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Cryptocurrency and Blockchain in Bankruptcy Cases

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I. Abstract:

Blockchain technology is an oft-misunderstood infrastructure for the storage of data. The brainchild of Satoshi Nakamoto, blockchain acts as a distributed, decentralized ledger and provides clarity and security to transactions through its applied use in cryptocurrency.¹ By storing new data to a chain of publicly available information, it authenticates transactions and guarantees transparency.²

Indubitably, the practice of law is being disrupted by blockchain technology, and bankruptcy is no exception. It will become increasingly more important for practitioners, judges, creditors, and anyone else in the world of bankruptcy law to understand blockchain technology in the coming years. These CLE materials will give an overview of the current state of the law, and an insight into issues regarding cryptocurrencies in bankruptcy and in secured transactions based on the information presently available on the subject.

II. What is Blockchain Technology?

“Blockchain” and “Cryptocurrency” are used almost interchangeably in lay speak because splitting the terms often raises more questions than answers. Yet, the terms refer to discrete things and, in fact, differ in a relatively straightforward way. Blockchain is the backbone of cryptocurrency, and it provides structure and security to the emerging technology of

¹ “Blockchains: The great chain of being sure about things” *The Economist*. October 21, 2015

² Ponciano, Johnathan. “What Public Company Disclosures Say About Blockchain and Cryptocurrencies.” *Forbes*. October 10, 2017. <https://www.forbes.com/sites/jonathanponciano/2017/10/10/what-public-company-disclosures-say-about-blockchain-and-cryptocurrencies/#1e926b7c767c>.

cryptocurrency. Blockchain operates as a database that exists among multiple parties and across several locations, and underlies cryptocurrency technology. It is decentralized, meaning that no central authority holds that database information.³ This structure facilitates peer-to-peer transparency and trust, and makes the database difficult to hack by design.⁴

“Blockchain” is a technical and variable term that represents a unique and dynamic technology with profound implications. Developers use the term to describe a “set of protocols and encryption technologies for securely storing data on a distributed network,”⁵ and business and financial institutions use “blockchain” to describe the technology underlying digital currencies.⁶ The specific technology is complicated, and most current explanations are either written in complex, technical verbiage or are too shallow and lack appropriate depth. Thus, for purposes of these CLE materials, a blockchain is a type of database that takes data and puts it into a block.⁷ This block uses cryptographic and algorithmic methods to create and verify transactions among participants.⁸

The simplest way to explain blockchain technology is to use the Bitcoin blockchain as an example. The bitcoin blockchain is the oldest in existence, and each block on the Bitcoin blockchain consists of 1 MB of data.⁹ The data on the Bitcoin blockchain is exclusively transactional data regarding Bitcoin exchanges or, the peer-to-peer exchange of Bitcoin. When a

³ Maull R, Godsiff P, Mulligan C, Brown A, Kewell B. “Special issue: The Future of Money and Further Applications of the Blockchain.” *Strategic Change*. Volume 26, Issue 5. 481-489. 2017

⁴ *Id.*

⁵ Udemy. “Blockchain: An Overview.” January 2018. <https://www.udemy.com/blockchain-an-overview/>.

⁶ *Id.*

⁷ UK Government Office for Science. “Distributed Ledger Technology: Beyond Blockchain.” https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/492972/gs-16-1-distributed-ledger-technology.pdf.

⁸ *Id.*

⁹ Jimi S. “How does blockchain work in 7 steps—a clear and simple explanation.” *Medium*. May 6, 2018. <https://blog.goodaudience.com/blockchain-for-beginners-what-is-blockchain-519db8c6677a>.

transaction is made, it is broadcast to the Bitcoin blockchain wallet application.¹⁰ At this stage, it remains in a pool of unconfirmed transactions.¹¹ It is up to the “miners”¹² on the network to select these unconfirmed transactions and form them into a “block.”¹³ Each miner constructs their own block, and receives a set amount of Bitcoin based on the size of the transaction as an award for their service.¹⁴ As a part of this process, a miner will then broadcast that specific block and its cryptographic signature to all other miners on the network, who will verify the block’s legitimacy. If it is deemed valid, it will be added to the blockchain itself.¹⁵ This process is called “proof of work,” and the block will be saved to the record.¹⁶ Once a block has been added to the blockchain, every block added onto it serves as confirmation of that block.¹⁷ This means, should a hacker attempt to change any of the information in the newest block, that block will get a completely different signature in the next block.¹⁸ Any altering of a block will “unchain” it from the sequence by rejecting that specific block. These properties are what makes Bitcoin, and blockchain in general, a highly secure and virtually immutable tool for peer-to-peer transfers.

