Articles:

Cryptocurrency, NFTs, and the "Metaverse": Addressing the Expanding World of Virtual Assets in Divorce Proceedings

Stephanie L. Tang*

ABSTRACT

Transactions involving virtual assets are increasing daily, with millions of people investing in cryptocurrency and most recently, Non-Fungible Tokens (NFTs). With billions of dollars being poured into virtual assets, family courts and practitioners are left scrambling to understand these assets and how to discover and value them. This Article sets forth a proposed framework for identifying, characterizing, valuing, and dividing virtual currency in dissolution of marriage cases. The framework follows four primary steps: (1) adopt uniform discovery

^{*} Stephanie L. Tang is an Assistant Professor of Law, Baylor Law School, Waco, Texas (teaching Family Law); Former Partner at the family law firm, Kogut & Wilson, L.L.C., graduated *magna cum laude* from University of Illinois College of Law in 2015; received her B.A. in Psychology and Legal Studies with Honors from Northwestern University in 2012; Chair of the Illinois State Bar Association Family Law Section Council (2022-2023). Thank you to my husband, Mark Scott, and son, Connor Scott, for the constant support, hugs, and love as we continue our wonderful adventure together. Thank you also to Prateek Janardhan, J.T. Buice, and Thomas Molloy, for all the help and revisions to this Article.

requests tailored to uncover virtual currency, and review concurrently produced discovery for evidence of virtual currency transactions; (2) consult with financial experts and review existing virtual currency exchanges for transaction history and inception of title for virtual currency; (3) value the virtual currency as of the date and time of dissolution separate from the rest of the marital estate and address any future marital earnings received from virtual currency or assets; and (4) encourage like-kind division or immediate sale of virtual currency upon divorce. These steps, along with continuing legal and judicial education, will assist courts in ensuring an equitable or equal property division between spouses and protect against subsequent litigation seeking to modify or vacate previous judgments dividing virtual assets.

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I. INTRODUCTION

Close your eyes and imagine the most expensive kitten you can think of: a purebred show kitten, bred from a long line of award-winning cats owned by celebrity clientele. Now, imagine that kitten had a \$172,000 price tag and instead of being a live kitten, it exists only virtually. Would you buy it? That is exactly what one user, Rabono, did in September 2018 when they purchased "Dragon," a cotton-candy-colored Non-Fungible Token (NFT) "CryptoKitty." Launched in November 2017, CryptoKitties was one of the original blockchain-based games, which allowed people to purchase and sell virtual cats. Each of the nearly 1.8 million CryptoKitties have distinct characteristics stored on Ethereum's blockchain, and fans have spent over twenty million dollars' worth of Ether purchasing, feeding, and nurturing these cats.

Fast forward to March 11, 2021. On this date, Mike Winkelmann, known by the username "Beeple," sold his NFT, "Everydays – The First 5000 Days" for \$69 million at Christie's Auction House, making it the highest selling NFT to date. "Everydays" was the first digital work of art ever offered by a major auction house, and from this success, Beeple

^{1.} See Mark Serrels, Someone Just Bought a Cryptocurrency Cat for \$172,000, CNET (Sept. 4, 2018, 8:26 PM), https://cnet.co/3NObpzn.

^{2.} See Jazmin Goodwin, What is an NFT? Non-fungible Tokens Explained, CNN BUS.: INVEST AHEAD (Nov. 10, 2021, 3:03 PM), https://cnn.it/3PJU6B8.

^{3.} See id. Ethereum is a popular cryptocurrency which backs the majority of NFTs. See infra Section II.B. Each cryptocurrency has its own native blockchain. See Nicholas Rossolillo, Types of Cryptocurrency, THE MOTLEY FOOL (June 28, 2022, 5:51 PM), https://bit.ly/3vgliMH.

^{4.} Jacob Kastrenakes, *Beeple Sold an NFT for \$69 Million*, The Verge (Mar. 11, 2021, 10:09 AM), https://bit.ly/3lX7FiZ.

became one of the top three most valuable living artists.⁵ Now, "Everydays" is only one of the increasing amount of digital works of art being sold as NFTs on a nearly daily basis.⁶ Art dealer and columnist for *Artnet*, Kenny Schacter, predicted that digital works like Beeple's will "eclipse the traditional art market within five years."

This spike in interest has sprung from the increasing number of cryptocurrency holders looking to diversify their virtual holdings. This reflects an overall increased interest in the digital marketplace over the past decade to diversify investor portfolios. This surge is supported by reports estimating there are around 300 million global cryptocurrency users. In the United States alone, around 27 million people own a digital asset. Since January 2019, the number of Ethereum accounts has surged by 160% and the price of cryptocurrency has gone up 1,355%. According to the market research website, CoinMarketCap.com, as of 2022, there are over 20 thousand publicly traded cryptocurrencies, a number that continues to grow on a daily basis. In December 2021, the total value of all cryptocurrencies hit over \$2 trillion. These trends support the Chief Executive Officer of IBM, Ginni Rometty's 2017 prediction that "blockchain will do for trusted transactions what the Internet has done for information."

