocurrency as the collateral. This article further proposes that the United States should create a comprehensive national filing system for cryptocurrency. Article 12 should be further amended to recognize that filing system as a method for perfecting security interests in cryptocurrency, to legitimize cryptocurrency, and to uniformly assure investor protections.

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I. Introduction

Cryptocurrency is becoming more and more well known as time goes on. Although the majority of Americans doubt cryptocurrency is a sound investment,¹ several platforms continue to maintain value. Even those who typically ignore cryptocurrency likely saw news reports of the multiple cryptocurrency exchange bankruptcies that were filed in 2022, and the 2023 five-week trial of Sam Bankman-Fried, accused of fraud in the way he operated FTX and Alameda Research.² Although Warren Buffet has criticized cryptocurrency as a nonproductive asset,³ his company Berkshire Hathaway has a \$1 billion ownership investment in Nubank, a digital bank that offers customers the ability to invest in cryptocurrency.⁴ BlackRock, Inc., reportedly the world's largest asset manager,⁵ has encouraged everyone to hold 1 to 2% of their investment portfolio in cryptocurrency, and compared it to providing diversification similar to gold.⁶ During his campaign for reelection, Donald Trump declared that he would make the United States “the

¹ Frank Holmes, *BlackRock Says Bitcoin Deserves A Spot In Your Portfolio*, U.S. GLOB. INVS., (Dec. 20, 2024), <https://www.usfunds.com/resource/blackrock-says-bitcoin-deserves-a-spot-in-your-portfolio> (“If you happen to be a Bitcoin skeptic, you’re not alone. A recent Pew Research Survey found that 63% of Americans are not confident in the reliability or safety of cryptocurrencies in general.”).

² Press Release, *Samuel Bankman-Fried Sentenced to 25 Years for His Orchestration of Multiple Fraudulent Schemes*, U.S. DEP’T OF JUST. (Mar. 28, 2024), <https://www.justice.gov/archives/opa/pr/samuel-bankman-fried-sentenced-25-years-his-orchestration-multiple-fraudulent-schemes>.

³ Tanaya Macheel, *Warren Buffet Gives His Most Expansive Explanation For Why He Doesn’t Believe in Bitcoin*, CNBC (Apr. 30, 2022, 4:10 PM), <https://www.cnbc.com/2022/04/30/warren-buffett-gives-his-most-expansive-explanation-for-why-he-doesnt-believe-in-bitcoin.html> (“Now if you told me you own all of the bitcoin in the world and you offered it to me for \$25 I wouldn’t take it because what would I do with it? I’d have to sell it back to you one way or another. It isn’t going to do anything.”).

⁴ Aliss Higham, *What Warren Buffet Has Said About Crypto*, NEWSWEEK (Nov. 18, 2024, 9:56 AM), <https://www.newsweek.com/what-warren-buffett-has-said-about-crypto-nubank-rat-poison-1987410>.

⁵ Arasu Kannagi Basil & Davide Barbuscia, *BlackRock’s Assets Hit Record \$11.5 Trillion Amid Private Market Push*, REUTERS (Oct. 11, 2024), <https://www.reuters.com/business/finance/blackrock-hits-record-high-115-trillion-assets-market-rally-etf-boost-2024-10-11/>.

⁶ Holmes, *supra* note 1 (“BlackRock isn’t suggesting that Bitcoin should replace bonds in your portfolio. Instead, they’re recommending a modest allocation—1% to 2%—to capture its diversification benefits without significantly increasing risk.”).

crypto capital of the world”⁷ and that the government would hold a national cryptocurrency reserve and take other steps to benefit the cryptocurrency market.⁸ Even if they have not heard of cryptocurrency or do not want to address it, cryptocurrency is a multi-trillion dollar industry, and almost everyone in the U.S. will confront it at some point.

On March 9, 2022, President Joseph Biden issued an Executive Order calling for a comprehensive review of the United States’ response to cryptocurrency, with four main considerations. First, the adoption of a Central Bank Digital Currency. Second, addressing energy use concerns and cryptocurrency’s potential impact on climate change. Third, considerations for regulating cryptocurrency through various governmental agencies such as the U.S. Treasury, the Federal Trade Commission, the Securities and Exchange Commission, the Commodity Futures Trading Commission, and/or the Consumer Financial Protection Bureau. Fourth, requesting the Attorney General consider the role of law enforcement in prosecuting criminal activity related to digital assets and its effects on competition policy.⁹

In a starkly contrasting vision, on January 23, 2025, President Donald Trump issued an Executive Order revoking President Biden’s Order.¹⁰ President Trump’s Executive Order states, “The digital asset industry plays a crucial role in innovation and economic development in the United States, as well as our Nation’s international leadership.”¹¹ The purpose of his Order is to “support the responsible growth and use of digital assets, blockchain technology, and related technologies” by encouraging minimal to no regulation on the creation and development of cryptocurrency, prohibiting the establishment of any central bank digital currencies whether in the United States or abroad, and revoking the Treasury’s Framework for International Engagement on Digital Assets issued on July 7, 2022.¹² The Executive Order

⁷ Jessica Klein, *Donald Trump Backs ‘Strategic Bitcoin Stockpile’ in Speech to Crypto Faithful*, WIRED (July 27, 2024, 6:32 PM), <https://www.wired.com/story/donald-trump-strategic-bitcoin-stockpile-bitcoin-2024/> (“It will be the policy of my administration to keep 100 percent of all bitcoin the US government currently holds or acquires in the future . . . as a core of the strategic national bitcoin stockpile.”).

⁸ *Id.*

⁹ See Jessica G. McKinlay, *Enforcing the Rights of Cryptocreditors*, 20 BERKELEY BUS. L.J. 86, 87–90 (2023).

¹⁰ Executive Order, *Strengthening American Leadership in Digital Financial Technology*, The White House (Jan. 23, 2025) <https://www.whitehouse.gov/presidential-actions/2025/01/strengthening-american-leadership-in-digital-financial-technology/>.

¹¹ *Id.*

¹² *Id.*

further established a “working group” to “identify all regulations, guidance documents, orders, or other items that affect the digital asset sector.”¹³

The working group was directed to provide “recommendations with respect to whether each identified regulation, guidance document, order, or other item should be rescinded or modified” and to “recommend regulatory and legislative proposals that advance the policies established in this order.”¹⁴ The working group has been comprised of twelve individuals, including the Special Advisor for AI and Crypto, the U.S. Treasury, the Attorney General, the Secretary of Commerce, the Secretary of Homeland Security, the Director of the Office of Management and Budget, the Assistant to the President for National Security Affairs, the Assistant to the President for National Economic Policy, the Assistant to the President for Science and Technology, the Homeland Security Advisor, the Chairman of the Securities and Exchange Commission, and the Chairman of the Commodity Futures Trading Commission.¹⁵ The Executive Order also directed the working group to consider how to build “a national digital asset stockpile and propose criteria for establishing such a stockpile, potentially derived from cryptocurrencies lawfully seized by the Federal Government through its law enforcement efforts.”¹⁶

These Executive Orders are, however, similar in one important respect: they both propose continued governmental involvement in cryptocurrency. President Biden’s approach encouraged regulation to assist multiple stakeholders including investors, the public, and the environment. President Trump’s approach encourages regulation primarily to assist cryptocurrency creators and to protect the U.S. dollar. It remains to be seen what legislation will be proposed and adopted in the next few years and how that legislation will affect bankruptcy and secured transactions laws.

In response, the Securities and Exchange Commission (“SEC”) created a Crypto Task Force on January 21, 2025, to address many of the issues with respect to regulating cryptocurrencies.

The Crypto Task Force collaborates with Commission staff and the public to help chart a new approach to the regulation of crypto assets. The scope of the Crypto Task Force’s focus will include assets colloquially referred to as digital assets, crypto assets, cryptocurrencies, digital coins and tokens, as

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

well as protocols. The Crypto Task Force will help to draw clear regulatory lines, appropriately distinguish securities from non-securities, craft tailored disclosure frameworks, provide realistic paths to registration for both crypto assets and market intermediaries, ensure that investors have the information necessary to make investment decisions, and make sure that enforcement resources are deployed judiciously.¹⁷

Many of those who have invested in the failed cryptocurrency exchanges have seen massive losses from several of the bankruptcies of those exchanges. They also experienced how their cryptocurrency rights were threatened in the bankruptcy process. What they thought they owned was often considered an asset of the exchange, and not their personal cryptocurrency. That ownership structure was established prepetition, but it came to light as their contractual terms were scrutinized in each bankruptcy case. Although many investors are now being paid back what they lost in 2022 plus interest, it may not equal the appreciable growth of the cryptocurrency, i.e. what it is trading for today. How can investors better protect themselves? If those investors were to be classified as qualifying purchasers under new Article 12 of the Uniform Commercial Code (“UCC”), they would be better protected. If those investors could be treated as secured creditors of the cryptocurrency on the exchanges, they would be paid back with priority before their cryptocurrency might be used to pay professional fees and other administrative expenses and then distributed to unsecured creditors.

The drafters of the UCC have proposed two core methods for secured creditors to take a security interest in cryptocurrency.¹⁸ They chose one of the four existing methods for perfecting a security interest in digital assets, that of control.¹⁹ This article proposes that a centralized national filing system is another viable method for perfecting a security interest and enhancing protections. A centralized filing system would create more transparency and would help lenders and the public to understand the extent to which cryptocurrency is encumbered. The filing system could also help limit criminal enterprises, fraud, and tax evasion by providing creditors and

¹⁷ *Crypto Task Force*, U.S. SEC. & EXCH. COMM’N, <https://www.sec.gov/about/crypto-task-force> (last visited Feb. 19, 2025).

¹⁸ U.C.C. §§ 12-104, 12-105.

¹⁹ *Id.*

debtors with some assurance that their respective interests are duly recognized consistent with mainstream expectations.

Section II of this article will address cryptocurrency in general. What is it? What is the blockchain on which it is hosted? What are its related assets, such as nonfungible tokens, smart contracts, and digital applications? Section III of this article will address cryptocurrency exchanges and the lessons from some of the bankruptcies filed in the U.S. and Canada related to cryptocurrency. Finally, section IV of this article will address UCC Article 12, including how it relates to UCC Article 9 and the establishment of a security interest in cryptocurrency. The conclusion of this article will advocate for a comprehensive national filing system as an additional method for perfecting a security interest consistent with the mainstreaming of cryptocurrency.

II. Cryptocurrency Explained

Cryptocurrency is a digital currency that is designed to be anonymous²⁰ and decentralized,²¹ meaning that it can be transferred without knowing the identities of the buyer and seller and without going through a third-party intermediary. Cryptocurrency has no existence outside of computer programs available on the Internet.²² The original cryptocurrency, Bitcoin, operates by having computer programs run a complicated mathematical algorithm commonly referred to as the blockchain.²³ Every time the algorithm is solved, it results in a private key (which is a code of characters that is connected with specific cryptocurrency).²⁴ Miners of Bitcoin are given a public key and a private key.²⁵ They can use their public

²⁰ Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, U.S. SENT’G COMM’N, https://www.ussc.gov/sites/default/files/pdf/training/annual-national-training-seminar/2018/Emerging_Tech_Bitcoin_Crypto.pdf (last visited Sept. 16, 2024).

²¹ *Id.*

²² Kate Ashford, *What is Cryptocurrency?*, FORBES, <https://www.forbes.com/advisor/investing/cryptocurrency/what-is-cryptocurrency/> (last updated Feb. 16, 2023, 10:52 AM).

²³ *Id.* (“A blockchain is an open, distributed ledger that records transactions in code. In practice, it’s like a little checkbook that’s distributed across countless computers around the world. Transactions are recorded in ‘blocks’ that are then linked together on a ‘chain’ of previous cryptocurrency transactions.”).

²⁴ Chris Coverdale, *A Beginner’s Guide: Private and Public Key Cryptography Deciphered*, MEDIUM: COINMONKS (Feb. 26, 2018), <https://medium.com/coinmonks/private-and-public-key-cryptography-explained-simply-4c374d371736>.

²⁵ *Id.*

key to receive Bitcoin and their private key to transfer Bitcoin.²⁶ There are two ways to earn cryptocurrency. The first is through “mining,” or discovering the computer code that is tied to the cryptocurrency.²⁷ The second is through verifying the transactions that someone else already mined.²⁸

Those who do not run the computer programs can also obtain cryptocurrency through buying and selling it.²⁹ Cryptocurrency can be hosted on an exchange where previously mined cryptocurrency can be bought or sold.³⁰ Finally, cryptocurrency can be indirectly held by buying shares of a publicly traded company or a mix of funds that invests in cryptocurrency and whose major holdings are cryptocurrency.³¹

There are some fundamental criticisms and institutional concerns with cryptocurrency. These include the high consumption of energy to generate it,³² its use in illegal enterprises,³³ and its failure to live up to its promises of being anonymous and decentralized. Additionally, several cryptocurrencies have been hacked, investors scammed, and fortunes stolen.³⁴ Cryptocurrency has also proven to be highly volatile as an

²⁶ *Id.*; see also Aaron Watts, *A Beginner’s Guide to Crypto Wallet Private Keys*, COINCODEX (Nov. 16, 2021), <https://coincodex.com/article/128802000063/a-beginners-guide-to-crypto-wallet-private-keys/> (“Almost every cryptocurrency is built atop the public-key cryptography (PKC) framework that uses two keys that fit together as a pair, allowing anyone to send and receive digital currencies without any centralized authority in between. One part of the pair is known as the ‘public key,’ which you can share ‘publicly’ to receive cryptocurrencies, NFTs, and other similar assets. The other is the ‘private key,’ which is used for encryption and authentication, and as the name implies, should be kept ‘private.’”).

²⁷ Matt Whittaker, *How Does Bitcoin Mining Work?*, FORBES (May 13, 2024), <https://www.forbes.com/advisor/investing/cryptocurrency/bitcoin-mining/>.

²⁸ *Id.*; see also Kate Ashford, *supra* note 22.

²⁹ Kat Tretina, *How To Buy Cryptocurrency*, FORBES (May 13, 2024), <https://www.forbes.com/advisor/investing/cryptocurrency/how-to-buy-cryptocurrency>.

³⁰ *Id.*

³¹ Tony Dong, *7 Best Cryptocurrency ETFs to Buy*, U.S. NEWS (Feb. 12, 2025), <https://money.usnews.com/investing/articles/best-cryptocurrency-etfs-to-buy>.

³² Jon Huang, Claire O’Neill & Hiroko Tabuchi, *Bitcoin Uses More Electricity Than Many Countries. How Is That Possible?*, N.Y. TIMES (Sept. 3, 2021), <https://www.nytimes.com/interactive/2021/09/03/climate/bitcoin-carbon-footprint-electricity.html>.

³³ Dylan Butts, *Over 60% of Illegal Crypto Activity is Tied to Sanctioned Groups or Terrorist Organizations, Report Finds*, CNBC (Feb. 29, 2024), <https://www.cnbc.com/2024/02/29/sanctioned-and-terrorist-entities-receive-most-global-illicit-crypto.html>.

³⁴ Cheyenne DeVon, *Crypto Hackers Have Stolen Nearly \$2 Billion This Year—Here’s Why it’s a Growing Problem*, CNBC (Aug. 19, 2022), <https://www.cnbc.com/2022/08/19/crypto-hackers-stole-billions-why-its-a-growing-problem.html>.

investment,³⁵ and many cryptocurrencies have disappeared or been abandoned, even after securing new investors.³⁶

Cryptocurrency is sometimes associated with illicit and criminal activities, such as drug trades,³⁷ human trafficking,³⁸ identity theft,³⁹ buying and selling stolen goods,⁴⁰ aiding terrorists,⁴¹ and supporting war efforts.⁴² The fraudulent activity on the Silk Road dark web is one such example of cryptocurrency being used for these activities;⁴³ Ross Ulbricht created that website with the understanding that it would be used to hide transactions from the government.⁴⁴

In addition, there are concerns that cryptocurrency's purported anonymity is a myth. Although transactions are anonymous, they are tied to one's private key. One engineer was able to determine that the anonymity of cryptocurrency is not infallible by studying private keys and following the transactions when the cryptocurrency was eventually traded for other currency or non-anonymous assets to identify the owners of those private

³⁵ Octavio Blanco, *Why Investing in Digital Currencies Like Bitcoin Is So Dangerous*, CONSUMER REPS. (Jan. 12, 2018), <https://www.consumerreports.org/cryptocurrency/why-investing-in-digital-currencies-like-bitcoin-is-so-dangerous/>.

³⁶ *Id.*

³⁷ Harjeev Kour Sudan, Andy Man Yeung Tai & Reinhard Michael Krausz, *Decrypting the Cryptomarkets: Trends Over a Decade of the Dark Web Drug Trade*, SAGEJOURNALS (Nov. 19, 2023), <https://journals.sagepub.com/doi/full/10.1177/20503245231215668>.

³⁸ Ted Knutson, *Crypto Increasingly Used In Human/Drug Trafficking Says GAO*, FORBES (Jan. 11, 2022), <https://www.forbes.com/sites/tedknutson/2022/01/10/crypto-increasingly-used-in-humandrug-trafficking-says-gao/>.

³⁹ *PYMNTS Intelligence: Keeping Cryptocurrency Payments Safe From Identity Fraud*, PYMNTS (Feb. 1, 2022), <https://www.pymnts.com/cryptocurrency/2022/pymnts-intelligence-keeping-cryptocurrency-payments-safe-from-identity-fraud/> (“Identity fraud is the most common type in cryptocurrency, making up 44% of fraud incidents.”).

⁴⁰ Hannah Murphy, *The Rise of Crypto Laundries: How Criminals Cash Out of Bitcoin*, FIN. TIMES (May 27, 2021), <https://www.ft.com/content/4169ea4b-d6d7-4a2e-bc91-480550c2f539>.

⁴¹ IntelBrief, *Blockchain and Bloodshed: The Role of Cryptocurrencies in Terrorist Financing*, THE SOUFAN CENTER (Oct. 16, 2024) <https://thesoufancenter.org/intelbrief-2024-october-16> (explaining how multiple terrorist groups, including Hamas, Hezbollah, the Palestinian Islamic Jihad, Islamic State Khorasan, and Islamic State, use cryptocurrency to fund terrorist activities).

⁴² Spencer Feingold, *Why The Role of Crypto is Huge in the Ukraine War*, WORLD ECON. F. (Mar. 16, 2023), <https://www.weforum.org/agenda/2023/03/the-role-cryptocurrency-crypto-huge-in-ukraine-war-russia/>.

⁴³ David Adler, *Silk Road: The Dark Side of Cryptocurrency*, FORDHAM J. CORP. & FIN. L. BLOG (Feb. 21, 2018), <https://news.law.fordham.edu/jcfl/2018/02/21/silk-road-the-dark-side-of-cryptocurrency/>.

⁴⁴ *Id.*

keys.⁴⁵ As a result of such a review, the State of New York has recovered millions of dollars of cryptocurrency involved in illegal transactions.⁴⁶

One of the purported pillars of cryptocurrency is its decentralized process.⁴⁷ Decentralization means that the verification of cryptocurrency transactions is done by a massive amount of people who are not colluding and are entirely independent of one another.⁴⁸ Mining pools have been formed to work together to solve the algorithmic formulas required to discover new cryptocurrency blocks in the blockchain.⁴⁹ As one commentator explained, “Crypto’s complexity arises from attempts at decentralization However, Bitcoin became centralized very quickly and now depends on a small group of software developers and mining pools to function.”⁵⁰

In the final analysis, cryptocurrency’s value is dependent on what it is traded for and how much faith investors put into it.⁵¹ New regulations have been debated, deferred, and some introduced to assure the integrity and predictability of cryptocurrency.⁵² The value and utility of cryptocurrency has increased based on actions taken by the Trump administration,⁵³ and it will

⁴⁵ Andy Greenberg, *How a 27-Year-Old Codebreaker Busted the Myth of Bitcoin’s Anonymity*, WIRED (Jan. 17, 2024, 6:00 AM), <https://www.wired.com/story/27-year-old-codebreaker-busted-myth-bitcoins-anonymity/> (“In Bitcoin, for good and for ill, everyone was a witness to every payment. Yes, identities behind those payments were obscured by pseudonymous addresses, long strings of between 26 and 35 characters. But to Meiklejohn, this seemed like an inherently dangerous sort of fig leaf to hide behind.”).

⁴⁶ *Id.*

⁴⁷ Hilary J. Allen, *The Superficial Allure of Crypto*, FIN. & DEV. MAG. (Sept. 2022), <https://www.imf.org/en/Publications/fandd/issues/2022/09/Point-of-View-the-superficial-allure-of-crypto-Hilary-Allen>.

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ Siddharth Venkataramakrishnan, *What Influences Cryptocurrency Values?*, FIN. TIMES (Nov. 29, 2021), <https://www.ft.com/content/06119305-82e3-4f7e-9bdb-387392571d45> (“Ask diehard believers why bitcoin was priced at \$68,000 earlier this month, up from less than \$30,000 at the start of the year, and their answer may be that it is just down to the market understanding its true value.”).

⁵² Ian Shine, *Cryptocurrency Regulations are Changing Across the Globe. Here’s What You Need to Know*, WORLD ECON. F. (May 2, 2024), <https://www.weforum.org/agenda/2024/05/global-cryptocurrency-regulations-changing>.

⁵³ Ryan Erme, *3 Ways Trump has Impacted the Crypto Market so Far: Everything on the Wish List ‘Pretty Much Happened’*, CNBC <https://www.cnbc.com/2025/01/31/how-trump-has-impacted-crypto-so-far.html> (Jan. 31, 2025, 9:51 AM) (“The price of bitcoin – the world’s largest and most popular cryptocurrency – has jumped to about \$104,000, a roughly 50% rise since Trump was elected for a second term.”).

likely continue to be influenced by federal regulations.⁵⁴

A. The History of Cryptocurrency

Cryptocurrency is a relatively recent invention. Satoshi Nakamoto is widely believed to be the foremost innovator whose name is a pseudonym for multiple individuals whose identities have never been revealed.⁵⁵ He created the first white paper on Bitcoin on October 31, 2008.⁵⁶ As explained in his white paper's abstract:

A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer to peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The longest chain serves not only as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power. As long as a majority of CPU power is controlled by nodes that are not cooperating to attack the network, they'll generate the longest chain and outpace attackers. The network itself requires minimal structure.

