

THE CRYPTO QUANDARY: IS BANKRUPTCY READY?

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ABSTRACT—As the United States grapples with how best to manage a global pandemic, bankruptcy courts are bracing for the inevitable fallout from COVID-19. As we saw in the wake of the 2008 financial crisis, hard-hit businesses will need to reorganize to adjust to new conditions, while out-of-work consumers will need debt relief options. But there will be a new twist for this impending wave of bankruptcies: how should bankruptcy courts deal with crypto assets like Bitcoin? This Essay argues that the rise of cryptocurrency investments over the last decade poses serious complications for the next round of consumer and business bankruptcies. Although legislative solutions may be necessary to adequately address these complications, at the very least, greater awareness of these issues will help ensure that courts and stakeholders are better prepared to address this looming crisis.

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INTRODUCTION

Though cryptocurrency is a relatively recent phenomenon, the academic literature is already replete with attempts to quantify the radical ways in which this new form of asset will uproot society.¹ Bankruptcy is one area that is beginning to bear out these predictions, as courts respond to new and complex questions relating to assets, liabilities, and contractual obligations involving cryptocurrencies.² Outside of the bankruptcy context,

¹ See, e.g., Asress Adimi Gikay, *Regulating Decentralized Cryptocurrencies Under Payment Services Law: Lessons from European Union Law*, 9 CASE W. RES. J.L. TECH. & INTERNET 1, 2 (2018) (“The only constant is the fast evolution of cryptocurrencies and businesses centered on them and the lack of robust legal framework regulating them in many areas.”); Sarah Jane Hughes & Stephen T. Middlebrook, *Advancing a Framework for Regulating Cryptocurrency Payments Intermediaries*, 32 YALE J. ON REG. 495, 495 (2015) (arguing that “the operation of wallets and exchanges requires a new commercial law that lays out rights and liabilities of cryptocurrency users in a robust and transparent fashion”); Jeanne L. Schroeder, *Bitcoin and the Uniform Commercial Code*, 24 U. MIAMI BUS. L. REV. 1, 6 (2016) (explaining the potential effects on poverty in the developing world if the blockchain proves to be “that holy grail of commerce—a payments system that would eliminate or minimize the roles of third party intermediaries”); Kevin V. Tu & Michael W. Meredith, *Rethinking Virtual Currency Regulation in the Bitcoin Age*, 90 WASH. L. REV. 271, 274 (2015) (noting “the unique challenges that face policymakers in creating a consistent, cohesive, and appropriately-scaled legal and regulatory framework for virtual currencies”); Lance Koonce, *The Wild, Distributed World: Get Ready for Radical Infrastructure Changes, from Blockchains to the Interplanetary File System to the Internet of Things*, DAVIS WRIGHT TREMAINE LLP (May 13, 2016), <https://www.dwt.com/the-wild-distributed-world-get-ready-for-radical-infrastructure-changes-from-blockchains-to-the-interplanetary-file-system-to-the-internet-of-things-05-13-2016> [<https://perma.cc/WH33-RJBP>] (predicting that the advent of blockchain “means that a wide range of industries stands to be disrupted and reinvented, and that the winds of change are going to blow in from every quadrant”).

² See, e.g., Devika Krishna Kumar, *Mt. Gox Founder Won’t Appear in U.S. for Questions About Bankruptcy Case*, REUTERS (Apr. 14, 2014, 9:12 PM), <https://www.reuters.com/article/us-bitcoin-mtgox/mt-gox-founder-wont-appear-in-u-s-for-questions-about-bankruptcy-case-idUSBREA3E02S20140415> [<https://perma.cc/QNT4-DUN4>] (discussing developments in *In re Mt. Gox Co.*, Ch. 15 No. 14-31229-sgj15 (Bankr. N.D. Tex. 2014) (Chapter 15 filing for the Japanese Bitcoin exchange that lost \$500 million to hackers)); Robin Sidel & Katy Stech, *Bitcoin Firm Files for Bankruptcy*, WALL ST. J. (Nov. 4, 2013, 7:04 PM), <https://www.wsj.com/articles/bitcoin-firm-files-for-bankruptcy-1383609802> [<https://perma.cc/ZY4P-BXVM>] (discussing developments in *In re CLI Holdings, Inc.*, Ch. 11 No. 13-19746-KAO (Bankr. W.D. Wash. 2013) (Chapter 11 filing of a business that was contractually obligated to mine and deliver Bitcoins to a counterparty)).

regulators have endeavored to design frameworks to address this new form of asset.³ However, so far, bankruptcy courts have yet to forge a clear framework for dealing with crypto assets.⁴

This Essay argues that a cogent and comprehensive approach to managing crypto assets⁵ in bankruptcy proceedings will be critical in the coming years as these assets will likely play an increasingly significant role in the bankruptcies of the future.⁶ The unique features of crypto assets also pose unique challenges for liquidations and reorganizations, including a heightened risk that debtors will use crypto holdings to shield assets from creditors; valuation problems that arise during liquidation or reorganization; the possibility that stakeholders may use bankruptcy opportunistically to exploit the value fluctuations in crypto-collateral;⁷ and questions about courts' authority to issue and enforce binding decisions involving digital assets that defy traditional jurisdictional frameworks.⁸

³ See generally Stephanie A. Lemchuk, *Virtual Whats?: Defining Virtual Currencies in the Face of Conflicting Regulatory Guidances*, 15 CARDOZO PUB. L. POL'Y & ETHICS J. 319 (2017); Tara Mandjee, *Bitcoin, Its Legal Classification and Its Regulatory Framework*, 15 J. BUS. & SEC. L. 157, 182 (2015) (arguing for three main approaches to effective government oversight: "A) measures to prevent financial crimes, B) taxation, and C) consumer protection, including data security issues").

⁴ See, e.g., Jhanile T. Smith, *Bitcoin Exchanges in Bankruptcy: The Square Peg in the Round Hole*, 35 AM. BANKR. INST. J., Dec. 2016, at 46–47 (identifying several unanswered questions arising from bankruptcies of crypto exchanges such as Mt. Gox); see also Adam J. Levitin, *Pandora's Digital Box: The Promise and Perils of Digital Wallets*, 166 U. PA. L. REV. 305, 311–12 (2018) (noting that courts are just beginning to grapple with the issues surrounding digital payment systems).

⁵ To avoid the suggestion that Bitcoin or other digital "currencies" resemble fiat currency, this Essay uses the terms "crypto assets," "crypto holdings," or "digital assets" instead of "cryptocurrency."

⁶ See, e.g., Ronald J. Mann, *Reliable Perfection of Security Interests in Crypto-Currency*, 21 SMU SCI. & TECH. L. REV. 159, 159 (2018) ("[A]ll signs suggest that, in the years to come, investments in one or another form of crypto-currency will become more routine and more substantial.>").

⁷ Increasing numbers of lenders are recognizing crypto holdings as possible collateral for loans. See generally Ashlyn L. Robinson, *Crypto-Collateral? Securing Loans with Digital Currency*, LAW.COM (Mar. 21, 2019, 7:00 AM), <https://www.law.com/legaltechnews/2019/03/21/crypto-collateral-securing-loans-with-digital-currency/?slreturn=20200014102547> [<https://perma.cc/8PA4-UHV7>] (examining the question of whether lenders should accept crypto assets as collateral for loans).

⁸ For the purposes of this Essay, I am setting aside a fourth, overarching problem: the issue of in rem jurisdiction for crypto assets. Some have argued that in rem jurisdiction should be tied to the location of the server on which transactional data is stored. See, e.g., Jason Mazzone, *Facebook's Afterlife*, 19 N.C. L. REV. 1643, 1676 (2012) (arguing in the context of probate law that states lack jurisdiction over the disposition of online social media accounts unless the servers are located in-state). Others have suggested that new jurisdictional frameworks may be necessary for digital assets. See, e.g., Howard Seife, *Cross-Border Professionals Respond to Chapter 15 Proposals*, 38 AM. BANKR. INST. J., Feb. 2019, at 8 ("Given

This Essay proceeds in three parts. Part I explains why the undefined nature of crypto assets creates confusion and uncertainty for stakeholders in the bankruptcy process. Part II sketches out the unique features of crypto assets that pose the greatest challenges for bankruptcy and insolvency systems, highlighting cases where these features have already played a disruptive role. Part III concludes with a call to action, arguing that a laissez-faire attitude would be detrimental to the orderly development of the market for crypto assets, and possibly to the U.S. bankruptcy system as a whole.

I. WHAT IS A CRYPTO ASSET AND WHY DOES IT MATTER FOR BANKRUPTCY?

Debates surrounding the proper legal characterization of crypto assets like Bitcoin have been a boon for the legal academy, the source of a seemingly endless stream of articles, notes, and comments over the past decade.⁹ Rather than summarizing the useful histories of regulatory efforts at the local, federal, and international levels provided by other scholars, this Essay will merely note that existing regulatory efforts—while substantial—nonetheless fall short of answering a critical question: What is a crypto asset?¹⁰

Meanwhile, bankruptcy courts have not even attempted to answer the question of what a crypto asset is. This Part argues that developing a clear answer to the question will be essential to the stakeholders in a bankruptcy that involves crypto assets. Not only does an answer give parties more clarity for the purposes of ex ante bargaining, but a definite framework would have the added benefit of making insolvency proceedings more efficient because

recent technological advances and the ‘virtual’ nature of certain businesses, a company incorporated in an offshore jurisdiction may not have a physical place of operations or otherwise engage in traditional business activities in its place of incorporation, thereby creating certain challenges for recognition of offshore foreign proceedings.”).

⁹ See, e.g., Evan Hewitt, *Bringing Continuity to Cryptocurrency: Commercial Law as a Guide to the Asset Categorization of Bitcoin*, 39 SEATTLE U. L. REV. 619 (2016) (surveying various federal and state approaches to regulation and proposing a new asset type: “electronic pseudo-currency”); Lemchuk, *supra* note 3, at 341–50 (surveying various approaches to domestic regulation and concluding that regulation as a commodity is most appropriate); Mandjee, *supra* note 3, at 182 (surveying domestic and international efforts to regulate Bitcoin); Mann, *supra* note 6, at 160–63 (discussing IRS, SEC, and Uniform Commercial Code (UCC) developments).

¹⁰ See, e.g., Mandjee, *supra* note 3, at 164–66 (describing the disagreements among regulators and courts about how to classify crypto assets such as Bitcoin); Mann, *supra* note 6, at 160–63 (explaining that crypto assets do not fit squarely into any existing framework and should therefore be considered “general intangibles” for the purposes of the UCC).

stakeholders would have more certainty about the outcome.¹¹ Section I.A begins by giving a brief overview of the U.S. bankruptcy system in order to introduce some of the key stakeholders and procedural mechanisms discussed in this Essay. Section I.B then examines a bankruptcy case that identified but did not resolve several critical issues surrounding the nature of crypto assets. The Section concludes by arguing that the ongoing lack of clarity surrounding these issues suggests that legislative intervention may be necessary.

A. A Brief Overview of the U.S. Bankruptcy System

This Section briefly introduces some of the key concepts and stakeholders in the United States bankruptcy system, in order to provide nonspecialist readers with some context for the common issues likely to arise with crypto assets. There are four types of bankruptcy discussed in this Essay: Chapter 7 liquidations for consumers and businesses,¹² Chapter 13 payment plans for consumers,¹³ Chapter 11 for business reorganizations,¹⁴ and Chapter 15 for cross-border cases.¹⁵ The person or entity filing for bankruptcy is the “debtor,”¹⁶ and the debtor initiates the bankruptcy process

¹¹ See, e.g., Jeffrey D. Osterman & Debra A. Dandeneau, *Bankruptcy and Modern Technology Transactions: An Old Bottle for New Wine*, 25 NORTON J. BANKR. L. & PRAC. 181, 197 (2016) (“[M]ismatches between bankruptcy law and current practices . . . divert time and attention during negotiation of deals, and all-too-often leave clients still uncertain as to the extent to which they will be protected in the future.”).

¹² 11 U.S.C. § 109(b) (2012) (eligibility for Chapter 7); *id.* §§ 701–27 (procedures specific to Chapter 7). Chapter 7 also prescribes more detailed procedures for a variety of specific types of liquidations, including stockbroker liquidation provisions, *id.* §§ 741–53, and commodity broker liquidation provisions, *id.* §§ 761–67. These subcategories of Chapter 7 might be implicated in a liquidation of a crypto exchange. However, as explained in Section I.B, the indeterminate nature of crypto assets creates challenges for predicting which, if any, of these procedures might apply in the event that a domestic crypto exchange files for bankruptcy.