- 7. *Id*.
- 8. See id.

- 10. Global Crypto Owners Near 300 Million, Predicted to Hit 1 Billion by the End of 2022, CRYPTO (Jan. 19 2022), https://bit.ly/3OxYHEW.
- 11. See Agné Cimermanaité, Crypto and NFT Division in Divorce Settlements: How Difficult Is It to Track Crypto Profits?, DAILYCOIN (Oct. 12, 2021), https://bit.ly/3N6cUc8.
- 12. Ethereum is one blockchain on which NFTs are based. See Rishi Iyengar, We Bought an NFT. Here's What We Learned, CNN Bus.: INNOVATE (Mar. 14, 2021, 11:55 AM), https://cnn.it/38QPgBL.
- 13. See Kevin Voigt & Andy Rosen, Cryptocurrency: What It Is and How It Works, NERDWALLET (June 13, 2022), https://bit.ly/3J6MJRn.
- 14. *See id.* Investment bank Jeffries similarly projects the NFT market will reach more than \$80 Billion in Value by 2025. *See* Will Canny, *Jeffries Sees the NFT Market Reaching More Than \$80B in Value by 2025*, CoinDesk (Jan. 20, 2022, 11:06 AM), https://bit.ly/3PGF6Us.
- 15. Mary C. Lacity, Crypto and Blockchain Fundamentals, 73 ARK. L. Rev. 363, 363 (2020).

^{5.} See id.

^{6.} Annie Nova, What are NFTs? Here's What You Need to Know About Nonfungible Tokens, CNBC (Oct. 16, 2021, 9:00 AM), https://cnb.cx/38vS7zA.

^{9.} See Amit Mathradas, The Prevalence of the Online Marketplace Model and Its Impact on E-Commerce, Forbes (Feb. 22, 2021, 7:20 AM), https://bit.ly/3J2pHLD; See also Michelle Faverio & Navid Massarat, 46% of Americans Who Have Invested in Cryptocurrency Say It's Done Worse Than Expected, PEW RSCH. CTR. (Aug. 23, 2022), https://pewrsr.ch/3LiTeBN (finding of the 16% of Americans who reported that they invested in cryptocurrency, 78% reported they were seeking for a "different way to invest")

However, despite this surge in popularity, cryptocurrency and NFTs are still relatively misunderstood and novel assets in legal jurisprudence. ¹⁶ Unfortunately, this makes virtual assets like cryptocurrency and NFTs the perfect replacement for the former "hide cash . . . under a mattress" approach to concealing assets in divorce cases. ¹⁷ The volatility of cryptocurrency values adds another layer of difficulty. ¹⁸ With the number of cryptocurrencies, NFTs, and NFT marketplaces growing rapidly, it is critical for courts and family law practitioners to understand these assets and approaches for how to discover and divide them.

In every divorce proceeding where parties own virtual assets (just like any physical assets), courts are tasked with four responsibilities: (1) identifying them, (2) characterizing them, (3) valuing them, and (4) dividing them.¹⁹ This Article first provides an overview of cryptocurrency, NFTs, and the growing concept of the "metaverse." Part III will then transition into a discussion of the current methodologies employed by courts when dividing virtual assets and considering inconsistent income streams, including stocks and royalty income, respectively. Part IV addresses recommendations for how courts should apply these existing methodologies to virtual assets. Specifically, to identify virtual assets, courts should adopt discovery requests targeted to locate documents and interrogatories addressing virtual asset acquisition and transactions, and review parties' produced discovery documents including tax returns and account statements. To characterize virtual assets as separate, marital, or community property, courts should consider the retention of forensic experts to prepare reports of outlining and tracing prior cryptocurrency transactions and reviewing transaction history on exchanges by a spouse. When valuing a virtual asset, courts should determine a value as of the date and time of dissolution, following

^{16.} See id.

^{17.} See Cimermanaité, supra note 11; Jane Wollman Rusoff, Crypto Assets Are Making Divorce More Complicated, THINKADVISOR (May 25, 2022), https://bit.ly/3eLKyYh (citing an interview with family law attorney, Kim Nutter, wherein she indicated she has seen an increase in disputes over digital assets in divorce are increasing).