⁵⁴ Larisa Yarovaya, *Under Trump, Cryptocurrency is Set To Go Mainstream—But That Won't Make it Any Safer for Investors*, THE GUARDIAN <https://www.theguardian.com/commentisfree/2025/jan/13/trump-cryptocurrency-mainstream-safer-investors> (Jan. 13, 2025, 10:11 AM) (“Some analysts predict that Bitcoin’s price could range between \$78,000 and \$250,000 in 2025. . . . Easing cryptocurrency regulations would not advance the ideal of financial freedom. Instead, it would mark a significant step backward in the pursuit of transparency and accountability in addressing financial misconduct by the wealthy and powerful. Strong political and government endorsements of crypto, paradoxically, pose a threat to its decentralization ethos and could ultimately undermine the appeal of crypto assets.”).

⁵⁵ Jordan Leech, *Who is Bitcoin Creator Satoshi Nakamoto*, THE BLOCK (June 22, 2024), <https://www.theblock.co/learn/298663/who-is-bitcoin-creator-satoshi-nakamoto-2?modal=newsletter> (“Nakamoto’s identity, whether an individual or a collective, has remained one of the most elusive and enduring mysteries in the cryptocurrency space, sparking endless speculation and investigations, yet no conclusive evidence has surfaced to unveil the true persona behind the groundbreaking digital currency.”).

⁵⁶ Nakamoto, *supra* note 20.

Messages are broadcast on a best effort basis, and nodes can leave and rejoin the network at will, accepting the longest proof-of-work chain as proof of what happened while they were gone.⁵⁷

The white paper relied on one source originating in 1980 to support the blockchain theory on how to create digital currency.⁵⁸ In 1983, “American cryptographer David Chaum, known as the ‘Godfather of Cryptocurrency,’ also published a concept for anonymous electronic money, which he named eCash.”⁵⁹ In 1989, David Chaum attempted to launch digiCash, a cryptocurrency.⁶⁰ While the mathematical ideas providing the foundation for cryptocurrency have been around for decades, Bitcoin was the first to put them into practice in a way that has lasted.⁶¹

B. Top Ten Cryptocurrencies

Cryptocurrencies account for an estimated current market value of approximately \$3.37 trillion.⁶² The top ten cryptocurrencies all together command about \$2.835 trillion in value.⁶³ Bitcoin leads the value at \$1.9 trillion; the other nine combined are worth about \$900 billion.⁶⁴ The best estimates are that there are at least twenty thousand cryptocurrencies as of February 2025.⁶⁵ Many of these, however, have been abandoned.⁶⁶ Over

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ Julie Pinkerton, *The History of Bitcoin*, U.S. NEWS & WORLD REP., <https://money.usnews.com/investing/articles/the-history-of-bitcoin> (last updated Feb. 18, 2025).

⁶⁰ *History of Cryptocurrency*, REGULATED UNITED EUR.: ESTONIA (Feb. 2024), <https://rue.ee/blog/cryptocurrency-history/>.

⁶¹ Pinkerton, *supra* note 59 (“Conceptually existing for over 40 years, Bitcoin made it a reality in 2009, and its journey since has been both volatile and revolutionary.”).

⁶² Digital Assets, *Cryptocurrency Prices Today by Market Cap*, FORBES, <https://www.forbes.com/digital-assets/crypto-prices/?sh=7421db8b2478> (last visited Feb. 14, 2025).

⁶³ Rae Hartley Beck, *Top 10 Cryptocurrencies Of February 11, 2025*, FORBES, <https://www.forbes.com/advisor/investing/cryptocurrency/top-10-cryptocurrencies/> (last updated Feb. 25, 2025).

⁶⁴ *Id.*

⁶⁵ Raynor de Best, *Quantity of Cryptocurrencies as of January 8, 2025*, STATISTICA, <https://www.statista.com/statistics/863917/number-crypto-coins-tokens/> (last visited Feb. 14, 2025).

⁶⁶ Lyle Daly, *How Many Cryptocurrencies Are There?*, THE MOTLEY FOOL, <https://www.motleyfool.com/insights/cryptocurrency/how-many-cryptocurrencies-are-there/>

ninety percent of all of the value of cryptocurrencies is found in the top twenty cryptocurrencies.⁶⁷ Bitcoin continues to be the cryptocurrency with the highest trading value,⁶⁸ reaching its highest ever value on January 20, 2025,⁶⁹ of \$109,026.02.⁷⁰ The other three cryptocurrencies with a large following include Ethereum, XRP, and Tether.⁷¹ Those that hold the top ten spots have changed over the years.⁷² The top 10 cryptocurrencies as of February 11, 2025 are: Bitcoin, Ethereum, XRP, Tether, Solana, Binance Coin, U.S. Dollar Coin, Dogecoin, Cardano, and Tron.⁷³

1. Bitcoin

Bitcoin was originally intended to be used as a payment system, to replace money.⁷⁴ The value of Bitcoin, when it was first introduced in 2009, was \$0.00.⁷⁵ On January 20, 2025, the day of the Trump presidential inauguration, Bitcoin was trading at an all time high of approximately \$109,000.⁷⁶ There are approximately 19,433,668 Bitcoins in existence.⁷⁷

[//www.fool.com/investing/stock-market/market-sectors/financials/cryptocurrency-stocks/how-many-cryptocurrencies-are-there/](https://www.fool.com/investing/stock-market/market-sectors/financials/cryptocurrency-stocks/how-many-cryptocurrencies-are-there/) (last updated Nov. 20, 2023, 11:18 AM).

⁶⁷ de Best, *supra* note 65.

⁶⁸ Beck, *supra* note 63.

⁶⁹ Helen Partz, *Bitcoin Hits New All-Time High Above \$109K Ahead of Trump's Inauguration*, COIN TELEGRAPH (Jan. 20, 2025), <https://cointelegraph.com/news/bitcoin-all-time-high-109000-trump-inauguration-day>.

⁷⁰ *Bitcoin Price*, COINBASE, <https://www.coinbase.com/price/bitcoin> (last visited Feb. 14, 2025) (identifying all time high price of \$109,026.02).

⁷¹ Beck, *supra* note 63.

⁷² *Evolution of Top-10 Coins in CoinMarketCap's History (2013-2023)*, COINMARKETCAP (Sept. 2023), <https://coinmarketcap.com/academy/article/evolution-of-top-10-coins-in-cmcs-history>.

⁷³ Beck, *supra* note 63.

⁷⁴ Mark Edwin Burge, *After FTX: Can The Original Bitcoin Use Case Be Saved?*, 72 U. KAN. L. REV. 1, 3–8 (Nov. 2023) (“The original use case for Bitcoin was as a system of payment, one that would avoid the necessity of established financial institutions and government control of the monetary supply.”).

⁷⁵ Dan Ashmore, *Bitcoin Price History 2009 to 2022*, FORBES ADVISOR (Apr. 16, 2024), <https://www.forbes.com/advisor/investing/cryptocurrency/bitcoin-price-history/> (“The transaction that first gave Bitcoin monetary value was in October 2009, when Finnish computer science student Martti Malmi, known online as Sirius, sold 5,050 coins for \$5.02, giving each Bitcoin a value of \$0.0009 each.”).

⁷⁶ Catherine McGrath, *Trump's Inauguration Sends Bitcoin on Wild Ride*, FORTUNE <https://fortune.com/crypto/2025/01/21/bitcoin-price-fluctuates-trump-inauguration-first-week-crypto-policy-change/> (Jan. 21, 2025, 4:47 PM).

⁷⁷ Daniel Gray, *Understanding Bitcoin and Ethereum Supply*, FIDELITY (Nov. 28, 2023),

Bitcoin has a market value of approximately \$1.9 trillion.⁷⁸ Bitcoin has always held the number one spot on the list of most valuable cryptocurrencies.⁷⁹ Originally, anyone could earn Bitcoins through using their home computer to run computer programs, thereby mining Bitcoin.⁸⁰ Today, anyone who wants to get into Bitcoin mining needs to invest in multiple processing systems and join a mining pool.⁸¹

There will only ever be 21 million Bitcoins.⁸² The computer algorithm created by Nakamoto puts a cap on the total amount of Bitcoins to be mined.⁸³ Bitcoin goes through a halving process, meaning that when it was originally mined, 50 Bitcoins would be awarded for about ten minutes of work.⁸⁴ Today, only 3.125 Bitcoins are awarded for the same ten minutes of work.⁸⁵

For many investors, Bitcoin started out as a hobby, and they frequently neglected to keep careful track of their private keys.⁸⁶ As a result, somewhere between three and six million Bitcoins, or as much as 30% of the total in existence, have been lost forever.⁸⁷ As a result of the critical role of

<https://www.fidelitydigitalassets.com/research-and-insights/understanding-bitcoin-and-ethereum-supply>.

⁷⁸ Beck, *supra* note 63.

⁷⁹ See *Evolution of Top-10*, *supra* note 72.

⁸⁰ Alex Lielacher, *Crypto You Can Mine From a Home Computer in 2025*, BRAVE NEW COIN (Jan. 2, 2025), <https://bravenewcoin.com/insights/crypto-assets-you-can-mine-from-a-home-computer>.

⁸¹ Jagjit Singh, *How to Mine Bitcoin at Home*, COINTELEGRAPH (Jan. 26, 2023), <https://cointelegraph.com/news/how-to-mine-bitcoin-at-home>.

⁸² Cryptopedia Staff, *How Many Bitcoins Are Left? BTC Supply and Mining Explained*, GEMINI (Feb. 12, 2025), <https://www.gemini.com/cryptopedia/how-many-bitcoins-are-left> (“Of the 21 million total bitcoins, about 19 million have already been mined, leaving approximately 2 million remaining.”).

⁸³ *Id.*

⁸⁴ *Id.* (“For the first four years, for instance, miners were awarded 50 bitcoins for every new block mined”).

⁸⁵ *Id.* (“Today, miners get 3.125 bitcoins per block, and until the next halving, it will be cut down to 1.5625. Bitcoin halving events are important because they reduce the speed at which new coins are issued into circulation. Such increased scarcity tends to raise demand and, therefore, plays a role in the appreciation of Bitcoin.”).

⁸⁶ Jeff John Roberts, *Old Bitcoin Wallets Keep Waking Up: How Many of the 1.8 Million ‘Lost’ Coins are Really Gone?*, YAHOO! FIN. (Apr. 24, 2024), <https://finance.yahoo.com/news/old-bitcoin-wallets-keep-waking-131642155.html> (“In most cases, it’s impossible to know for sure what became of a given wallet, but it’s a safe bet many are indeed gone forever. . . . many people who received it may have forgotten about it entirely or not bothered to safeguard the private keys needed to open a wallet.”).

⁸⁷ Katie Rees, *How Much Bitcoin Is Lost Forever and How Did It Get Lost?*, MAKE USE

private keys, there are now services that work to uncover the private keys that investors have lost or forgotten.⁸⁸ With Bitcoins now so valuable, there is much more of an incentive to locate these lost wallets. Satoshi Nakamoto allegedly mined the first 1.1 million Bitcoins, and the wallet holding the original Bitcoins has not traded or moved any of them.⁸⁹ Nakamoto's lack of participation has led some to speculate the founder of Bitcoin is deceased (though the founder is likely not Hal Finney).⁹⁰

The preeminent asset management firm, BlackRock, Inc., claims Bitcoin "is 'digital gold' and a 'legitimate' financial instrument."⁹¹ President Trump ran on the promise of being "pro-Bitcoin" and that he would ease the restrictions on banks and cryptocurrency exchanges put in place by the SEC under Gary Gensler.⁹² Indeed, Gensler has resigned and Paul Atkins has been proposed to replace him as SEC chair to pursue a new agenda.⁹³

2. Ethereum

The second largest cryptocurrency, Ethereum, was not released until

OF (Sept. 28, 2023), <https://www.makeuseof.com/how-much-bitcoin-is-lost-forever/> ("Estimates suggest that around 6 million BTC, or 30% of Bitcoin's supply, have been irretrievably lost, amounting to \$554 billion in value.").

⁸⁸ *Id.* ("Recovering lost Bitcoin is challenging, but services known as crypto hunters can help track down wallets if users have their blockchain ID and a guess at the password. However, the success of recovery is not guaranteed.").

⁸⁹ Jeff John Roberts, "Bitcoin's Black Swan Event: How the Return of Satoshi Could Pose a \$75 Billion Threat," *FORTUNE* <https://fortune.com/crypto/2024/03/07/bitcoins-black-swan-event-how-the-return-of-satoshi-could-pose-a-75-billion-threat/> (Mar. 7, 2024, 3:16 PM).

⁹⁰ Andy Greenberg, *Nakamoto's Neighbor: My Hunt For Bitcoin's Creator Led to A Paralyzed Crypto Genius*, *FORBES* <https://www.forbes.com/sites/andygreenberg/2014/03/25/satoshi-nakamotos-neighbor-the-bitcoin-ghostwriter-who-wasnt/> (Mar. 25, 2014, 2:55 PM) (interviewing Hal Finney on the early days of Bitcoin).

⁹¹ Billy Bambrough, *A 'Huge' BlackRock Bitcoin ETF Price 'Surprise' Is Suddenly About To Hit*, *FORBES*, <https://www.forbes.com/sites/digital-assets/2024/09/19/blackrock-reveals-its-quietly-preparing-for-a-35-trillion-federal-reserve-crisis-with-bitcoin-predicted-to-spark-a-sudden-price-boom/> (last updated Sept. 22, 2024, 6:38 AM).

⁹² Aditi Ganguly, *Trump goes all-in on crypto: Bitcoin soars as new policies shake up the industry*, *YAHOO! FIN.* (Feb. 8, 2025), <https://finance.yahoo.com/news/trump-goes-crypto-bitcoin-soars-134800379.html> ("According to the Federal Election Commission data, the crypto community donated over \$245 million to Trump's campaign—accounting for more than 50% of all corporate donations.").

⁹³ *Nomination of Paul Atkins for Securities and Exchange Commission*, 119th Congress, <https://www.congress.gov/nomination/119th-congress/18> (last visited Feb. 15, 2025).

July 30, 2015.⁹⁴ Prior to its release, other coins such as Litecoin (in 2011) and Ripple (in 2012) were also released.⁹⁵ Ethereum differs from Bitcoin in an important way, the algorithm does not put a limit on the total amount of Ethereum that can be mined; it is theoretically unlimited.⁹⁶

Ethereum was trading at \$2,721.30 as of February 15, 2025.⁹⁷ There are over 120 million Ether coins in circulation as of February 2025.⁹⁸ The market value of Ethereum is \$320.3 billion as of February 11, 2025.⁹⁹ In addition to issuing blockchain digital currency, Ethereum provides related additional benefits. It has a focus on smart contracts and applications.¹⁰⁰ Individuals can also play games on the Ethereum network.¹⁰¹ The Ethereum blockchain hosts non-fungible tokens (“NFTs”), known as digital art.¹⁰² “Anyone can view the individual images—or even the entire collage of images online for free. So why are people so willing to spend millions on something they could easily screenshot or download?”¹⁰³ It’s a great question. People like to own the digital art. “Collectors value those ‘digital bragging rights’ almost more than the item itself.”¹⁰⁴ The Ethereum network requires investors to use Ethereum (also known as Ether coins) to buy and sell NFTs and engage in other transactions on the blockchain.¹⁰⁵

Originally criticized for its enormous use of electricity for digital

⁹⁴ Bernard Marr, *Blockchain: A Very Short History Of Ethereum Everyone Should Read*, BERNARD MARR & CO., <https://bernardmarr.com/blockchain-a-very-short-history-of-ethereum-everyone-should-read/> (last visited Feb. 27, 2025).

⁹⁵ See *History of Cryptocurrency*, *supra* note 60.

⁹⁶ Daniel Gray, *Understanding Bitcoin and Ethereum Supply*, FIDELITY (Nov. 28, 2023), <https://www.fidelitydigitalassets.com/research-and-insights/understanding-bitcoin-and-ethereum-supply> (“On the Ethereum network, the total supply is, in theory, infinite.”).

⁹⁷ *Ethereum*, COINDESK (Sept. 20, 2024), <https://www.coindesk.com/price/ethereum>.

⁹⁸ *Number of Ethereum (ETH) tokens in circulation from November 2016 to January 27, 2025*, STATISTA, <https://www.statista.com/statistics/1278169/ethereum-circulating-supply/> (last visited Feb. 15, 2025).

⁹⁹ Beck, *supra* note 63.

¹⁰⁰ *What are the Differences Between Bitcoin and Ethereum?*, COINBASE, <https://www.coinbase.com/learn/crypto-basics/what-are-the-differences-between-bitcoin-and-ethereum> (last visited Feb. 19, 2024).

¹⁰¹ *Top Ethereum Games*, DAPPRADAR, <https://dappradar.com/rankings/protocol/ethereum/category/games> (last visited Feb. 19, 2024).

¹⁰² Robyn Conti, *What Is An NFT? Non-Fungible Tokens Explained*, FORBES (May 10, 2024), <https://www.forbes.com/advisor/investing/cryptocurrency/nft-non-fungible-token/>.

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ Ola Kalejaye, *How To Buy an NFT*, LEDGER ACADEMY (July 5, 2024), <https://www.ledger.com/academy/topics/nfts/how-to-buy-an-nft>.

mining,¹⁰⁶ the Ethereum blockchain's new process of mining using a proof-of-stake versus a proof-of-work model since September 2022 greatly reduces the amount of energy needed to mine it.¹⁰⁷ "Instead of using expensive GPUs, validators simply need a basic laptop and a stable internet connection. This change will reduce Ethereum's energy consumption by more than 99%."¹⁰⁸

3. XRP

XRP is the cryptocurrency on the Ripple exchange.¹⁰⁹ One XRP was worth \$2.76 as of Feb. 15, 2025.¹¹⁰ The total value of XRP is somewhere between \$142 billion¹¹¹ and \$159.7 billion.¹¹² "XRP is the native crypto token of the Ripple network, and it consistently lists among the top 10 cryptocurrencies by market capitalization."¹¹³ XRP and Ripple are trying to provide a money exchange system, either between cryptocurrencies and fiat currencies or between fiat currencies.¹¹⁴ Whenever someone uses the network, a small amount of XRP is charged as a fee.¹¹⁵ XRP has its own blockchain network; it does not run on the Bitcoin or Ethereum network.¹¹⁶ XRP prides itself in being low-cost and fast.¹¹⁷ It is claimed that "XRP transactions are confirmed around four to five seconds at a much lower [electricity] cost."¹¹⁸

XRP is allegedly so fast because it was mined before it was

¹⁰⁶ Zack Hale, *Ethereum's 99% Cut in Energy Use Will Curb Crypto's Climate Footprint*, S&P GLOBAL (Sept. 16, 2022), <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/ethereum-s-99-cut-in-energy-use-will-curb-crypto-s-climate-footprint-72145342>.

¹⁰⁷ *Id.* ("Ethereum, the world's second-largest cryptocurrency protocol by market capitalization, virtually eliminated its energy consumption overnight on Sept. 15 by successfully transitioning to a new consensus mechanism known as proof of stake.").

¹⁰⁸ *Id.*

¹⁰⁹ David Rodeck, *What is XRP (Ripple)?*, FORBES <https://www.forbes.com/advisor/investing/cryptocurrency/what-is-ripple-xrp> (last updated Apr. 16, 2024, 3:42 PM).

¹¹⁰ *Convert and Swap XRP to United States Dollar*, COINBASE, <https://www.coinbase.com/converter/xrp/usd> (last visited Feb. 15, 2025).

¹¹¹ Beck, *supra* note 63.

¹¹² *See Convert and Swap XRP*, *supra* note 110.

¹¹³ Rodeck, *supra* note 109.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.*

launched.¹¹⁹ Many codes were already discovered and quickly available to be used.¹²⁰ Only six months ago, XRP was seventh on the top ten list, however, the change in the U.S. administration has paved the way for XRP to continue to increase in value.¹²¹ “Replacing [SEC Chairman Gary] Gensler is a big deal because a lawsuit between Ripple, the company behind the XRP token, and the SEC continues to drag on after more than four years.”¹²²

4. Tether

Tether is the first stablecoin based on the U.S. dollar.¹²³ Tether was trading at \$1.00.¹²⁴ “Crypto traders use stablecoins like Tether to make transfers between different cryptocurrencies or to move their investments into or out of fiat currencies.”¹²⁵ The value of Tether does not fluctuate. Tether was valued at approximately \$141.9 billion as of February 11, 2025.¹²⁶ More and more people have bought into Tether, however, which makes it the fourth most valuable cryptocurrency based on the total cryptocurrency market.¹²⁷

Tether lacks its own blockchain; it is hosted on Bitcoin, Ethereum, or other cryptocurrency blockchains.¹²⁸ Those behind Tether claim that it is backed by the equivalent in U.S. dollars, so they are always holding enough dollars to provide one-for-one coverage for Tether.¹²⁹

Stablecoins like Tether don’t make much sense as an investment because they aren’t meant to increase in value. They only operate as a store of value, since one USDT should always equal one dollar. Besides being a useful store of value, the benefit of Tether is as a tool for conducting

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ Dominic Basulto, *XRP Is Up 400% in the Past 3 Months. Is It a Buy Now?*, THE MOTLEY FOOL <https://www.fool.com/investing/2025/02/14/xrp-is-up-400-in-the-past-3-months-is-it-a-buy-n/> (Feb. 14, 2025, 7:10 AM).

¹²² *Id.*

¹²³ *Tether*, COINDESK (Feb. 15, 2025), <https://www.coindesk.com/price/tether>.

¹²⁴ *Id.*

¹²⁵ Coryanne Hicks, *What Is Tether? How Does It Work?*, FORBES, <https://www.forbes.com/advisor/investing/cryptocurrency/what-is-tether-usdt/> (last updated Aug. 15, 2023, 10:09 AM).

¹²⁶ Beck, *supra* note 63.

¹²⁷ Hicks, *supra* note 125.

¹²⁸ *Id.*

¹²⁹ *Id.*

business in a far simpler manner than using Bitcoin.¹³⁰

There are questions about whether Tether is really backed by actual reserves. However, “Recent disclosures from Tether reveal a reserve composition including \$100 billion in U.S. Treasury bonds, over 82,000 Bitcoin, valued at approximately \$5.5 billion, and 48 metric tons of gold.”