¹³ *Id.* § 109(e) (eligibility for Chapter 13); *id.* §§ 1301–30 (procedures specific to Chapter 13).

¹⁴ *Id.* § 109(d) (eligibility for Chapter 11); *id.* §§ 1101–46 (procedures specific to Chapter 11). Individuals can also use Chapter 11 to reorganize. This use is most common for high-net-worth individuals who are not eligible for Chapter 7 or individuals with high debts who are not eligible for Chapter 13. This Essay refers briefly to the bankruptcy of the rap mogul Curtis James Jackson (also known as 50 Cent), who filed a Chapter 11 petition. See Zack Guzman, *50 Cent Files for Bankruptcy*, CNBC (July 13, 2015, 11:17 AM), <https://www.cnbc.com/2015/07/13/50-cent-files-for-bankruptcy.html> [<https://perma.cc/3272-NDNN>].

¹⁵ 11 U.S.C. § 1501 (purpose of Chapter 15); *id.* §§ 1502–32 (procedures specific to Chapter 15).

¹⁶ *Id.* § 101(13) (defining “debtor”).

by filing a petition,¹⁷ which is followed by detailed schedules that include lists of the debtor's assets and liabilities.¹⁸

A Chapter 7 bankruptcy is a relatively quick and streamlined process.¹⁹ For a business, a Chapter 7 filing means that the business is dissolving and using the bankruptcy to make an orderly distribution of its assets to the business's creditors.²⁰ For an individual consumer, a Chapter 7 bankruptcy allows the debtor to liquidate nonexempt assets for distribution to creditors.²¹ Although debtors can use exemptions to shield some assets from liquidation²² (such as a home or a car, at least up to a certain dollar value),²³ crypto assets are not covered by most exemptions and would therefore usually be liquidated in order to pay creditors.²⁴ Following this liquidation, the debtor receives a discharge which covers most types of unsecured consumer debts.²⁵

A key stakeholder in either type of Chapter 7 bankruptcy is the trustee, a private attorney who is appointed by the court to represent the collective

¹⁷ See *id.* § 301(a) (setting forth the method of commencing a voluntary bankruptcy case).

¹⁸ See *id.* § 521 (describing the schedules that a debtor must file after commencing a case).

¹⁹ See Teresa A. Sullivan, Elizabeth Warren & Jay Lawrence Westbrook, *The Persistence of Local Legal Culture: Twenty Years of Evidence from the Federal Bankruptcy Courts*, 17 HARV. J.L. & PUB. POL'Y 801, 815 (1994) (contrasting a consumer Chapter 7 bankruptcy, which "is typically completed in less than six months," with the longer and more cumbersome Chapter 13 process).

²⁰ See David S. Kupetz, *Assignment for the Benefit of Creditors: Effective Tool for Acquiring and Winding Up Distressed Businesses*, BUS. L. TODAY, Nov. 2015, at 1–2 (explaining that for distressed businesses that are winding down operations, Chapter 7 "provides a procedure for the orderly liquidation of the assets of the debtor and the ultimate payment of creditors in the order of priority set forth in the U.S. Bankruptcy Code").

²¹ See Angela Littwin, *The Affordability Paradox: How Consumer Bankruptcy's Greatest Weakness May Account for Its Surprising Success*, 52 WM. & MARY L. REV. 1933, 1943 (2011) ("In theory, the 'deal' provided by Chapter 7 is that the debtor will surrender all nonexempt assets and, in exchange, will receive a 'fresh start,' free of most unsecured debt.").

²² See 11 U.S.C. § 522(b) (process for claiming exemptions under either federal or state law).

²³ See *id.* § 522(d)(1) (setting forth a federal exemption of up to \$15,000 for equity in real property); *id.* § 522(d)(2) (setting forth a federal exemption of up to \$2,400 of value in a motor vehicle). These federal dollar limits are adjusted every three years. See *id.* § 104(a).

²⁴ The federal exemptions include a "wild card exemption" that can be applied to any asset, up to a certain dollar value. See *id.* § 522(d)(5) (allowing a debtor who is using the federal exemptions to designate as exempt up to \$800 in any property, plus up to \$7,500 of any unused portion of the real property exemption in 11 U.S.C. § 522(d)(1)). If eligible for a wildcard exemption, a debtor could have a way to shield at least some crypto assets from liquidation.

²⁵ See *id.* § 727 (describing the discharge process). Several types of debt are nondischargeable. See *id.* § 523. Common examples of nondischargeable debt include domestic support obligations, most taxes, and student loans. The latter category is only dischargeable upon a showing of "undue hardship." See *id.* § 523(a)(8).

interests of the creditors.²⁶ The trustee's primary goal is to identify nonexempt assets that are available for liquidation, for the benefit of creditors, and then sell them.²⁷ Because crypto assets are not generally exempt, a trustee can be expected to liquidate any crypto assets that a debtor has disclosed in her schedules.²⁸

Chapter 7 trustees also have various mechanisms at their disposal to help them recover assets that a business or consumer debtor may have transferred in the months, and sometimes years, leading up to bankruptcy.²⁹ These mechanisms are generally referred to as the trustee's avoiding powers.³⁰ Finally, the Chapter 7 trustee is also tasked with determining whether a debtor has properly disclosed all assets, including crypto assets, and conducting further investigation if there are doubts about whether a debtor has made a complete and accurate disclosure.³¹ A debtor who fails to completely and accurately fill out the required schedules can be denied a discharge.³² The denial of a discharge then renders nondischargeable all of the debt that could have been discharged in the Chapter 7 bankruptcy.³³ Thus, a debtor's failure to accurately disclose crypto assets in the bankruptcy schedules could make the debtor worse off than if the debtor had never filed for bankruptcy at all.

Chapter 13 bankruptcy is also an option for consumers, but it operates differently from Chapter 7 liquidations.³⁴ In Chapter 13, a debtor develops a long-term³⁵ payment plan and commits a portion of his or her future wages

²⁶ *Id.* § 701 (provisions for appointment of trustee in Chapter 7); *id.* § 704 (duties of Chapter 7 trustee).

²⁷ *See id.* § 704(a)(1).

²⁸ *See supra* text accompanying notes 21–24.

²⁹ 11 U.S.C. §§ 544–50.

³⁰ *See generally* Richard B. Levin, *An Introduction to the Trustee's Avoiding Powers*, 53 AM. BANKR. L.J. 173 (1979) (providing an overview of the tools available to the trustee under the Bankruptcy Code).

³¹ *See* 11 U.S.C. § 704(a)(4); *see also id.* §§ 341(d), 343 (requiring the trustee to examine the debtor under oath and permitting other stakeholders to conduct an examination as well). An additional stakeholder, known colloquially as the U.S. Trustee's Office, also plays a broader oversight role in the bankruptcy process and provides an added layer of fraud detection. 28 U.S.C. § 586 (2012).

³² 11 U.S.C. § 727(a)(1)–(5).

³³ *Id.* § 523(a)(10).

³⁴ Sullivan, Warren & Westbrook, *supra* note 19, at 814–17 (explaining the “different legal bargain” made by Chapter 13 debtors).

³⁵ The Chapter 13 payment plan will either be three years or five years depending on debtor characteristics that are not significant here. *See* 11 U.S.C. § 1325(b)(4).

toward the plan.³⁶ After the plan is confirmed and fully executed, the debtor receives a discharge of most of the remaining unsecured consumer debts.³⁷ Unlike a Chapter 7 debtor, who must give up nonexempt assets, the Chapter 13 debtor can typically opt to keep his or her assets.³⁸ Thus, a Chapter 13 debtor could ordinarily file for bankruptcy without putting crypto assets at risk. However, Chapter 13 becomes significant for debtors that have used their crypto assets as security for loans, because a Chapter 13 debtor can ask the court to reduce or eliminate the liens that a secured creditor has on the debtor's assets.³⁹ The possibility that debtors will use these lien-stripping provisions opportunistically will be discussed in Section II.C.

The two remaining types of bankruptcies are discussed only briefly in this Essay and will be given similarly brief treatment here. Chapter 11 reorganization is used primarily (but not exclusively) by businesses⁴⁰ and involves both a plan⁴¹ and a discharge from remaining debt.⁴² Unlike a Chapter 13 debtor, who is expected to complete plan payments before receiving a discharge,⁴³ the Chapter 11 debtor obtains a discharge of remaining debt as soon as the plan is confirmed.⁴⁴ Chapter 11 gives debtors a variety of tools to implement an effective reorganization,⁴⁵ including modifying liens.⁴⁶ In addition, most Chapter 11 cases allow the debtor to exercise the same rights to recover assets as the trustee exercises in a Chapter 7 case.⁴⁷ Finally, Chapter 15 involves cross-border insolvencies for entities

³⁶ *Id.* § 1322(a)(1).

³⁷ *Id.* § 1328(a). Debtors who have not completed their plan payments “due to circumstances for which the debtor should not justly be held accountable” may be eligible for a hardship discharge. *Id.* § 1328(b)(1). Chapter 13 discharges are also subject to most, but not all, of the nondischargeability provisions discussed in note 25. Compare *id.* § 1328(a)(1)–(4), with *id.* § 523.

³⁸ Sullivan, Warren & Westbrook, *supra* note 19, at 814 (explaining that Chapter 13 “debtors keep all their property in return for an agreement to pay their trustees” a portion of their future income).

³⁹ 11 U.S.C. § 1322(b)(2).

⁴⁰ See *supra* note 14.

⁴¹ 11 U.S.C. §§ 1121–29 (describing the procedures for preparing and confirming a Chapter 11 plan).

⁴² *Id.* § 1141(d).

⁴³ *Id.* § 1328(a).

⁴⁴ *Id.* § 1141(d)(1)(A).

⁴⁵ See *id.* § 1123(a)(5).

⁴⁶ *Id.* § 1123(a)(5)(E). Lien modification is generally subject to creditor approval, see *id.* § 1126, but may be authorized even over the objections of the affected lienholder under certain circumstances, known as cram-down. See generally Charles J. Tabb, *Credit Bidding, Security, and the Obsolescence of Chapter 11*, 2013 U. ILL. L. REV. 103, 113 (explaining how the cram-down process affects secured lenders).

⁴⁷ See 11 U.S.C. § 1101(1) (defining “debtor in possession”); *id.* § 1107(a) (giving the debtor in possession most of the same rights as a trustee).

that need to resolve issues surrounding assets and liabilities in various jurisdictions with different insolvency systems. Typically, a debtor will file its main proceeding in the locale where its main business operates,⁴⁸ and then open ancillary proceedings in other locales,⁴⁹ with the expectation that those ancillary fora will defer to the decisions made in the main proceeding.⁵⁰

B. In re HashFast Technologies LLC: A Missed Opportunity?

This Section examines an early opportunity for the bankruptcy system to at least start developing an analytical framework. This opportunity arose six years ago during a corporate liquidation filed in the Northern District of California: *In re HashFast Technologies LLC*.⁵¹ HashFast, a Bitcoin mining technology company, had pioneered a technology that purported to allow Bitcoin miners to outpace their competitors.⁵² HashFast enlisted the help of Dr. Marc Lowe, an early proponent of Bitcoin who had a large online following, to help market the technology.⁵³ In exchange for his assistance, HashFast promised to pay Dr. Lowe 10% of the proceeds of the first set of sales, which amounted to \$308,000.⁵⁴ But instead of paying this commission in U.S. currency, HashFast paid Dr. Lowe using 3,000 bitcoins.⁵⁵ When HashFast later found itself in bankruptcy court,⁵⁶ the Chapter 11 trustee

⁴⁸ See *id.* § 1502(4) (defining a “foreign main proceeding”).

⁴⁹ See *id.* § 1502(5) (defining a “foreign nonmain proceeding”).

⁵⁰ See *id.* §§ 1515–21 (describing the process for obtaining recognition of the outcome of a foreign main proceeding).

⁵¹ *In re HashFast Techs. LLC*, Ch. 11 No. 14-30725 (Bankr. N.D. Cal. 2014).