^{18.} Kai Sedgwick, *British Couple Lawyer Up as \$840k Cryptocurrency Divorce Heats Up*, Bitcoin.com (Feb. 15, 2018), https://bit.ly/38w7oQX (detailing a case where British divorce law firm reported in 2018 that they were handling an estate with an original cryptocurrency investment of eighty thousand pounds in November 2016, which increased to one million pounds in December 2017, and as of February 2018, was back to six hundred thousand pounds). In June 2022, Bitcoin's price plummeted nearly 5% to its lowest price since December 2020. Alex Gailey, *Bitcoin's Price Dips Below \$23,000, After Fed Meeting and U.S. GDP Report. Here's How Investors Should React*, TIME: NEXTADVISOR (July 22, 2022), https://bit.ly/3cAzTyF.

^{19.} See generally Chris Meuse, Cryptocurrency and Divorce, 2018 ADVANCED FAM. L. 28-V (2018).

case precedent surrounding valuation of other volatile and collectible assets. Finally, when dividing cryptocurrency, courts should address both present and future potential income from the virtual asset, and favor like-kind exchanges where possible, or immediate sale and division of tax liability or gains between spouses. Overall, efforts should be made to increase continuing legal education and continuing judicial education to help practitioners and judges keep abreast of developments in the constantly changing world of virtual assets.

II. OVERVIEW OF CRYPTOCURRENCY, NFTs, AND THE "METAVERSE"

This Section will first provide an overview of cryptocurrency and NFTs. It will then discuss the reasons behind the growth of virtual assets, criticisms of virtual assets, and the general role of virtual assets in the growing "metaverse."

A. What is a Blockchain?

A blockchain is an open, public, decentralized ledger that records transactions between parties in a permanent record, in contrast with banks that maintain a private, centralized ledger. For proof-of-work blockchains, such as Bitcoin, "miners" act as "nodes" connected to the blockchain, each maintaining an identical copy of the ledger, and processing further transactions on that ledger by publishing "blocks" to the blockchain. Every "block" on the blockchain contains a collection of transactions between participants. Whenever an end user wants to send cryptocurrency or an NFT to another user, they submit a transaction to miners who compete to propose blocks to be added to the blockchain and verify the transaction. The transaction is then recorded as a "block" on the blockchain. There is a separate blockchain for each cryptocurrency, and each blockchain may allow for other uses. For example, Ethereum is a type of cryptocurrency and the Ethereum

^{20.} See id.

^{21.} See CPA CANADA & AICPA, BLOCKCHAIN TECHNOLOGY AND ITS POTENTIAL IMPACT ON THE AUDIT AND ASSURANCE PROFESSION 3 (2017), https://bit.ly/3PRuUIf.

^{22.} See id.

^{23.} See id. (The nodes use a pre-determined mechanism known as a "consensus algorithm" to check the validity of the transaction). Nodes are computers that store specific amounts of cryptocurrency and use that stored amount to verify transactions. See Andrew N. Speer, Digital Dissolutions: Cryptocurrency and the Marital Estate 1–2 (2019), https://bit.ly/3UcuJdx.

^{24.} See id. at 3.

^{25.} Adam Hayes, *What is a Blockchain?*, INVESTOPEDIA (June 24, 2022), https://bit.ly/3wS9tim.

blockchain allows for the creation of smart contracts²⁶ and NFTs.²⁷ While the blockchain ledger is public and available to all computers connected to the blockchain network,²⁸ users transact under a pseudonym (their virtual wallet address) so it is nearly impossible to trace trades back to the actual individual or entity without using more complex chain analysis tools commonly used by law enforcement.²⁹

The two primary benefits of using blockchain technology are its efficiency and reliability resulting from elimination of third-party intermediaries from its transactions.³⁰ Traditional credit cards or other bank payments use software and hardware to facilitate a financial transaction and the credit card company or bank, as intermediaries, maintain a ledger of transactions that flow through their network.³¹ Blockchain transactions increase efficiency by eliminating the need for a third-party intermediary by allowing a person or entity to send cryptocurrency directly to the intended recipient.³² Further, traditional accounts require centralized transaction processors and a single company controls the ledger.³³ In contrast, each active node maintains a complete copy of the blockchain ledger. Thus, if one node goes offline, the ledger is still available to the rest of the nodes to prevent any single party from modifying the past transactions or censoring future transactions.³⁴

B. What is Cryptocurrency?

Cryptocurrency is a form of virtual currency that uses blockchain technology to record its transactions.³⁵ In 2008, an author using the pseudonym, "Satoshi Nakamoto," published a white paper titled "Bitcoin: A Peer-to-Peer Electronic Cash System" on a cryptography email list, introducing the world to blockchain and the first cryptocurrency unit, Bitcoin.³⁶ The "crypto" prefix of cryptocurrency

^{26.} Introduction to Smart Contracts, ETHEREUM (July 25, 2022), https://bit.ly/3eUVrHz (Smart contracts are digital agreements using computer code that automatically executes when the terms of the contract are met).