5. Solana

As another alternative to Bitcoin and Ethereum, Solana has been adopted by many creators, artists, and developers.¹³¹ It advertises as “fast, scalable, decentralized, energy efficient, and with low transaction costs.”¹³² Solana provides smart contracts and NFTs similar to Ethereum.¹³³ It also has extremely low transaction fees compared to other cryptocurrencies.¹³⁴ The Solana network has crashed a couple of times, which has caused some investors to worry about its reliability.¹³⁵ Like Ethereum (and unlike Bitcoin), there is no limit to the number of Solana coins that can be mined.¹³⁶ Solana’s environmental impact is minimal, however, because it does not require significant electricity to mine.¹³⁷

Solana was trading at \$194.57 as of February 15, 2025.¹³⁸ The total market value of Solana is approximately \$95 billion¹³⁹ to \$97 billion.¹⁴⁰ “Solana has a current supply of nearly 591 million tokens and no maximum supply, but it’s set to reduce its annual inflation rate, currently at 4.83%, by 15% every . . . 450–630 days.”¹⁴¹

¹³⁰ *Id.*

¹³¹ SOLANA, <https://solana.com> (last visited Feb. 19, 2025) (“It’s time to join the thousands of creators, artists and developers using Solana.”).

¹³² *Id.*

¹³³ Wayne Duggan, *Should You Buy Solana? 3 Pros, 3 Cons*, U.S. NEWS <https://money.usnews.com/investing/article/should-you-invest-in-solana-sol> (May 9, 2024, 3:35 PM).

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ *Id.*

¹³⁸ *Convert and Swap Solana SOL to United States Dollar USD*, COINBASE (Feb. 15, 2025), <https://www.coinbase.com/converter/sol/usd>.

¹³⁹ *Id.*

¹⁴⁰ Beck, *supra* note 63.

¹⁴¹ Leo Sun, *Should You Forget Bitcoin and Buy Solana Instead?*, THE MOTLEY FOOL <https://www.fool.com/investing/2024/12/25/should-you-forget-bitcoin-and-buy-solana-instead/> (Dec. 25, 2024, 4:42 AM).

6. Binance Coin

Binance Coin was valued at \$662.72 per coin as of February 15, 2025.¹⁴² Binance Coin started on the Ethereum blockchain in July 2017.¹⁴³ It was subsequently transferred to its own blockchain.¹⁴⁴ In 2023, Binance's first CEO, Changpeng Zhao, pled guilty to U.S. federal anti-money laundering charges and agreed to pay a \$50 million fine to the U.S. Commodity Futures Trading Commission. Zhao was sentenced in April 2024 to four months in prison for failing to prevent money laundering on the Binance exchange.¹⁴⁵ In addition, Binance Exchange paid additional penalties of approximately \$3.85 billion.¹⁴⁶ Despite its legal troubles,¹⁴⁷ Binance Coin has continued to maintain a spot in the top ten cryptocurrencies.¹⁴⁸

Binance has a total value of \$90.7 billion as of February 11, 2025.¹⁴⁹ One Binance Coin was trading at \$661.37 as of February 15, 2025.¹⁵⁰ There are currently 145 million Binance coins trading, and there is a limit of 200 million Binance coins.¹⁵¹

7. U.S. Dollar Coin

The USD was valued at \$1.00. The total market value was \$56.4 billion as of February 11, 2025.¹⁵² The USD Coin is also a stablecoin, similar to Tether. It is allegedly "fully backed digital dollars," meaning it can be traded for U.S. dollars.¹⁵³ The value of the cryptocurrency is tied to a dollar, and it does not fluctuate, so there is no reason to hold it hoping for growth or

¹⁴² *Binance Coin (BNB/USD)*, GOOGLE FIN., <https://www.google.com/finance/quote/BNB-USD> (last visited Feb. 15, 2025).

¹⁴³ CFI Team, *Binance Coin (BNB)*, CORP. FIN. INST., <https://corporatefinanceinstitute.com/resources/cryptocurrency/binance-coin-bnb> (last visited Feb. 19, 2025).

¹⁴⁴ *Id.*

¹⁴⁵ Mastering Crypto (@masteringcrypto), BINANCE SQUARE (June 1, 2024), <https://www.binance.com/en/square/post/8884651632594>.

¹⁴⁶ *Id.*

¹⁴⁷ Press Release, *Binance and CEO Plead Guilty to Federal Charges in \$4B Resolution*, U.S. DEP'T. OF JUST. (Nov. 21, 2023), <https://www.justice.gov/opa/pr/binance-and-ceo-plead-guilty-federal-charges-4b-resolution>.

¹⁴⁸ Beck, *supra* note 63.

¹⁴⁹ *Id.*

¹⁵⁰ *BNB*, COINBASE, <https://www.coinbase.com/price/bnb> (last visited Feb. 15, 2025).

¹⁵¹ *Id.*

¹⁵² Beck, *supra* note 63.

¹⁵³ *USDC*, CIRCLE, <https://www.circle.com/en/usdc> (last visited Feb. 19, 2025).

speculation.¹⁵⁴

One commentator opined, “USD Coin is widely considered to be the safer option [than Tether] because of its transparency. Its management has provided reports since its launch, verifying its reserves.”¹⁵⁵

8. Dogecoin

From its website, “Dogecoin is an open-source peer-to-peer digital currency”¹⁵⁶ and stands for “Do Only Good Everyday.”¹⁵⁷ “Dogecoin was created in 2013, inspired by the popular Shiba Inu meme.”¹⁵⁸ Although it started as a joke,¹⁵⁹ Dogecoin was also made popular by celebrities such as Elon Musk, Snoop Dogg, Mark Cuban, Gene Simmons, Lil Yachty, Kevin Jonas, and Jake Paul.¹⁶⁰

“Dogecoin has held its place as the most iconic meme coin since its creation. The project quickly developed a cult following.”¹⁶¹ Dogecoin is based on a Shiba Inu dog.¹⁶² Photos of the dog were accompanied with phrases like “much wow” and “so amaze” in Comic Sans font.¹⁶³

Commentators believe Dogecoin is a good investment based on its “strong community support, widespread media coverage, accessibility through various platforms, and its ability to tap into the growing interest in

¹⁵⁴ Megan DeMatteo, *What’s the Point of Stablecoins? The Reasons, Risks and Types to Know*, COINDESK, <https://www.coindesk.com/learn/whats-the-point-of-stablecoins-understanding-why-they-exist/> (last updated Mar. 22, 2023, 9:12 PM) (“[D]esigned to counter crypto’s hallmark volatility and provide a convenient way for crypto traders to preserve their fiat value without having to cash out of the market and to allow users to pay for everyday goods and services in crypto without all the budgeting drama.”).

¹⁵⁵ Lyle Daly, *What Is USD Coin (USDC)?*, THE MOTLEY FOOL, <https://www.fool.com/terms/u/usd-coin> (last updated July 26, 2024, 5:17 PM).

¹⁵⁶ DOGECOIN, <https://dogecoin.com> (last visited Feb. 19, 2025).

¹⁵⁷ *Id.*

¹⁵⁸ Camila Karam, *Is Dogecoin a Good Investment in 2025?*, CRYPTONEWS (Dec. 6, 2024), <https://cryptonews.com/cryptocurrency/is-dogecoin-a-good-investment>.

¹⁵⁹ *Id.*

¹⁶⁰ Sahana Kiran, *List of Celebrities That Have Invested in Dogecoin*, WATCHER.GURU (July 3, 2024), <https://watcher.guru/news/list-of-celebrities-that-have-invested-in-dogecoin>.

¹⁶¹ Pratik Chadhokar, *Dogecoin And Pepe Not Safe: A New Meme Coin Is Defying The Market*, THE COIN REPUBLIC (Sept. 25, 2024), <https://www.thecoinrepublic.com/2024/09/25/dogecoin-and-pepe-not-safe-a-new-meme-coin-is-defying-the-market/>.

¹⁶² Kyle Chayka, *What Doge Taught Me About the Internet*, THE NEW YORKER (June 5, 2024), <https://www.newyorker.com/culture/infinite-scroll/what-doge-taught-me-about-the-internet>.

¹⁶³ *Id.*

cryptocurrency.”¹⁶⁴

Dogecoin had a market value of \$38.2 billion as of February 11, 2025.¹⁶⁵ Dogecoin has no limit on the number of coins to be mined.¹⁶⁶ “Initially, when Dogecoin was launched in 2013, it had a limit of 100 billion coins. However, this limit was removed in 2014, rendering the coin inflationary by nature.”¹⁶⁷ There are 148 billion Dogecoins in existence as of February 15, 2025.¹⁶⁸

9. Cardano

Cardano was created by an Ethereum co-founder.¹⁶⁹ Based on proof-of-stake instead of proof-of-work, “Cardano has a self-proclaimed goal of providing banking services to the world’s unbanked.”¹⁷⁰ The Cardano blockchain also provides for smart contracts, tokens, applications, and other games.¹⁷¹

Cardano had a market value of \$27.9 billion as of February 11, 2025.¹⁷² One Cardano was trading for approximately \$0.78 as of February 15, 2025.¹⁷³ Cardano has a limited supply, there can only ever be 45 billion Cardano coins in existence.¹⁷⁴ There are about 35 billion Cardano coins in existence as of April 2024.¹⁷⁵

¹⁶⁴ Alex Sterling, *Expanding DOGE’s Reach: Global Community Growth for Dogecoin*, doubloin (Dec. 30, 2023), <https://www.doubloin.com/learn/dogecoin-global-community-growth>.

¹⁶⁵ Beck, *supra* note 63.

¹⁶⁶ Paul Sazan, *How Many Dogecoins Are There in 2024 and Beyond?*, ATOMIC WALLET (Nov. 29, 2024), <https://atomicwallet.io/academy/articles/how-many-dogecoins-are-there>.

¹⁶⁷ *Id.*

¹⁶⁸ *Dogecoin*, BLOCKWORKS, <https://blockworks.co/price/doge> (last visited Feb. 15, 2025).

¹⁶⁹ Luke Conway, *Cardano (ADA): What It Is, How It Differs From Bitcoin*, INVESTOPEDIA, <https://www.investopedia.com/cardano-definition-4683961> (last updated Apr. 12, 2024).

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² Beck, *supra* note 63.

¹⁷³ *Cardano*, COINBASE, <https://www.coindesk.com/price/cardano> (last visited Feb. 15, 2025).

¹⁷⁴ *Id.*; *Number of Cardano (ADA) tokens in circulation from September 2017 to January 27, 2025*, STATISTA, <https://www.statista.com/statistics/1278987/cardano-circulating-supply/> (last visited Feb. 15, 2025).

¹⁷⁵ James Royal, *What is Cardano and how does it work?*, BANKRATE (May 6, 2024),

10. Tron

Tron started on the Ethereum blockchain and is now hosted on its own blockchain.¹⁷⁶ It “can run smart contracts and be used for building decentralized apps (dApps).”¹⁷⁷ Its mission is to “decentralize the web” by allowing creators and consumers to connect directly.¹⁷⁸ Tron has positioned itself as the cryptocurrency for those in the entertainment industry.¹⁷⁹

Tron was launched in China in 2017, just days before the country banned cryptocurrency initial coin offerings.¹⁸⁰ Its founder has been accused of “pumping and dumping cryptocurrencies” in a questionable way, specifically to inflate their prices and to build up Tron.¹⁸¹ “TRON has also been criticized for copying other projects. In January 2018, the CEO of Protocol Labs tweeted that the TRON white paper copied portions of other protocols’ white papers. In February 2018, a report claimed that copies of code from other projects were found in TRON’s code base.”¹⁸²

The market value for TRON was \$21.1 billion as of February 11, 2025.¹⁸³ There are about 85 billion TRON coins in existence as of February 15, 2025.¹⁸⁴ Each individual TRON coin was trading for approximately \$0.22.¹⁸⁵

TRON is one of the most widely used blockchains. It has more than eighty-five million accounts and has processed more than three billion transactions.¹⁸⁶ Individuals who choose to verify transactions on the Tron network are rewarded with the cryptocurrency.¹⁸⁷ In September 2021, TRON ranked second in total transactions among blockchains, behind only

<https://www.bankrate.com/investing/what-is-cardano/>.

¹⁷⁶ Lyle Daly, *What is Tron (TRX)?*, THE MOTLEY FOOL, <https://www.fool.com/terms/t/tron/> (last updated Mar. 21, 2024, 11:06 AM).

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

¹⁸² *Id.*

¹⁸³ Beck, *supra* note 63.

¹⁸⁴ *What is Cryptocurrency Tron (TRX) and How Does it Work?*, KRIPTOMAT, <https://kriptomat.io/cryptocurrency-prices/tron-trx-price/what-is/> (last visited Feb. 15, 2025).

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ Daly, *supra* note 176.

Ethereum.¹⁸⁸

11. Honorable Mention: Toncoin

The creators of the popular encrypted instant messaging service, Telegram, decided to create a blockchain and cryptocurrency, Toncoin.¹⁸⁹ TON originally stood for the “Telegram Open Network” and was also briefly called “Gram.”¹⁹⁰ Nikolai and Pavel Durov, two brothers who co-founded the Telegram social networking app in 2013, abandoned the Toncoin project after facing challenges and fines from the U.S. Securities and Exchange Commission, which found that Toncoin’s initial coin offering was governed by securities laws and that TON had failed to register.¹⁹¹ Other investors took it over and relaunched it as “The Open Network (TON) Foundation.”¹⁹²

Toncoin’s value dropped in August 2024 from a high of approximately \$6.90 per coin to a low of approximately \$4.60 per coin when Pavel Durov was arrested in France for Telegram’s unwillingness to cooperate with authorities in attempting to stop Telegram users engaged in child sexual abuse and child pornography distribution and exploitation.¹⁹³ On September 20, 2024, Pavel Durov announced that Telegram would update its terms of service and capitulate to authorities’ requests for the identities of illegal actors.¹⁹⁴ Toncoin has still not recovered the 20% it lost when Pavel Durov was arrested.¹⁹⁵

¹⁸⁸ *Id.*

¹⁸⁹ Elizabeth Wright, *What is Toncoin (TON)*, ATOMIC WALLET, <https://atomicwallet.io/academy/articles/what-is-toncoin> (last updated Aug. 16, 2024) (“In 2018, the Durov brothers, Nikolai [sic] and Pavel, aimed for an effective blockchain to support the massive users on Telegram.”).

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ Océane Herrero, Victor Goury-Laffont & Elisa Braun, *Telegram CEO’s Brother Also Wanted by French Authorities*, POLITICO (Aug. 28, 2024), <https://www.politico.eu/article/exclusive-telegram-ceo-brother-nikolai-durov-wanted-france-authorities-pavel-durov/> (“The price of Toncoin, a cryptocurrency developed by the Durov brothers, dropped precipitously after news of the arrest broke, and is trading around 20 percent lower than it was on Saturday.”).

¹⁹⁴ Agence France-Presse, *Telegram’s Pavel Durov Announces New Crackdown on Illegal Content After Arrest*, GUARDIAN (Sept. 23, 2024), <https://www.theguardian.com/technology/2024/sep/23/telegram-illegal-content-pavel-durov-arrest>.

¹⁹⁵ Crypto Brand Press, *Spot Trade Thousands of Cryptocurrencies Across Multiple Blockchains; Toncoin (TON) and Ripple (XRP) Holders Flock to Lunex Network*, TECHPOINT

As of February 15, 2025, Toncoin was trading at \$3.79 per coin.¹⁹⁶ Toncoin has not seen the increase that other cryptocurrencies experienced when President Trump was elected, as it was trading at a high of \$8.24 in June 2024,¹⁹⁷ and only trading at \$2.89 on January 20, 2025, Trump's inauguration day.¹⁹⁸ There are approximately 3.47 billion Toncoins in existence, with a market cap of \$5 billion.¹⁹⁹

The cryptocurrencies outlined above comprise a tiny sampling—albeit a high percentage of the market value—of the different cryptocurrencies available worldwide. There are thousands of other cryptocurrencies trying to grow their value. Both President Trump and the First Lady have launched their own cryptocurrency.²⁰⁰ As more financial institutions invest in cryptocurrency; it continues to bring an element of legitimacy to the industry and encourages more mainstream investment.

Cryptocurrency has raised novel legal questions regarding regulation and jurisdictional issues. The SEC has sued cryptocurrency exchanges for violating the Securities Acts of 1933 and 1934 for failing to register before selling cryptocurrency.²⁰¹ At least two federal court judges have issued rulings partially in favor of the exchanges.²⁰² Judge Amy Berman Jackson ruled that the SEC could not prove that cryptocurrency purchasers beyond the initial coin offering acquired Binance solely for profits and not for another purpose.²⁰³ Judge William Orrick ruled that cryptocurrency exchange Kraken can proceed to trial on whether it would have known it was required to

AFRICA (Sept. 26, 2024), <https://techpoint.africa/2024/09/26/spot-trade-thousands-of-cryptocurrencies-across-multiple-blockchains-toncoin-ton-and-ripple-xrp-holders-flock-to-lunex-network/> (“Toncoin is still sitting on a 16% loss in the past 30 days, cooling off in a major way since its hot run at the beginning of August.”).

¹⁹⁶ *Toncoin to USD Chart*, COINMARKETCAP, <https://coinmarketcap.com/currencies/toncoin/> (last visited Feb. 15, 2025).

¹⁹⁷ Sahana Kiran, *Toncoin: How High Will TON Surge in February 2025?*, WATCHER.GURU (Feb. 7, 2025), <https://watcher.guru/news/toncoin-how-high-will-ton-surge-in-february-2025>.

¹⁹⁸ *See Toncoin to USD*, *supra* note 196.

¹⁹⁹ *Id.*

²⁰⁰ Peter Hoskins & Joe Tidy, *Melania Trump Launches her Own Cryptocurrency*, BBC (Jan. 20, 2025), <https://www.bbc.com/news/articles/c98y47vrv2jo> (“Disclaimers on the websites of both the \$Trump and \$Melania coins said they were ‘not intended to be, or the subject of’ an investment opportunity or a security.”).

²⁰¹ SEC v. Binance Holdings Ltd., 738 F. Supp. 3d 20 (D.C. 2024) available at 2024 U.S. Dist. LEXIS 114924; SEC v. Payward, Inc., __ F.Supp.3d __, No. 23-cv-06003 (N.D. Cal. Jan. 24, 2025), available at 2025 U.S. Dist. LEXIS 16288.

²⁰² *Id.*

²⁰³ *Binance*, 738 F. Supp. 3d at 67.

register under the *Howey* test for securities.²⁰⁴ In light of a new SEC administration we may see changes with respect to whether registration is required. U.S. citizens are still responsible for complying with all laws including not engaging with persons who are considered enemies of the state.²⁰⁵ Many of the cryptocurrency founders are either not U.S. citizens or living abroad, which makes it difficult to prosecute them for violations of securities law.²⁰⁶ Globally, there are diverse responses to cryptocurrency, with some countries, like China, banning it completely, and others, like El Salvador, adopting it as their national currency.²⁰⁷

Cryptocurrency generally has trended positively, and many have increased in value. Although individual investors have gained and lost fortunes, and individual cryptocurrencies have succeeded and failed, considering the industry as a whole, cryptocurrency is continuing to gain legitimacy and be considered a worthwhile way to diversify one's investment portfolio.

III. Cryptocurrency Exchanges and Related Companies Filing for Bankruptcy Protection

There are two main ways to obtain cryptocurrency. The first is to mine it, and the second is to trade it on an exchange.²⁰⁸ Many cryptocurrencies have their own exchanges to facilitate and promote trade.²⁰⁹ Unlike stock exchanges, which are highly regulated by the SEC, cryptocurrency exchanges

²⁰⁴ *Payward, Inc.*, No. 23-cv-06003, n.1 (“The SEC refers to these assets as the ‘Kraken-Traded Securities.’ As I made clear in my previous order, I will not entertain any theory of liability where the SEC asks this court to treat the crypto assets themselves as though they are securities. I am considering the theory that those crypto assets, once sold/traded/exchanged on the Kraken Trading Platform, are investment contracts that form the basis for securities.”).

²⁰⁵ Office of Foreign Assets Control, *Questions on Virtual Currency*, 559, U.S. DEP’T OF TREASURY, <https://ofac.treasury.gov/faqs/topic/1626> (last visited Feb. 15, 2025).

²⁰⁶ See, e.g., Izzah Imran, *#trending: Co-Founder of Crypto Hedge Fund Three Arrows Capital Says Life in S’pore Prison Was ‘Enjoyable’, ‘Good’ For Everyone to Experience Once*, TODAY (Jan. 26, 2024), <https://www.todayonline.com/singapore/cryptocurrency-hedge-fund-three-arrows-capital-zhu-su-prison-life-2350236>.

²⁰⁷ McKinlay, *supra* note 9.

²⁰⁸ Andy Rosen, *Cryptocurrency Basics: Pros, Cons and How it Works*, NERDWALLET (Dec. 16, 2024), <https://www.nerdwallet.com/article/investing/cryptocurrency#>.

²⁰⁹ Adam Hayes, *10 Important Cryptocurrencies Other Than Bitcoin*, INVESTOPEDIA (Feb. 7, 2025), <https://www.investopedia.com/tech/most-important-cryptocurrencies-other-than-bitcoin/>.

historically have not been highly regulated.²¹⁰ Because of the lack of registration, “investors in crypto assets may not benefit from rules that protect against fraud, manipulation, front-running, wash sales, and other misconduct when intermediaries for those products do not comply with the federal securities laws that apply to registered exchanges.”²¹¹

When cryptocurrencies as a whole experience a dramatic decline in value, it is referred to as a crypto winter.²¹² Crypto winters are analogous to bear markets, although a crypto winter does not have to meet the same thresholds as a bear market.²¹³ The “crypto winter” in 2022 was filled with multiple cryptocurrency-related bankruptcies.²¹⁴ Prior to 2022, there were other bankruptcies filed related to cryptocurrency.²¹⁵ Exchanges have failed all over the world.²¹⁶ This article focuses on U.S. and Canadian insolvency proceedings which have resulted from failed cryptocurrency exchanges. In all these bankruptcies, a common theme has been a struggle with the treatment of investors, not as owners, but as general unsecured creditors with lower priority than other creditors holding a security interest in the debtor’s assets.