⁵² See Declaration of Defendant in Opposition to Partial Summary Judgment, ¶¶ 5–12, Kasolas v. Lowe (*In re HashFast Techs. LLC*), Ch. 11 Case No. 14-30725, Adv. No. 15-03011 (Bankr. N.D. Cal. Feb. 5, 2016).

⁵³ See *id.*

⁵⁴ Brief in Opposition to Partial Summary Judgment at 3, Kasolas v. Lowe (*In re HashFast Techs. LLC*), Ch. 11 Case No. 14-30725, Adv. No. 15-03011 (Bankr. N.D. Cal. Feb. 5, 2016).

⁵⁵ *Id.* at 3–4.

⁵⁶ HashFast was initially the subject of a petition for involuntary bankruptcy under Chapter 7. See Involuntary Petition filed by creditors Koi Systems, UBE Enterprises, Timothy Lam, Edward Hammond, Grant Pederson, *In re HashFast Techs. LLC*, Ch. 7 No. 14-30725 (Bankr. N.D. Cal. May 9, 2014). The debtor successfully converted the case to a voluntary Chapter 11 reorganization. See Motion to Convert to Chapter 11, *In re HashFast Techs. LLC*, Ch. 7 No. 14-30725 (Bankr. N.D. Cal. June 3, 2014); Order Granting Motion to Convert to Chapter 11, *In re HashFast Techs. LLC*, Ch. 7 No. 14-30725 (Bankr. N.D. Cal. June 4, 2014). Eventually, the bankruptcy court approved HashFast’s Chapter 11 liquidation plan and appointed Michael Kasolas as the liquidation trustee. See Order Approving on a Final Basis and Confirming the Consolidated Plan of Liquidation, *In re HashFast Techs. LLC*, Ch. 11 No. 14-30725 (Bankr. N.D. Cal. June 25, 2015).

charged with liquidating HashFast sought to avoid, or undo, the payment as a fraudulent transfer.⁵⁷ By that time, Dr. Lowe's 3,000 bitcoins had more than tripled in value to over \$1 million. Accordingly, the trustee sought to use the tools available in the bankruptcy code to recover either the Bitcoin itself, or the current value of the Bitcoin.⁵⁸ In opposing the trustee's avoidance action, Dr. Lowe asked the bankruptcy court to treat the Bitcoin as currency, thereby limiting the trustee's recovery to a maximum of approximately \$300,000.⁵⁹

During the summary judgment briefing, both parties harnessed available case law and regulatory frameworks to support their competing positions. Specifically, the trustee argued that Bitcoin should be treated as "a commodity, like gold, silver or pork bellies, that fluctuates in price based upon market conditions."⁶⁰ As supporting authority, the trustee cited a September 17, 2015, order from the Commodity Futures Trading Commission (CFTC) requiring that virtual currencies be regulated under the Commodities Exchange Act.⁶¹ The trustee argued that his position was further supported by 2014 IRS guidance, which stated that Bitcoin would be treated as property for the purpose of capital gains tax.⁶²

Meanwhile, to oppose the trustee's motion, Dr. Lowe cited the Treasury Department's Financial Crimes Enforcement Network (FinCEN), which had issued the first federal guidance regarding cryptocurrency in early 2013.⁶³ FinCEN had advised that because cryptocurrency mainly behaves like regular currency, it should be regulated as such.⁶⁴ Dr. Lowe also pointed out

⁵⁷ HashFast originally filed the motion to avoid the payment in its capacity as debtor in possession. See Adversary Complaint, HashFast v. Lowe (*In re* HashFast Techs. LLC), Ch. 11 No. 14-30725 (Bankr. N.D. Cal. Feb. 17, 2015). After HashFast's liquidation plan was confirmed, the liquidation trustee took over this adversary proceeding. See Motion for Partial Summary Judgment at 1, HashFast v. Lowe (*In re* HashFast Techs. LLC), Ch. 11 Case No. 14-30725, Adv. No. 15-03011 (Bankr. N.D. Cal. Jan. 22, 2016).

⁵⁸ Under the trustee's avoiding powers, discussed in *supra* note 17 and surrounding text, the trustee typically has the option of recovering either the value of property or the property itself, depending on which option is more beneficial to creditors. See 11 U.S.C. § 550 (2012).

⁵⁹ Brief in Opposition to Partial Summary Judgment, *supra* note 54, at 14.

⁶⁰ Brief in Support of Partial Summary Judgment at 2, Kasolas v. Lowe (*In re* HashFast Techs. LLC), Ch. 11 No. 14-30725, Adv. No. 15-03011 (Bankr. N.D. Cal. Jan. 22, 2016).

⁶¹ *Id.* at 4–5.

⁶² *Id.* at 5.

⁶³ Brief in Opposition to Partial Summary Judgment, *supra* note 54, at 5.

⁶⁴ See Dep't of the Treasury, Fin. Crimes Enf't Network, Application of FinCEN's Regulations to Virtual Currency Mining Operations (Jan. 30, 2014), <https://www.fincen.gov/resources/statutes->

that the Consumer Financial Protection Bureau had described Bitcoin as “a kind of electronic money” in guidance issued in August 2014.⁶⁵ Finally, Dr. Lowe argued that court briefs filed by the Securities and Exchange Commission (SEC) in a separate case, along with various court opinions in money laundering cases involving crypto assets, lent further authority to the view that Bitcoin should be treated the same way as currency.⁶⁶

With such a well-briefed motion, the HashFast case presented a prime opportunity for the bankruptcy court to take a critical first step toward developing a working approach to crypto assets in bankruptcy. Instead, the court only addressed Dr. Lowe’s argument that crypto assets should be treated as the equivalent of U.S. dollars.⁶⁷ In a terse, two-page order rejecting this aspect of Dr. Lowe’s argument, the court stated that there was no need to go beyond this narrow ruling because the trustee had not yet established his claim for avoidance.⁶⁸ After determining that Bitcoin was not the equivalent of U.S. currency, the court deferred further consideration of what exactly Bitcoin was, and what the trustee’s rights to the Bitcoin might be. The court explained that it was unnecessary to address these further issues until the trustee had first established that HashFast’s transfer was fraudulent.⁶⁹

regulations/administrative-rulings/application-fincens-regulations-virtual-0 [https://perma.cc/4NL7-58YN] (“[FinCEN’s] guidance makes clear that an administrator or exchanger of convertible virtual currencies that (1) accepts and transmits a convertible virtual currency or (2) buys or sells convertible virtual currency in exchange for currency of legal tender or another convertible virtual currency for any reason (including when intermediating between a user and a seller of goods or services the user is purchasing on the user’s behalf) is a money transmitter under FinCEN’s regulations . . .”).

⁶⁵ Brief in Opposition to Partial Summary Judgment, *supra* note 54, at 6; *see also* CONSUMER FIN. PROT. BUREAU, RISKS TO CONSUMERS POSED BY VIRTUAL CURRENCIES (2014), https://files.consumerfinance.gov/f/201408_cfpb_consumer-advisory_virtual-currencies.pdf [https://perma.cc/PG5Q-AJA3].

⁶⁶ Brief in Opposition to Partial Summary Judgment, *supra* note 54, at 5–6 (pointing to the government’s argument in another case that Bitcoin should be treated as money for the purposes of the SEC’s enforcement action against a Ponzi scheme); *see also id.* at 8 (citing the court’s prior holding that Bitcoin was a “decentralized digital currency”); *id.* at 7–8 (citing the holding that Bitcoin was a monetary instrument for the purposes of the federal money laundering statutes because holding otherwise would “be nonsensical”).

⁶⁷ Order on Motion for Partial Summary Judgment at 1, HashFast v. Lowe, (*In re* HashFast Techs. LLC), Ch. 11 No. 14-30725, Adv. No. 15-03011 (Bankr. N.D. Cal. Feb. 23, 2016).

⁶⁸ *Id.* at 1–2.

⁶⁹ *Id.* at 2.

That day never came because the parties opted to settle rather than continue to litigate over an uncertain benefit or loss.⁷⁰ Indeed, even four years later, these issues remain largely uncharted territory for bankruptcy courts. This lack of clarity over the nature of crypto assets and a trustee's recovery rights risks leaving the bankruptcy system in limbo because trustees are unable to meaningfully evaluate whether to pursue avoidance actions in situations when a crypto asset has dramatically increased in value after leaving a debtor's hands. Although the payoff from a successful avoidance action would be significant, both for the trustee and for creditors, trustees must balance the possibility of a large recovery (which would likely be appealed) against the risk of walking away with nothing to show for their litigation efforts. At this point, congressional intervention may be the likeliest way to obtain clarity regarding these issues.

II. CRYPTO ASSETS ARE NOT LIKE ANY OTHER ASSETS

As Part I illustrates, no clear framework has yet emerged for how to characterize crypto assets in bankruptcy. This Part argues that efforts to force crypto assets into an existing category or framework is not an ideal solution because existing frameworks are inadequate to address the unique challenges that these digital assets pose to bankruptcy and insolvency systems. There are four features that make these assets particularly challenging. First, crypto assets are typically bought and sold through pseudonymous⁷¹ transactions, which pose challenges for determining ownership as well as obtaining key details regarding transfers. Second, crypto assets that are traded on exchanges⁷² present a false facade of liquidity, which adds a potentially unexpected layer of complexity to court-ordered asset sales. Third, crypto assets are highly volatile, which creates a heightened risk of opportunistic behavior. Fourth, to the extent that crypto assets are digital constructions that exist "on the cloud" rather than in physical form, these assets defy traditional jurisdictional characterizations. Each of these features is described in more detail below.

⁷⁰ See Stipulation to Dismiss Adversary Proceeding with Prejudice, *Kasolas v. Lowe*, (*In re HashFast Techs. LLC*), Ch. 11 No. 14-30725, Adv. No. 15-03011 (Bankr. N.D. Cal. June 17, 2016).

⁷¹ "Pseudonymous" may be a better term than "anonymous," because although the blockchain does not reveal the name of a buyer or seller, the blockchain does retain other identifying information. See Nathaniel Popper, *DIGITAL GOLD: BITCOIN AND THE INSIDE STORY OF THE MISFITS AND MILLIONAIRES TRYING TO REINVENT MONEY* 84 (2015).

⁷² See *infra* text accompanying notes 131–135.

A. *Opportunities for Anonymous Transactions*

Crypto assets allow for a greater level of anonymity than ordinary assets, at least in theory.⁷³ Although the names of the purchasers and sellers of crypto assets are generally not associated with specific transactions, the blockchain stores other identifying information about each transaction.⁷⁴ To understand this aspect of crypto assets, it is helpful to consider the context for the creation of one of the most prominent crypto assets: Bitcoin. Bitcoin was born out of an economic libertarianism that skirted the boundaries of anarchy,⁷⁵ motivated in large part by the desire to create a means of storing and transferring wealth that would be less easily tracked and controlled by centralized authorities.⁷⁶ Indeed, it is no coincidence that Bitcoin's early prominence paralleled the development of Silk Road, a website that enabled all manner of illicit transactions, from drug deals to human trafficking.⁷⁷ The developer of Silk Road, Ross Ulbricht, recognized early on that Bitcoin solved a critical problem for those seeking to use the internet for illegal transactions.⁷⁸ While other types of electronic payment systems required buyers and sellers to use their names, the pseudonymous nature of blockchain technology enabled buyers and sellers to transact business with nothing more than a post office box.⁷⁹

⁷³ See Popper, *supra* note 71, at 84 (“Bitcoin was actually less anonymous than most people believed, owing to the record of all transactions on the blockchain.”). Other crypto assets promise greater levels of anonymity than Bitcoin. See Mandjee, *supra* note 3, at 163–64 (describing Darkcoin, a Bitcoin alternative that offers “increased anonymity”).

⁷⁴ See generally Popper, *supra* note 71 (providing an in-depth story of Bitcoin and how digital currencies work).

⁷⁵ See *id.* at 110–12 (describing Bitcoin's well-timed introduction against the backdrop of Occupy Wall Street).

⁷⁶ See 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> [<https://perma.cc/C743-36WR>] (explaining that Canada's leading crypto exchange, Quadriga, “trade[d] tens of millions of dollars worth of Bitcoin with accounts connected to known Ponzi schemes and illegal marketplaces”); see also Mandjee, *supra* note 3, at 183 (“[G]iven the potential abuse of virtual currencies and the increasing recognition that they were used to facilitate illicit transactions and to launder criminal proceeds . . . FinCEN provided guidelines on ‘virtual currencies,’ subjecting them to the regulations applicable to money transmitters.”).