^{27.} See id.; see also infra Section II.B.

^{28.} See Introduction to Smart Contracts, supra note 26.

^{29.} See The Bankruptcy Estate and Cryptocurrency, FOLEY & LARDNER LLP (May 17, 2018), https://bit.ly/3oshMh2; Paul Sibenik, *Identifying and Discovering Cryptocurrency in a Divorce*, CIPHERBLADE (Dec. 13, 2019), https://bit.ly/3w3sOOg.

^{30.} See Hayes, supra note 25.

^{31.} See id.

^{32.} See id.

^{33.} See CPA CANADA & AICPA, supra note 21, at 4.

^{34.} See id.

^{35.} See Bryce Hopson, Bitcoin Battles: Is Your Spouse Hiding Assets via Cryptocurrency?, 81 Tex. B.J. 936, 936 (2018).

^{36.} Doug Fredrick, *Down the Rabbit Hole: Cryptocurrency & Blockchain*, STATE BAR OF WIS.: WIS. LAW. (Mar. 12, 2019), https://bit.ly/3z9vv1i. Based on Nakamoto's design, the total amount of Bitcoin that can be issued is 21 million. Adam Hayes, *What*

stems from cryptography, the practice of sending secure and encrypted data between one or two parties.³⁷

Cryptocurrency uses a form of encryption called "public-private key encryption" to secure its transactions without a third-party intermediary. Every user's cryptocurrency wallet is created using a keypair, comprised of a private key and a public key. Only the user has access to their private key, which is similar to an account password or PIN and grants the user access to their funds. The 33/34-character public key is similar to an e-mail address that does not disclose any information about the user behind the wallet but can be used to track the user's complete transaction history.

At its inception, because Bitcoin was the only cryptocurrency, the only way to obtain and exchange Bitcoin was to "mine" it by setting up a mining rig and managing your own virtual "wallet." Around 2010, cryptocurrency exchanges began in response to cryptocurrency users seeing a need for a marketplace where they could easily buy and sell Bitcoins that they or other users mined. Today, while some cryptocurrencies can be mined in a proof-of-work system, most cryptocurrency transactions are purchases and exchanges on widely used online cryptocurrency exchanges including Coinbase, Binance, and FTX. On these exchanges, users can access their cryptocurrency holdings through a virtual exchange wallet, which allows for peer-to-peer

Happens to Bitcoin After All 21 Million Are Mined?, INVESTOPEDIA (Mar. 5, 2022), https://bit.ly/38tyicd.

39. See Fredrick, supra note 36. Wallets may either be "hot," "cold," or "paper" wallets. Speer, supra note 23, at 2. ("Hot wallets are websites, apps, or computer programs, and are linked to specific users or devices . . . Cold wallets are similar to USB keys, often with physical buttons to unlock them . . . Paper wallets are printouts or engravings of public and private keys, sometimes with a QR code and can be made of metal, or carved into wood.")

- 41. Public Key vs. Private Key: What's the Difference?, BITCOIN DEPOT (June 9, 2022), https://bit.ly/3OB0AAq. (An example of a 33/34-character public key is 1F1tAaz5x1HUXrCNLbtMDqcw6o5GNn4xqX). The public key has no value without a private key. See Speer, supra note 23, at 1.
- 42. Lacity, *supra* note 15, at 381. Mining involves running a sophisticated computer program on an energy-intensive computer to solve complex mathematical programs. *See* 16 ANDREA CARROLL & RICHARD D. MORENO, LA. CIV. L. TREATISE, MATRIMONIAL REGIMES § 3:64, (5th ed. 2022). If a problem is solved, the miner then earns and now owns a unit of cryptocurrency. *See id*.
- 43. See Lacity, supra note 15, at 381; see also Ollie Leech, How to Gift Bitcoin, NFTs and Other Crypto, COINDESK (Dec. 20, 2021, 8:47 AM), https://bit.ly/3L6tfMe.
- 44. See Lacity, supra note 15, at 382. There are two types of cryptocurrency exchanges: "fiat-crypto" exchanges, which take cash, and pure crypto exchanges, where users can only trade one cryptocurrency for another. Speer, supra note 23, at 1.

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^{37.} What is Cryptography?, COINBASE, https://bit.ly/3ov8LDP (last visited July 25, 2022).