A. U.S. Entities

A loss of confidence in cryptocurrency, a decline in cryptocurrency value, and fraudulent activity across multiple companies caused a series of interrelated bankruptcies and contributed to a major meltdown for cryptocurrency in 2022.²¹⁷ A representative of Berkeley Research Group

²¹⁰ Investor Alerts & Bulletins, *Exercise Caution with Crypto Asset Securities: Investor Alert*, U.S. SEC. & EXCHANGE COMM’N (Mar. 23, 2023), <https://www.sec.gov/resources-for-investors/investor-alerts-bulletins/exercise-caution-crypto-asset-securities-investor-alert#> (“In particular, no crypto asset entity is registered with the SEC as a national securities exchange (like, for example, the New York Stock Exchange or the Nasdaq Stock Market). And no existing national securities exchange currently trades crypto asset securities.”).

²¹¹ *Id.*

²¹² Riley Adams, *What is Crypto Winter?*, TURBOTAX, <https://turbotax.intuit.com/tax-tips/investments-and-taxes/what-is-crypto-winter/L5Y01RAmy> (last updated Oct. 28, 2024, 8:23 AM).

²¹³ *Id.*

²¹⁴ Nina Semczuk, *What is a Crypto Winter?*, BANKRATE (Oct. 25, 2023), <https://www.bankrate.com/investing/crypto-winter>.

²¹⁵ *Id.*

²¹⁶ *Id.* (“Mt. Gox, a Tokyo-based exchange, filed for bankruptcy” in 2014).

²¹⁷ Jane VanLare & Jack Massey, *Novel Issues in the Crypto Bankruptcy Cluster*, CLEARY GOTTlieb (Aug. 2024), <https://content.clearygottlieb.com/corporate/global-restructuring-insights/novel-issues-in-the-crypto-bankruptcy-cluster/index.html>.

testified in the BlockFi bankruptcy:

2022 has been a uniquely terrible year for the cryptocurrency industry, given the collapse of the UST/Luna stablecoin ecosystem and the bankruptcies of Singapore-based cryptocurrency hedge fund Three Arrows Capital and several major cryptocurrency brokerages and exchanges such as Celsius Network Ltd. and Voyager Digital—all before the FTX debacle unfolded over a period of several days earlier this month. These events, individually and collectively, shook the confidence of cryptocurrency investors and caused a market purge, with substantial numbers of investors seeking to pull their funds from any and all cryptocurrency investments. BlockFi was not immune.²¹⁸

One commonality among these debtors is that many of them produced their own blockchain and their own cryptocurrency, but they also made loans to each other and invested in each other's assets, including cryptocurrency.²¹⁹ Every debtor owned some Bitcoin and some Ethereum, along with other major cryptocurrencies. As explained further below, some of these companies emerged from bankruptcy with their platforms and viability still intact. Others have liquidated and no longer exist. A common element running through these meltdowns were larger-than-life personalities running the companies. Some of them have been convicted of or found liable for various attempts to defraud investors, securities fraud, money laundering, and other nefarious crimes.

The success of a debtor's reorganization efforts can largely be attributed to the market recovery and the growth in value of Bitcoin, Ethereum, and other cryptocurrencies from 2022 to 2024. Market conditions facilitated the confirmation of reorganization plans of many of these chapter 11 bankruptcy cases. When a debtor files bankruptcy, the automatic stay goes into effect so creditors cannot seize assets, and the debtor needs to obtain court orders to continue operations, including transferring or selling any property of the estate. Creditors file claims and their claims are based on the date the bankruptcy was filed. For a hypothetical investor who had a claim on one of the exchanges to \$10,000 in Bitcoin in 2022, that same Bitcoin is

²¹⁸ Declaration of Mark A. Renzi in Support of Debtors' Chapter 11 Petitions and First- Day Motions, *In re* BlockFi, Inc., Case No. 22-19361 (MBK) (Bankr. D.N.J. Nov. 28, 2022), ECF No. 17, <https://restructuring.ra.kroll.com/blockfi/Home-DocketInfo?DockRelatedSearchValue=900808-17>.

²¹⁹ VanLare & Massey, *supra* note 217.

now worth quite a bit more in 2025. Due to the massive fraud and losses on those platforms, creditors are not always able to receive the full appreciable value of the Bitcoin. However, they can, in the successful reorganizations, recover at least their initial investment plus a portion of the postpetition growth in the value of the cryptocurrency investments.

For example, since the price of one Bitcoin increased from \$22,000 to over \$69,000 in 2024, even despite a debtor's massive losses, the growth is so robust that there is enough money when the remaining Bitcoin is liquidated (even after accounting for all of the Bitcoin lost through fraud, theft, and missing private keys), that the hypothetical investor can receive back their \$10,000, plus interest. Some of the bankruptcy plans also do not require that the cryptocurrencies be liquidated in full; instead, the remaining Bitcoin and other cryptocurrencies can be reallocated among the creditors to pay a pro rata distribution on claims in as fair a way as possible.

Of course, millions of dollars are spent on bankruptcy transaction professional fees including those of accountants, financial advisors, and attorneys. Some of these bankruptcies also have been the target of phishing expeditions and other hacks to steal creditors' information. In those instances, scammers impersonated the claims processing agents to ask for personal information from creditors under the pretense that it is needed to make distributions to these creditors. Investors have been revictimized through these schemes.

An angry refrain made throughout these bankruptcies and seen in many investors' comments is: "Not your keys, not your coins."²²⁰ This statement explains that those involved in the exchanges did not have access to the private keys to control the cryptocurrency.²²¹ As a result, when things started to look bad, the investors were unable to transfer the cryptocurrency and move it to a different exchange. In some of the bankruptcy cases, prepetition contracts between the debtor and the investors specifically identified that the debtors, and not the investors, owned the cryptocurrency.²²² So when the debtor filed bankruptcy, the investors did not

²²⁰ Adam J. Levitin, *Not Your Keys, Not Your Coins: Unpriced Credit Risk in Cryptocurrency*, 101 TEX. L. REV. 877 (Mar. 2023), <https://texaslawreview.org/not-your-keys-not-your-coins-unpriced-credit-risk-in-cryptocurrency/> ("Unfortunately, it might take several high-profile cryptocurrency exchange bankruptcies for cryptocurrency investors to understand this Article's basic lesson: 'not your keys, not your coins.'").

²²¹ Ledger, *Not Your Keys, Not Your Coins: Explained*, LEDGER ACADEMY, <https://www.ledger.com/academy/not-your-keys-not-your-coins-why-it-matters> (last updated Aug. 9, 2024).

²²² Memorandum Opinion and Order Regarding Ownership of Earn Account Assets, *In*

have contractual ownership rights to the cryptocurrency assets.²²³ The investors were only considered unsecured creditors of the exchanges.²²⁴

Various of the exchanges collapsed like dominos, starting with the failure of stable coins Terra and Luna in May 2022. This was followed by Three Arrows Capital's bankruptcy on July 2, 2022, then Voyager's bankruptcy July 5, 2022. Celsius filed its bankruptcy petition on July 13, 2022. FTX then filed bankruptcy on November 11, 2022, then BlockFi filed on November 28, 2022. Genesis filed a bankruptcy petition on January 19, 2023, and finally TerraForm Labs (creator of Terra and Luna) filed a petition in January 2024. Each case charted a new unpredictable course of resolution for investor interests.

1. Terra and Luna

Terra was a stablecoin that was pegged to the U.S. dollar.²²⁵ Luna was a cryptocurrency designed to assist Terra in staying on track with its pricing.²²⁶ "On May 9, 2022, . . . the UST started to lose its dollar peg. After the UST depeg, the price of UST and LUNA dramatically plummeted and only after three weeks, they became useless in the ecosystem"²²⁷ The collapse of Luna and Terra meant the loss of \$40 billion for investors.²²⁸ "After buying into UST, Terraform Labs then encouraged owners to deposit the tokens into the company's staking pool known as the 'Anchor Protocol.'" The staking pool advertised a 20% interest rate."²²⁹

Terraform Labs did not file bankruptcy until January 21, 2024, (one

re Celsius Network LLC, Case No. 22-10964 (Bankr. S.D.N.Y. Jan. 4, 2023), ECF No. 1822.

²²³ *Id.*

²²⁴ *Id.*

²²⁵ Seungju Lee, Jaewook Lee & Yunyoung Lee, *Dissecting the Terra-LUNA Crash: Evidence From the Spillover Effect and Information Flow*, 53 FIN. RES. LETTERS 103590 (May 2023), <https://www.sciencedirect.com/science/article/abs/pii/S1544612322007668#>.

²²⁶ *Id.* ("The role of LUNA is to maintain the value of TerraUSD (UST), which is a stablecoin pegged to the US dollar in the Terra ecosystem.").

²²⁷ *Id.*

²²⁸ Pascale Davies, *Fallen Crypto Company Terraform Labs Files for US Bankruptcy, Says it Will Build Web3 Business*, EURONEWS (Jan. 22, 2024), <https://www.euronews.com/next/2024/01/22/fallen-crypto-company-terraform-labs-files-for-us-bankruptcy-says-it-will-build-web3-busin>.

²²⁹ Zachary Folk, *Who Is Do Kwon? Crypto CEO Whose Coin Lost \$40 Billion In 2022 Facing Civil Fraud Trial*, FORBES (Mar. 25, 2024), <https://www.forbes.com/sites/zacharyfolk/2024/03/25/who-is-do-kwon-crypto-ceo-whose-coin-lost-40-billion-in-2022-facing-civil-fraud-trial/>.

and one-half years after the crypto winter crash).²³⁰ The bankruptcy was filed after the SEC brought its complaint.²³¹ Terraform Labs filed the bankruptcy after the federal district court found that Terraform should have registered its cryptocurrencies.²³² The SEC brought a civil complaint against Terra and Kwon for what happened with the collapse of the cryptocurrency, alleging that Kwon misled investors, that the algorithm to keep Terra's value at one U.S. dollar did not work as promised, and that approximately \$2.8 billion of investors' money had been spent to shore up Terra.²³³ In April 2024, a jury found Terraform liable for fraud.²³⁴ As part of the final consent judgment with the SEC, Terraform agreed to pay \$4,473,828,306 in disgorgement, prejudgment interest, and civil penalties.²³⁵ The SEC agreed to be subordinated to the other investors and creditors who were harmed, so the SEC will only be paid if creditors are paid in full.²³⁶

The Terraform chapter 11 bankruptcy was filed in the District of Delaware, the Honorable Brendan Shannon presiding. A Confirmation Order was entered on September 20, 2024.²³⁷ The liquidation analysis in its plan estimated that about 50% of the value of claims would be paid to unsecured creditors if the case were converted to a chapter 7 bankruptcy case.²³⁸ The plan provides that unsecured creditors will be paid on the effective date, and again at the conclusion of the wind down.²³⁹ A deadline of October 31, 2024,

²³⁰ Davies, *supra* note 228.

²³¹ *Id.*

²³² Dietrich Knauth, *SEC Goes After Bankrupt Terraform Labs' \$166 Mln 'Slush Fund' for Dentons*, REUTERS (Feb. 28, 2024), <https://www.reuters.com/legal/transactional/sec-goes-after-bankrupt-terraform-labs-166-mln-slush-fund-dentons-2024-02-28/>.

²³³ Harmed Investor, *SEC v. Terraform Labs PTE, Ltd. and Do Hyeong Kwon*, No. 23-cv-1346-JS (S.D.N.Y.), SEC (July 26, 2024), <https://www.sec.gov/enforcement-litigation/distributions-harmed-investors/sec-v-terraform-labs-pte-ltd-do-hyeong-kwon-no-23-cv-1346-jsr-sdny>.

²³⁴ TheNewsCrypto, *Terraform Labs to Begin Liquidation After Court Approval*, BINANCE SQUARE (Sept. 20, 2024), <https://www.binance.com/en-IN/square/post/13789380357185>.

²³⁵ Harmed Investor, *supra* note 233.

²³⁶ *Id.*

²³⁷ Findings of Fact, Conclusions of Law, and Order Confirming Second Amended Chapter 11 Plan of Liquidation of Terraform Labs Pte. Ltd. and Terraform Labs Limited, *In re Terraform Labs Pte. Ltd.*, Case No. 24-10070 (Sept. 20, 2024), ECF No. 717.

²³⁸ Disclosure Statement for Amended Chapter 11 Plan of Liquidation of Terraform Labs Pte. Ltd. and Terraform Labs Limited, *In re Terraform Labs Pte. Ltd.*, *In re Terraform Labs Pte. Ltd.*, Case No. 24-10070 (Aug. 8, 2024), ECF No. 569.

²³⁹ Findings of Fact, Conclusions of Law, and Order Confirming Second Amended Chapter 11 Plan of Liquidation of Terraform Labs Pte. Ltd. and Terraform Labs Limited, *In re Terraform Labs Pte. Ltd.*, Case No. 24-10070 (BLS) (Sept. 20, 2024), ECF No. 717.

was set for “Private Wallet Crypto Holders” with assets tied up in the Terraform system to file claims to have their cryptocurrency returned.²⁴⁰

Meanwhile Kwon, the 92% owner of the company, had used a falsified passport to leave his apartment in Singapore, and was arrested in Montenegro.²⁴¹ The U.S. Attorney in the Southern District of New York brought criminal charges against Kwon “for securities fraud, wire fraud, and conspiracy to commit fraud.”²⁴² There are also pending charges against Kwon in South Korea and Singapore.²⁴³

Kwon was extradited to the U.S. on December 31, 2024.²⁴⁴ He has been criminally charged with multiple counts, and faces 130 years in prison if convicted.²⁴⁵ The charges relate to five broad misrepresentations.²⁴⁶ First, misrepresentations about the stable coin, Terra.²⁴⁷ Unbeknownst to investors, Kwon had a trading firm buying large amounts of Terra to artificially inflate its price, to provide legitimacy to it with the pricing structure pegged to \$1.00.²⁴⁸ Second, misrepresentations about the cryptocurrency, Luna, including its management and governance.²⁴⁹ Luna was not independently managed or audited, and it was used to launder misappropriated funds.²⁵⁰ Third, misrepresentations about the stock market Kwon created on the Terra blockchain.²⁵¹ The stock market was not independently operated and Kwon used “automated trading bots” to inflate the prices and make it seem more profitable than it was. Fourth, misrepresentations about business partnerships with Korean companies.²⁵² “Kwon falsely claimed that the Terra blockchain was being used to process billions of dollars in financial transactions for the

²⁴⁰ Notice of (I) Entry of Order Confirming Second Amended Chapter 11 Plan of Liquidation of Terraform Labs Pte. Ltd. and Terraform Labs Limited and (II) Effective Date, *In re Terraform Labs Pte. Ltd.*, Case No. 24-10070 (Oct. 1, 2024), ECF No. 765.

²⁴¹ Folk, *supra* note 229.

²⁴² *Id.*

²⁴³ *Id.*

²⁴⁴ Press Release, *Do Kwon Extradited to the United States from Montenegro to Face Charges Relating to Fraud Resulting in \$40B in Losses*, U.S. DEP’T OF JUST. (Jan. 2, 2025), <https://www.justice.gov/archives/opa/pr/do-kwon-extradited-united-states-montenegro-face-charges-relating-fraud-resulting-40b-losses>.

²⁴⁵ *Id.*

²⁴⁶ *Id.*

²⁴⁷ *Id.*

²⁴⁸ *Id.*

²⁴⁹ *Id.*

²⁵⁰ *Id.*

²⁵¹ *Id.*

²⁵² *Id.*

Korean payment-processing application Chai. In doing so, Kwon claimed that the Terra blockchain had real world applications or uses, as distinct from competing cryptocurrency platforms.”²⁵³ The Korean company never used Terra.²⁵⁴ Finally, misrepresentations about the reserves that Terra held.²⁵⁵ He faces criminal charges with a maximum penalty of 130 years in prison.²⁵⁶

2. Three Arrows Capital

On July 2, 2022, Three Arrows Capital (“Three Arrows”) filed a chapter 15 bankruptcy petition in the Southern District of New York, the Honorable Martin Glenn presiding. Three Arrows was a Singapore-based company founded by Kyle Davies and Su Zhu in 2012.²⁵⁷ Originally, Three Arrows exploited differences in prices of different assets.²⁵⁸ “During this early phase, Three Arrows focused on a niche market: arbitraging emerging-market foreign-exchange (or “FX”) derivatives—financial products tied to the future price of smaller currencies (the Thai baht or the Indonesian rupiah, for instance).”²⁵⁹ They failed in this endeavor. As banks stopped working with Three Arrows because it was not well liked, it transitioned to cryptocurrency in 2017.²⁶⁰

Three Arrows had taken a position that predicted that cryptocurrency would only rise; it never accounted for or protected itself in the event that cryptocurrency lost value.²⁶¹ When stablecoin Terra collapsed, Three Arrows failed to pay back a \$665 million loan from Voyager.²⁶² It then continued to fail to pay other cryptocurrency positions as its investors attempted to cash out.²⁶³ Three Arrows ended up in a liquidation proceeding in the British Virgin Islands and a chapter 15 bankruptcy proceeding in the U.S. on July 1, 2022.²⁶⁴ Zhu was arrested in September 2023 while attempting to leave

²⁵³ *Id.*

²⁵⁴ *Id.*

²⁵⁵ *Id.*

²⁵⁶ *Id.*

²⁵⁷ Jen Wiczner, *The Crypto Geniuses Who Vaporized A Trillion Dollars*, N.Y. INTELLIGENCER (Aug. 15, 2022), <https://nymag.com/intelligencer/article/three-arrows-capital-kyle-davies-su-zhu-crash.html>.

²⁵⁸ *Id.*

²⁵⁹ *Id.*

²⁶⁰ *Id.*

²⁶¹ *Id.*

²⁶² *Id.*

²⁶³ *Id.*

²⁶⁴ Memorandum Opinion and Order Granting in Part and Denying in Part the Foreign

Singapore, and was sentenced to four months in prison for failing to cooperate with the Three Arrows liquidation.²⁶⁵ Zhu served three of the four months and was released December 20, 2023.²⁶⁶ Of his time in prison, he said:

“Obviously no one wants to go to prison but I think that it’s actually a really enjoyable experience overall. Not to the point of like, highly recommending it per se. . . . But I would say that it’s something that if everyone got to experience once, I think it’s definitely good for you.”²⁶⁷

Davies, the other co-founder of Three Arrows, never appeared to answer questions in the liquidation.²⁶⁸ He has evaded authorities seeking him for criminal charges as well.²⁶⁹ It is reported that he was last spotted in Bali.²⁷⁰ Judge Martin Glenn, presiding over the chapter 15 bankruptcy proceeding, ruled that because Davies had renounced his American citizenship, marrying a Singaporean national and moving outside the United States, the bankruptcy court could not hold him in contempt for failing to participate in the proceedings.²⁷¹ Davies and Zu have failed to pay their attorney, and they are being sued in the British Virgin Islands to recover over \$348,000 in legal fees.²⁷²

Representatives’ Service Motion, *In re Three Arrows Capital, Ltd.*, Case No. 22-10920 (Bankr. S.D.N.Y. Dec. 29, 2022), ECF No. 79.

²⁶⁵ Yiwen Lu, *A Founder of the Crypto Hedge Fund Three Arrows Capital Is Arrested*, N.Y. TIMES (Sept. 29, 2023), <https://www.nytimes.com/2023/09/29/technology/su-zhu-founder-crypto-three-arrows-capital-arrested.html> (“A Singaporean court . . . had issued what are known as ‘committal’ orders for Mr. Zhu and another Three Arrows founder, Kyle Davies, sentencing both to four months in prison after they failed to cooperate with the liquidators investigating their failed hedge fund.”).

²⁶⁶ Imran, *supra* note 206.

²⁶⁷ *Id.*

²⁶⁸ Jen Wiczner, *How Su Zhu and Kyle Davies Are Dodging Jail*, N.Y. INTELLIGENCER, <https://nymag.com/intelligencer/article/how-su-zhu-and-kyle-davies-are-dodging-jail-and-rebranding.html> (last updated Feb. 22, 2024).

²⁶⁹ *Id.*

²⁷⁰ Brian Yue, *Three Arrows Capital Co-founder Kyle Davies Seen in Bali: Report*, CRYPTONEWS (Nov. 16, 2023), <https://cryptonews.com/news/three-arrows-capital-co-founder-kyle-davies-seen-in-bali-report/>.

²⁷¹ *Id.*

²⁷² *Carey Olsen Sues Three Arrows Capital Crypto Fund Founders Su Zhu & Kyle Davies for ‘Unpaid Legal Fees’*, OFFSHOREALERT (Jan. 19, 2025), <https://www.offshorealert.com/carey-olsen-sues-three-arrows-capital-crypto-fund-founders-su-zhu-kyle-davies-for-unpaid-legal-fees/>.

The Three Arrows liquidation proceeding is ongoing. The court appointed liquidators are seeking to recover from the co-founders²⁷³ and from Terraform Labs,²⁷⁴ and to return the \$3.3 billion owed to creditors.²⁷⁵

3. Voyager

On July 5, 2022, Voyager filed a chapter 11 bankruptcy petition, in the Southern District of New York, the Honorable Michael Wiles presiding.²⁷⁶ Voyager filed its bankruptcy petition in part due to Three Arrows Capital's inability to pay Voyager back for its \$665 million loan.²⁷⁷ Voyager confirmed a plan of liquidation, and has been able to make two distributions to its creditors, resulting in about an 80% recovery.²⁷⁸ Voyager remains a creditor in the Three Arrows bankruptcy.²⁷⁹ Creditors received checks in the mail to pay their distributions, meaning that they were paid in U.S. dollars for their claims.²⁸⁰

The Federal Trade Commission ("FTC") has brought litigation against Voyager which resulted in a settlement.²⁸¹ The FTC received a

²⁷³ Siladitya Ray, *Court Freezes Three Arrows Capital Founders' Assets Worth \$1 Billion*, FORBES (Dec. 21, 2023), <https://www.forbes.com/sites/siladityaray/2023/12/21/court-freezes-three-arrows-capital-founders-assets-worth-1-billion> ("In an emailed statement, the bankrupt fund's liquidator Teneo said the court had issued an order preventing 3AC co-founders Su Zhu, Kyle Davies and Davies' wife Kelly Chen from moving or selling assets worth \$1.14 billion.").