The Bitcoin blockchain is the simplest example to follow because it is both well-known and deals exclusively with the exchange of Bitcoin.¹⁹ It is a public blockchain, meaning that

¹⁰ Jimi S. “Blockchain: how mining works and transactions are processed in seven steps.” Medium. May 2, 2018. <https://blog.goodaudience.com/how-a-miner-adds-transactions-to-the-blockchain-in-seven-steps-856053271476>.

¹¹ *Id.*

¹² “Miners validate new transactions and record them on the blockchain. On average, a block...is mined every 10 minutes. Miners compete to solve a difficult mathematical problem based on a cryptographic hash algorithm. It is a race to solve the mathematical equation required to create a block.” Cosset, Damien. “Blockchain: What is Mining?” Dev.com. January 5, 2018. <https://dev.to/damcosset/blockchain-what-is-mining-2eod>.

¹³ Jim S., *supra* note 9.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ UK Government Office for Science, *supra* note 7

¹⁹ For more on this technology, visit: <https://bitcoin.org/en/>.

anyone can transact over its platform. Still, it is only one of a growing number of applications utilizing blockchain technology.

III. What are Cryptocurrencies?

A. Types of Cryptocurrencies

Over 2,700 types of cryptocurrencies exist.²⁰ Although there are many different types, they all serve different purposes and are treated differently.²¹ Three main categories of cryptocurrencies currently exist: coins, utility tokens, and tokenized securities.²²

1. Coins: These are “decentralized digital currencies that use encryption techniques to regulate the generation of units of currency and verify fund transfers.” An example of a coin would be Bitcoin.²³
2. Utility Tokens: A utility token is not purchased as an investment to gain profit; instead it is utilized for various purposes, such as gaining access to services or products located on a server. An example of a utility token would be Ethereum.²⁴
3. Tokenized Security: A tokenized security is similar to a share of a business and carries with it an expectation of return on investment. An example of a tokenized security would be Ripple.²⁵

²⁰ *All Cryptocurrencies*, INVESTING.COM, <https://www.investing.com/crypto/currencies> (last visited on May 28, 2019).

²¹ Matthew Frankel, *How Many Cryptocurrencies Are There? Bitcoin, Ethereum, and Ripple are just the beginning*, FOOL.COM <https://www.fool.com/investing/2018/03/16/how-many-cryptocurrencies-are-there.aspx> (Mar. 16, 2018); Molly St. Louis, *Not all Cryptocurrencies Are Created Equal*, YAHOO FINANCE, <https://finance.yahoo.com/news/not-cryptocurrencies-created-equal-172123085.html> (Dec. 21, 2017).

²² Molly St. Louis, *Not All Cryptocurrencies Are Created Equal*, YAHOO FINANCE, <https://finance.yahoo.com/news/not-cryptocurrencies-created-equal-172123085.html> (Dec. 21, 2017).

²³ *Id.*

²⁴ *Id.*; Matthew T. McClintock, *Understanding Wyoming's 2018 Blockchain Laws A Model for Industry Regulation*, 41 Wyo. Law. 40, 41–42 (June 2018)

²⁵ Molly St. Louis, *Not All Cryptocurrencies Are Created Equal*, YAHOO FINANCE, <https://finance.yahoo.com/news/not-cryptocurrencies-created-equal-172123085.html> (Dec. 21, 2017).

The way in which the holder of the cryptocurrency is using it will influence whether it is categorized as a currency, a commodity, or a security.²⁶ A commodity is defined as a raw material that can be bought and sold. Some cryptocurrencies, like Ethereum, fall into this label when the cryptocurrency is used as fuel for the implementation and enforcement of smart contracts.²⁷ Currency, or money, is defined as “a medium of exchange currently authorized or adopted by a domestic or foreign government.”²⁸ Cryptocurrencies are treated as currencies when they are used to purchase materials online²⁹; however, to date the United States has not recognized cryptocurrencies as an official medium of exchange.³⁰ A security, put simply, is any debt that has been assigned a value and sold. Whether a cryptocurrency will be classified as a security is determined by analyzing the cryptocurrency and use of the cryptocurrency in conjunction with the *Howey Test*.³¹

B. Governmental Classifications of Cryptocurrencies.

When it comes to further classifying cryptocurrencies as currency, a commodity, or a security, you will get no guidance from the government. Cryptocurrency classifications handed

²⁶ Molly St. Louis, *Not All Cryptocurrencies Are Created Equal*, YAHOO FINANCE, <https://finance.yahoo.com/news/not-cryptocurrencies-created-equal-172123085.html> (Dec. 21, 2017); Public Statement, *Statement on Potentially Unlawful Online Platforms for Trading Digital Currencies*, SECURITIES EXCHANGE COMMISSION, (Mar. 7, 2018) <https://www.sec.gov/news/public-statement/enforcement-tm-statement-potentially-unlawful-online-platforms-trading>.