⁷⁷ See Popper, *supra* note 71, at 167 (“[As of 2012,] the most successful entrepreneur in the Bitcoin world was . . . Ross Ulbricht, the operator of the world's largest drug bazaar.”); *id.* at 119 (noting that the Silk Road “provid[ed] a good showcase for how anonymous markets and decentralized currencies could work in practice”); see also Margaret Ryznar, *The Future of Bitcoin Futures*, 56 HOUS. L. REV. 539, 554 (2019) (“[B]itcoin's background [is] an anonymous cryptocurrency for criminals.”).

⁷⁸ See Popper, *supra* note 71, at 71.

⁷⁹ *Id.*

Similarly, it is probably no coincidence that Bitcoin's value dropped more than 20% in the two hours following the FBI's bust of Silk Road.⁸⁰ In the panicked words of one Bitcoin forum poster: "I just hope that mainstream adoption has surpassed the adoption of criminals and drug dealers. LOL! Otherwise its [sic] time to SELL! SELL! SELL!"⁸¹ Although mainstream adoption did ultimately keep Bitcoin values high (thanks to opportunistic investors who had been looking for the right moment to buy),⁸² the Silk Road saga highlights the ways in which the relative anonymity of crypto assets can facilitate illegal activity.⁸³

Tax authorities have begun to recognize the challenges posed by crypto assets that lack easy traceability, particularly the risk that these assets will be used to shield wealth from taxation.⁸⁴ Although international consensus about how to properly tax cryptocurrencies appears to be a distant prospect,⁸⁵ domestically, the tax issues are much clearer. In 2014, the IRS opted to treat Bitcoin as property for the purposes of calculating capital gains and gross income.⁸⁶ Perhaps in an attempt to induce voluntary compliance with its newly announced stance, the IRS also created a safe harbor that would allow Bitcoin investors to pay back taxes without penalty.⁸⁷ Investors who had reasonable cause for not previously paying taxes on Bitcoin had the opportunity to pay back their taxes to the IRS, but those who failed to take

⁸⁰ *Bitcoin Value Drops After FBI Shuts Silk Road Drugs Site*, BBC (Oct. 3, 2013), <https://www.bbc.com/news/technology-24381847> [<https://perma.cc/Y6C9-2993>] ("The going rate for the virtual currency dropped from more than \$140 . . . to around \$110 . . .").

⁸¹ See Popper, *supra* note 71, at 250 (noting that the market price of Bitcoin dropped from \$140 to \$110 within two hours of the FBI's seizure of the Silk Road website).

⁸² See *id.* at 250–51 (explaining that a "surge of buying" from investors including the Winklevoss twins helped Bitcoin to rebound within a few days).

⁸³ Despite Ulbricht's efforts to remain anonymous, he was eventually apprehended at a local branch of the San Francisco Public Library while using their free Wi-Fi to log into his Silk Road account. See Popper, *supra* note 71, at 246–48. During his subsequent criminal trial, Ulbricht argued that he could not be convicted of money laundering because Bitcoin was not a "monetary instrument[]" for the purposes of federal law. See *United States v. Ulbricht*, 31 F. Supp. 3d 540, 569 (S.D.N.Y. 2014). The district court rejected this argument as "nonsensical," reasoning that "the only value for Bitcoin lies in its ability to pay for things." *Id.* at 570. Dr. Lowe subsequently cited this decision in his effort to convince the bankruptcy court that his Bitcoin was the equivalent of U.S. currency. See *supra* notes 27–40 and accompanying text.

⁸⁴ See Mandjee, *supra* note 3, at 187–88.

⁸⁵ See *id.* at 189–92 (comparing the IRS's treatment of Bitcoin as property in the United States with the treatment of Bitcoin in the tax systems of Canada, Singapore, Germany, and the U.K.).

⁸⁶ See *id.* at 189.

⁸⁷ See *id.* at 189–90 (indicating that IRS rules provide penalty relief for persons who can prove reasonable cause for non-filing).

advantage of this safe harbor were warned that they were “open[ing] themselves to penalties, interest and possible fraud prosecution.”⁸⁸ Then, in late 2019, the IRS added a question to Schedule 1 of its tax forms, asking filers whether “[a]t any time during 2019, did you receive, sell, send, exchange, or otherwise acquire any financial interest in any virtual currency?”⁸⁹ Likewise, some state regulators have also taken steps to facilitate the collection of tax revenues from crypto assets.⁹⁰ Although the ultimate success of these efforts remains to be seen, these efforts show that tax regulators are attempting to be proactive about addressing the issue of crypto assets.

The relative anonymity of crypto investments poses similar challenges for bankruptcy or insolvency systems for three closely related reasons. First, the speculative nature of crypto assets can create a gambling mentality, with some ordinary consumers going deeply into debt in the hopes of a big win. For example, one early Bitcoin evangelizer went deeply into credit card debt in order to increase his holdings.⁹¹ But given the boom-and-bust nature of Bitcoin and other crypto assets, investors who get the timing wrong stand to lose significant sums of money.⁹² Indeed, almost everyone who invested over the nine-month period during late 2017 or early 2018 saw their holdings lose value.⁹³ If those investments were made with borrowed funds, then these losses could ultimately lead to a surge in bankruptcy filings. Second, to the extent that crypto assets create opportunities for pseudonymous investment, debtors may be able to use these vehicles in order to shield assets from creditors. And third, the pseudonymous nature of crypto assets complicates

⁸⁸ *Id.* at 189 (quoted source omitted).

⁸⁹ See Darla Mercado, *The IRS Has a New Tax Form Out and Wants to Know About Your Cryptocurrency*, CNBC (Dec. 6, 2019, 1:06 PM), <https://www.cnbc.com/2019/12/06/the-irs-has-a-new-tax-form-and-wants-to-know-about-your-cryptocurrency.html> [<https://perma.cc/K7J9-KRVJ>].

⁹⁰ For example, New York requires crypto investors to obtain a “BitLicense” that facilitates recordkeeping and taxation. *BitLicense Frequently Asked Questions*, N.Y. ST. DEP’T FIN. SERVS., https://www.dfs.ny.gov/apps_and_licensing/virtual_currency_businesses/bitlicense_faqs [<https://perma.cc/68YA-RZDT>].

⁹¹ See Popper, *supra* note 71, at 108 (introducing early Bitcoin evangelizer Erik Voorhees, who opted to go deeply into credit card debt in order to devote himself full-time to developing the crypto market).

⁹² See, e.g., Nathaniel Popper & Su-Hyun Lee, *After the Bitcoin Boom: Hard Lessons for Cryptocurrency Investors*, N.Y. TIMES (Aug. 20, 2018), <https://www.nytimes.com/2018/08/20/technology/cryptocurrency-investor-losses.html> [<https://perma.cc/2MAC-ETQF>] (describing one investor whose \$23,000 investment had shrunk to \$4,000 and another whose \$100,000 stake had dropped by 70%).

⁹³ *Id.* (“Almost all of the new customers on Coinbase and Square would be in the red if they bought cryptocurrencies at almost any point over the last nine months and held on to them.”).

trustees' methods for avoiding preferences by making it challenging for them to prove when a crypto transaction occurred or to whom the assets were transferred.

Concerns that debtors can use crypto holdings to conceal assets from creditors during a bankruptcy proceeding are not merely hypothetical. For example, in the case of *In re Schultz*, the debtor failed to disclose \$30,000 worth of crypto assets.⁹⁴ Creditors have also begun to alert bankruptcy courts to the possibility that debtors may be exploiting the bankruptcy system to obtain a discharge of debts while shielding crypto assets from creditors.⁹⁵

One ultimately unsuccessful example of this creditor warning occurred in the case of *In re Peeples*.⁹⁶ The debtors in this case had been running a coin dealership⁹⁷ in order to provide for their family of seven.⁹⁸ After the debtors filed for bankruptcy, the family's landlords attempted to have their unpaid rental debts of close to \$50,000 declared nondischargeable.⁹⁹ In the alternative, the landlords asked the court to deny the debtors a discharge altogether.¹⁰⁰ Among other things, the landlords argued that the debtors had failed to account for close to \$30,000 in proceeds from their coin dealership.¹⁰¹ The bankruptcy court found that the debtors' testimony about their business's lack of profit from the coin dealership was not credible and that the debtors had failed to provide satisfactory business records to explain their transfers.¹⁰² Nonetheless, the court described the creditors' suggestion of debtor malfeasance as "nothing more than a tempest in a teapot."¹⁰³ Accordingly, the court concluded that the landlords had not carried their burden of establishing that the debtors should be denied a discharge.¹⁰⁴

⁹⁴ *Schultz v. Keyword Rockstar, Inc. (In re Schultz)*, Ch. 7 Case No. 17-01568-LA7, Adv. No. 17-90126-LA, 2019 WL 2385186, at *2 (B.A.P. 9th Cir. June 4, 2019).

⁹⁵ See, e.g., Scott Neuman, *Rapper 50 Cent, Who Bragged About Owning Bitcoin, Now Denies It*, NPR (Feb. 27, 2018, 5:09 AM), <https://www.npr.org/sections/thetwo-way/2018/02/27/589052493/rapper-50-cent-who-bragged-about-owning-bitcoin-now-denies-it> [<https://perma.cc/49QS-HNT3>].

⁹⁶ 579 B.R. 254 (Bankr. D. Utah 2017).

⁹⁷ *Id.* at 264–65.

⁹⁸ *Id.* at 261.

⁹⁹ *Id.* at 259.

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 280.

¹⁰² *Id.* at 265.

¹⁰³ *Id.* at 259.

¹⁰⁴ *Id.*

On appeal, the landlord creditors pointed out that the missing funds may have been invested in Bitcoin and could now be worth millions of dollars.¹⁰⁵ However, the Tenth Circuit Bankruptcy Appellate Panel (BAP) rejected this argument as unsupported speculation.¹⁰⁶ In a terse opinion, the Tenth Circuit Court of Appeals acknowledged that the bankruptcy court had erred in concluding that the debtors had satisfied their obligation to provide sufficient records to account for the missing funds,¹⁰⁷ but nonetheless affirmed the debtors' discharge, concluding that the bankruptcy court did not abuse its discretion in deciding that the debtors "were not the 'worst actors' who deserved the 'extreme step' of being denied a discharge."¹⁰⁸

The debtor-friendly decision in *Peeples* is unsurprising as the case presented only a hypothetical risk that the debtors had funneled assets into crypto holdings. However, the case highlights the challenges that face a creditor who suspects that a debtor has undisclosed crypto assets. Precisely because it is so difficult to prove that debtors have crypto holdings, we might expect courts to respond more harshly when a debtor is actually caught red-handed in failing to disclose these assets. But this expectation does not yet match reality. Thus far, bankruptcy courts appear willing to indulge a debtor's nondisclosure of crypto assets as an oversight that can be corrected rather than treating it as a serious abuse of the bankruptcy process.

A prime example of bankruptcy courts' debtor-friendly approach is the Ninth Circuit BAP decision in *In re Schultz*.¹⁰⁹ The debtor was a personal coach who had created a number of educational videos and webinars.¹¹⁰ After a series of disruptive life events—a fallout with his business partners, an extended family court battle, and a house fire—the debtor filed for bankruptcy, both individually and for his business.¹¹¹ However, the debtor was caught making two significant mistakes in his schedules. First, the debtor failed to disclose assets, including most significantly a \$30,000

¹⁰⁵ *In re Peeples*, Ch. 7 Case No. 14-23970, Adv. No. 14-2236, 2018 WL 3424680, at *7 (B.A.P. 10th Cir. July 16, 2018).

¹⁰⁶ *Id.*

¹⁰⁷ *In re Peeples*, 779 F. App'x 561, 566 (10th Cir. 2019).

¹⁰⁸ *Id.* at 567–68.

¹⁰⁹ Ch. 7 Case No. 17-01568-LA7, Adv. No. 17-90126-LA, 2019 WL 2385186 (B.A.P. 9th Cir. June 4, 2019).

¹¹⁰ *Id.* at *1.