²⁷⁴ Amitoj Singh, *Three Arrows Capital Liquidators Now Sue Terraform Labs for \$1.3B*: Bloomberg, COINDESK (Aug. 13, 2024), <https://www.coindesk.com/policy/2024/08/13/three-arrows-capital-liquidators-now-sue-terraform-labs-for-13b-bloomberg/> ("The liquidators for Three Arrows Capital (3AC) have sued Terraform Labs for \$1.3 billion.").

²⁷⁵ *Id.*

²⁷⁶ Voluntary Petition, *In re Voyager Digital Holdings, Inc.*, Case No. 22-10943 (Bankr. S.D.N.Y. July 5, 2022).

²⁷⁷ Dietrich Knauth, *Crypto Lender Voyager Settles with Executives who Approved Risky Loan*, REUTERS (Oct. 18, 2022), <https://www.reuters.com/legal/litigation/crypto-lender-voyager-settles-with-executives-who-approved-risky-loan-2022-10-18/>.

²⁷⁸ Plan Administrator's Eighth Status Report to Creditors, *In re Voyager Digital Holdings, Inc.*, Case No. 22-10943 (Bankr. S.D.N.Y. Sept. 25, 2024), available at <https://www.investvoyager.com/>.

²⁷⁹ *Id.*

²⁸⁰ *Id.* (identifying 495,000 checks mailed for a total of \$587 million).

²⁸¹ Federal Trade Commission, *FTC Reaches Settlement with Crypto Company Voyager Digital; Charges Former Executive with Falsely Claiming Consumers' Deposits Were Insured by FDIC*, FTC (Oct. 12, 2023), <https://www.ftc.gov/news-events/news/press-releases/2023/10/ftc-reaches-settlement-crypto-company-voyager-digital-charges-former-executive-falsely-claiming>.

judgment of \$1.65 billion and Voyager agreed to stop operating:

The Federal Trade Commission announced a settlement with bankrupt crypto company Voyager that will permanently ban it from handling consumers' assets and is filing suit against its former CEO, Stephen Erlich, for falsely claiming that customers' accounts were insured by the Federal Deposit Insurance Corporation (FDIC) and were 'safe,' even as the company was approaching an eventual bankruptcy. The complaint also names Stephen Erlich's wife, Francine Ehrlich, as a relief defendant.²⁸²

The FTC has also subordinated its claim so that investors could be paid back first, if possible.²⁸³ The FTC found, and Voyager agreed, that the misrepresentation that assets were FDIC-insured was actionable, and that it had misled many investors who thought their investments were so protected.²⁸⁴ The FTC and Commodity Futures Trading Commission ("CFTC") both have active cases against Stephen Ehrlich and his wife Francine for injunctive relief and monetary damages.²⁸⁵

"To generate income to pay its customers the promised returns, Ehrlich and Voyager pooled customer assets stored on the Voyager platform and transferred billions of dollars' worth of customers' digital asset commodities as 'loans' to high-risk third parties."²⁸⁶ Rather than have the money available for investors to withdraw, the money was invested in other cryptocurrencies that lost value or failed.²⁸⁷

Many of the approximately one hundred thousand investors who had used the Voyager platform were distraught to know that they were being treated as unsecured creditors, and not as owners or secured creditors of their cryptocurrency.²⁸⁸ One said, "'I just want to position myself as an owner and a depositor of my cryptocurrency . . . I'm witnessing 10 years of my life

²⁸² *Id.*

²⁸³ *Id.*

²⁸⁴ *Id.*

²⁸⁵ Commodity Futures Trading Commission, *CFTC Charges Former Chief Executive Officer of Digital Asset Platform with Fraud in Massive Commodity Pool Scheme*, CFTC (Oct. 12, 2023), <https://www.cftc.gov/PressRoom/PressReleases/8805-23#>.

²⁸⁶ *Id.*

²⁸⁷ *Id.*

²⁸⁸ MacKenzie Sigalos, *Voyager Customer Lost \$1 Million Saved Over 24 Years and is One of Many Now Desperate to Recoup Funds*, CNBC <https://www.cnbc.com/2022/08/15/voyager-customers-beg-new-york-judge-for-money-back-after-bankruptcy.html> (Aug. 15, 2022, 3:45 PM).

being frozen on a platform that I trusted.”²⁸⁹

Another former Voyager investor explained:

I’ve always identified myself as an owner and a rightful depositor of the cryptocurrency that was traded on their platform I just want to get more of a handle on why I’m being labeled a creditor, or unsecured creditor, instead of the owner of my cryptocurrency.²⁹⁰

Many other Voyager investors expressed a desire to know the answer to the above question. Even without the FDIC representation, many cryptocurrency investors believe that they own their cryptocurrency and should be able to withdraw it and not have the assets frozen and used to help pay administrative expenses and secured creditors’ debts, despite the popular refrain, “Not your keys, not your coins.”

4. Celsius

Celsius and its affiliated companies filed its chapter 11 bankruptcy petition on July 13, 2022, in the Southern District of New York, the Honorable Martin Glenn presiding.²⁹¹ Celsius was designed to provide a platform for those interested in cryptocurrency to buy and sell, and to lend and borrow.²⁹²

Celsius was created with a basic business model whereby users could transfer their crypto assets to Celsius and benefit from the opportunity to borrow fiat, or other digital assets, against those assets or earn rewards on those assets at more favorable rates than traditional banks or cryptocurrency platforms that merely store crypto assets.²⁹³

Based on Celsius’ contracts with investors, ownership was transferred from the individual to Celsius, so in that sense, Celsius was attempting to act like a bank, where it could freely borrow and lend on investors’ deposits.²⁹⁴ Its founder, Alex Mashinsky, attributed Celsius’ bankruptcy, in part, to the

²⁸⁹ *Id.*

²⁹⁰ *Id.*

²⁹¹ Voluntary Petition, *In re Celsius Network LLC*, Case No. 22-10964 (Bankr. S.D.N.Y. July 13, 2022), ECF No. 1.

²⁹² Declaration of Alex Mashinsky, Chief Executive Officer of Celsius Network, LLC, in Support of Chapter 11 Petition And First Day Motions, *In re Celsius Network LLC*, Case No. 22-10964, (Bankr. S.D.N.Y. Aug. 8, 2022), ECF No. 23.

²⁹³ *Id.*

²⁹⁴ *Id.*

failure of Terra and Luna, and to investors' general lack of faith in the cryptocurrency market.²⁹⁵ Mashinsky's misrepresentations and fraud were also to blame.

Mashinsky and other Celsius officers were criminally charged for their actions in connection with Celsius.²⁹⁶ Mashinsky was charged "with securities fraud, commodities fraud, and wire fraud for defrauding customers and misleading them about core aspects of the company he founded, including Celsius' success, profitability, and the nature of the investments Celsius made using customer funds."²⁹⁷ Mashinsky and the Chief Revenue Officer for Celsius, Roni Cohen-Pavon, were also "charged with conspiracy, securities fraud, market manipulation, and wire fraud for illicitly manipulating the price of CEL, Celsius' proprietary crypto token, all while secretly selling their own CEL tokens at artificially inflated prices."²⁹⁸

Mashinsky pled guilty to "one count of committing commodities fraud and one count of committing securities fraud in connection with two fraudulent schemes at Celsius, the purported 'bank' of the crypto industry."²⁹⁹ As part of the plea, Mashinsky is returning \$48 million he received as part of his fraudulent operations.³⁰⁰ Mashinsky has not yet been sentenced and has asked for a one-month extension until May 8, 2025, from the April 8, 2025 sentencing date.³⁰¹ Roni Cohen-Pavon, Celsius' former chief revenue officer, also pled guilty to four counts of felony charges and has not been sentenced either.³⁰²

Celsius was not able to pay creditors in full, though it was able to return cryptocurrency and fiat currency to its creditors.³⁰³ The Confirmation

²⁹⁵ *Id.*

²⁹⁶ United States Attorney's Office, *Celsius Founder And Former Chief Revenue Officer Charged In Connection With Multibillion-Dollar Fraud And Market Manipulation Schemes*, U.S. ATT'Y'S OFF., S.D.N.Y. (July 13, 2023), <https://www.justice.gov/usao-sdny/pr/celsius-founder-and-former-chief-revenue-officer-charged-connection-multibillion>.

²⁹⁷ *Id.*

²⁹⁸ *Id.*

²⁹⁹ Press Release, *Celsius Founder and Former CEO Alexander Mashinsky Pleads Guilty to Multi-Billion Dollar Fraud and Market Manipulation Schemes*, U.S. Attorney's Office S.D.N.Y. (Dec. 3, 2024), <https://www.justice.gov/usao-sdny/pr/celsius-founder-and-former-ceo-alexander-mashinsky-pleads-guilty-multi-billion-dollar>.

³⁰⁰ *Id.*

³⁰¹ Turner Wright, *Alex Mashinsky Requests One-Month Delay for Sentencing Hearing*, CoinTelegraph (Feb. 6, 2025), <https://cointelegraph.com/news/alex-mashinsky-delay-sentencing-hearing>.

³⁰² *Id.*

³⁰³ Neil Khilwani, *Settling Scores: Celsius' Chapter 11 Debt Resolution*, FORDHAM J.

Order was entered on November 9, 2023.³⁰⁴ The Confirmation Order provides that the asset value of the Debtors' cryptocurrency was \$2.8 billion as of May 31, 2023.³⁰⁵ The plan provides that Celsius will create a new business and customers of Celsius will become customers of the NewCo, and NewCo will receive the value of the Celsius assets to pass along to the customers as investors.³⁰⁶

According to the Plan Administrator, "each Eligible Creditor [not including the convenience class] will receive a cumulative distribution in Cash or Liquid Cryptocurrency equal to approximately 60.4% of the value of such creditor's Claims as of the Petition Date."³⁰⁷ The Plan Administrator delivered the second distributions in Bitcoin, based on a conversion rate of \$95,836.23.³⁰⁸ This price was the "weighted price at which the Post-Effective Date Debtors purchased BTC using the funds from the Litigation Administrator."³⁰⁹

The Plan Administrator has cautioned creditors that there have been phishing attempts where hackers pretended to represent the debtors and asked for personal information including to connect into the creditor's wallet to make a distribution.³¹⁰ The Plan Administrator cautioned the creditors that they would never contact creditors via telephone or social media and emails would only be from authorized domains.³¹¹

The phishing attempts made on Celsius creditors were quite sophisticated.³¹² The hackers impersonated Stretto's website, and created their own website called claims-stretto.com, which was very similar to the real website, case-stretto.com.³¹³ When investors visited the website, they were asked to connect their cryptocurrency wallet to the website to receive

OF CORP. & FIN. LAW (Apr. 5, 2024), <https://news.law.fordham.edu/jcfl/2024/04/05/settling-scores-celsius-chapter-11-debt-resolution/#>.

³⁰⁴ Findings of Fact, Conclusions of Law, and Order Confirming the Modified Joint Chapter 11 Plan of Celsius Network LLC and its Debtor Affiliates, *In re Celsius Network LLC*, Case No. 22-10964 (Bankr. S.D.N.Y. July 13, 2022), ECF No. 3972.

³⁰⁵ *Id.* at 31–32.

³⁰⁶ *Id.* at 39–40.

³⁰⁷ Notice of Commencement of Second Plan Distribution, *In re Celsius Network LLC*, No. 22-10964 (Bankr. S.D.N.Y. Nov. 27, 2024), ECF No. 7871.

³⁰⁸ *Id.*

³⁰⁹ *Id.*

³¹⁰ *Id.*

³¹¹ *Id.*

³¹² *Crypto Phishing Attacks of Bankrupt Celsius: Detected by Real-Time URL Scanning*, CIP BLOG (Sept. 27, 2023), <https://blog.criminalip.io/2023/09/27/celsius-crypto-phishing/>.

³¹³ *Id.*

their distribution in the Celsius bankruptcy case. Investors who so connected their wallet would thereby “allow hackers to steal [their] crypto wallet information and drain all assets.”³¹⁴

5. FTX

On November 11, 2022, FTX filed its chapter 11 bankruptcy petition in the District of Delaware, the Honorable John Dorsey presiding.³¹⁵ On November 14, 2022, an additional 101 affiliated entities also filed petitions in the same court.³¹⁶ FTX filed a draft plan on July 31, 2023,³¹⁷ the first plan on May 7, 2024,³¹⁸ an amended plan on August 2, 2024,³¹⁹ the second amended plan on September 30, 2024,³²⁰ and the Confirmation Order was later entered on October 8, 2024.³²¹ The FTX plan proposed that the company wind down and pay creditors.³²² Mainly because Bitcoin and Ethereum and other cryptocurrencies had rebounded and increased in value, creditors were mostly being made whole under the proposed plan.³²³ Most executory contracts were being assumed and assigned to the wind down entities.³²⁴ The

³¹⁴ *Id.*

³¹⁵ Chapter 11 Voluntary Petition, *In re FTX Trading Ltd.*, Case No. 22-11068 (Bankr. D. Del. Nov. 11, 2022), ECF No. 1.

³¹⁶ *See In re FTX Trading Ltd.*, Case No. 22-11068 (Bankr. D. Del. Nov. 11, 2022), <https://restructuring.ra.kroll.com/ftx/Home-DocketInfo>.

³¹⁷ Chapter 11 Plan of Reorganization (Draft Joint Plan of Reorganization) Filed by FTX Trading Ltd., *In re FTX Trading Ltd.*, Case No. 22-11068 (Bankr. D. Del. July 31, 2023), ECF No. 2100.

³¹⁸ Chapter 11 Plan of Reorganization – Joint Chapter 11 Plan of Reorganization of FTX Trading Ltd. and Its Debtor Affiliates Filed by FTX Trading Ltd., *In re FTX Trading Ltd.*, No. 22-11068 (Bankr. D. Del. May 7, 2024), ECF No. 14300.

³¹⁹ First Amended Chapter 11 Plan (First Amended Joint Chapter 11 Plan of Reorganization of FTX Trading Ltd. and its Debtor Affiliates, *In re FTX Trading Ltd.*, No. 22-11068 (Bankr. D. Del. August 2, 2024), ECF No. 19139.

³²⁰ Second Amended Chapter 11 Plan (Second Amended Joint Chapter 11 Plan of Reorganization of FTX Trading Ltd. and its Debtor Affiliates), *In re FTX Trading Ltd.*, No. 22-11068 (Bankr. D. Del. Sept. 30, 2024), ECF No. 26029.

³²¹ Order Confirming Second Amended Joint Chapter 11 Plan of Reorganization of FTX Trading Ltd. and its Debtor Affiliates, *In re FTX Trading Ltd.*, No. 22-11068 (Bankr. D. Del. Nov. 11, 2022), ECF No. 26404.

³²² Second Amended Chapter 11 Plan (Second Amended Joint Chapter 11 Plan of Reorganization of FTX Trading Ltd. and its Debtor Affiliates), *In re FTX Trading Ltd.*, No. 22-11068 (Bankr. D. Del. Sept. 30, 2024), ECF No. 26029.

³²³ *Id.*

³²⁴ Plan Supplement, *In re FTX Trading Ltd.*, No. 22-11068 (Bankr. D. Del. Sept. 23,

debtors-in-possession reported overwhelming support for the plan from the creditors.³²⁵

FTX anticipates it will pay creditors between \$14.7 billion and \$16.5 billion, which represents 118% of claims as of the petition date.³²⁶ Creditors with claims of less than \$60,000, which represents 98% of all creditors, will be paid within 60 days of the effective date of January 3, 2025.³²⁷ The initial date for distributions is February 18, 2025.³²⁸

FTX and Alameda were engaged in a systemic fraudulent scheme. Like other collapsed exchanges, the cryptocurrency didn't stay in the exchange but instead was used to fund other projects and even went to gifts for Bankman-Fried's parents and political contributions to candidates from both parties.³²⁹ Bankman-Fried did not provide any institutional checks and balances between FTX and Alameda, but instead allowed Alameda unfettered access to FTX funds without any oversight, independent scrutiny, or accountability.³³⁰

"FTX was one of the largest digital currency exchange platforms for buying and selling cryptocurrencies."³³¹ Unfortunately the funds Alameda was borrowing from FTX were those of customer deposits.³³² When Alameda could not pay FTX back, it caused a "run" on the exchange and resulted in a

2024), ECF No. 25649.

³²⁵ *FTX Announces Overwhelming Support from Creditors for Plan of Reorganization*, PR NEWswire (Aug. 21, 2024), <https://www.prnewswire.com/news-releases/ftx-announces-overwhelming-support-from-creditors-for-plan-of-reorganization-302227961.html>.

³²⁶ Dietrich Knauth, *FTX Cleared to Repay Billions to Customers After Bankruptcy Plan Approval*, REUTERS (Oct. 8, 2024), <https://www.reuters.com/legal/crypto-exchange-ftx-liquidation-plan-receives-court-approval-2024-10-07/>.

³²⁷ *FTX Announces Effective Date and Record Date of January 3, 2025 for its Chapter 11 Plan of Reorganization*, PR NEWswire (Dec. 16, 2024), <https://www.prnewswire.com/news-releases/ftx-announces-effective-date-and-record-date-of-january-3-2025-for-its-chapter-11-plan-of-reorganization-302332816.html>.

³²⁸ *FTX Announces Initial Distribution Date of February 18, 2025 for Convenience Class Creditors*, PR NEWswire (Feb. 7, 2025), <https://www.prnewswire.com/news-releases/ftx-announces-initial-distribution-date-of-february-18-2025-for-convenience-class-creditors-302371626.html>.

³²⁹ Office of Public Affairs, *Samuel Bankman-Fried Sentenced to 25 Years for His Orchestration of Multiple Fraudulent Schemes*, U.S. DEP'T. OF JUST. (Mar. 28, 2024), <https://www.justice.gov/opa/pr/samuel-bankman-fried-sentenced-25-years-his-orchestration-multiple-fraudulent-schemes>.

³³⁰ *Id.*

³³¹ Amanda Hetler, *FTX Scam Explained: Everything You Need to Know*, TECHTARGET (Oct. 8, 2024), <https://www.techtarg et.com/whatis/feature/FTX-scam-explained-Everything-you-need-to-know>.

³³² *Id.*

bankruptcy first in the Bahamas and then a chapter 11 in New York.

Binance was planning to buy out FTX, but when it realized FTX had unreliable records and had mishandled funds, and that the U.S. was investigating FTX for its “mishandling of customer funds,” Binance cancelled the deal.³³³

As part of the chapter 11 bankruptcy case, certain of the debtors-in-possession brought adversary proceedings against many affiliated and insider parties, including Bankman-Fried’s parents, Joseph Bankman and Barbara Fried, to recover funds they received from FTX that were in excess of any regular compensation or were provided as gifts to the detriment of other creditors of the estate.³³⁴ The deadline to respond to the motion to dismiss the amended complaint has been continued thirteen times and is currently set for February 24, 2025.³³⁵

FTX’s failure, more than any other to date, caused the U.S. government to look for ways to regulate cryptocurrency. “If a cryptocurrency exchange files bankruptcy, there is no backup—unlike U.S. banks, where the government ensures the funds up to certain limits.”³³⁶

In his criminal prosecution, Samuel Bankman-Fried was sentenced to twenty-five years in prison for his fraudulent actions related to FTX and Alameda Research Group.³³⁷ The five-week trial resulted in the jury returning guilty verdicts on counts of wire fraud, conspiracy to commit wire fraud, conspiracy to commit securities fraud, conspiracy to commit commodities fraud, and conspiracy to commit money laundering.³³⁸ The sentencing hearing happened months later on March 28, 2024.³³⁹ John J. Ray III, acting as the chief executive officer and chief restructuring officer of FTX in order to carry it through the chapter 11 bankruptcy case, estimated that Bankman-

³³³ *Id.*

³³⁴ David Gura, *It’s Not Just FTX’s Sam Bankman-Fried. His Parents Also Face Legal Trouble*, NPR (Oct. 2, 2023), <https://www.npr.org/2023/10/02/1200764160/sam-bankman-fried-sbf-parents-ftx-crypto-collapse-trial-stanford-law-school>.

³³⁵ Order Approving Thirteenth Stipulation Regarding (I) Extension of Response Deadline and (II) Adjournment of Pretrial Conference, *Alameda Research, LLC v. Bankman (In re FTX Trading Ltd.)*, Adv. Pro. No. 23-50584 (Bankr. D. Del. Feb. 13, 2025), ECF No. 48.

³³⁶ *Id.*

³³⁷ Office of Public Affairs, *supra* note 329.

³³⁸ Elizabeth Lopatto, *Sam Bankman-Fried Gambled on a Trial and His Parents Lost*, THE VERGE (Nov. 2, 2023), <https://www.theverge.com/2023/11/2/23944485/sam-bankman-fried-guilty-verdict-parents>.

³³⁹ Office of Public Affairs, *supra* note 329.

Fried stole somewhere between \$8 billion and \$11 billion.³⁴⁰ Ray previously handled many prominent bankruptcies, including those of Enron, Residential Capital, Nortel Networks, and Fruit of the Loom.³⁴¹ He strongly condemned FTX and Bankman-Fried's actions, saying, "Never in my career have I seen such a complete failure of corporate controls and such a complete absence of trustworthy financial information as occurred here."³⁴²

6. BlockFi

The BlockFi bankruptcy was filed on November 28, 2022.³⁴³ Its chapter 11 bankruptcy was filed in bankruptcy court in the District of New Jersey, with the Honorable Michael Kaplan presiding. Related entities that filed included BlockFi Inc., BlockFi Trading LLC, BlockFi Lending LLC, BlockFi Wallet LLC, BlockFi Ventures LLC, BlockFi International Ltd., BlockFi Investment Products LLC, BlockFi Services, Inc., and BlockFi Lending II LLC.³⁴⁴ The 50 largest creditors included many investors, as well as a settlement owed to the SEC.³⁴⁵

BlockFi's filing was based on the FTX bankruptcy.³⁴⁶ FTX was supposed to buy out BlockFi, and its collapse meant that was no longer possible.³⁴⁷ The SEC once again agreed to subordinate its \$30 million fine to allow investors to be repaid first.³⁴⁸

³⁴⁰ *Id.*

³⁴¹ Amy Feldman, *With A New CEO, An Adult Has Arrived To Clean Up The FTX Mess*, FORBES (Nov. 22, 2022), <https://www.forbes.com/sites/amyfeldman/2022/11/22/with-a-new-ceo-an-adult-has-arrived-to-clean-up-the-ftx-mess/>.