²⁷ Molly St. Louis, *Not All Cryptocurrencies Are Created Equal*, YAHOO FINANCE, <https://finance.yahoo.com/news/not-cryptocurrencies-created-equal-172123085.html> (Dec. 21, 2017); Alyssa Hertig, *How do Ethereum Smart Contracts Work?*, COINDESK, <https://www.coindesk.com/information/ethereum-smart-contracts-work/> (Last visited Dec. 14, 2018 1:02 PM EST).

²⁸ UCC § 1-201(B)(24)

²⁹ *United States v. Ulbricht*, 31 F. Supp. 3d 540, 540 (S.D.N.Y. 2014); *State of Fla. V. Michell Abner Espinoza*, Case No. F14-2923, in the Eleventh Circuit in Miami Dade County, Fla.

³⁰ See Andrew C. Helman & Carl N. Wedoff, *When Blockchain Meets Article 9 and Bankruptcy*, LAW360 (Feb. 9, 2018).

³¹ *S.E.C. v. W.J. Howey Co.*, 328 U.S. 293, 301 (1946).

down from U.S. Courts or administrative bodies are few and far between.³² Classifications are also not consistent from agency to agency as different bodies have classified cryptocurrencies as different things. For example, the Commodities Futures Trading Commission has classified cryptocurrencies as a commodity³³, the IRS has labeled it as property³⁴, the Securities Exchange Commission has deemed it a security³⁵, and FinCen has determined that it is currency^{36, 37}.

Classifications are also not consistent from court to court as different courts have classified cryptocurrencies differently, some even declining to make a ruling on classification and holding instead that bitcoins are not U.S. Dollars³⁸. The classification of cryptocurrencies as “commodities” has been upheld by the Eastern District of New York³⁹ and the District of Massachusetts.⁴⁰ In decisions from the Southern District of New York⁴¹ and the Eastern District of Texas, Bitcoin was deemed “currency” rather than a “commodity.”⁴² The idea of cryptocurrency

³² Madiha M. Zuberi, *The Bitcoin Identity Crisis: Currency or Property*, BAKERHOSTETLER, <https://www.copyrightcontentplatforms.com/2016/02/the-bitcoin-identity-crisis-currency-or-property/#page=1> (Feb. 17, 2016).

³³ The Commodity Futures Trading Commission (CFTC), *CFTC Staff Issues Advisory for Virtual Currency Products*, U.S. COMMODITY FUTURES TRADING COMMISSION, <https://www.cftc.gov/PressRoom/PressReleases/7731-18> (May 21, 2018).

³⁴ I.R.S. Notice 2014-21, INTERNAL REVENUE SERVICE, https://www.irs.gov/irb/2014-16_IRB#NOT-2014-21 (April 14, 2014) (This notice by the Internal Revenue Service officially categorizes cryptocurrencies as property for federal tax purposes).

³⁵ Public Statement, *Statement on Potentially Unlawful Online Platforms for Trading Digital Currencies*, SECURITIES EXCHANGE COMMISSION, <https://www.sec.gov/news/public-statement/enforcement-tm-statement-potentially-unlawful-online-platforms-trading> (Mar. 7, 2018).

³⁶ United States Department of the Treasury Financial Crimes Enforcement Network (FinCEN), *Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies*, UNITED STATES DEPARTMENT OF THE TREASURY FINANCIAL CRIMES ENFORCEMENT NETWORK, <https://www.fincen.gov/resources/statutes-regulations/guidance/application-fincens-regulations-persons-administering> (Mar. 18, 2013).

³⁷ Francine Mckenna, *Here's how the U.S. and the world regulate bitcoin and other cryptocurrencies*, MARKETWATCH, <https://www.marketwatch.com/story/heres-how-the-us-and-the-world-are-regulating-bitcoin-and-cryptocurrency-2017-12-18> (Dec. 28, 2017 11:19 AM EST).

³⁸ HashFast Technologies v. Lowe (In re HashFast Technologies LLC), No. 14-30725-DM (Bankr. N.D. Cal. Feb. 22, 2016).

³⁹ *Commodity Futures Trading Comm'n v. McDonnell*, 287 F. Supp. 3d 213 (E.D.N.Y.), *adhered to on denial of reconsideration*, 321 F. Supp. 3d 366 (E.D.N.Y. 2018).