^{38.} *Id*

^{40.} See Fredrick, supra note 36.

transfers.⁴⁵ Each wallet has its own unique address that can be used to publicly trace a user's prior cryptocurrency transactions and current holdings.⁴⁶ Users can link their pre-existing bank or other cash accounts to these virtual wallets to fund purchases of new cryptocurrency.⁴⁷ Alternatively, users can "self-custody" their own funds through their own wallets.⁴⁸

So how do these pieces all fit together? Say User 1, Abby, has ten Bitcoins and wants to transfer all of them to User 2, Bert. To do so, she will need to have Bert's virtual wallet address. Abby will send the ten Bitcoins to Bert. This transaction will be encrypted through a hashing encryption algorithm using Abby's private key to "digitally sign" the transaction and indicate the transaction came from Abby. The transaction is then transmitted to the Bitcoin network's nodes using Abby's public key. Once a consensus is reached between the nodes, the transaction will be added as a block to the Bitcoin blockchain. The transaction can only be decrypted using Bert's private key that only Bert has access to. Once Bert decrypts the transaction using his private key, he will be able to access the ten Bitcoins.

C. What are Non-Fungible Tokens?

NFTs are purchased with and secured by blockchain technology.⁵³ The most widely used blockchain for NFTs is Ethereum.⁵⁴ NFTs are unique and irreplaceable digital representations of art or other

^{45.} An individual can only hold one type of cryptocurrency in a virtual wallet. You can have multiple Bitcoin wallets but "the Bitcoin wallet could not access Ether stored at an Ethereum address and an ether wallet cannot access bitcoins stored at a bitcoin address." Dorothy Haraminac, *On Records and Objections with Cryptocurrency*, State Bar of Texas 48th Annual Advanced Family Law Conference Paper (Aug. 2022), at 1.

^{46.} See Fredrick, supra note 36.

^{47.} Kat Tretina, *How to Buy Cryptocurrency*, FORBES: ADVISOR (May 15, 2022, 4:16 PM), https://bit.ly/3owXlzI.

^{48.} Rufus Kamau, *How to Safely Self-Custody Your Bitcoin*, FORBES (May 30, 2022, 5:53 AM), https://bit.ly/3Lfwl1W.

^{49.} Alternatively, Abby will need access to a QR code that Abby can scan with her phone to access Bert's wallet address. *See* Ciaran, *How Do I Send and Receive Bitcoin*?, BITCOIN.COM: SUPPORT (last visited July 25, 2022), https://bit.ly/3RYcqaX. *See also* Techskill Brew, *Cryptography in Blockchain (Part 6- Blockchain Series)*, MEDIUM (Jan. 16, 2022), https://bit.ly/3b536kR.

^{50.} Simplilearn, *Blockchain in 7 Minutes | What is Blockchain | Blockchain Explained | How Blockchain Works | Simplilearn*, YOUTUBE (Feb. 27, 2019), https://bit.ly/3BjmoxO.

^{51.} See id.

^{52.} See id.

^{53.} See Non-Fungible Tokens (NFT), ETHEREUM, https://bit.ly/37A04TW (last visited June 28, 2022).

^{54.} See id.; Which Blockchain to Choose for Your NFT Project?, PIXELPLEX (June 12, 2022), https://bit.ly/3czljY5.

collectibles that are stored on a blockchain and verified using blockchain technology.⁵⁵ Unlike cryptocurrency or cash dollars, NFTs cannot be substituted or exchanged at equivalency due to their unique nature, hence why they are described as "non-fungible."⁵⁶ The economic concept of "fungibility" hinges on whether an asset can be exchanged, and is best explained using an example.⁵⁷ A one-dollar bill is fungible, meaning you can exchange your one-dollar bill with your friend's one-dollar bill.⁵⁸ In contrast, a piece of artwork like the Mona Lisa is non-fungible because it cannot be exchanged for another piece of art as there is only one original painting.⁵⁹ Likewise, a digital NFT, including digital NFTs of artwork, cannot be traded for your friend's NFT.

NFTs can extend beyond digital artwork to "tokenizing" TikTok moments, website domains, ⁶⁰ virtual trading cards, and even real estate. ⁶¹ Each NFT contains unique ownership details in its metadata to distinguish it from other tokens. ⁶² This "tokenizing" process can be extended to physical assets to allow them to be purchased, sold, or traded more efficiently while reducing the possibility of fraud. ⁶³

People can either create⁶⁴ a smart contract with the NFT metadata from which users can mint an NFT, or purchase an NFT through an NFT marketplace.⁶⁵ Creating an NFT benefits the creator by allowing them to control its scarcity in the market and any royalty income received if their

^{55.} See Goodwin, supra note 2; Kastrenakes, supra note 4; Non-Fungible Tokens (NFT), supra note 53.

^{56.} See Rakesh Sharma, Non-Fungible Token (NFT) Definition, Investopedia (Feb. 26, 2022), https://bit.ly/3ss0uTu.