³⁴² Christopher J. Brooks, *FTX's new CEO: "Never in my career have I seen such a complete failure"*, CBS NEWS (Nov. 17, 2022), <https://www.cbsnews.com/news/ftx-bankruptcy-john-ray-ceo-failure/>.

³⁴³ Voluntary Petition, *In re BlockFi, Inc.*, No. 22-19361 (Bankr. D.N.J. Nov. 28, 2022), ECF No. 1.

³⁴⁴ *Id.* at 6.

³⁴⁵ *Id.* at 8–12.

³⁴⁶ Hannah Lang, Niket Nishant & Manya Saini, *Crypto Lender BlockFi Files For Bankruptcy, Cites FTX Exposure*, REUTERS (Nov. 28, 2022), <https://www.reuters.com/technology/crypto-lender-blockfi-files-bankruptcy-protection-2022-11-28/> ("Despite their best efforts to stabilize the enterprise and protect clients, the Debtors are faced with a severe liquidity crunch due to the unprecedented, expedited collapse of FTX Trading Ltd., West Realm Shires, Inc (dba FTX US), Alameda Research, Ltd. and their affiliates (together 'FTX')").

³⁴⁷ *Id.*

³⁴⁸ Stipulation and Agreed Order Between U.S. Securities and Exchange Commission and Debtors to Forego Receiving Distribution from Debtor's Bankruptcy Estates, *In re*

Zac Prince was one of the co-founders and CEO of BlockFi.³⁴⁹ BlockFi's downfall was based on a series of unfortunate mistakes, including missteps in their series investment opportunities, a SEC fine of \$100 million for their failure to register their securities, lending money to Three Arrows Capital, accidentally sending bitcoin instead of stablecoin as a payment and costing themselves \$10 million, and accepting FTX's cash investment.³⁵⁰ BlockFi intended to use their SEC registration to their advantage in their marketing to attract new investors; however, they were barred from acquiring new U.S. customers, which made it difficult.³⁵¹ "A number of prominent crypto players, while declining to talk on the record, praised [BlockFi executives] and their integrity—and especially noted their willingness to dive headlong into alternative income streams, rather than doubling down on what didn't work."³⁵² Investors, however, are not as equally pleased with the exchange.³⁵³

BlockFi's chapter 11 plan was filed on November 28, 2022,³⁵⁴ amended on May 12, 2023,³⁵⁵ amended on June 28, 2023,³⁵⁶ and amended on July 31, 2023.³⁵⁷ The plan was confirmed on October 3, 2023,³⁵⁸ and notice

BlockFi, Inc., No. 22-19361 (Bankr. D.N.J. July 7, 2023), ECF No. 1161.

³⁴⁹ David Canellis, *How BlockFi Went From Tech Unicorn to Crypto Burnout*, BLOCKWORKS (Sept. 22, 2022), <https://blockworks.co/news/how-blockfi-went-from-tech-unicorn-to-crypto-burnout>.

³⁵⁰ *Id.*

³⁵¹ *Id.*

³⁵² *Id.*

³⁵³ Nathan Minsberg, *BlockFi Repayments to Its 100,000 Creditors Will Begin This Month*, DECRYPT (July 18, 2024), <https://decrypt.co/240453/blockfi-repayments-to-its-100000-creditors-will-begin-this-month>.

³⁵⁴ Joint Chapter 11 Plan, *In re* BlockFi, Inc., No. 22-19361 (Bankr. D.N.J. Nov. 28, 2022), ECF No. 22.

³⁵⁵ Amended Chapter 11 Plan, *In re* BlockFi, Inc., No. 22-19361 (Bankr. D.N.J. May 12, 2023), ECF No. 875.

³⁵⁶ Amended Chapter 11 Plan, *In re* BlockFi, Inc., No. 22-19361 (Bankr. D.N.J. June 28, 2023), ECF No. 1132.

³⁵⁷ Amended Chapter 11 Plan, *In re* BlockFi, Inc., No. 22-19361 (Bankr. D.N.J. July 31, 2023), ECF No. 1300.

³⁵⁸ Revised Findings of Fact, Conclusions of Law, and Order (I) Approving the Disclosure Statement Relating to the Third Amended Joint Chapter 11 Plan of BlockFi Inc. and its Debtor Affiliates Pursuant to Chapter 11 of the Bankruptcy Code on a Final Basis and (II) Confirming the Third Amended Joint Chapter 11 Plan of BlockFi Inc. and its Debtor Affiliates Pursuant to Chapter 11 of the Bankruptcy Code (Additional Technical Modifications), *In re* BlockFi, Inc., No. 22-19361 (MBK) (Bankr. D.N.J. Oct. 3, 2023), ECF No. 1655.

of the effective date went out on October 24, 2023.³⁵⁹

The attorneys for BlockFi declared on September 6, 2024, that investors were paid in full for their claims.³⁶⁰ Investors received payment in cryptocurrency, either from three stable coins (tied to the U.S. dollar) or the two highest market value cryptocurrencies, namely Bitcoin and Ethereum.³⁶¹ These payments were based on the cryptocurrencies that the investors held on the date of the filing of the bankruptcy petition.³⁶² If an investor held currencies other than Bitcoin, Ethereum, Gemini Dollar, US Dollar Coin, or Tether in BlockFi, they would receive a cash distribution; otherwise they would receive cryptocurrency.³⁶³ Investors' claims were allowed based on what they were owed as of the petition date, and all claim recoveries were calculated using an exchange rate with the U.S. dollar,³⁶⁴ e.g., one Bitcoin was \$45,824.58, one Ethereum was \$2,436.80, Gemini was \$1.00, US Digital Coin was \$0.99932, and Tether was \$0.99820.

7. Genesis Global Capital

On January 19, 2023, cryptocurrency lending company Genesis filed its chapter 11 bankruptcy case in the Southern District of New York, the Honorable Sean H. Lane presiding.³⁶⁵ The bankruptcy was preceded by an enforcement action brought against the company by the SEC, which filed a complaint on January 12, 2023.³⁶⁶ During the bankruptcy, the State of New York brought a complaint in October 2023 alleging Genesis concealed from

³⁵⁹ Notice of (I) Entry of the Order (A) Approving the Disclosure Statement on a Final Basis and (B) Confirming the Third Amended Joint Chapter 11 Plan of BlockFi Inc. and its Debtor Affiliates Pursuant to Chapter 11 of the Bankruptcy Code (Additional Technical Modifications) and (II) Occurrence of the Effective Date in support of, *In re BlockFi, Inc.*, No. 22-19361 (Bankr. D.N.J. Oct. 24, 2023), ECF No. 1788.

³⁶⁰ Press Release, *Haynes Boone Secures 100% Recovery for BlockFi Creditors*, HAYNES BOONE (Sept. 6, 2024), <https://www.haynesboone.com/news/press-releases/haynes-boone-secures-100-recovery-for-blockfi-creditors>.

³⁶¹ *Estate Withdrawals FAQs*, BLOCKFI (Mar. 1, 2024), <https://blockfi.com/estate-distribution-faqs/>.

³⁶² *Id.*

³⁶³ *Id.*

³⁶⁴ *Id.* ("The USD value of your BIA/BPC funds & any applicable accrued interest for these funds as of the date BlockFi declared bankruptcy.").

³⁶⁵ Voluntary Petition, *In re Genesis Global Holdco, LLC*, Case No. 23-10063 (Bankr. S.D.N.Y. Jan. 19, 2023), ECF No. 1.

³⁶⁶ Press Release, *Genesis Agrees to Pay \$21 Million Penalty to Settle SEC Charges*, SEC (Mar. 19, 2024), <https://www.sec.gov/newsroom/press-releases/2024-37>.

investors more than \$3 billion in losses.³⁶⁷ Genesis settled both the prepetition and postpetition complaints during the course of the bankruptcy and the governing entities subordinated their claims to benefit investors.³⁶⁸ Genesis was enjoined from operating in New York.³⁶⁹ The actions by the SEC and the State of New York were based on dealings of the Company in 2022, when Genesis froze the Gemini Earn program on November 16, 2022,³⁷⁰ just days after FTX filed bankruptcy.

Genesis, owned by Digital Currency Group (whose owner is Barry Silbert), was affiliated with the Gemini exchange.³⁷¹ Gemini was owned by Cameron Winklevoss and Tyler Winklevoss (perhaps most famous for their alleged claim as the true founders of Facebook).³⁷² The Gemini Earn program was set up like a bank; Gemini investors could loan cryptocurrency to Genesis, and they were supposed to receive their loan back, with 8% interest.³⁷³ Earlier in 2022, Genesis lost \$1.1 billion based on its inability to recover a loan made to Three Arrows.³⁷⁴ Several months before Gemini Earn's collapse, on August 9, 2022, the Winklevoss twins allegedly withdrew about \$282 million from the Gemini Earn program.³⁷⁵ The withdrawal consisted of 3,120 Bitcoin, 18,060 Ethereum, 49.6 million Dogecoin, 142 million Gemini coin (which is a stable coin pegged to the U.S. dollar), and

³⁶⁷ Press Release, *Attorney General James Secures Settlement Worth \$2 Billion from Crypto Firm Genesis Global Capital for Defrauded Victims*, N. Y. STATE ATT'Y GEN. (May 20, 2024), <https://ag.ny.gov/press-release/2024/attorney-general-james-secures-settlement-worth-2-billion-crypto-firm-genesis>.

³⁶⁸ Press Release, *supra* note 366; Press Release, *supra* note 367.

³⁶⁹ Press Release, *supra* note 367.

³⁷⁰ *Updates*, GEMINI (Nov. 16, 2022), <https://www.gemini.com/earn>.

³⁷¹ Thomas Barrabi, *Winklevoss Twins Secretly Withdrew \$280M in Assets Before Crypto Firm Collapsed: Sources*, NEW YORK POST, <https://nypost.com/2023/09/27/winklevoss-twins-secretly-withdrew-282m-in-gemini-assets-before-genesis-collapse-sources> (Sept. 27, 2023, 5:19 PM).

³⁷² Ben Mezrich, *"He Thinks We're Going to Take a Swing at Him?": Inside the Decades-Long Cage Match Between Mark Zuckerberg and the Winklevoss Twins*, VANITY FAIR (Apr. 30, 2019), <https://www.vanityfair.com/news/2019/04/inside-the-mark-zuckerberg-winklevoss-twins-cage-match?>.

³⁷³ Gemini, *Gemini Earn Users Receive \$2.18 Billion of Their Digital Assets in Kind – a 232% Recovery*, PR NEWswire (May 29, 2024), <https://www.prnewswire.com/news-releases/gemini-earn-users-receive-2-18-billion-of-their-digital-assets-in-kind--a-232-recovery-302158134.html>.

³⁷⁴ Barrabi, *supra* note 371.

³⁷⁵ *Id.*

several other cryptocurrencies.³⁷⁶ The total amount invested in Gemini Earn was around \$900 million,³⁷⁷ so this was significant. The allegation surrounding their withdrawal of cryptocurrency caused some to speculate about whether the Winklevoss twins knew of Genesis's impending collapse.³⁷⁸

FTX was a major creditor in the Genesis bankruptcy. FTX sought \$4 billion in funds from Genesis based on alleged fraudulent and preferential transfers, including loan repayments, collateral transfers, and for funds that Genesis withdrew from FTX.³⁷⁹ The parties ultimately settled, and FTX received a \$175 million claim in the Genesis bankruptcy.³⁸⁰

Genesis first filed a chapter 11 plan on January 20, 2023.³⁸¹ The plan was amended multiple times.³⁸² The Confirmation Order was entered on May 31, 2024.³⁸³ The plan provided for fiat or stablecoin claims, Bitcoin claims, Ethereum claims, and Altcoin claims.³⁸⁴ On August 2, 2024, the plan effective date occurred.³⁸⁵ The chapter 11 plan for Genesis bankruptcy paid Gemini Earn investors mostly in cryptocurrency.³⁸⁶ This resulted in a remarkable recovery of approximately 237% to its unsecured creditors.³⁸⁷

³⁷⁶ *Id.*

³⁷⁷ *Id.*

³⁷⁸ *Id.*

³⁷⁹ Press Release, *Genesis in Settlement of \$4 Billion in Claims by FTX*, CLEARY GOTTlieb (Oct. 6, 2023), <https://www.clearygottlieb.com/news-and-insights/news-listing/genesis-in-settlement-of-%244-billion-in-claims-by-ftx>.

³⁸⁰ *Id.*

³⁸¹ Joint Chapter 11 Plan, *In re Genesis Global Holdco, LLC*, Case No. 23-10063 (Bankr. S.D.N.Y. Jan. 20, 2023), ECF No. 20.

³⁸² *Id.* at ECF Nos. 427, 886, 897, 948, 979, 989, 1325, 1392, 1712, and 1874.

³⁸³ Findings of Fact, Conclusions of Law, and Order Signed on 5/31/2024, (I) Confirming the Debtors' Amended Joint Chapter 11 Plan and (II) Granting Related Relief, *In re Genesis Global Holdco, LLC*, Case No. 23-10063 (Bankr. S.D.N.Y. May 31, 2024), ECF No. 1736.

³⁸⁴ *Id.* at ECF No. 1874, p. 44.

³⁸⁵ Statement/Notice of (I) Occurrence of Effective Date for the Debtors' Amended Joint Chapter 11 Plan and (II) Final Deadline for Filing Certain Claims, *In re Genesis Global Holdco, LLC*, Case No. 23-10063 (Bankr. S.D.N.Y. Aug. 2, 2024), ECF No. 1907.

³⁸⁶ Dietrich Knauth, *Gemini Customers Get Back Over \$2 Billion in Crypto From Genesis Bankruptcy*, REUTERS (May 29, 2024), <https://www.reuters.com/technology/gemini-customers-get-back-over-2-billion-crypto-genesis-bankruptcy-2024-05-29/> ("Unlike other crypto companies that went bankrupt after a 2022 market crash, Genesis was able to return customers' crypto to them rather than liquidating a limited pool of assets and paying them back in cash.").

³⁸⁷ See Press Release, *supra* note 379.

B. Canadian Entities

The Company Creditors' Arrangement Act ("CCAA") in Canada provides a framework for companies seeking to reorganize. The CCAA is unique and does not exactly parallel any processes in the United States. It draws from elements of chapter 11 and receiverships, but it is distinct from both proceedings. Accounting firms typically serve as the monitor in CCAA proceedings, a position similar to a chapter 11 trustee. Several Canadian insolvency proceedings are worth discussing for their lessons regarding the way in which one person can create a system and obtain many individuals' trust, while causing them to lose much of their savings in the process.

1. Quadriga

Quadriga Fintech Solutions, which closed on February 5, 2019, was a cautionary tale. If other investors had heeded what happened to Quadriga's Canadian investors, they might have taken actions to protect themselves against the risks of an unregulated cryptocurrency exchange and another downturn in the cryptocurrency market.

A Netflix documentary about Quadriga's downfall, *Trust No One: The Hunt for the Crypto King*, came out on March 30, 2022,³⁸⁸ just a couple of months before Terra and Luna collapsed in May 2022, and Three Arrows and Voyager filed for bankruptcy in July 2022. Quadriga entered into a CCAA on February 5, 2019.³⁸⁹ The proceeding was converted to an assignment in bankruptcy on April 11, 2019,³⁹⁰ which meant it became a liquidation proceeding.³⁹¹ Ernst & Young acted as the monitor and then as the bankruptcy trustee.³⁹² After four years of investigating Quadriga, Ernst & Young was able to pay creditors only 13% of the money they held on the Quadriga exchange. Unlike some of the U.S. exchanges that filed for relief in

³⁸⁸ Joe Julians, *Trust No One: The Hunt for the Crypto King Release Date – When Netflix Doc Airls*, RADIOTIMES.COM (Mar. 29, 2022), <https://www.radiotimes.com/tv/documentaries/true-crime/crypto-king-netflix-release-date/>.

³⁸⁹ *In re Quadriga Fintech Solutions Corp.*, Hlfx. No. 484743 (Nova Scotia July 31, 2018), available at <https://documentcentre.ey.com/#/detail-engmt?eid=342>.

³⁹⁰ *In re the Bankruptcy of Quadriga Fintech Solutions Corp.*, CV-19-627184 (Ont. Sup. Ct. Apr. 11, 2019), available at <https://documentcentre.ey.com/#/detail-engmt?eid=342>.

³⁹¹ *Id.*

³⁹² *Id.*

2022, these 2019 investors did not have luck of a better recovery.³⁹³

Gerald Cotten and Michael Patryn founded Quadriga in 2013.³⁹⁴ Cotten had invested in Bitcoin and wanted to create a platform for others to do so as well.³⁹⁵ He was considered a Bitcoin expert, and a friendly, helpful person who wanted to evangelize Bitcoin.³⁹⁶ By 2016, Cotten was running the entire exchange from his laptop computer, and only he had the password to it.³⁹⁷

Cotten died on December 9, 2018, in a hospital in Jaipur from complications related to his Crohn's disease.³⁹⁸ When he died, no one had access to his laptop and no "dead man's switch" email came with instructions about what to do upon his death.³⁹⁹ After his death and through the bankruptcy investigation, it came to light that Cotten was trading away other people's Bitcoin, and much of the millions that should have been in the exchange was gone.⁴⁰⁰ Cotten had traded on Quadriga under multiple aliases, including the largest investor of Quadriga, Chris Markay.⁴⁰¹

The Ontario Securities Commission ("OSC") investigated and determined where the money went.⁴⁰² Only \$46 million CAD was recovered by the monitor.⁴⁰³ Cotton had lost \$115 million CAD on the Quadriga platform and \$28 million CAD on other exchanges.⁴⁰⁴ The OSC accounted \$2 million for "Client funds misappropriated by Cotten for living and travel

³⁹³ Joe Castaldo & Alexandra Posadzki, *Creditors of Quadriga Crypto Fraud To Receive 13% of Funds They Lost in Payout*, GLOBE AND MAIL, <https://www.theglobeandmail.com/business/article-quadriga-crypto-fraud-creditors-compensation/> (last updated May 16, 2023).

³⁹⁴ Toby Bochan, *The Story Behind QuadrigaCX and Gerald Cotten, Netflix's 'Crypto King'*, COINDESK, <https://www.coindesk.com/learn/the-story-behind-quadrigacx-and-gerald-cotten-netflixs-crypto-king/> (last updated Apr. 10, 2024).

³⁹⁵ *Id.*

³⁹⁶ *Id.*

³⁹⁷ *Id.*

³⁹⁸ Cassie Williams, *Quadriga CEO's Widow Speaks Out Over His Death and the Missing Crypto Millions*, CBC NEWS (Jan. 18, 2022), <https://www.cbc.ca/news/canada/nova-scotia/quadriga-widow-jennifer-roberston-gerald-cotten-1.6318955>.

³⁹⁹ Bochan, *supra* note 394.

⁴⁰⁰ *Id.*

⁴⁰¹ *Id.*

⁴⁰² *Where Did the Funds Go?*, ONT. SEC. COMM'N (2020), <https://www.osc.ca/quadrigacxreport/where-did-the-funds-go.html>.

⁴⁰³ *Id.*

⁴⁰⁴ *Id.*

expenses”⁴⁰⁵ and \$1 million for operating losses.⁴⁰⁶

An additional \$23 million, however, remained unaccounted for due to the lack of records.⁴⁰⁷ The OSC surmised that additional expenses that were likely substantial included Cotten’s trading losses and fees on external platforms, as well as “client assets transferred to Cotten for personal use.”⁴⁰⁸

Right before they left for their honeymoon, Cotten reportedly told his wife, Jennifer Robertson, that “the business would die without him” and that no one at Quadriga could keep it operating.⁴⁰⁹ Many investors believed that Cotten faked his death, took the money, and is living under an assumed name.⁴¹⁰ His widow disputes it, saying “I saw Gerry die, I was holding his hand when he passed away. It was a terrible, terrible moment.”⁴¹¹

In the context of the proceedings, Robertson turned over \$12 million in assets to Ernst & Young. “She was allowed to keep \$90,000 in cash, \$20,000 in retirement savings, a 2015 Jeep Cherokee, \$15,000 in furniture and some jewelry, including her wedding band.”⁴¹²

Quadriga was likely not Cotten’s first fraud.⁴¹³ There was evidence that Cotten was involved in schemes when he was as young as fifteen years old.⁴¹⁴ Cotten opened an account on TalkGold in July 2003, and he and Patryn met each other through the website, trying to scam each other.⁴¹⁵ Quadriga stopped keeping records after their bid to go public in 2015 failed, even though there was more than \$1 billion in trades.⁴¹⁶ The theory of Cotten as mastermind suggests that he squirreled away millions of dollars by taking cash into foreign countries, and by making a series of trades to further hide funds. “Cotten’s trades were so bizarre, and so risky, that this seemed

⁴⁰⁵ *Id.*

⁴⁰⁶ *Id.*

⁴⁰⁷ *Id.*

⁴⁰⁸ *Id.*

⁴⁰⁹ Williams, *supra* note 398.

⁴¹⁰ Nathaniel Rich, *Ponzi Schemes, Private Yachts, and a Missing \$250 Million in Crypto: The Strange Tale of Quadriga*, VANITY FAIR (Nov. 22, 2019), <https://www.vanityfair.com/news/2019/11/the-strange-tale-of-quadriga-gerald-cotten>.

⁴¹¹ Williams, *supra* note 398.

⁴¹² *Id.*

⁴¹³ Joe Castaldo, *Before Quadriga: How Shady Ventures in Gerald Cotten’s Youth Led to the Creation of his Ill-Fated Cryptocurrency Exchange*, GLOBE AND MAIL (Nov. 24, 2019), <https://www.theglobeandmail.com/business/article-before-quadriga-how-shady-ventures-in-gerald-cottens-youth-led-to/>.

⁴¹⁴ *Id.*

⁴¹⁵ Rich, *supra* note 410.

⁴¹⁶ *Id.*

plausible—just as plausible, perhaps, as the idea that Cotten believed a series of Hail Mary bets on Zcash would come through.”⁴¹⁷

“After Bitcoin collapsed—and the withdrawal complaints turned into lawsuits, negative press, and the threat of a formal investigation—Cotten got married, wrote a will, flew to India for his ‘honeymoon,’ and disappeared.”⁴¹⁸ The Royal Canadian Mounted Police could choose to exhume his body to try to confirm he is, in fact, dead, but so far they have refused to do so,⁴¹⁹ and at this point it is unlikely that they will.