⁴⁰ *Commodity Futures Trading Comm'n v. My Big Coin Pay, Inc.*, 334 F. Supp. 3d 492 (D. Mass. 2018).

⁴¹ *United States v. Faiella*, 39 F. Supp. 3d 544, 545 (S.D.N.Y. 2014).

⁴² *Sec. & Exch. Comm'n v. Shavers*, No. 4:13-CV-416, 2013 WL 4028182 (E.D. Tex. Aug. 6, 2013), *adhered to on reconsideration*, No. 4:13-CV-416, 2014 WL 12622292 (E.D. Tex. Aug. 26, 2014).

as “currency” was later implicitly rejected in a bankruptcy decision from the Northern District of California, where the court stated, “Bitcoin are not United States dollars.”⁴³ If that line of cases was not convoluted enough, some classify cryptocurrency as a “security” under the Security Exchange Act of 1934⁴⁴ and the *Howey* Test.⁴⁵ This definition seems to have the smallest amount of support and would likely only apply to tokenized securities. In addition, any support currently given to classifying cryptocurrencies as securities may come to a halt soon with the recent reintroduction of the Token Taxonomy Act (TTA) in the US House of Representatives.⁴⁶ This bill seeks to exclude cryptocurrency from all securities laws, will provide regulatory certainty, and clarifying conflicting state initiatives and rulings that have added confusion to this area⁴⁷. It was originally introduced in December of 2018, but failed in early 2019. The success of this version of the TTA remains to be seen.

C. Why Classifications Matter in Bankruptcy

The effects of these different definitions are important. For instance, the distinction between “commodity” and “currency” can significantly impact the valuation of fraudulent transfers. Bankruptcy estates are entitled to recover any increase in the value of commodities as of the date of recovery. For currency, on the other hand, the value recovered should be determined at the time of the transfer instead of recovery.⁴⁸ Whether a court defines cryptocurrency as a

⁴³ *Kasolas v. Lowe (In re Hashfast Techs. LLC)*, Adv. No. 15-3011 Dkt. No. 49 (Bankr. N.D. Cal. Feb. 23, 2016).

⁴⁴ Securities Exchange Act of 1934, § 3(a)(10); 15 U.S.C. § 78c (a)(10).

⁴⁵ *S.E.C. v. W.J. Howey Co.*, 328 U.S. 293, 66 S. Ct. 1100, 90 L. Ed. 1244 (1946)(creating a test to determine when a security exists. An investment is in a security when there is (1) an investment of money; (2) an expectation of profits from that investment; (3) the investment is in a common enterprise; and (4) the profits come predominately from the efforts of third parties).

⁴⁶ Ana Alexandre, *US Legislators Reintroduce Token Taxonomy Act to Exclude Crypto From Securities Laws*, COINTELEGRAPH, <https://cointelegraph.com/news/us-legislators-reintroduce-token-taxonomy-act-to-exclude-crypto-from-securities-laws> (Apr. 10, 2019).

⁴⁷ *Id.*

⁴⁸ *Kasolas v. Lowe (In re Hashfast Techs. LLC)*, Adv. No. 15-3011 Dkt. No. 49 (Bankr. N.D. Cal. Feb. 23, 2016).

“commodity” or “currency” could alter the amount a creditor receives by an appreciable amount. Another difference between these two definitions is that currency can be used in a “swap agreement.”⁴⁹ Swap agreements afford debtors more protections because they are exempt from the bankruptcy automatic stay provisions and avoidance as a fraudulent transfer under the safe harbor provisions of the Bankruptcy Code.⁵⁰ It is still possible for a commodity to be given these protections, but it is far less likely because the underlying agreement must be a “forward contract.”⁵¹

Although there are still many debates about how to classify cryptocurrency, the “emerging majority” of courts are beginning to define it as a “general intangible” under the UCC.⁵² This category is essentially a catch-all provision for items that do not fit into other categories.⁵³ Placing cryptocurrency into this category is significant in many ways. One way is that the “general intangible” category is “almost perfectly non-negotiable” which may not seem that significant yet, but, as cryptocurrency becomes more common in bankruptcy proceedings, it will become more important, especially as “second generation” collateral.⁵⁴

⁴⁹ “‘Swap agreement’ is derivative transaction involving agreement between two parties, ‘counterparties,’ to exchange cash flows over period of time.” *Procter & Gamble Co. v. Bankers Tr. Co.*, 925 F. Supp. 1270 (S.D. Ohio 1996).

⁵⁰ 11 U.S.C. § 546.

⁵¹ 11 U.S.C. § 101 (25) (defining “forward contract”).

⁵² *Hagerty & Shachmurove*, supra note 38.