¹¹¹ *Id.* at *1–2. Schultz filed a Chapter 7 petition on his own behalf and filed a Chapter 7 petition on behalf of his business, JWS Publishing, Inc., a week later. *Id.*

Bitcoin account.¹¹² Second, the debtor had valued his email contact list at \$700, despite having bragged in a webinar that his customer list was worth \$1 million.¹¹³ The debtor's former business partners—now creditors—asked the court to deny his discharge, arguing that these inaccurate disclosures represented a false oath in violation of the bankruptcy code.¹¹⁴ In opposing this motion, the debtor argued that he had been in a zombie-like state when he filed his petitions and that he had relied on his accountant as well as advice from a friend.¹¹⁵

After hearing testimony from the debtor, as well as the debtor's accountant and therapist, the bankruptcy court rejected most of the creditors' arguments in favor of denial of discharge regarding the Bitcoin account.¹¹⁶ Specifically, the court found that most of the debtor's false oaths were not intentional, but rather a result of "forgetfulness, lack of focus, [and] inability to connect the dots."¹¹⁷ However, the bankruptcy court reached the opposite conclusion with respect to the low valuation that the debtor had assigned to his email list. The court explained that the fact that the debtor had intentionally chosen a low valuation was unreasonable and an act of "commission rather than [of] omission."¹¹⁸ Accordingly, the bankruptcy court concluded that this false oath was a proper basis for denying the debtor a discharge.

On appeal, the Ninth Circuit BAP reversed the denial of discharge.¹¹⁹ In addition to discrediting testimony regarding the potentially high value of the email list,¹²⁰ the panel focused on the discrepancy between the court's two findings regarding intent. The panel explained that there was no basis in the record to reconcile the finding that the debtor did not knowingly fail to disclose the Bitcoin account with the finding that the debtor had knowingly

¹¹² *Id.*

¹¹³ *Id.* at *3.

¹¹⁴ *See id.* at *6. The creditors also moved for denial of discharge under § 727(a)(5) for inadequate record keeping but the bankruptcy court rejected this argument. *Id.* at *5. On appeal, the Ninth Circuit BAP affirmed this aspect of the bankruptcy court's decision. *Id.* at *10–11.

¹¹⁵ *Id.* at *4.

¹¹⁶ *Id.* at *4–6.

¹¹⁷ *Id.* at *6.

¹¹⁸ *Id.*

¹¹⁹ *Id.* at *11.

¹²⁰ *Id.* at *8–9.

and fraudulently undervalued the email list.¹²¹ Accordingly, the panel concluded that the latter finding “was implausible and clearly erroneous.”¹²²

The pro-debtor decisions in *Peeples* and *Schultz* reflect bankruptcy courts’ nonchalant attitudes toward the risk that a debtor has used crypto holdings to shield assets from creditors. These nonchalant attitudes stand in stark contrast to the proactive steps taken by domestic tax regulators to ensure that crypto investors will pay capital gains taxes on realized profits.¹²³ One step that bankruptcy courts can adopt is to specifically ask debtors about crypto assets, just as the IRS recently added a specific question about cryptocurrency to federal income tax forms.¹²⁴ For example, debtors should be asked if they have ever purchased or owned cryptocurrency. Requiring a clear “yes” or “no” answer to this question will make it less likely for a debtor to inadvertently fail to disclose crypto assets, and this will, in turn, make it easier for a creditor or trustee to demonstrate bad faith on the part of a debtor who fails to disclose significant crypto assets.

Moreover, increased scrutiny from bankruptcy courts may be necessary to deter future debtors from taking advantage of the relative anonymity of crypto transactions. At the very least, those debtors who are caught failing to disclose significant crypto holdings—like the debtor in *Schultz*—should face serious consequences for failing to make a complete and accurate disclosure. For example, courts could conclude that the nondisclosure of any nontrivial amount of crypto assets, or any crypto assets directly purchased by the debtor, should be grounds for denying a discharge. In the absence of clear and unequivocal consequences for nondisclosure, courts may be incentivizing debtors to use crypto holdings to at least attempt to shield assets from liquidation. Long term, such conduct could cast doubts on the system as a whole, which might eventually undermine the use of Chapter 7 by honest debtors.¹²⁵

As noted above, the third challenge posed by the relative anonymity of crypto transactions relates to the trustee’s avoidance powers. In Part I, we

¹²¹ *Id.* at *10.

¹²² *Id.* The Bankruptcy Appellate Panel’s decision is currently being appealed to the Ninth Circuit. *Keyword Rockstar, Inc. v. Schultz (In re Schultz)* No. 19-60032 (9th Cir. filed July 9, 2019).

¹²³ *See supra* notes 84–90 and accompanying text.

¹²⁴ *See supra* note 89 and accompanying text.

¹²⁵ *Cf.* James J. White, *Abuse Prevention 2005*, 71 MO. L. REV. 863, 865 (2006) (describing the fears of opportunistic behavior by debtors that prompted Congress to amend the consumer bankruptcy code in 2005).

saw one example of how crypto assets can create a wrinkle for the trustee’s authority to avoid (or undo) transactions that occur in the months, and sometimes even years, leading up to a bankruptcy filing.¹²⁶ But anonymous transactions portend many more challenges, particularly to a trustee’s ability to avoid preferences under Section 547 of the bankruptcy code. This provision gives the trustee the power to avoid any transfer that occurs within ninety days of a bankruptcy filing.¹²⁷ The recovery period extends to one year if the counterparty is a statutorily defined “insider”¹²⁸—typically a close relative or business partner.¹²⁹ The relative anonymity of crypto transactions complicates both options for trustee recovery. A debtor who admits to having owned crypto assets in the past may nonetheless claim to have disposed of these assets before the preference period (and at a lower valuation), putting trustees in the challenging position of having to prove a negative with limited information. Moreover, even assuming that a trustee can develop evidence to determine the timing of a particular debtor transaction, the question of whether the transaction was conducted with an insider may be even harder to answer due to anonymity issues concerning the transferee.¹³⁰ Thus, we are likely to see increased complications for trustees in future liquidation cases that involve crypto assets.

In sum, the uncertain nature of crypto assets—as highlighted by the *HashFast* case—coupled with the relative anonymity of these investments have created many complications for stakeholders in the bankruptcy process. These complications undermine the prospects for creditor recovery when debtors choose not to be forthcoming about their crypto assets. To deal with these issues, bankruptcy courts should consider following the IRS’s lead by requiring specific disclosures of crypto assets. In addition, courts should consider denying a discharge to debtors who fail to make an adequate disclosure.

¹²⁶ See *supra* Section I.B.

¹²⁷ 11 U.S.C. § 547(b)(4)(A) (2012).

¹²⁸ *Id.* § 547(b)(4)(B).

¹²⁹ *Id.* § 101(31).

¹³⁰ See, e.g., Eric S. Rein & John Guzzardo, *The Trustee and the Bitcoin*, 37 AM. BANKR. INST. J., Aug. 2018, at 4 (“[M]ost virtual currencies are transferred between parties in an anonymous fashion that, in all likelihood, make it impossible for the creditor to identify the recipient or take possession of the transfers.”). *But see* Popper, *supra* note 71, at 84 (noting that “sophisticated network analysis” can be used to glean personally identifying information from the blockchain).

B. The False Facade of Liquidity

The second unique feature of crypto assets is that they often present an illusionary facade of liquidity. From the outside, the market for crypto assets resembles that of other market-traded assets, such as securities and commodities. Indeed, many of these assets trade on “exchanges,” and the current prices of these assets are usually available from a variety of internet sources. To the extent that this superficial resemblance to a market-traded asset suggests that a Bitcoin seller could actually obtain that current amount in fiat currency, the picture does not always accurately reflect reality.¹³¹ Instead, early crypto investors learned the hard way that enterprises that call themselves “exchanges” do not operate in the way that investors in other market-based assets might expect.¹³²

The insolvencies of crypto exchanges like Quadriga and Mt. Gox help highlight the disconnect between the “exchange” label and the reality of how these platforms function.¹³³ Both the Quadriga and Mt. Gox bankruptcies involved entities that purported to act as exchanges for Bitcoin. Although these entities did provide customers with some of the functions of an exchange, such as being able to transfer fiat currency for crypto assets and vice versa, neither entity was regulated as an exchange, nor did either entity operate strictly as a trading market for these assets. Rather, both also served as wallets¹³⁴ for many of the assets and currencies being exchanged in the crypto market. This wallet service is the main reason why each insolvency hit its customers much harder than did the insolvency of any exchange for

¹³¹ See generally Smith, *supra* note 4 (explaining that Bitcoin exchanges function as money transmitters and depository institutions but are not regulated as closely).

¹³² See Alexandra Harney & Steve Stecklow, *Twice Burned: How Mt. Gox's Bitcoin Customers Could Lose Again*, REUTERS (Nov. 16, 2017, 1:15 PM), <https://www.reuters.com/investigates/special-report/bitcoin-gox/> [<https://perma.cc/S324-BS98>] (noting that as of late 2017, Bitcoin exchanges have lost close to one million bitcoin valued at over \$6 billion).

¹³³ See Nikhilesh De, *QuadrigaCX Officially Enters Bankruptcy with Millions Still Missing*, COINDESK (Apr. 8, 2019, 8:17 PM), <https://www.coindesk.com/quadrigacx-officially-enters-bankruptcy-with-millions-still-missing> [<https://perma.cc/Y5PK-24ZN>]; Hiroko Tabuchi, *In Disarray, Mt. Gox Signals a Move Toward Liquidation*, N.Y. TIMES (Apr. 16, 2014, 10:22 AM), <http://dealbook.nytimes.com/2014/04/16/former-bitcoin-exchange-mt-gox-set-to-liquidate-in-absence-of-revival-plan/> [<https://perma.cc/5C4F-V3QW>] (discussing the bankruptcy filing of Bitcoin exchange Mt. Gox, which lost close to \$500 million in cryptocurrency).

¹³⁴ Levitin, *supra* note 4, at 315 (“A digital wallet is a computer software application that stores and transmits payment authorization data for [a] credit or deposit account[.]”); see also Ryznar, *supra* note 77, at 542–43 (explaining that many crypto investors keep their crypto assets remotely in wallets that are maintained on the cloud).

traditional market-based assets. Similarly, many other types of insolvencies would allow consumers to recover up to \$250,000 from the Federal Deposit Insurance Corporation (FDIC).¹³⁵ When a consumer stores crypto assets in an online wallet, however, there is no safety net in the event of an insolvency by the wallet provider.

The circumstances surrounding both insolvencies are shrouded in intrigue and mystery. Quadriga's insolvency was prompted by the death of its founder, Gerald Cotten, in 2018.¹³⁶ Since late 2013, Cotten had run Quadriga, one of Canada's most prominent Bitcoin exchanges, from his personal MacBook Pro.¹³⁷ Purportedly, Cotten kept all of the passwords to his customers' accounts in encrypted files on this laptop and did not share the encryption codes with anyone else at the company.¹³⁸ After Cotten died, customers were unable to access the wallets where their assets were stored.¹³⁹ Quadriga entered insolvency proceedings in Nova Scotia with Ernst & Young (EY) appointed as monitor.¹⁴⁰ EY's investigation determined that close to \$200 million in customer funds was missing—likely funneled into Cotten's pockets.¹⁴¹ EY has been able to collect some assets, including from

¹³⁵ See *How Are My Deposit Accounts Insured by the FDIC?*, FED. DEPOSIT INS. CORP., <https://www.fdic.gov/deposit/covered/categories.html> [<https://perma.cc/8RAH-G5WY>] (explaining the variety of deposit accounts, retirement accounts, and trust accounts subject to FDIC insurance).

¹³⁶ See Rich, *supra* note 76. According to official reports, Cotten died of complications relating to Crohn's disease while honeymooning in India. *Id.* Not surprisingly, this series of events is the subject of rampant internet speculation. *Id.*

¹³⁷ See *id.*

¹³⁸ See Randy Shore, *Troubled Bitcoin Trader QuadrigaCX Takes Another Bizarre Turn*, VANCOUVER SUN (Feb. 1, 2019), <https://vancouversun.com/news/local-news/troubled-bitcoin-trader-quadrigacx-takes-another-bizarre-turn/> [<https://perma.cc/42WL-LNR8>] (quoting an affidavit from Cotten's colleague which states that "[t]he laptop computer from which Gerry carried out the company's business is encrypted and I do not know the password or recovery key"); see also Rich, *supra* note 76 (describing an episode in which Cotten became hysterical upon realizing that he had left his laptop on a yacht that was departing from the dock).