2. Aiden Pleterski

Aiden Pleterski is a Canadian citizen who has been charged with fraud and money laundering in connection with cryptocurrency.⁴²⁰ He is facing a potential of fourteen years in prison.⁴²¹ According to bankruptcy court documents, investors trusted Pleterski with \$41.5 million CAD, “promising to invest in cryptocurrency and foreign markets.”⁴²² He allegedly only invested 1.6% of the funds, using the rest to buy himself “luxury cars, flights on private jets and lakefront mansions” and to enjoy life.⁴²³

Grant Thornton was acting as the trustee in Aiden Pleterski and AP Private Equity Limited’s bankruptcy case, which was filed on August 9, 2022.⁴²⁴ Pleterski denies that he ever solicited funds from any investors. He says, “I was not soliciting monies and HAVE NEVER SOLICITED INVESTMENT MONIES from anyone.”⁴²⁵ Pleterski also says that he kept records of cryptocurrency trades without actually entering into trades, to avoid the high transactions fees from actually engaging in trades.⁴²⁶ The

⁴¹⁷ *Id.*

⁴¹⁸ *Id.*

⁴¹⁹ *Id.*

⁴²⁰ Holly Honderich, *The Rise and Fall of Canada’s ‘Crypto King’ Aiden Pleterski*, BBC NEWS (May 16, 2024), <https://www.bbc.com/news/world-us-canada-69023845>.

⁴²¹ *Id.*

⁴²² *Id.*

⁴²³ *Id.*

⁴²⁴ Jake Wiebe, *Aiden Pleterski and AP Private Equity Limited*, DOANE GRANT THORNTON, <https://www.doanegrantthornton.ca/service/advisory/creditor-updates/#Aiden-Pleterski-and-AP-Private-Equity-Limited> (last visited Feb. 19, 2025).

⁴²⁵ Affidavit of Aiden Pleterski, *In re Bankruptcy of AP Private Equity Limited*, No. BK-22-00208582 (Ont. Sup. Ct. of Just. July 8, 2024), <https://docs.doanegrantthornton.ca/document-folder/viewer/docul8LWsxwWho7J/2158974792847550193>.

⁴²⁶ *Id.*

trustee is challenging Pletreski's right to a discharge, and Pleterski is defending that right.⁴²⁷

Pleterski was reportedly kidnapped, tortured and beaten in December 2022 by four people, including Akil Heywood, a disgruntled investor who was trying to get his investment back.⁴²⁸ Heywood released a video of Pleterski apologizing to investors and admitting, "I should have been honest with everybody and told them that I lost a lot of money."⁴²⁹

Many of these U.S. and Canadian bankruptcy proceedings were largely the result of cryptocurrency exchanges and companies riddled with fraud or affected by others' fraud. Investors were bound by contracts that they did not read or understand in advance, which often provided that they were not the owners of their cryptocurrency. These investors only had general unsecured creditors' claims to their cryptocurrency accounts, not secured claims. Contract terms, mismanagement and fraud, not bankruptcy, diminished the investors' rights and expectations.

State and federal regulation has played a role in the proceedings. The open question about whether cryptocurrency exchanges were required to register as securities before engaging in trading, or borrowing and lending, and more generally what laws they needed to follow, resulted in a lack of federal oversight at the companies' creation. As a result, bad actors had the runway to build complicated and lucrative schemes for themselves. The government while heavily involved in litigation related to almost all these bankruptcies, by seeking to enforce standards and rules to protect investors, was late to the game. To soften the falls, the government agencies agreed in most cases to subordinate their claims, to allow investors to recover before any fines were paid.

Bitcoin is now trading at close to, or over, \$80,000. As Warren Buffet said, Bitcoin still does not provide a tangible product or service, although

⁴²⁷ *Id.*; see also Supplement to the Sixth Report of the Trustee and The Supplemental Report of the Trustee on the Bankrupt's Application for Discharge, *In re* Bankruptcy of AP Private Equity Limited, No. BK-22-00208582 (Ont. Sup. Ct. of Just. July 11, 2024), <https://docs.doanegrantthornton.ca/document-folder/viewer/docu18LWsxWho7J/31250879551604896>.

⁴²⁸ Jesus Jimenez, *Investor Charged With Kidnapping 'Crypto King'*, N.Y. TIMES (July 20, 2023), <https://www.nytimes.com/2023/07/20/world/canada/crypto-king-aiden-pleterski-kidnapping-arrest.html>.

⁴²⁹ Hannah Alberga, *Ontario Crypto King Apologizes to Investors While Appearing Badly Beaten From Kidnapping*, CTVNEWS <https://www.ctvnews.ca/toronto/article/ontario-crypto-king-apologizes-to-investors-in-video-while-appearing-badly-beaten-from-kidnapping/> (July 17, 2023, 6:17 PM).

many banks and other companies are providing products and services and profiting off Bitcoin's existence. The current U.S. administration has promised to be friendly to crypto companies, and the leeway they grant may well encourage additional schemes at the expense of investors looking to profit from investments in cryptocurrency. If the economy faces another recession, individuals may continue to sell off their cryptocurrency, causing another drop in prices. When the tide goes out, more fraudulent schemes will come to light, and more investors may see their cryptocurrency enmeshed in bankruptcy proceedings.

IV. Creating a Comprehensive National Filing System for Cryptocurrency

There are currently two core choices for perfecting a security interest in cryptocurrency, control and filing. Before there was any uniform proposal regarding security interests in cryptocurrency, some states adopted filing protocols, some states adopted control mechanisms, and some states adopted both filing and control as the means for perfection.⁴³⁰ The 2022 amendments to the UCC adopted control as the method of choice, and provide that filing is an option only if the state had already chosen filing as an option.⁴³¹ As of February 14, 2025, twenty-five states have adopted UCC Article 12, and an additional eight states have introduced legislation to adopt UCC Article 12.⁴³² Although control is a viable method for perfection, a national filing system should be created as a more comprehensive method for investors and secured creditors to establish their rights in and to cryptocurrency.

A. What is the Uniform Commercial Code?

"The Uniform Commercial Code (UCC) is a comprehensive set of laws governing all commercial transactions in the United States. It is not a federal law, but a [model for] uniformly adopted state law."⁴³³ It deals with the sale of goods, leases, negotiable instruments, bank deposits and collections, letters of credit, bulk sales, documents of title, general

⁴³⁰ McKinlay, *supra* note 9, at 102–03.

⁴³¹ *Uniform Commercial Code*, UNIF. L. COMM'N, <https://www.uniformlaws.org/acts/ucc> (last visited Feb. 15, 2025).

⁴³² Uniform Law Commission, *UCC, 2022 Amendments to*, ULC, <https://www.uniformlaws.org/committees/community-home?CommunityKey=1457c422-ddb7-40b0-8c76-39a1991651ac> (last visited Feb. 14, 2025).

⁴³³ Unif. L. Comm'n, *supra* note 432.

intangibles, investment securities, and secured transactions.⁴³⁴

The drafters of the UCC were forward-thinking in many of their definitions and descriptions to allow for new technologies and assets that previously had not been conceived. When the UCC was first introduced in 1952, there were no computers, no cell phones, and many other technologies we use every day were in their infancy, or did not yet exist. When amendments to the UCC were made in 1998, definitions were broadened to allow for electronic assets and descriptions were written in such a way to encompass those new technologies that the personal computer, the Internet, and additional inventions would undoubtedly provide. The 1998 version of Article 9, however, does not include any description of cryptocurrency or digital currency, or electronic records such as NFTs,⁴³⁵ and all states to address the issue decided to add their own new sections addressing these assets.⁴³⁶

In 2022, the drafters of the UCC proposed comprehensive amendments to the UCC to address digital assets, including blockchain and its related applications such as NFTs, games and smart contracts, and cryptocurrency.⁴³⁷ The amendments were also designed to address social media, and artificial intelligence.⁴³⁸ These were significant changes for security interests in this class of assets. They proposed a new Article 12 to the UCC to deal with electronic money, controllable electronic records, controllable accounts, or controllable payment intangibles.⁴³⁹ They also proposed amendments to Article 9 of the UCC to address the requirements for establishing a security interest in electronic money, controllable electronic

⁴³⁴ *Id.*

⁴³⁵ McKinlay, *supra* note 9, at 100–01.

⁴³⁶ *Id.* at 102–03.

⁴³⁷ *Final Act, with Comments: Uniform Commercial Code Amendments (2022)*, UNIF. L. COMM’N (July 26, 2022), <https://www.uniformlaws.org/committees/community-home/librarydocuments?communitykey=1457c422-ddb7-40b0-8c76-39a1991651ac&LibraryFolderKey=&DefaultView=&5a583082-7c67-452b-9777-e4bdf7e1c729=eyJsaWJyYXJ5J5ZW50cnkiOiI0MjRjNDliZC1jNGRmLTQyMGEtYWJjOS0yNjgxZGZkNWVhYmYifQ%3D%3D> (“The 2022 Amendments include a new UCC Article 12 that governs the transfer of property rights in certain intangible digital assets (‘controllable electronic records’) that have been or may be created and may involve the use of new technologies. These assets include, for example, certain types of (non-fiat) virtual currency and nonfungible tokens (NFTs). ‘Control’ of controllable electronic records is a central organizing concept under Article 12.”).

⁴³⁸ *Id.*

⁴³⁹ *Id.*

records, controllable accounts, or controllable payment intangibles.

B. The Secured Transaction Requirements for Attachment and Perfection

Article 9 of the UCC provides for the governance of secured transactions. Secured transactions are “transactions that involve the granting of credit secured by personal property.”⁴⁴⁰ In other words, secured transactions encompass loans that are backed up by collateral (excluding real property). If a debtor defaults on a loan, the secured creditor has rights in and to the collateral and in certain circumstances can seize the collateral without court intervention to repay the loan. If creditors wish to be secured, they need to take extra steps to secure a grant of a security interest from a debtor and to perfect their security interest vis-à-vis the debtor and other creditors.⁴⁴¹

Cryptocurrency investors on an exchange are classified in two ways. Sometimes they are treated as qualifying purchasers (“owners”) of the cryptocurrency.⁴⁴² If they are a qualifying purchaser, they acquire “rights in the controllable electronic record free of a claim of a property right in the controllable electronic record.”⁴⁴³ For rights in controllable accounts or controllable payment intangibles, “a qualifying purchaser takes a right to payment, right to performance, or other interest in property evidenced by the controllable electronic record subject to a claim of a property right in the right to payment, right to performance, or other interest in property.”⁴⁴⁴ So the UCC has different rules for perfecting an interest in the record itself versus the right to receive payment for the record.

The exchanges themselves are not qualifying purchasers if they do not acquire property rights in and to the collateral, or if they have engaged in fraud or failed to operate in good faith with respect to the collateral.⁴⁴⁵ Comment 7 Example 3 to Article 12 states, however, that if a hacker steals cryptocurrency, and then sells it to a qualifying purchaser who obtains the private keys and purchases the cryptocurrency for value, in good faith, and

⁴⁴⁰ *Id.*

⁴⁴¹ McKinlay, *supra* note 9, at 100–01 (“There are generally two categories of creditors, secured and unsecured. When lending money, secured creditors take additional steps to protect their loans to ensure that they can be paid if the debtor defaults on those loans.”).

⁴⁴² U.C.C. § 12-104(b) (“To determine whether a purchaser of a controllable account or controllable payment intangible is a qualifying purchaser, the purchase obtains control of the account or payment intangible if it obtains control of the controllable electronic record that evidences the account or payment intangible.”).

⁴⁴³ U.C.C. § 12-104(e).

⁴⁴⁴ U.C.C. § 12-104(f).

⁴⁴⁵ See Official Comments nos. 4 & 5 to U.C.C. § 12-104.

without notice that the hacker had stolen the cryptocurrency, then this person has the superior rights and protections of a qualifying purchaser.⁴⁴⁶

Investors in cryptocurrency exchanges can be considered qualifying purchasers if they “obtain control of the controllable electronic record for value, in good faith, and without notice of a claim of a property right in the controllable electronic record.”⁴⁴⁷ Investors, however, are often unsecured creditors in the bankruptcy of a cryptocurrency platform because they did not obtain these ownership rights and the private keys to give them control over the electronic record. If the cryptocurrency exchange or lending company does not allow investors to establish themselves as qualifying purchasers, the next best option is for investors to enter into a security agreement with the exchanges to be classified and treated as their secured creditors.

A secured creditor must meet the requirements found in Article 9 of the UCC, including attachment⁴⁴⁸ and perfection.⁴⁴⁹ Attachment means that the debtor has ownership rights in the collateral, the creditor gives value to the debtor, and the debtor signs a writing agreeing to grant the creditor a security interest in the collateral.⁴⁵⁰ Perfection is the way that creditors give notice to “the world” that they have rights in and to specific collateral. Third parties thinking of loaning to a debtor should therefore take note and recognize that if they were to also loan money to the exchanges, their loans would be junior to a party who had already perfected a security interest.⁴⁵¹

Under the UCC, there are four main methods of perfecting a security interest in personal property: possession, taking a purchase money security interest in the asset, filing a financing statement, and exercising control.⁴⁵² Control over deposit accounts can be obtained through a control agreement which directs the custodian of the asset to follow the directions of the creditor.⁴⁵³

C. Possession and PMSIs Do Not Work As Methods to Perfect a Security Interest in Cryptocurrency

⁴⁴⁶ *Id.* no. 7.

⁴⁴⁷ U.C.C. § 12-102(a)(2).

⁴⁴⁸ U.C.C. § 9-203.

⁴⁴⁹ U.C.C. §§ 9-301, *et seq.*

⁴⁵⁰ U.C.C. § 9-203.

⁴⁵¹ McKinlay, *supra* note 9, at 100–01.

⁴⁵² *Id.* at 101–04.

⁴⁵³ U.C.C. § 9-104.

For different reasons, neither possession nor PMSIs can be used to perfect an interest in controllable electronic records, which is how the new Article 12 defines electronic money and other blockchain assets. Possession mechanisms simply do not work, because the blockchain cannot be physically held. PMSIs don't work, because the UCC limits them solely to interests in goods and software, and by definition, they do not apply to other types of assets.

1. Possession

Possession requires physically holding the asset.⁴⁵⁴ Security interests in fiat currency, such as U.S. dollar bills or Japanese yen, can only be perfected through such possession.⁴⁵⁵ “Possession, however, is not possible for intangible assets, such as a general intangible, a payment intangible, or software.”⁴⁵⁶ Most cryptocurrency does not exist in the tangible world, so it is impossible to possess.

2. Purchase Money Security Interest

A purchase money security interest (“PMSI”) is available to lenders who make a loan to allow a borrower to acquire a specific asset.⁴⁵⁷ There are unique rules for PMSIs which allow creditors holding a PMSI to have a higher priority than other creditors who perfect using other methods. PMSIs only apply to goods⁴⁵⁸ or software,⁴⁵⁹ and by definition, they don't apply to intangible assets, so they do not apply to cryptocurrency.⁴⁶⁰

If a filing system were adopted for cryptocurrency, then it would be possible for the definition of PMSI to be expanded to include cryptocurrency. If that were to happen, a lender could provide funds for a borrower to purchase cryptocurrency, and the lender could file a financing statement to perfect its security interest in that cryptocurrency. That lender would then

⁴⁵⁴ McKinlay, *supra* note 9, at 102.

⁴⁵⁵ *Id.*

⁴⁵⁶ U.C.C. § 9-312(b)(3).

⁴⁵⁷ U.C.C. § 9-103.

⁴⁵⁸ U.C.C. § 9-102(a)(44) (defining goods to include “all things that are movable when a security interest attaches” including “fixtures,” “standing timber . . .,” “unborn young of animals,” “crops grown, growing, or to be grown . . .,” and “manufactured homes.”).

⁴⁵⁹ U.C.C. § 9-102(a)(76) (defining software as “a computer program and any supporting information provided in connection with a transaction relating to the program. The term does not include a computer program that is included in the definition of goods.”).

⁴⁶⁰ U.C.C. § 9-103(a)(1).

have rights superior to and a higher priority than other creditors who also filed a financing statement against that borrower in and to all their cryptocurrency, including after-acquired cryptocurrency.

Even if a filing system is adopted as a method for perfection, however, it would not apply to PMSIs unless and until that UCC definition is expanded to include assets beyond those of goods and software.

D. Control is Not the Only Solution

The recently introduced UCC Article 12 adopts control as the best method for perfecting a security interest in cryptocurrency.⁴⁶¹ Article 12 has been thoroughly vetted and is filled with many comments giving specific examples of security interests in Bitcoin and other cryptocurrency and how they are intended to work. Article 12 would, however, be materially benefited if a centralized national filing system for cryptocurrency were adopted to allow investors and secured creditors to thereby perfect their security interests in controllable electronic records.

1. What is Control?

Control is obtained through granting another the ability to direct disposition of an asset. This can be done through either written agreement or by providing access to the asset.⁴⁶² There are three methods for obtaining control of a bank account for instance.⁴⁶³ One, add the secured creditor as an owner of the bank account.⁴⁶⁴ Two, deposit the assets in the bank where the account is located.⁴⁶⁵ Or three, enter into a control agreement authorizing the host bank to accord the creditor the right to direct what happens to the funds in the account.⁴⁶⁶

For cryptocurrency or other transactions on the blockchain, control is invariably established by dominion over the private key, or the code necessary to transfer the asset. The Overview of the 2022 Amendments to the UCC explains how that control is intended to work:

Control is best understood in a general sense as a functional

⁴⁶¹ See *Final Act*, *supra* note 437.

⁴⁶² U.C.C. §§ 9-104 to 107.

⁴⁶³ U.C.C. § 9-104.

⁴⁶⁴ *Id.*

⁴⁶⁵ *Id.*

⁴⁶⁶ *Id.*

equivalent of “possession” of a controllable electronic record and a necessary condition for protection as a good faith purchaser for value (a “qualifying purchaser”) of a controllable electronic record. Article 12 confers an attribute of negotiability on controllable electronic records because a qualifying purchaser takes its interest free of conflicting property claims to the record.⁴⁶⁷

2. Article 12 Currently Identifies Control as the Optimal Method of Perfection

In 2022, the drafters of the UCC created a new Article 12 addressing “Controllable Electronic Records.”⁴⁶⁸ This Article 12 is meant to encompass many new technologies, including cryptocurrency, blockchain smart contracts, blockchain NFTs and other digital applications, artificial intelligence, and social media.⁴⁶⁹

Article 12 proposes control as the optimal method of choice for perfecting cryptocurrency.⁴⁷⁰ Article 9 provides that the perfection of interests in cryptocurrency is governed by state law of the jurisdiction where the debtor is located.⁴⁷¹ Each state must choose whether to adopt the 2022 amendments, and may do so in full, in part, or not at all.

Article 12 is, however, a bit of a departure from how some states have addressed perfection of cryptocurrency interests.⁴⁷² Accordingly, there is no uniformity of approach which would facilitate ease of use or reasonable predictability. Texas made the choice to allow the filing of a financing statement or taking control of cryptocurrency.⁴⁷³ Wyoming chose to allow the filing of a financing statement to be the method for obtaining perfection.⁴⁷⁴ Kentucky chose to allow the filing of a financing statement to be the method for obtaining perfection.⁴⁷⁵

⁴⁶⁷ See *Final Act*, *supra* note 437.

⁴⁶⁸ *Id.*

⁴⁶⁹ *Id.*

⁴⁷⁰ U.C.C. § 12-104(h) (“Filing of a financing statement under Article 9 is not notice of a claim of a property right in a controllable electronic record.”).

⁴⁷¹ U.C.C. §§ 12-107, § 9-109(c)(2), § 9-109(c)(3).

⁴⁷² McKinlay, *supra* note 9, at 101–05.

⁴⁷³ *Id.*

⁴⁷⁴ *Id.*

⁴⁷⁵ Carlton Fields & Justin Wales, *State Regulations on Virtual Currency and Blockchain Technologies (Updated March 2021)*, CARLTON FIELDS PA (Apr. 9, 2021), <https://www.carltonfields.com/insights/publications/2021/state-regulations-virtual->

3. Problems with Relying on Control

Relying on control as the method of perfection is difficult for investors because exchanges purposely do not give investors control over the assets and may not want investors to be classified as the owners of the cryptocurrency. Rather, the opposite happens—investors give the exchanges the control. A person wishing to trade on an exchange may not have the private keys available to them to direct the cryptocurrency. The exchange may keep those keys independently and not share them with investors. So those investors will not obtain the protections accorded secured creditors (or qualifying purchasers) because they will never have control of the assets.

Another concern with control is that a debtor could give their private key to multiple parties at the same time, and each creditor might think that they were the only ones to have control. There is no way to verify who has the private keys, or who had the private keys first, if multiple creditors all have access to the keys, and thus all have control.

Many holders of cryptocurrency are extremely reluctant to disclose their private keys. Other than obligations to act in good faith, there is not much preventing a secured creditor with the private keys to move the cryptocurrency to their own wallet or otherwise steal the debtor's cryptocurrency. Although many lenders are trustworthy, the failure of so many cryptocurrency exchanges and the loss of investors' cryptocurrency is evidence that this nascent remains vulnerable to theft, hacking and other schemes to divest individuals of their assets. Sometimes even simple mistakes in cryptocurrency transactions can be very costly, as when \$1 million of Bitcoin was accidentally moved from a hot wallet, where it could be accessed, into several cold wallets that could no longer be accessed by investors or the monitor on the Quadriga exchange.⁴⁷⁶

currency-blockchain-tech.

⁴⁷⁶ See Nikhilesh De, *QuadrigaCX Lost Another \$500K in Bitcoin By Mistake: EY Report*, COINDESK (Feb. 12, 2019), <https://www.coindesk.com/markets/2019/02/12/quadrigacx-lost-another-500k-in-bitcoin-by-mistake-ey-report/>; Ben Munster, *EY 'Did Not Initiate' Transfers of \$1.7M in Bitcoin Linked to Defunct QuadrigaCX*, YAHOO! FIN. (Dec. 21, 2022), <https://finance.yahoo.com/news/ey-did-not-initiate-transfers-110426750.html> (“Accountancy firm Ernst & Young has denied moving funds mistakenly transferred three years ago to inaccessible cold wallets associated with QuadrigaCX ‘The locked Bitcoin remained within the Quadriga cold wallets until December 16, 2022, prior to the unauthorized transfers being initiated.’”).