⁵³ “General intangible” means any personal property, including things in action, other than accounts, chattel paper, commercial tort claims, deposit accounts, documents, goods, instruments, investment property, letter-of-credit rights, letters of credit, money, and oil, gas, or other minerals before extraction. The term includes payment intangibles and software.

U.C.C. § 9-102(a)(43)(2010).

⁵⁴ Jeanne L. Schroeder, *Bitcoin and the Uniform Commercial Code*, 24 U. Miami Bus. L. Rev. 1 (2016) Available at: <http://repository.law.miami.edu/umbl/vol24/iss3/3> (citing George K. Fogg, *The UCC and Bitcoins: Solution to Existing Fatal Flaw*, BLOOMBERG BNA (April 1, 2015) <http://www.bna.com/ucc-bitcoins-solution-n17179924871>; Bob Lawless, *Is UCC Article 9 the Achilles Heel of Bitcoin?*, CREDIT SLIPS (Mar. 10, 2014), <http://www.creditslips.org/creditslips/2014/03/isucc-article-9-the-achilles-heel-of-bitcoin.html#more>).

IV. Cryptocurrency and Bankruptcy: Overarching Questions

Cryptocurrency is a relatively new phenomenon and it will usher in a new wave of previously unaddressed legal issues, including many dealing with bankruptcy. Although Bitcoin's value has dropped significantly since the end of 2017,⁵⁵ its value and commercial use in recent years is significant enough to affect commercial transactions for, at least, the near future. Courts are just now beginning to see some of the first large scale cryptocurrency bankruptcy cases. For example, one of North America's largest "mining" companies recently filed for Chapter 11 bankruptcy in the Eastern District of Washington.⁵⁶ Due to the increased popularity and use of cryptocurrencies, it is only a matter of time until they become a common asset to be dealt with in bankruptcy proceedings. Accordingly, it is necessary to analyze and prepare for some of the more challenging questions that are bound to arise regarding cryptocurrencies in bankruptcy proceedings.

Some questions have already been settled, but others remain unanswered by the courts. One question that is not in dispute is that cryptocurrency owned by a debtor on the petition date will be considered "property of the estate" under 11 U.S.C. § 541.⁵⁷ Therefore, as required by 11 U.S.C. § 542, the debtor must deliver all cryptocurrency to the trustee and account for all property. Further, in a step that is unique to cryptocurrency holders, the debtor must maintain or turn over

⁵⁵ The Bitcoin price peaked at \$17,060.55 on December 29, 2017. *Bitcoin Price (BTC)*, COINDESK, <https://www.coindesk.com/price/bitcoin> (last visited May 28, 2019). It hit as low as \$3,295.27 on December 10, 2018. *Id.* And it is currently \$8,800.35. *Id.*

⁵⁶ Yogita Khatri, *Bitcoin Mining Firm Giga Watt Declares Bankruptcy Owing Millions*, COINDESK (NOV. 21, 2018), <https://www.coindesk.com/bitcoin-mining-firm-giga-watt-declares-bankruptcy-owing-millions>.

⁵⁷ 11 U.S.C. § 541. See also *In re Jackson*, Case No. 15-21233, Docket No. 879-3 (Bankr. D. Conn. Feb. 23, 2018)(allowing U.S. Trustee and creditors to investigate into the cryptocurrency assets owned by Rapper 50 Cent in his bankruptcy proceedings because cryptocurrency is "property of the estate.").

any keys to their “wallets” during bankruptcy proceedings.⁵⁸ As a practical matter, debtors may be apprehensive to turn over their access keys and wallets because once the wallet address and access key are known, anyone could steal the cryptocurrencies; however, this is similar to bank account information which debtors also have to turn over to trustees after filing for bankruptcy.

A. Finding the Asset

However, many issues still need to be addressed. One potential area of concern, given the greater privacy cryptocurrency grants its owners, is that trustees may have a difficult time finding a debtor’s cryptocurrency assets. This difficulty likely stems from the fact that wallets vary in their form. Wallets could encompass everything from a file on a computer, to a flashdrive, to a piece of paper. The small and versatile formats of the wallets provide greater ability for hiding the wallets and the cryptocurrencies contained therein. Fortunately, the bankruptcy code permits parties-in-interest to use an abundance of tools to help discover fraud; all of which will still be available when uncovering cryptocurrency assets. These mechanisms include the section 341 meeting of creditors⁵⁹ and Bankruptcy Rule 2004 examinations.⁶⁰ In addition, evidence of cryptocurrency can generally be uncovered in the debtor’s bank activity, credit card statements, or other documents easily obtainable by the trustee or creditors. Further, the same punishment for fraud remains, including criminal prosecution for bankruptcy fraud and the denial of discharge.⁶¹

⁵⁸ In order to maintain cryptocurrencies, a holder must also have a wallet where the unique identities of their cryptocurrencies are maintained. This wallet, and the cryptocurrencies contained therein, are accessed through the use of an access key, known only to the owner of the wallet.