¹³⁹ See Henry Mance, *Left High and Dry by a Crypto Founder's Demise*, FIN. TIMES (Feb. 7, 2019), <https://www.ft.com/content/6f10707a-2ac1-11e9-88a4-c32129756dd8> [<https://perma.cc/37S4-UKF2>] ("For years, I've had one thing in common with most cryptocurrency investors: I know almost nothing about cryptocurrency. I now share something else with users of cryptocurrency trading platform QuadrigaCX: I cannot access any cryptocurrency.").

¹⁴⁰ See *Message from QuadrigaCX*, QUADRIGACX (Feb. 5, 2019), <https://www.quadrigacxtrustee.com/> [<https://perma.cc/9T28-7JTR>].

¹⁴¹ See Paul Vigna, *Quadriga Founder Spent Client Money, Bankruptcy Monitor Says*, WALL ST. J. (Jun. 20, 2019, 6:48 PM), <https://www.wsj.com/articles/quadriga-founder-spent-client-money-bankruptcy-monitor-says-11561070902> [<https://perma.cc/YXF9-XZKN>].

Cotten's widow, but customers are unlikely to recover more than a small fraction of the lost Bitcoin value.¹⁴²

The Mt. Gox insolvency also centered around the unexplained disappearance of customer assets. Mt. Gox was founded in 2010 by Jed McCaleb,¹⁴³ who soon sold the enterprise to Mark Karpelès.¹⁴⁴ It quickly became the world's leading forum for trading Bitcoin.¹⁴⁵ Based in Japan, Mt. Gox allowed customers to buy and sell Bitcoin, initially using McCaleb's PayPal account for transactions and storage.¹⁴⁶ However, the entity was plagued with numerous security breaches, which suggested that the nascent exchange lacked fundamental security measures.¹⁴⁷ Likewise, its inability to handle high-volume trading left customers waiting extended periods for execution, which in turn affected their returns.¹⁴⁸ Finally, in early 2014, Mt. Gox suddenly shut down for good,¹⁴⁹ with Karpelès dodging a flood of questions about whether any of its customers would recover their Bitcoin.¹⁵⁰ Eventually, Mt. Gox's operators revealed that 750,000 bitcoins had vanished

¹⁴² See Doug Alexander, *Quadriga CEO's Widow to Return \$9 Million of Estate Assets*, BLOOMBERG (Oct. 7, 2019, 4:38 PM), <https://www.bloomberg.com/news/articles/2019-10-07/quadriga-ceo-s-widow-agrees-to-return-estate-assets> [<https://perma.cc/M29S-MHQ9>].

¹⁴³ See Harney & Stecklow, *supra* note 132 ("The Mt. Gox exchange was first launched by Jed McCaleb, an American software engineer, in 2010."). McCaleb was an early adopter of Bitcoin and also an internationally renowned player of *Magic: The Gathering*, a card-based role play game, that in turn inspired the acronym Mt. Gox ("Magic: The Gathering Online Exchange"). See Popper, *supra* note 71, at 51. The website that hosted the exchange was originally a forum where game players could trade cards. See Harney & Stecklow, *supra* note 132. However, after several frustrating months trying to run a Bitcoin trading operation from his beach home in Costa Rica, McCaleb realized that he lacked the professional appetite to manage the enterprise full-time. See Popper, *supra* note 71, at 63–65. After an early hack, McCaleb also recognized that he lacked the expertise necessary to provide a safe venue for customers. *Id.* at 67.

¹⁴⁴ See Popper, *supra* note 71, at 67–68.

¹⁴⁵ As of 2012, Mt. Gox handled approximately 80% of Bitcoin trades. See *id.* at 203.

¹⁴⁶ See *id.* at 52.

¹⁴⁷ See *id.* at 82–83 (showing Karpelès's slow response to an early denial-of-service attack, which suggests that the nascent exchange lacked fundamental security measures); *id.* at 89–91 (describing a 2011 Mt. Gox hack in which the price of Bitcoin dropped from seventeen dollars to one cent over the course of an hour); *id.* at 207 ("[H]ackers showed up and staged fierce denial-of-service attacks, forcing [Karpelès] to shut down the site altogether in the middle of the day.").

¹⁴⁸ See *id.* at 200–01 (describing Karpelès' struggles to manage the challenges presented by Mt. Gox's massive growth); see also *id.* at 206 (describing one period of extreme volatility where trade delays forced buyers to pay as much as \$300 per coin, before cancellations drove the price down to \$100 a few hours later); *id.* at 307–08 (noting that by early 2014, the price of Bitcoin on Mt. Gox was almost \$100 more than on any other exchange and customers were having difficulty withdrawing their funds).

¹⁴⁹ See *id.* at 309.

¹⁵⁰ See *id.* at 310–11.

from Mt. Gox wallets, wiping out virtually all of its customers as well as some of the exchange's own holdings.¹⁵¹ The value of the lost crypto assets amounted to more than \$400 million¹⁵² and represented approximately 6% of the total outstanding Bitcoin.¹⁵³ Surprisingly, the price of Bitcoin remained relatively robust in the face of this failure.¹⁵⁴

Karpelès eventually sought insolvency protection in Japanese bankruptcy court, where creditors—consisting mainly of Mt. Gox's unhappy customers—filed claims totaling close to \$600 million.¹⁵⁵ The court entered an order of liquidation in April 2014, and appointed Japanese bankruptcy practitioner Nobuaki Kobayashi as trustee.¹⁵⁶ Pursuant to the cross-border provisions of Chapter 15, a companion proceeding was opened in a bankruptcy court in the Northern District of Texas.¹⁵⁷

An added twist for the Mt. Gox proceedings, as compared to the Quadriga proceedings, was that Kobayashi was able to recover around 200,000 bitcoins after Karpelès turned over additional crypto assets that had been stashed away in Mt. Gox's system.¹⁵⁸ Following Japanese law, the bankruptcy court ordered Kobayashi to liquidate the newly discovered Bitcoin in order to pay creditor claims in fiat currency, with each Bitcoin's value set at the then-current price of \$483.¹⁵⁹ However, during the lengthy process for customers to submit their claims and obtain court approval, the

¹⁵¹ See *id.* at 312. Other sources reported the loss at 850,000 bitcoins. See Jon Southurst, *Mt. Gox Files for Bankruptcy, Claims \$63.6 Million Debt*, COINDESK (Feb. 28, 2014, 11:33 AM), <https://www.coindesk.com/mt-gox-files-bankruptcy-claims-63-6m-debt> [<https://perma.cc/TPD5-ZQXM>].

¹⁵² See Popper, *supra* note 71, at 315.

¹⁵³ See Casey Doherty, *Bitcoin and Bankruptcy*, 33 AM. BANKR. INST. J., July 2014, at 39.

¹⁵⁴ See Popper, *supra* note 71, at 315.

¹⁵⁵ See Stan Higgins, *Mt. Gox Bankruptcy Trustee Issues New Details on Creditor Reimbursement*, COINDESK (Feb. 17, 2016, 10:46 PM), <https://www.coindesk.com/mt-gox-bankruptcy-details-creditor-reimbursement> [<https://perma.cc/BR9X-S4DE>].

¹⁵⁶ See Harney & Stecklow, *supra* note 132.

¹⁵⁷ *In re Mt. Gox Co.*, Ch. 15 No. 14-31229-sgj15 (Bankr. N.D. Tex. 2014).

¹⁵⁸ See Jen Wiczner, *Mt. Gox and the Surprising Redemption of Bitcoin's Biggest Villain*, FORTUNE (Apr. 19, 2018, 6:30 AM), <https://fortune.com/longform/bitcoin-mt-gox-hack-karpelès/> [<https://perma.cc/QNT4-DUN4>] (describing how Karpelès eventually found coins that had been stashed away in Mt. Gox's system discovery of the additional coins).

¹⁵⁹ See Harney & Stecklow, *supra* note 132 (explaining that the Japanese court fixed the approved claims to the value of Bitcoin as of April 2014, which totaled approximately \$400 million).

price of Bitcoin rose to eighteen times its 2014 value.¹⁶⁰ Continued liquidation promised a massive payday for Karpelès, who would receive any surplus after customers had been repaid at the depressed price of \$483 per Bitcoin.¹⁶¹ Not surprisingly, Mt. Gox's customers protested, arguing that they should be paid back in Bitcoin.¹⁶² However, Kobayashi's hands were tied by the Japanese legal process, and he proceeded to liquidate close to \$400 million in Bitcoin.¹⁶³ As the liquidation proceeded, coin prices sunk: Bitcoin's price had peaked in December 2017 at an all-time high of over \$20,000 per coin; then, as Kobayashi sought to exchange the Bitcoin for fiat currency, the price of Bitcoin dropped by half.¹⁶⁴ Kobayashi's single biggest transfer of Bitcoin took place on February 5, 2018, which in turn marked a long-term low point for Bitcoin's valuation at just over \$6,000—less than a third of its price just two months earlier.¹⁶⁵

Due to this extreme volatility in the price of Bitcoin, the total value lost over the course of liquidation dwarfed the total amount of creditors' approved claims. The fact that Karpelès received some surplus after the repayments at \$483 per Bitcoin was the final straw for creditors, who successfully organized to put pressure on Kobayashi to halt the Bitcoin sales.¹⁶⁶ In June 2018, Mt. Gox's liquidation was converted to a rehabilitation

¹⁶⁰ Adrienne Jeffries, *Inside the Bizarre Upside-Down Bankruptcy of Mt. Gox*, VERGE (Mar. 22, 2018, 10:30 AM), <https://www.theverge.com/2018/3/22/17151430/bankruptcy-mt-gox-liabilities-bitcoin> [<https://perma.cc/94XN-GYYR>].

¹⁶¹ *See id.*; Oscar Williams-Grut, 'This Is Horse S---': Bitcoin Traders Are Angry That Mt. Gox's Crypto Stash Is Being 'Dumped' on the Market, BUS. INSIDER (Mar. 8, 2018), <https://www.businessinsider.com/bitcoin-price-traders-angry-over-mt-gox-trustees-bitcoin-sales-2018-3/?international=true&r=UK> [<https://perma.cc/N6KT-44X8>].

¹⁶² As one creditor complained, "Those of us who were burned by this are now permanently locked into that depressed price." *See* Harney & Stecklow, *supra* note 132 (quoting software developer Aaron Gutman, who lost 464 bitcoins in the hack).

¹⁶³ *Id.*

¹⁶⁴ *See* Williams-Grut, *supra* note 161.

¹⁶⁵ *See id.*

¹⁶⁶ *See* Jeffries, *supra* note 160 (describing the formation of Mt. Gox Legal, led by Andy Pag).

proceeding, which meant that creditors could opt to be repaid in Bitcoin.¹⁶⁷ The price of Bitcoin promptly rebounded.¹⁶⁸

The Mt. Gox liquidation in particular carries an important lesson for insolvency systems dealing with crypto assets: forced liquidation of crypto assets is a risky process. Not only does forced liquidation often drive down creditor recovery (a problem that occurs with many types of assets¹⁶⁹), but it can also drive down the value for other investors in the crypto asset at issue.¹⁷⁰ Moreover, unlike forced sales of other assets in bankruptcy proceedings, such as real estate, the loss in value to other investors has ripple effects globally. A global problem calls for a global solution, so insolvency systems should be mindful of the need for uniformity. That said, requiring creditors to accept payment in Bitcoin seems to be the fairest system, both from the standpoint of creditors and from the perspective of coinvestors who would otherwise face losses from large-scale liquidation. Creditors who are paid in crypto assets will then be on even footing with other investors, regardless of whether they choose to remain invested in the crypto asset.

C. Avoiding Opportunistic Behaviors Enabled by High Volatility

A third problem that arises with crypto assets is the risk that creditors or debtors will exploit bankruptcy or insolvency proceedings in order to capitalize on the high volatility of crypto assets. Although such risks exist for other assets, the potential for opportunistic behavior is exacerbated by the

¹⁶⁷ See Kosaku Narioka, *Court Blocks Payday for Chief of Bankrupt Mt. Gox Bitcoin Exchange*, WALL ST. J. (June 25, 2018, 8:23 AM), <https://www.wsj.com/articles/court-blocks-payday-for-chief-of-bankrupt-mt-gox-bitcoin-exchange-1529929409> [<https://perma.cc/6DZZ-6F5N>].