^{57.} See Goodwin, supra note 2.

^{58.} See id.

^{59.} See id.

^{60.} See, e.g., ENS, https://bit.ly/3yvBT4g (last visited Dec. 21, 2021) (selling NFTs for website domains ending in .ETH); UD, https://bit.ly/3w4IZLu (last visited Dec. 21, 2021) (selling NFTs for website domains ending in .crypto, .coin, .wallet, .Bitcoin, and other cryptocurrency-related domains).

^{61.} See Non-Fungible Tokens (NFT), supra note 53; Edward Ongweso Jr., Crypto Investors Buy 40 Acres of Land in Wyoming to Build Blockchain City, VICE (Nov. 3, 2021, 11:55 AM), https://bit.ly/3bbEOpj; Morgan Chittum, The Future of NFTs, According to Top Crypto VCs and Web3 Founders (July 6, 2022, 10:31 AM), https://bit.ly/3PBXQUO (predicting that the ten-year outlook for NFTs includes "a wide variety of use cases, which includes music, gaming, ticketing, virtual real estate, deeds for houses, medical records, and even collateral for loans").

^{62.} See Sharma, supra note 56.

^{63.} See id.

^{64.} How to Create NFTs, Tatum, https://bit.ly/3DpaCmj (last visited Aug. 5, 2022) (Explaining the process to create a NFT by creating a smart contract with the NFT metadata, from which users can mint the NFT).

^{65.} See Iyengar, supra note 12.

NFT is later sold.⁶⁶ Further, while an NFT cannot be divided, "NFT creators can . . . create 'shares' for their NFT" so people can own a fractional share of a token.⁶⁷ If an owner acquires a fractional share of the NFT, they may enter into a decentralized autonomous organization ("DAO") for managing the asset.⁶⁸ This fractional ownership means each holder does not have to buy or sell their share at the same time as another holder.⁶⁹ However, many investors are wary of creating their own NFTs because it is time-consuming to create and mint a new NFT collection. Additionally, once created, the creator is solely responsible for advertising and generating investors based on unique marketing or unique NFT characteristics.⁷⁰

Alternatively, if a user wants to acquire an NFT, they must first transfer the necessary amount of Ethereum from a cryptocurrency exchange⁷¹ to a cryptocurrency wallet application.⁷² The user will then connect their cryptocurrency wallet to an NFT marketplace⁷³ to send the Ethereum to the seller to purchase the NFT.⁷⁴ When the user purchases an NFT, the NFT is transferred to their cryptocurrency wallet via their public address.⁷⁵ After the transaction is complete, the purchaser's private key serves as proof of ownership of the original, and the original NFT creator's public key acts as a certificate of authenticity for that NFT.⁷⁶

Within the virtual marketplace, NFTs may even be used as collateral, allowing someone to own an NFT and borrow money against

^{66.} See id. (NFT creators set royalty payouts when creating their NFT. A standard royalty payout is five to ten percent of the secondary sales price); Non-Fungible Tokens (NFT), supra note 53.

^{67.} Id.

^{68.} See What Is a DAO and How Does It Benefit NFTs?, BINANCE (June 10, 2022), https://bit.ly/3J6mnPF ("Investing in an NFT project . . . can sometimes require significant capital that could be difficult for smaller traders to afford. Collector DAOs let multiple individuals own a fragment of an NFT.").

^{69.} See id.

^{70.} Mitchell Clark, *How to Create an NFT – And Why You May Not Want To*, THE VERGE (June 6, 2022, 8:00 AM), https://bit.ly/3z7FDrd.

^{71.} See, e.g., cryptocurrency exchanges, such as Wrapped Ethereum (WETH), DAI, LISDC

^{72.} See, e.g., cryptocurrency wallet applications, such as Rainbow Wallet, SOURCEFORGE, https://bit.ly/3N3SIN2 (last visited May 11, 2022); MetaMask, SOURCEFORGE, https://bit.ly/3ssKXmH (last visited May 11, 2022); see also Iyengar, supra note 12.

^{73.} See, e.g., OpenSea, Known Origin, Nifty Gateway, Rarible, and Mintbase. See Andrew Steinwold, Quick Overview of the NFT Ecosystem, ZIMA RED (Oct. 1, 2020), https://bit.ly/39cQS8l.

^{74.} See Iyengar, supra note 12.

^{75.} See id.