⁵⁹ 11 U.S.C. § 341

⁶⁰ Fed. R. Bankr. P. 2004.

⁶¹ 18 U.S.C. §§ 152–157 (for criminal prosecution); 11 U.S.C. § 727(a) (for the denial of discharge).

B. Fraudulent and Preference Transfers

Another concern that must be considered is potential fraudulent transfers and preference transfers (and the amount of time and money spent litigating these transfers) involving cryptocurrency. One aspect of cryptocurrency that makes it appealing is the anonymity of its use. Although all cryptocurrency transactions are publically recorded on the blockchain ledger and thereby traceable,⁶² allowing the trustee to check the ledger for evidence of any transactions by the debtor, this does not mean that the trustee will easily discover or track the transfers. To track the transfers the trustee would need very specific information to actually trace the transfer, such as the debtor's and the recipient's private keys and wallet information. Additionally, there is new technology and new cryptocurrencies being developed for the sole purpose of promoting the anonymity of transactions.⁶³

C. Valuation and Exemption

The next potential issue involving cryptocurrency in bankruptcy proceedings is the volatility in cryptocurrency's value. Bitcoin's stock dropped tremendously from its peak in December of 2017 to December of 2018.⁶⁴ Bitcoin further displayed its volatility by rebounding and quickly increasing in value over the last few months.⁶⁵ This is significant for bankruptcy proceedings because a debtor could potentially satisfy all creditors with their cryptocurrency assets one day, but be completely insolvent the next (or vice versa). Determining when the valuation should occur will likely depend on the chapter of bankruptcy at issue. If the debtor has filed chapter

⁶² *How Does Bitcoin Work?*, BITCOIN, <https://bitcoin.org/en/how-it-works> (last visited May 28, 2019).

⁶³ One of the main technologies being developed is known as Zero-Proof technology which can be used with Bitcoin to remove all identifying information. In addition, new cryptocurrencies such as Zcash, Monroe, Dash, and Grin offer anonymous transactions without the use of Zero-Proof technology.

⁶⁴ See *Bitcoin Price (BTC)* *supra* at note 20. The value of Bitcoin peaked at \$17,060.55 on December 29, 2017. It hit as low as \$3,295.27 on December 10, 2018. *Id.*

⁶⁵ *Id.* Bitcoin's price, as of May 28, 2019, is \$8,800.35.

7 bankruptcy, the trustee will likely liquidate the cryptocurrencies as close to the petition date as possible due to the trustee's duties and the possibility that the value of the cryptocurrencies could drop. Conversely, if the debtor has filed chapter 13 or chapter 11, the debtor and creditors could negotiate a provision in the plan to allow for delayed liquidation in order to account for future increases in the value of the cryptocurrencies.⁶⁶

Finally, another issue that may arise is if the debtor wants to exempt the cryptocurrency from the bankruptcy estate. In order to exempt cryptocurrencies, a debtor will have to utilize the "wild card" exemption denoted in 11 U.S.C. § 522(d)(5) which states: "The following property may be exempt under subsection (b)(2) of this section: . . . (5) The debtor's aggregate interest in any property, not to exceed in value \$1,250 plus up to \$11,850 of any unused amount of the exemption provided under paragraph (1) of this subsection."⁶⁷ Courts have construed 11 U.S.C. § 522(d)(5) liberally to include no limitation on the type of property which may be exempt thereunder.⁶⁸ Although it seems to be well settled that a debtor could choose to exempt his cryptocurrency, the trustee, debtor, and creditors would again be faced with the question of valuation. Although the initial determination of value should be made either on the petition date or as discussed above depending on the chapter of bankruptcy, because of the volatile nature of the cryptocurrencies the trustee could take three separate approaches: (1) the trustee could liquidate all of the cryptocurrencies and reimburse the debtor for the amount of the exemption; (2) the trustee could liquidate the non-exempt portion of the cryptocurrency leaving the debtor with his interest

⁶⁶ Erin Illman & Robert Cox, Jr., *Bitcoin: A New Versatile Asset in Bankruptcy*, Law360 (February 4, 2019), <https://www.bradley.com/insights/publications/2018/03/bitcoin-a-new-volatile-asset-in-bankruptcy>.