Another problem with control mechanisms is that if, after a bankruptcy is filed, a secured creditor with the private keys moves the cryptocurrency away from the debtor, the secured creditor may be subject to charges of a violation of the automatic stay. Intentional violations of the automatic stay risk punitive damages.⁴⁷⁷ Also, if a debtor is planning to avoid certain creditors, it might give control to an insider creditor right before it filed bankruptcy, and that insider creditor might foreclose on the cryptocurrency by moving it away from the debtor. In this context, the timing of the grant of control would not be public knowledge, so it would be easier for the debtor to prefer certain creditors, thereby thwarting the protections of the ninety-day clawback period for preferential transfers.⁴⁷⁸

E. A Central Filing System for Cryptocurrency Should Be Created

The Official Comments to the UCC 2022 Amendments provides that cryptocurrency shall be perfected through control, and if a jurisdiction permits perfection through filing, the creditor who perfected through filing shall have lower priority than the creditor who perfected through control.⁴⁷⁹

Article 12 conforming and other amendments. The 2022 Amendments include extensive amendments to UCC Article 9. Several of these amendments address security interests in controllable electronic records and in the rights to payment that are embedded in, or tethered to, controllable electronic records—controllable accounts and controllable payment intangibles. Perfection (i.e., essentially, enforceability against third parties) of security interests in these [cryptocurrency and blockchain] assets may be achieved by a secured party obtaining control of the asset or filing a financing statement in the appropriate jurisdiction's filing office. A security interest perfected by control has priority over a security interest perfected by filing. The amendments also provide special rules for the law governing perfection and priority for security interests in controllable electronic records, controllable accounts, and controllable payment intangibles. These rules draw on Article 12 choice-of-law rule.⁴⁸⁰

⁴⁷⁷ See 11 U.S.C. § 362(k).

⁴⁷⁸ See 11 U.S.C. § 547.

⁴⁷⁹ See *Final Act*, *supra* note 437.

⁴⁸⁰ *Id.*

There are many different filing systems. Rather than rely on the states' preexisting filing systems, an optimal choice for rationalizing and legitimizing cryptocurrency transactions would be to create a national filing system that is specific to all the assets encompassed under the new Article 12. A national filing system would provide enhanced transparency, uniformity, and predictability—but in part undoing the decentralization and secrecy that has been cryptocurrency's character and curse.

1. How Do Filing Systems Work?

Most security interests that are perfected through the filing of a UCC-1 financing statement with each state based on where the debtor resides (if an individual) or where it is chartered (if a business entity).⁴⁸¹ The creditor who is the first-in-time to file typically has priority over other creditors who file later. There are several assets that have a different process for filing, such as copyrights, motor vehicles and aircraft. Secured creditors taking a security interest in automobiles perfect a lien on car titles by filing with a state Division of Motor Vehicles of the relevant state to be listed on the title of the motor vehicles.⁴⁸² For aircraft, filing occurs at the Aircraft Registration branch at the Federal Aviation Administration.⁴⁸³

a. The States' UCC Article 9 Filing Systems

Each state has their own UCC filing system to record secured creditors' interests in collateral. For example, in Delaware, the Secretary of State maintains the UCC filing system. The form for each state is uniform, and requires the debtor's name and address, the creditor's name and address, and a description of the collateral.⁴⁸⁴ Financing statements are then indexed

⁴⁸¹ McKinlay, *supra* note 9, at 103.

⁴⁸² U.C.C. § 9-303 ("The local law of the jurisdiction under whose certificate of title the goods are covered governs perfection, the effect of perfection or nonperfection, and the priority of a security interest in goods covered by a certificate of title from the time the goods become covered by the certificate of title until the goods cease to be covered by the certificate of title.").

⁴⁸³ See *Aircraft Registration*, FAA, https://www.faa.gov/licenses_certificates/aircraft_certification/aircraft_registry/record_aircraft_lien ("You must send the original claim of lien with \$5 (US funds) to the Aircraft Registration Branch. The lien must comply with the requirements for recording claims of lien in the State having jurisdiction over the claim.").

⁴⁸⁴ See *National UCC Financing Statement (UCC-1)*, DEL., <https://corp.delaware.gov/uccform>.

by the government in the debtor's name which is typically searched to discern any liens.

Each state sets their own filing fee for filing a financing statement.⁴⁸⁵ For example, New York charges \$40 for a paper filing and \$20 for an online filing,⁴⁸⁶ Nevada charges \$90 for a paper filing from three to twenty pages, or \$60 for a paper filing from one to two pages, and \$30 for an online filing,⁴⁸⁷ Delaware charges \$100 for documents submitted through an authorized UCC filer (similar to a paper filing), or \$50 for documents submitted through the website.⁴⁸⁸

Once a financing statement is filed, it is good for five years. A continuation statement, UCC-3, needs to be filed before the five years expires to preserve the validity and priority of the original UCC-1 financing statement. If the continuation statement is not filed, the financing statement expires, and the creditor's security interest is no longer perfected against third parties.

b. Copyright Office Filing System

"[A] perfected security interest in a registered, copyrighted work must be recorded with the U.S. Copyright Office to perfect the creditor's interest."⁴⁸⁹ A secured creditor perfects an interest in an unpublished book or work of art by filing a financing statement with the debtor's state of residence through its UCC-1 financing statement system.⁴⁹⁰

Copyright protection began in England after the printing press was

⁴⁸⁵ *Uniform Commercial Code (UCC) Filings*, HUD EXCHANGE, <https://www.hudexchange.info/programs/multifamily-housing/ucc/> (last visited Feb. 19, 2025).

⁴⁸⁶ Dep't. of State, *File a UCC Financing Statement*, N.Y., <https://dos.ny.gov/file-ucc-financing-statement> (last visited Feb. 19, 2025).

⁴⁸⁷ Sec'y of State, *Forms & Fees*, NEV., <https://www.nvsos.gov/sos/sos-information/forms-all-divisions/ucc-forms> (last visited Feb. 19, 2025).

⁴⁸⁸ Div. of Corps., *UCC Filing & Expedited Fees*, DEL., <https://corp.delaware.gov/uccfeessept09/> (last visited Feb. 19, 2025).

⁴⁸⁹ 17 U.S.C. § 205; Andy Hackett, *Perfected Security Interests in Copyrighted Works: Recording, Indexing and Constructive Notice*, COGENCY GLOBAL (Sept. 12, 2019), <https://www.cogencyglobal.com/blog/recording-security-interests-in-copyrighted-works-recording-indexing-and-constructive-notice>; David Muradyan, *How to Perfect a Security Interest in Intellectual Property (Copyrights, Trademarks and Patents)*, WEINTRAUB TOBIN (May 13, 2011), <https://www.theiplawblog.com/2011/05/articles/copyright-law/how-to-perfect-a-security-interest-in-intellectual-property-copyrights-trademarks-and-patents/> (quoting 17 U.S.C. § 205(a) and *Nat'l Peregrine, Inc. v. Capitol Fed. Sav. & Loan (In re Peregrine Entm't, Ltd.)*, 116 B.R. 194, 200–204 (C.D. Cal. 1990)).

⁴⁹⁰ Hackett, *supra* note 489; Muradyan, *supra* note 489.

invented,⁴⁹¹ and it is one of the enumerated powers found in the United States Constitution.⁴⁹² Congress is charged: “To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”⁴⁹³

From the time of the Constitution until July 8, 1870, authors would register their copyrights by providing copies of their works to federal district courts throughout the country.⁴⁹⁴ The district courts would send the works to be stored in various offices in Washington D.C.⁴⁹⁵ From July 8, 1870, the Library of Congress was the place to register copyrighted works.⁴⁹⁶

The Copyright Office was established on July 22, 1897, as a division of the Library of Congress and the appropriate department to record copyrights.⁴⁹⁷ Since that time, it has also been the place for secured creditors to record their security interests in copyrights.⁴⁹⁸ The first published decision addressing this recording system was not until 1989, in the *National Peregrine Inc.* bankruptcy case.⁴⁹⁹ In *Peregrine*, United States Bankruptcy Judge Lisa Hill Fenning granted summary judgment in favor of the Federal Savings and Loan Association of Denver, holding that their security interest was properly perfected by filing a UCC-1 in California, Colorado and Utah.⁵⁰⁰ On appeal to the district court, Judge Alex Kozinski (sitting by designation), reversed the summary judgment, holding that the Copyright

⁴⁹¹ ARL, *Copyright Timeline: A History of Copyright in the United States*, ASSOC. OF RES. LIBRS., <https://www.arl.org/copyright-timeline/> (last visited Feb. 14, 2025).

⁴⁹² U.S. Const. art. I, § 8, cl. 8.

⁴⁹³ *Id.*

⁴⁹⁴ Find Yourself In Copyright, *History of U.S. Copyright Office*, COPYRIGHT.GOV, <https://www.copyright.gov/history/copyright-exhibit/history-co/> (last visited Feb. 19, 2025).

⁴⁹⁵ *Id.*

⁴⁹⁶ *Id.*

⁴⁹⁷ *Id.*

⁴⁹⁸ *Statement of Marybeth Peters, The Register of Copyrights, Before the Subcommittee on Courts and Intellectual Property Committee on the Judiciary*, U.S. House of Representatives 106th Congress, 1st Session (June 24, 1999), available at <https://www.copyright.gov/docs/regstat62499r.html>.

⁴⁹⁹ *Nat'l Peregrine, Inc. v. Capitol Fed. Savs. & Loan Ass'n (In re Peregrine Entm't)*, 116 B.R. 194, 197 (C.D. Cal. 1990) (“This appeal from a decision of the bankruptcy court raises an issue never before confronted by a federal court in a published opinion: Is a security interest in a copyright perfected by an appropriate filing with the United States Copyright Office or by a UCC-1 financing statement filed with the relevant secretary of state?”).

⁵⁰⁰ *In re Peregrine Entm't, Ltd.*, Case No. LA 89-01991-LHF (Dec. 15, 1989), 1989 Bankr. LEXIS 2470 (*rev'd Nat'l Peregrine, Inc. v. Capitol Fed. Savs. & Loan Ass'n (In re Peregrine Entm't)*, 116 B.R. 194, 197 (C.D. Cal. 1990)).

Office had sole jurisdiction to record security interests in copyrights.⁵⁰¹

As Judge Kozinski said, “No useful purposes would be served—indeed, much confusion would result—if creditors were permitted to perfect security interests by filing with either the Copyright Office or state offices.”⁵⁰² Several years after this opinion was issued, the American Bar Association decided to propose that secured creditors should be able to file in both places.⁵⁰³ Its proposal was not adopted.

c. Patent Office Filing System

Security interests in trademarks and patents are not recorded with the United States Patent and Trademark Office.⁵⁰⁴ While regulated in part, by that office, they are instead recorded in each state where the debtor resides.⁵⁰⁵

The statute governing filings with the Patent and Trademark Office specifically limits the effectiveness of recording a lien as only against a “subsequent purchaser or mortgagee” and not against all persons.⁵⁰⁶ In this way, it differs from the Copyright Act,⁵⁰⁷ and means that there are different recording procedures for these different types of general intangibles.⁵⁰⁸

However, the best practice for lenders is to record security interests in both the state filing system and in the Patent and Trademark Office, because there is no penalty for filing in multiple systems. Such is essential to put others on notice of the security interest.⁵⁰⁹

If an interested party wishes to check to see if a certain patent or

⁵⁰¹ *Nat’l Peregrine, Inc. v. Capitol Fed. Savs. & Loan Ass’n (In re Peregrine Entm’t)*, 116 B.R. at 200.

⁵⁰² *Id.*

⁵⁰³ Marybeth Peters, *supra* note 498.

⁵⁰⁴ Muradyan, *supra* note 489 (“[T]he Lanham Act does not preempt Article 9 and the manner of perfecting a security interest in trademarks is governed by Article 9, which means that the secured creditor must file a financing statement with the Secretary of State to perfect the security interest in the trademark.”).

⁵⁰⁵ *Id.*

⁵⁰⁶ 35 U.S.C. § 261 (“An assignment, grant or conveyance shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase or mortgage.”).

⁵⁰⁷ Compare *id.* (identifying “subsequent purchaser or mortgagee”) with 17 U.S.C. § 205(d) (“[r]ecordation of a document in the Copyright Office gives *all persons* constructive notice of the facts stated in the recorded document”) (emphasis added).

⁵⁰⁸ See *Nat’l Peregrine, Inc. v. Capitol Fed. Savs. & Loan Ass’n (In re Peregrine Entm’t)*, 116 B.R. at 206–07.

⁵⁰⁹ Muradyan, *supra* note 489.

trademark is encumbered, they are required to first obtain confirmation of the owner of the patent or trademark, by searching with the Patent and Trademark Office. Once they have confirmed ownership of the patent or trademark, they then must search under the owner's name in the state where the owner resides (if they are an individual) or the state where the owner is chartered (if they are a business). This is a cumbersome, but necessary and reliable process, to determine the status of these security interests.

2. Hosting the Filing System

To provide a more comprehensive filing system for cryptocurrency, it would make sense to host it with a national governmental agency. Those possibilities include the Commodity Futures Trading Commission, the Securities and Exchange Commission, or the U.S. Treasury Department. Another option would be to create a new agency for cryptocurrency tasked with hosting the filing system. Finally, a remote possibility could be for each blockchain with a capable algorithm to host their own filing system; unfortunately, that is likely not a great solution, as many of the exchanges have been credibly accused of fraudulent activity and serious ethics violations, and it would be inconsistent with ease of use, legitimacy or transparency.

a. Allowing Multiple Blockchains to Host Filing Systems

This approach would provide the most autonomy, allowing each blockchain to provide their own filing system for owners and secured creditors to record their security interest in specific cryptocurrency or other assets. In theory, how this would work, for example, is that Bitcoin would create an independent ledger that would track secured creditors' interests in specific Bitcoin. A form similar to the UCC-1 could be used. Each filing would ask for a public key to identify the debtor, the creditor's name and contact information, and date of the filing. This method would preserve some anonymity for debtors who do not want to disclose the extent of their cryptocurrency holdings. The same would be done for the other cryptocurrencies, with a separate filing system for Ethereum, Ripple, Cardano, and so forth. The data would perhaps be built directly into the blockchain, preserving it in the same way as a smart contract.

The arguable benefits of hosting the filing system with each cryptocurrency include: (1) it preserves anonymity for cryptocurrency users

by allowing debtors to identify themselves with their public keys instead of their names; (2) it preserves autonomy for each blockchain in allowing it to self-govern and keep the master list of secured creditors; (3) the cryptocurrency earns the filing fees from the filing system; and (4) the cryptocurrency is best positioned to understand what information is necessary to create and record a security interest in the cryptocurrency, and might even be able to build it directly into the blockchain.

The drawbacks of hosting the filing system with each cryptocurrency include: (1) unwillingness of the cryptocurrency to track such records; (2) providing too much autonomy to those who do not want to be governed or report to others; (3) lack of oversight and methods to determine the integrity of the recording system—this system could, in essence, be giving the foxes control of the hen house; (4) the system is too untenable, instead of centralizing the process it would create tens of thousands of lists that would all need to be separately searched if a creditor was unsure of the type of cryptocurrency they were trying to locate; and (5) there is no regulatory scheme to support this and no precedent for it in any other type of asset.

b. A Central Filing System Based in a U.S. Agency

The benefit of a centralized national filing system is it would be set up to preserve the desire of many cryptocurrency holders to remain anonymous, and instead of indexing and searching by a debtor's name, indexing and searching for cryptocurrency would be done through the public keys associated with the specific cryptocurrency at issue. Using preexisting identifiable means of tracing each cryptocurrency or NFT helps to counteract concerns of loss of anonymity. The new filing system would also be set up so that it did not matter where the debtor resided, or the creditor was located; it would apply to all the cryptocurrency and other digital assets. There would be just one place to look to determine if cryptocurrency was encumbered.

Another benefit to debtors is that such a filing system would be less invasive than having to provide their private keys and give up control of their cryptocurrency. Debtors would not have to disclose their private keys to anyone; just like a password, they could keep those confidential. For individual debtors, a national filing system would also be less complicated and likely less costly than entering into control agreements and needing to hire third party intermediaries to act as escrow agents or otherwise protect the integrity of a debtor's private keys.

For investors who do not meet the definition of a qualifying purchaser

under the UCC Article 12, being able to enter into a security agreement and perfect a lien as a secured creditor would be more palatable to cryptocurrency exchanges, and cryptocurrency exchanges might be more willing to do that than to allow debtors to have control by having access to the exchange's private keys.

A filing system would also provide benefits to the greater public. The existence of such a system would provide a record useful for lenders, competing creditors, bankruptcy trustees, liquidators, and receivers who may need to establish priority among multiple secured creditors. The filing system would have evidentiary value in enforcement actions and investigations regarding fraudulent activity. The filing system would have value to investigations into tax fraud, illicit activities, and cases of embezzlement or theft. The filing system would also potentially help provide information to recover illegally obtained cryptocurrency.

A centralized national filing system is also beneficial for bankruptcy trustees and others required to evaluate the priority and validity of secured creditors' security interests. Trustees could more easily determine the timing of when a valid security interest had been granted before a bankruptcy was filed, to see if they had any grounds for avoiding the security interest. Unlike perfection through control, where timing would be harder to prove if the security interest was granted prior to or after the bankruptcy was filed, it would be much harder to falsify the date of filing.

If a national filing system were introduced, qualifying purchasers would be required to search the filing system before buying cryptocurrency from most sellers to ensure the cryptocurrency they were purchasing was owned by the seller or unencumbered by a lien. An exception could be made for cryptocurrency exchanges or other companies that sold cryptocurrency in the ordinary course of their business and met certain standards as promulgated by the SEC or state regulators. Those cryptocurrency companies that wished to sell cryptocurrency in the ordinary course of their business would be vetted and obtain sufficient insurance to protect secured creditors if cryptocurrency is wrongfully sold. Investors in those cryptocurrency companies could be told that their actions are free and clear of secured creditors' interests. All other investors would be required to search the national filing system to ensure that the cryptocurrency they are buying is not encumbered. Alternatively, if investors wished to purchase from non-vetted companies, investors might obtain insurance or reports of ownership and encumbrances, similar to title insurance when purchasing real property.

Finally, the filing fees in a national system would be used to provide

institutional support to those maintaining the filing system database. Ideally, there would be enough fees generated to make the system financially independent, technically reliable, and able to operate on its own.

3. Practical Considerations in Implementation

As previously noted, filing systems to record security interests are typically based on state law, with a few exceptions.⁵¹⁰ This article proposes adopting a federal system as part of cryptocurrency legal reform.⁵¹¹ A federal system could provide a central place for all creditors and interested parties to search, without having to look to each state's filing system to see if a specific cryptocurrency is already encumbered. Such federal system also would accord debtors the ability to retain some anonymity because indexing could be set up based on the cryptocurrency at issue, not the debtor's name.

New federal legislation would need to be proposed and adopted to provide for a federal filing system to perfect security interests. Perhaps the digital assets working group established by President Trump could add a national filing system to its proposed legislation addressing cryptocurrency on the federal level. That same legislation could also address other methods for regulating cryptocurrency, including whether to treat it as a security or commodity, and what processes are required for exchanges to register to buy and sell cryptocurrencies on behalf of investors. New legislation could clarify that the national filing system does not invalidate state procedures for perfection, the same as is provided for in Article 12.⁵¹²

Article 12 could be further amended to provide for recognition of a federal filing system as an alternate method to perfect a security interest in cryptocurrency. Article 12 already provides that if there is a contradiction between its provisions and state law, state law governs. The consequence of a dual system however might be two species of cryptocurrency, those governed under the old system, and those governed under the new system.

There would be two methods for perfecting a security interest in

⁵¹⁰ *Document Recordation*, U.S. COPYRIGHT OFF., <https://www.copyright.gov/recordation> (last visited Mar. 14, 2025); *Find Yourself In Copyright*, *supra* note 494; *Aircraft Registration*, FED. AVIATION ADMIN., https://www.faa.gov/licenses_certificates/aircraft_certification/aircraft_registry/record_security_agreement (last visited Mar. 14, 2025); *Aircraft Registration*, *supra* note 483.

⁵¹¹ See David Yaffe-Bellany, *Under Trump, U.S. Dismantles Crypto Crackdown*, NY TIMES (Mar. 1, 2025) (identifying specific SEC enforcement actions against exchanges and entrepreneurs settled or withdrawn under Trump administration).

⁵¹² U.C.C. § 12-103.

cryptocurrency under this proposal, filing or control. To be consistent with other provisions in Article 9,⁵¹³ control should take priority over filing if the same cryptocurrency is perfected using both methods.

Even though control might retain higher priority, the national filing system could serve as a valuable resource for creditors who are attempting to establish priority over judgment lien creditors but who do not want to go to the lengths to gain control over cryptocurrency or when debtors do not want to give up their keys.

Cryptocurrency exchanges should also adopt language in their agreements with investors granting investors a security interest in the exchanges' cryptocurrency to provide additional legitimacy, reliability and protection to their investors. As part of their services, the exchanges could record the investors' security interests in the national filing system. Then if the exchanges were to file bankruptcy, investors would be better protected with their treatment as secured creditors.

This proposed law would necessarily be prospective only. So, there would still likely exist two types of cryptocurrency investors, those newer investors who are protected by being established as secured creditors in the national filing system, and those earlier investors who may be considered general unsecured creditors. Hopefully in time market forces and mainstream investor expectations would encourage every exchange to adopt the same protections for investors.

V. Conclusion

Many cryptocurrencies appear to have rebounded since the crypto winter of 2022. Another crash amid market volatility and cryptocurrency evolutions may invariably come. As long as regulations appear lax and opportunities for immense profits appear high, it is likely that bad actors will continue to operate in the cryptocurrency sphere, and their fraudulent conduct will harm investors and this class of assets. When that happens, the sustained complexities and disruptions of additional bankruptcies and insolvency proceedings are a natural outcome that will tarnish these assets.

Although UCC control mechanisms may be a valid method for obtaining perfection for controllable electronic records including cryptocurrency, there is enormous incremental value for debtors, creditors, investors, receivers, trustees, researchers, cryptocurrency enthusiasts, and other third parties, in

⁵¹³ U.C.C. §§ 9-314, 12-105.

structuring a centralized national filing system that could be used to facilitate the treatment and classification of investors in cryptocurrency.