¹⁶⁸ The story for Mt. Gox creditors does not yet have a happy ending: rehabilitation proceedings have since ground to a halt, due to a massive \$16 billion suit filed by Coinlab. See Nikhilesh De, *Advocate for Mt Gox Creditors Quits, Saying Bitcoin Payouts Could Take Years*, COINDESK (Apr. 9, 2019, 9:16 PM), <https://www.coindesk.com/coinlabs-mt-gox-claim-may-hold-up-payouts-for-another-2-years> [<https://perma.cc/VZ8D-GAVM>]. After successfully leading the creditor uprising that would allow repayment in Bitcoin, Pag quit the fight in early 2019 and sold off his claims for quick cash. *Id.*

¹⁶⁹ See generally Thomas W. Mitchell, Stephen Malpezzi & Richard K. Green, *Forced Sale Risk: Class, Race, and the 'Double Discount'*, 37 FLA. ST. U.L. REV. 589, 601–03 (2010) (“In many areas of the law it is well accepted that an asset sold at a forced sale will likely sell for a price significantly below the asset’s fair market value.”).

¹⁷⁰ See Doherty, *supra* note 153, at 38–39 (“[D]ue to Bitcoin’s finite and largely unregulated existence, its supply can be easily affected large-scale by outside events, such as the *Mt. Gox* [liquidation] . . .”).

rising use of crypto assets as collateral.¹⁷¹ In particular, the extreme volatility of crypto assets means that there are more opportunities for lenders who were previously fully secured to suddenly find themselves undersecured. As explained in Section I.A, a consumer debtor might then be able to use the tools of Chapter 13 to strip down the lender's lien to the current value of the collateral. A business debtor could achieve the same result using the tools of Chapter 11. Such opportunistic behavior could take other forms as well. However, this Section focuses primarily on the risk of opportunistic behavior by the debtor.

To explore the risks that we might see from crypto investors, we can consider behaviors that have already played out in real estate markets. This comparison is helpful from a policy perspective because the modern bankruptcy code, as well as the court decisions applying it, provide tools intended to prevent stakeholders from manipulating the volatility of the real estate market.¹⁷² However, these tools do not work for crypto assets as the volatility risks affect both the individual debtor-creditor relationships and the rest of the market for crypto assets. These impacts illustrate that there is an even stronger case for congressional intervention in crypto than there was for real estate.

In the business reorganization context, the risk of opportunistic behavior by debtors arose primarily from reorganization provisions that authorized debtors who obtained secured loans at a time when the collateral was highly valued to then use the bankruptcy code to reorganize if the value of the collateral fell, even temporarily. Under this scenario, any rise in value following a discharge would represent a windfall to the debtor. This strategy is, in a nutshell, “the Pine Gate problem” that Congress sought to fix in 1978 when it revamped the bankruptcy code.¹⁷³

¹⁷¹ See Robinson, *supra* note 7. Various lenders have sprung up to take advantage of the consumer market for crypto-backed loans, including Celsius, Coinloan, and SALT Lending. See 8 *Cryptocurrency Lending Platforms*, PANORAMA CRYPTO (Oct. 3, 2019), <https://panoramacrypto.com/8-cryptocurrency-lending-platforms/> [https://perma.cc/88G6-VNCH].

¹⁷² See Tabb, *supra* note 46, at 118 (explaining how, in the wake of *Pine Gate*, secured creditors went “straight to the legislature” and obtained “the kinds of protections they wanted against the sort of low-ball cram-down ignominy that *Pine Gate* wrought”).

¹⁷³ See generally Douglas G. Baird, *Remembering Pine Gate*, 38 J. MARSHALL L. REV. 5, 8 (2004) (referring to a debtor's once unchecked ability to use bankruptcy to write down secured debt as the “*Pine Gate* problem”).

Professor Douglas Baird has described the circumstances surrounding the Pine Gate problem in colorful detail,¹⁷⁴ but the basic facts are as follows: the Pine Gate bankruptcy involved a debtor who had borrowed \$1.45 million to build an apartment complex.¹⁷⁵ The complex was not nearly as profitable as projected, and the secured lender eventually sought to foreclose by arguing for a low valuation of the asset.¹⁷⁶ But, using the debtor-friendly tools of the prior version of the bankruptcy code, Pine Gate’s developers were able to use reorganization proceedings not only to retain the apartment complex, but also to write down the loan significantly.¹⁷⁷ The developers emerged from bankruptcy lien-free by paying the formerly secured lender \$1.032 million—barely two-thirds of the amount the lender had advanced just a few years earlier.¹⁷⁸

The *Pine Gate* decision quickly became infamous in bankruptcy circles,¹⁷⁹ due in part to the influence of William Norton, Jr., the bankruptcy judge who put his stamp of approval on the debtor’s plan.¹⁸⁰ Judge Norton’s decision was widely criticized for striking the wrong balance: allowing the debtor to capture all of the benefits of any future appreciation of the apartment complex, while imposing the consequences of any undervaluation on the lender.¹⁸¹ Indeed, Congress expressly cited the *Pine Gate* decision when revamping the bankruptcy code.¹⁸²

In his article, Professor Baird identified three statutory tools that Congress enacted to prevent future debtors from similarly exploiting the volatility and valuation problems that arise in the real estate lending market:

¹⁷⁴ See *id.* at 6–8.

¹⁷⁵ *Id.* at 7.

¹⁷⁶ *Id.*

¹⁷⁷ See *In re Pine Gate Assocs.*, 1977 WL 373416 (N.D. Ga. Apr. 15, 1977).

¹⁷⁸ See *id.* at *1.

¹⁷⁹ Professor Charles Tabb uses the adjective “notorious” to describe Judge Norton’s decision in *Pine Gate*. See Tabb, *supra* note 46, at 117.

¹⁸⁰ See generally Gerald K. Smith, *Tribute to William L. Norton, Jr.*, 4 NORTON BANKR. L. ADVISER, Apr. 2002, at 1 (“Many of us first became familiar with Judge Norton as a result of his *Pine Gate* decision [in which he] breathed life into a little used reorganization tool.”). Among other achievements, Judge Norton authored the leading U.S. bankruptcy treatise, *Norton Bankruptcy Law and Practice*, and founded the Norton Institutes for Bankruptcy. See *generally About Us*, NORTON INSTS. ON BANKR. L., <https://www.nortoninstitutes.org/about-us/> [<https://perma.cc/NDG7-YT8D>] (explaining the history of the institute and its founder, Judge Norton).

¹⁸¹ See Michael E. Rubinger & Gary W. Marsh, *Sale of Collateral Plans Which Deny a Nonrecourse Undersecured Creditor the Right to Credit Bid: Pine Gate Revisited*, 10 BANKR. DEV. J. 265, 270 (1993).

¹⁸² See 124 CONG. REC. 28258 (1978) (statement of Sen. Malcolm Wallop).

Section 1111(b)(1), which allows a lender to turn nonrecourse debt into recourse debt; Section 1111(b)(2), which allows a lender to treat the entire amount of its allowed claim as secured; and Section 1129(b)(2), which ensures that when a plan is confirmed over a lender's objection, the lender will nonetheless receive the "indubitable equivalent" of the value of its collateral.¹⁸³

These statutory responses to the Pine Gate problem give secured creditors more tools to protect themselves from debtors who use volatility opportunistically. In particular, these statutory tools prevent secured creditors from being at a systemic disadvantage relative to other creditors, or to the debtor itself, due to fluctuations in the value of the collateral. Importantly, these tools work most effectively if the secured creditor makes an accurate assessment about the current and future value of the collateral. Of course, creating incentives for accurate valuation does not always ensure that the valuation *will* be accurate. A creditor's failure to make an accurate valuation, if accepted by the court, could still result in forced sales that destroy value, thereby inflicting external costs on the broader market.

This last point is not a significant problem in the real estate market, because the fallout from secured creditors' suboptimal choices is generally localized. For example, the collapse of the savings and loan industry in 1984 prompted a wave of bankruptcy filings involving single asset real estate ventures.¹⁸⁴ The surge began in Texas and then extended to nearby regions.¹⁸⁵ The Northeast experienced its own surge, as did California and Florida.¹⁸⁶ The relatively localized nature of this crisis allowed local courts to develop their own approaches to the flood of cases.¹⁸⁷ However, the shortcomings of these statutory fixes may become more apparent in the crypto asset market, where—as the Mt. Gox trustee demonstrated—untimely liquidations based on pessimism about future value can have negative effects that are felt around the globe.¹⁸⁸ The risk for opportunistic behavior by creditors is also

¹⁸³ See Baird, *supra* note 173, at 9–10. In the interest of concision, this Essay will not attempt to provide a detailed explanation of these concepts, but interested readers may find Professor Baird's article quite helpful to explain how these tools work in practice.

¹⁸⁴ See Hon. Leif M. Clark, *Chapter 11—Does One Size Fit All?*, 4 AM. BANKR. INST. L. REV. 167, 179–80 (1996).

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ See *id.*

¹⁸⁸ See *supra* text accompanying notes 97–110.

possible, particularly if the creditors are in a position to benefit from volatility and can use the statutory tools cynically to create price swings.¹⁸⁹

Finally, the risk of opportunistic behaviors is not limited to Chapter 11 debtors: consumer debtors may be able to use Chapter 13 to reduce the value of liens on crypto collateral.¹⁹⁰ Once again, a comparison to the real estate market provides helpful context. Prior to 1992, consumer debtors attempted to use the bankruptcy code to strip down liens on home mortgages when real estate values had fallen.¹⁹¹ The Supreme Court's 1992 decision in *Dewsnup v. Timm* put a halt to this practice.¹⁹² Over a sharp dissent from Justice Scalia,¹⁹³ the majority conceded that rejecting the debtor's straightforward application of the lien-stripping provisions of the bankruptcy code was "not without its difficulty."¹⁹⁴ However, the majority explained that the "windfall" for a debtor who was allowed to use lien stripping in this manner would upend the home mortgage market.¹⁹⁵ Surely Congress could not have intended such a significant outcome.¹⁹⁶

The *Dewsnup* decision has been widely criticized by courts and commentators alike.¹⁹⁷ These critiques raise doubts about whether *Dewsnup*'s logic, dependent as it is on the reliance interests of home mortgage lenders, would be extended to lenders in the relatively new crypto

¹⁸⁹ Savvy hedge fund investors are particularly adept at identifying opportunities to profit from volatility. See, e.g., Dana Hull & Pierre Paulden, *Soros Finds Another Route to Profit from Tesla's Volatile Stock*, BLOOMBERG (May 18, 2018, 12:35 PM), <https://www.bloomberg.com/news/articles/2018-05-18/soros-finds-another-route-to-profit-from-tesla-s-volatile-stock> [<https://perma.cc/V5AY-GDSZ>] (explaining why Soros sees asset volatility as "a recipe for making money").

¹⁹⁰ See 11 U.S.C. § 506(d) (2012).

¹⁹¹ See, e.g., *Gaglia v. First Fed. Sav. & Loan Ass'n*, 889 F.2d 1304, 1306 (3d Cir. 1989) ("The majority of the bankruptcy and district courts that have considered this issue agree that the language of Sec. 506 allows a Chapter 7 debtor to void liens secured by property that is not administered.").

¹⁹² 502 U.S. 410 (1992).

¹⁹³ *Id.* at 420–36.

¹⁹⁴ *Id.* at 417.

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ See, e.g., *Bank of Am., N.A. v. Caulkett*, 135 S. Ct. 1995, 2000, n.† (2015) ("From its inception, *Dewsnup* . . . has been the target of criticism."); *In re Woolsey*, 696 F.3d 1266 (10th Cir. 2012); Mary Josephine Newborn, *Undersecured Creditors in Bankruptcy: Dewsnup, Nobelman, and the Decline of Priority*, 25 ARIZ. ST. L.J. 547, 581–92 (1993). In the *Woolsey* case, then-Judge Gorsuch described *Dewsnup* as "a gnarled bramble blocking what should be an open path" leading to "a topsy-turvy result." *In re Woolsey*, 696 F.3 at 1278, 1273.

collateral lending market.¹⁹⁸ Thus, in the future, we may see debtors using bankruptcy opportunistically to try to strip down liens on crypto collateral, creating another round of valuation and statutory interpretation problems for bankruptcy courts.