⁶⁷ 11 U.S.C. § 522(d)(5)

⁶⁸ *In re Beaudoin*, 427 B.R. 30 (Bankr. D. Conn. 2010).

in his exempt cryptocurrencies; or (3) the trustee could choose not to liquidate any of the cryptocurrencies.

V. Cryptocurrencies as Collateral

Because cryptocurrencies are becoming a widely accepted asset, it is only a matter of time until lenders start to secure loans by taking a security interest in cryptocurrencies as collateral. The next area of concern is figuring out the best way for a creditor to secure and perfect a security interest in cryptocurrency.

Initially, the creditor must analyze the digital currency to be pledged. Determining how the cryptocurrency is being used will be instrumental in assessing which UCC classification the cryptocurrency will fall under. As already discussed in detail, there are three types of cryptocurrencies: coins (currency), tokenized securities (security), and utility tokens (commodity). These classifications can be used to assist a lender in determining how the cryptocurrency is being used as each category is used in a different way and serves a different purpose.

Once a creditor determines which category their security interest fall into, they can move on to the next question: determining the best fit for classification under the UCC. There are currently many disagreements over this topic, and there is no definitive answer as of right now.

Although determining what cryptocurrency is remains a difficult question, the UCC is much clearer on what cryptocurrency is not. Cryptocurrency is not an instrument, which the UCC defines as “a writing that evidences a right to the payment of a monetary obligation.”⁶⁹ Next, it is not “inventory” which only includes tangible items under the UCC’s definition.⁷⁰ And finally, it

⁶⁹ U.C.C. § 9-102(47).

⁷⁰ U.C.C. § 9-102(48).

is also not a “deposit account” because such accounts must be maintained at a bank.⁷¹ Cryptocurrencies do not meet the necessary elements required under the definitions of the above classifications. Therefore, we can confidently exclude instruments, inventory, and deposit accounts from the list of UCC classifications that

Cryptocurrency could still fall into any one of the following categories: “currency,” “investment property” or “general intangible.” These remaining categories have support from various sources, but “general intangible” is being selected by an “emerging majority” of courts as the proper classification for cryptocurrencies.⁷² Depending on the category it falls into, perfection of the security interest will also vary.

A. Currency

Cryptocurrencies may also be classified as currency or money; however, it is likely that only the cryptocurrencies falling into the “coin” category would be classified as a currency. The UCC defines money as a “medium of exchange currently authorized or adopted by a domestic or foreign government.”⁷³ Although the United States government has not adopted cryptocurrency as a recognized medium of exchange, other countries have, such as Japan, Canada, and Germany. If the collateral is classified as money, perfection of a security interest would occur through possession. Cryptocurrency is digital; thus, possession could occur in two ways. First, if the cryptocurrency is stored within a tangible “wallet,” such as a paper wallet or in a wallet stored on a flash drive, then the lender could physically possess the wallet. Second, the lender could require

⁷¹ U.C.C. § 9-102(47).

⁷² Richard Hagerty, Esq. & Amir Shachmurove, Esq., *The Lay of a Virtual Land: Cryptocurrencies as Collateral*, Business Credit, 10 (May 2019) (citing *Currier v. PDL Recovery Grp, LLC*, No. 14-12179, 2018 U.S. Dist. LEXIS 145127, at *5 (E.D. Mich. Aug. 27, 2018); *SEC v. PlexCorps*, No. 17-CV-7007 (CBA) (RML), 2018 U.S. Dist. LEXIS 102453, at 1-3 (E.D.N.Y. June 15, 2018)).

⁷³ UCC § 9-201(24).

the borrower to transfer the cryptocurrency collateral into the lender's own wallet. As a practical matter though, borrowers dealing in cryptocurrency will likely be unwilling to physically hand over their digital assets.

B. Investment Property

Only tokenized securities would likely be categorized as investment property because these types of cryptocurrencies are treated as securities. Some authors have blatantly stated that cryptocurrencies are not investment properties because they are not securities.⁷⁴ It is possible though that authors making this determination have not considered how the cryptocurrency is being used.⁷⁵ A security is defined as “an obligation of an issuer or share, participant, or other interest in an issuer or in property or an enterprise of an issuer which is represented by a security certificate in bearer or registered form, or the transfer of which may be registered upon books maintained for that purpose on behalf of the transferor.”⁷⁶ There are two types of securities, those with certificates and those without.⁷⁷ Perfection of an interest in a security can occur through delivering the security certificate documenting the security to the lender or by filing a financing statement with the proper government entity.⁷⁸ Which perfection method used will likely be determined based on whether the security is certificated or uncertificated. In the context of cryptocurrencies treated as securities, if the investor does not receive a certificate, then perfection would occur through filing a UCC-1 financing statement. As discussed above, the lender would have to ensure that the financing statement is sufficient. However, if the cryptocurrency investor

⁷⁴ See e.g. See Andrew C. Helman & Carl N. Wedoff, *When Blockchain Meets Article 9 and Bankruptcy*, Law360 (Feb. 9, 2018).