^{76.} See id.

it.⁷⁷ The South African company, NFTfi, is a marketplace where users can get a "cryptocurrency loan" against their NFTs.⁷⁸ This need arose from investors purchasing and retaining illiquid NFTs, but wanting to increase their liquidity without selling their NFTs.⁷⁹ Users seeking to borrow money using their NFT as collateral enter NFTfi's marketplace, where, like in a traditional loan setting, lenders propose offers with "varying interest rates and payment terms" for the borrower to choose from.⁸⁰ Once the borrower selects an option, the borrower transfers the NFT into NFTfi's smart contract where no one, including the NFTfi team, can access it.⁸¹ Once the loan is paid off with interest to the lender, the NFT returns to the borrower's wallet.⁸² If the borrower "defaults" on the loan, the lender receives the NFT.⁸³

D. The Growing Appeal and Popularity of Virtual Assets

May 22, 2010 became a famous date in the cryptocurrency world when Laszlo Hanyecz used 10,000 Bitcoins, at the time worth \$41, to purchase two Papa John's pizzas. Since Papa John's Pizza did not accept Bitcoin, Hanyecz posted an offer on Bitcoin.talk, an online chat platform, for ten thousand Bitcoins in exchange for the two pizzas. Nineteen-year-old Jeremy Sturdivant accepted the offer and purchased the pizzas for Hanyecz. This is now considered the first recorded purchase of a physical good using Bitcoin, and that 10,000 Bitcoins is now worth hundreds of millions of dollars. Fast forward to 2022, thousands of retailers now accept cryptocurrency for payment of physical goods using wallet addresses established by the retailer. As both cryptocurrency and NFTs are based in blockchain, both are appealing to investors to "streamline]" transactions between sellers and buyers by

^{77.} See Tage Kene-Okafor, South Africa's NFTfi Raises \$5M So People Can Use Their NFTs as Collateral for Loans, TECHCRUNCH (Nov. 16, 2021, 9:30 AM), https://tcm.ch/3wKeUBi.

^{78.} *Id.* Other companies that allow use of NFTs as collateral include J'PEG'd. J'PEG'd, https://jpegd.io/ (last visited Aug. 5, 2022).

^{79.} See Kene-Okafor, supra note 77.

^{80.} Id.

^{81.} See id.

^{82.} See id.

^{83.} *Id*.

^{84.} See Rufas Kamau, What Is Bitcoin Pizza Day and Why Does the Community Celebrate on May 22?, FORBES (May 9, 2022, 8:41 AM), https://bit.ly/3ow7dtg.

^{85.} See id.

^{86.} See id. (As of May 9, 2022, 10,000 Bitcoins had an estimated value of \$330.6419 million.)

^{87.} See id. See, e.g., Kadhim Shubber, Bitcoin-accepting Subway Sandwich Shop Discovered in the US, COINDESK (Nov. 12, 2013), https://bit.ly/3ROX4VN (A Subway in Allentown, Pennsylvania provided a QR code in their window for Bitcoin users to transfer Bitcoin for payment of Subway sandwiches).

removing third-party intermediaries.⁸⁸ Companies are also beginning to see how using cryptocurrency and NFTs can have different uses and can be used to streamline business practices by removing third-party intermediaries.⁸⁹ For example, WiV Technology, a blockchain-based technology for the wine industry, recently partnered with Ernst & Young to develop its fine wine investment trading blockchain platform.⁹⁰ The goal of this platform is to use NFTs to address the problem of counterfeiting in the fine wine industry. WiV ships the wine directly from the producers to a bonded warehouse with traceability and each case of wine is allocated an NFT with unique metadata that stores its properties.⁹¹

Everyday people have also developed an interest in virtual assets because of their overall "cool factor" and their accessibility to people of all ages. Particularly noteworthy, 12-year-old coder, Benyamin Ahmed, is on track to earn over \$1,000,000 from his collection of NFTs that he coded and titled "Weird Whales." NFTs also appeal to many fandoms and audiences. Like CryptoKitties, another example of a fandom marketplace for NFTs is NBA Top Shot. He NBA Top Shot marketplace allows purchasers to collect NFTs representing NBA basketball highlights. Likewise, NFTs have similar exclusive groups including the Bored Ape Yacht Club, which boasts celebrity members like Stephen Curry, Snoop Dogg, Mark Cuban, and Jimmy Fallon, for users who want to spend \$200,000 to join. Alternatively, users looking for something more personal could even turn their grandchild's artwork into an NFT to "gift" to family members.

Other long-standing organizations have also found virtual assets appealing and financially beneficial.⁹⁸ Auction houses, like Sotheby's

^{88.} See Sharma, supra note 56.

^{89.} See id.; Chittum, supra note 61.

^{90.} See Press Release, EY, EY Helps WiV Technology Accelerate Fine Wine Investing with Blockchain (Aug. 12, 2019), https://go.ey.com/3wEUGHy.

^{91.} See id.