D. Planning Around Future Jurisdictional Headaches

A final feature unique to crypto assets is the wrench that these assets throw into traditional analysis of jurisdiction. In particular, crypto assets pose a new complication when a court's authority to dispose of certain assets depends on in rem jurisdiction: namely, how to determine the location of an asset that arguably exists only in digital form. Already we see regulators and lawmakers around the world approaching these issues differently. Under some proposals, the location of the key that unlocks the digital asset is the hook for in rem jurisdiction.¹⁹⁹ In others, regulators have focused on the location of the server on which the asset is stored.²⁰⁰ Under this approach, to determine jurisdiction over a wallet-stored crypto asset, we would look to the location of the server for the entity that provides the wallet services. Finally, some commentators have argued that jurisdictional concepts are meaningless because these assets exist both nowhere and everywhere.²⁰¹

¹⁹⁸ See *Nobelman v. Am. Sav. Bank*, 508 U.S. 324, 332 (1993) (Stevens, J., concurring) (“[T]he legislative history indicat[es] that favorable treatment of residential mortgagees was intended to encourage the flow of capital into the home lending market”).

¹⁹⁹ See, e.g., Dillon Collett, *Cryptocurrency Assets Under Insolvency and Personal Property Security Law*, AIRD BERLIS (Feb. 15, 2018), <https://www.airdberlis.com/insights/publications/publication/cryptocurrency-assets-under-insolvency-and-personal-property-security-law> [https://perma.cc/3LVP-ABX6] (suggesting that obtaining the debtor's cooperation to take possession of the private key might avoid an otherwise “lengthy and tedious” process, especially if the debtor has stored the private key offline).

²⁰⁰ See, e.g., *Dealing With Cryptocurrency in a Bankrupt Estate*, AUSTL. FIN. SECURITY AUTHORITY, <https://www.afsa.gov.au/insolvency/i-am-practitioner/dealing-cryptocurrency-bankrupt-estate> [https://perma.cc/97KW-QARS] (explaining that the trustee should immediately gain control of the digital key to unlock the crypto asset and should consider using UNCITRAL if the key is stored in an extraterritorial wallet).

²⁰¹ For an early articulation of this view, see, for example, Allan R. Stein, *The Unexceptional Problem of Jurisdiction in Cyberspace*, 32 INT'L L. 1167, 1170 (1998) (arguing that the fact that actions in cyberspace can have global effects “requires the abandonment, or at least compromise, of sovereign claims” to jurisdiction). Japan's approach seems to fit into this last category. See generally Akihiro Shiba, *What Tokyo's Mt Gox Ruling Means for Bitcoin in Japan*, COINDESK (Aug. 14, 2015, 3:25 PM), <https://www.coindesk.com/what-tokyos-mt-gox-ruling-means-for-bitcoin-in-japan>

Interestingly, the current U.S. approach most closely resembles this third option, in that we define our bankruptcy courts' jurisdiction as being coextensive with the reach of 11 U.S.C. § 541, which defines property of the estate as "property, wherever located and by whomever held."²⁰² But this approach may eventually create conflicts in cross-border cases, where Chapter 15 requires U.S. courts to defer to proceedings that occur in "the country where the debtor has the center of its main interests"²⁰³—also known as the COMI principle, which guides European bankruptcy jurisprudence.²⁰⁴ Although current approaches to cross-border insolvencies have generally promoted comity and function over strict adherence to form,²⁰⁵ jurisdictional skirmishes have already limited the extraterritorial application of U.S. judgments in some instances.²⁰⁶ If other, more favorable jurisdictions opt to take a more restrictive approach to in rem jurisdiction over crypto assets, we may see similar skirmishes in future large-scale bankruptcies involving widely held crypto assets.²⁰⁷

[<https://perma.cc/EYE4-XE93>] (explaining why a Japanese court rejected a Mt. Gox customer's argument that his Bitcoin was an object of ownership that the court should order returned: Article 85 of the Japanese civil code requires that "an object of ownership must occupy a portion of space" whereas crypto assets merely represent contractual rights and obligations).

²⁰² See 11 U.S.C. § 541 (2012).

²⁰³ See *id.* § 1502(4) (defining "foreign main proceeding"); *id.* § 1517(a)–(b) (stating the standard for recognition of a foreign proceeding); see also *id.* § 1508 ("In interpreting this chapter, the court shall consider its international origin, and the need to promote an application of this chapter that is consistent with the application of similar statutes adopted by foreign jurisdictions.").

²⁰⁴ See Bob Wessels & Ilya Kokorin, *COMI Under European and American Insolvency Law*, OXFORD BUS. L. BLOG (Feb. 5, 2019), <https://www.law.ox.ac.uk/business-law-blog/blog/2019/02/comi-under-european-and-american-insolvency-law> [<https://perma.cc/72HC-HD37>].

²⁰⁵ See generally UNITED NATIONS COMM'N ON INT'L TRADE LAW, UNCITRAL MODEL LAW ON CROSS-BORDER INSOLVENCY WITH GUIDE TO ENACTMENT AND INTERPRETATION 3 (2014) ("The purpose of this Law is to . . . promote the objectives of: [c]ooperation between the courts and other competent authorities of this State and foreign States involved in cases of cross-border insolvency; . . . [p]rotection and maximization of the value of the debtor's assets; and [f]acilitation of the rescue of financially troubled businesses, thereby protecting investment and preserving employment.").

²⁰⁶ See, e.g., *Rubin v. Eurofinance SA* [2012] UKSC 46 (appeal taken from Eng.) (refusing to enforce a U.S. judgment in accordance with Chapter 15 due to the failure to satisfy local personal jurisdiction standards); see also *Osterman & Dandeneau*, *supra* note 11, at 189–91 (discussing cross-border skirmishes between U.S. and German bankruptcy courts over patent licensing in the Qimonda bankruptcy).

²⁰⁷ See generally Collett, *supra* note 199 (describing that cryptocurrencies "are intended to be borderless" and that the location of the main proceeding will have large implications).

III. POTENTIAL PROBLEMS WITH THE CURRENT WAIT-AND-SEE APPROACH

As this Essay shows, bankruptcy systems have yet to forge a cogent and comprehensive approach for how to manage crypto assets. One explanation for the agnostic approach in cases like *HashFast*,²⁰⁸ and the current void of concrete guidance, is that bankruptcy courts and litigants alike would prefer to wait until other authorities have had a full opportunity to characterize and regulate this asset. But this wait-and-see approach is a mistake for three reasons.

First, the speculative nature of crypto assets creates a potent risk of a future market collapse, which would likely lead to a surge in bankruptcy filings. To see how this risk might play out for bankruptcy, we can look to the collapse of the real estate market in the early 1980s.²⁰⁹ Single-asset real estate filings surged, overwhelming bankruptcy courts.²¹⁰ This wave of filings in turn prompted a variety of inconsistent and arguably inadequate responses, including judicial work-arounds that had no basis in the text of the bankruptcy code.²¹¹ A crypto market failure could have a similarly detrimental effect on bankruptcy, with overwhelmed and underprepared bankruptcy courts aiming for quick dispositions as opposed to thoughtful decisions that guarantee consistency or that make sense from a long-term policy perspective. Moreover, the global nature of crypto assets practically ensures that the fallout will be far more widespread than it would be with other assets.

Second, there is little upside to a wait-and-see approach, because waiting for other authorities to act is unlikely to yield a coherent framework that would allow bankruptcy courts to handle these assets efficiently.²¹² To the contrary, legal developments surrounding crypto assets look more like

²⁰⁸ See *supra* Part I.

²⁰⁹ See generally Clark, *supra* note 184, at 179 (explaining that bankruptcy serves as “a ready device with which to blunt the worst effects” of a market collapse).

²¹⁰ See *id.* (explaining that the number of single-asset Chapter 11 filings surged from dozens to thousands after the speculative real estate bubble burst).

²¹¹ *Id.* at 179–80 (explaining that the variety of approaches and lack of consistency in the single-asset real estate cases “skew[ed] the law” and “may have rendered [Chapter 11] less of a fit” for other types of debtors).

²¹² See, e.g., Lemchuk, *supra* note 3, at 323 (“[W]hile government actors have been stepping into the virtual currency world and trying to set its borders, the assortment of definitions and regulations seem more to confuse than clarify.”).

regulatory power grabs than an effort to provide a meaningful framework.²¹³ Moreover, as Part II shows, crypto assets have unique features that create idiosyncratic problems for bankruptcy. Accordingly, waiting on other actors would likely leave the bankruptcy system with a patchwork approach that still forces difficult and uncertain choices about how to handle crypto assets in bankruptcy proceedings. Because crypto assets create unique problems in the bankruptcy context, bankruptcy will likely need its own framework to properly address how these assets should function within bankruptcy.²¹⁴

Third, a wait-and-see approach could inhibit the development of reliable crypto enterprises here in the United States, which in turn could eventually limit U.S. courts' ability to take meaningful action in bankruptcies and reorganizations that involve crypto assets. Without any real certainty or even guidance about how crypto assets will be treated under Title 11 of the United States Code, sophisticated players may be tempted to look elsewhere for a framework that provides more clarity (or, from a cynical perspective, lax regulation).²¹⁵ Moreover, depending on how the jurisdictional issues discussed in Section II.D play out, the COMI principles followed by the European Union could eventually become a barrier to U.S. courts seeking to exercise jurisdiction over digital assets held on foreign servers.²¹⁶ Large-scale cases involving crypto assets would more likely be filed in jurisdictions that have a stronger COMI claim, and U.S. courts may be shut out of this arena entirely.

CONCLUSION

The possibility that the United States will be shut out of the crypto bankruptcy arena is an important consideration for the country, one that

²¹³ See, e.g., *id.* at 320–23 (describing the patchwork of state and federal regulation and judicial rulings, which has led to a split over whether cryptocurrencies are property or currency); *id.* at 349–50 (arguing that agencies such as the CFTC and the SEC need to collaborate in regulating crypto assets rather than pursuing overlapping but disparate regulatory actions).

²¹⁴ See Mandjee, *supra* note 3, at 9 (explaining that the proper legal characterization of Bitcoin depends in large part on the type of use that is being regulated).

²¹⁵ See Malcolm Campbell-Verduyn & Marcel Goguen, *A Digital Revolution Back to the Future: Blockchain Technology and Financial Governance*, 37 BANKING & FIN. SERVS. POL'Y REP., Sept. 2018, at 1 (explaining how players in the blockchain and crypto markets make location decisions based on regulatory approaches of various jurisdictions).

²¹⁶ See generally Bryan Rochelle, *Cross-Border Insolvency in the U.S. and U.K.: Conflicting Approaches to Defining the Locus of a Debtor's "Center of Main Interests,"* 50 INT'L LAW. 391, 391 (2017) ("This lack of clarity [about how to apply COMI principles] has left courts on both sides of the proverbial 'pond' with the task of formulating definitions of their own.").

raises questions about its continued leadership role, not just in insolvency but in the future global economy. Although myths of American exceptionalism may at times overstate the case, the United States has long been recognized as a global leader in corporate reorganization.²¹⁷ Though the U.S. system may not always get the right answer, our decades of experience with a time-tested framework for Chapter 11 reorganizations serves as a useful base model that other countries can choose either to mirror or to deviate from. Either way, the choice is both conscious and informed.

However, if the United States' insolvency systems continue to ignore the mounting issues presented by crypto assets, we may see other jurisdictions stepping into that void and positioning themselves as the base model for handling crypto assets. Perhaps that is for the best, but at the very least, the possibility of a future in which U.S. bankruptcy courts are relegated to second-tier status ought to be a conscious and informed choice. This is exactly why the United States bankruptcy system's lack of focus on crypto assets is so troubling: without some centralized effort to address the particular challenges associated with crypto assets, we may find ourselves with no choices left at all.

²¹⁷ See, e.g., Deborah Ball, *Europe Builds Own Chapter 11*, WALL ST. J. (Apr. 5, 2013), <https://www.wsj.com/articles/SB10001424127887323296504578398612178796882> [<https://perma.cc/Y8GG-EHB5>] (“[T]he Continent’s bankruptcy laws are getting an extreme makeover. And the model for European lawmakers is Chapter 11 of the U.S. Bankruptcy Code.”).