⁷⁵ *Supra* Part III (B); *Security Interests In Investment Property*; FINDLAW.COM <https://corporate.findlaw.com/business-operations/security-interests-in-investment-property.html> (Dec. 16, 2018).

⁷⁶ UCC § 8-102(15).

⁷⁷ See UCC § 8-102(16); (18).

⁷⁸ *Security Interests In Investment Property*; FINDLAW.COM <https://corporate.findlaw.com/business-operations/security-interests-in-investment-property.html> (Dec. 16, 2018).

receives a security certificate, which is simply “a certificate representing a security,”⁷⁹ perfection can be achieved by delivering the certificate to the lender.

Should a Tokenized Security be considered investment property, the transfer of the security along with the proper perfection would be influenced by Article 8 of the UCC which governs any instrument deemed suitable for trading according to securities markets.⁸⁰ Under Article 8, a bona fide purchaser acquires perfect title to the security.⁸¹ However, this discussion of cryptocurrencies as securities may be moot as there was a bill filed December 20, 2018, that seeks to exempt cryptocurrencies from securities laws and regulations by preventing the “digital tokens” from being defined as securities.⁸²

C. General Intangibles

The category of general intangibles is essentially a catch-all category for those items not fitting into a different classification and includes “any personal property, including things in action, other than accounts, chattel paper, commercial tort claims, deposit accounts, documents, goods, instruments, investment property, letter-of-credit rights, letters of credit, money, and oil, gas, or other minerals before extraction.”⁸³ All cryptocurrencies will likely be categorized as general intangibles; therefore, perfection of an interest in coins and tokens would occur through filing a UCC-1 financing statement in the jurisdiction where the debtor is located.⁸⁴ A financing statement will only be sufficient if it provides the name of the debtor, the name of the secured party or

⁷⁹ UCC § 8-102(16).

⁸⁰ Owen F. Walker, *Uniform Commercial Code Article 8 – Investment Securities*, 14 OHIO STATE LAW JOURNAL 57.

⁸¹ UCC § 8-301.

⁸² *US Lawmakers File Bill to Exempt Cryptocurrencies from Securities Laws*, COINDESK.COM, <https://www.coindesk.com/us-lawmakers-file-bill-to-exempt-cryptocurrencies-from-securities-laws?amp> (Dec. 20, 2018).

⁸³ UCC § 9-102(42).

⁸⁴ *See Id.*; UCC §§ 9-307, 9-301, 9-507.

representative thereof, and indicates the collateral.⁸⁵ Collateral will be considered sufficiently indicated if it complies with UCC § 9-108 or indicates that the financing statement covers all assets or personal property.⁸⁶ Filing a financing statement that covers all personal property generally would encompass cryptocurrencies; however, the description required is not so cut and dry when filing a UCC-1 financing statement only pertaining to cryptocurrencies. When filing a financing statement only covering cryptocurrencies, the description will have to reasonably identify the cryptocurrency in a manner by which the identity of the collateral will be objectively determinable.⁸⁷ A possible description for a financing statement will be the address and access key of a cryptocurrency wallet, which is required to deal in cryptocurrencies. As such, the following description could be used: “All cryptocurrency contained within the wallet with the following address and access key.” This is a risky description though because once the wallet address and access key are known, anyone could steal the collateralized cryptocurrency. Another potential UCC-1 description would be “all cryptocurrencies owned by [name].” This description, however, could be too broad depending on the amount of cryptocurrency owned by the borrower in comparison to the amount used as collateral.

VI. Conclusion

Blockchain and cryptocurrency issues are going to become increasingly more common in bankruptcy proceedings and in our daily lives. Currently, the subject matter is amorphous in many ways. It is relatively new, difficult to understand, unpredictable in the market, and has gained inconsistent and contradictory opinions. Although the trends are beginning to materialize and become more predictable, these are still rapidly changing areas. For this reason it is imperative

⁸⁵ UCC § 9-502(a).

⁸⁶ UCC § 9-504.

⁸⁷ UCC § 9-108.

that creditors, practitioners, judges, law makers, cryptocurrency owners, and anyone interested in the topic remain vigilant in updating their knowledge regarding cryptocurrencies in bankruptcy and secured loans. It will be interesting to see what these new developments are and how they affect bankruptcy law going forward into the near future.