^{92.} See Rikki Schlott, Meet 12-year-old Benyamin Ahmed Who Made \$1 Million Creating NFTs, N.Y. Post (Feb. 3, 2022), https://bit.ly/3BK7sbR.

^{93.} See id.

^{94.} See NBA TOP SHOT, https://bit.ly/3sV6IM6 (last visited June 20, 2022); see also Sharma, supra note 56.

^{95.} See NBA TOP SHOT, supra note 94.

^{96.} See Joanna Stern, I Gave My Mom a Crypto Wallet: A Simple Guide to NFTs, Blockchain and More, WALL St. J. (Dec. 13, 2021, 9:00 AM), https://on.wsj.com/3PHSzLM; see also SANDBOX, https://bit.ly/3LIWzbX (last visited Dec. 22, 2021); Andrew Hayward, The Biggest Celebrity NFT Owners in the Bored Ape Yacht Club, DECRYPT (Mar. 27, 2022), https://bit.ly/3vgdVHB.

^{97.} Stern, supra note 96.

^{98.} See Kastrenakes, supra note 4; Nova, supra note 6.

and Christie's, have jumped into the NFT bidding game. ⁹⁹ As detailed above, Christie's sold the highest selling NFT in March of 2021 for \$69 million. ¹⁰⁰ Sotheby's enjoyed a record-breaking sales year in 2021 with \$7.3 billion in sales, its highest sales figure in its 277-year history. ¹⁰¹ The auction house credited its record-breaking year to "younger, tech-savvy collectors" interested in purchasing NFTs, reporting that 80% of its NFT bidders were newcomers and over half of the bidders were under 40 years old. ¹⁰² As part of its recent sale of NFTs, Sotheby's opened a virtual replica of its London building in the virtual reality platform, Decentraland, to exhibit its NFT artwork to virtual visitors. ¹⁰³ Physical museums displaying NFTs are also rumored to begin appearing. ¹⁰⁴ Todd Morley of Guggenheim Partners recently announced his plans to build the world's largest NFT museum in midtown Manhattan. ¹⁰⁵

Finally, now that cryptocurrency is being more frequently used, many commonly used mobile payment apps, such as CashApp, Revolut, Coinbase, and Robinhood, have increased their accessibility to cryptocurrency by recently adopting cryptocurrency gifting features. ¹⁰⁶ CashApp does not even require users to buy Bitcoin prior to sending it. ¹⁰⁷ Rather, users can just send the U.S. dollar equivalent value to the recipient. ¹⁰⁸ Revolut, a British financial technology company, allows users to send "over 53 different cryptocurrencies to one another" via their mobile banking app. ¹⁰⁹ Binance, a cryptocurrency exchange, now even allows people to purchase digital "gift cards" to send coins to their friends' and family members' cryptocurrency wallets. ¹¹⁰

^{99.} See Kastrenakes, supra note 4; Nova, supra note 6.

^{100.} See supra Part I.

^{101.} See Yvonne Lau, Sotheby's Posted its Highest-Grossing Year Ever, Boosted by Millennials and NFTs, FORTUNE (Dec. 16, 2021, 3:08 AM), https://bit.ly/3GjffOu.

^{102.} *Id.* (internal quotation marks omitted).

^{103.} See Elizabeth Howcroft, Virtual Real Estate Plot Sells for Close to \$1 Mln, REUTERS (June 18, 2021, 9:32 AM), https://reut.rs/3NQpSLh.

^{104.} See Sophia Herring, The World's Largest NFT Museum is Coming to New York, ARCHITECTURAL DIGEST (May 27, 2021), https://bit.ly/3tSwQHR.

^{105.} See id.

^{106.} See Leech, supra note 43.

^{107.} See id.

^{108.} See id. As of June 28, 2022, the current price of 1 Bitcoin is \$20,323.87 USD. See Bitcoin, CoinMarketCap, https://bit.ly/3NZ9FU7 (last visited June 28, 2022).

^{109.} Leech, supra note 43.

^{110.} See Send Crypto with Binance Gift Card, BINANCE, https://bit.ly/3MIyOSw (last visited June 20, 2022).

E. Criticisms of Virtual Assets

Critics of virtual assets often emphasize their high energy usage requirements.¹¹¹ When someone "mines" cryptocurrency, they need to expend substantial energy and power to run the computers used to verify transactions and complete calculations.¹¹² A recent study conducted by the University of Cambridge found mining Bitcoin alone consumed more energy in one year than the entire country of Argentina.¹¹³ Further, mining Ethereum, second to Bitcoin in popularity, consumed an amount of energy comparable to that consumed by Libya.¹¹⁴ However, many studies ignore that significant energy is trapped in inefficient places and miners often go there to harvest the electricity.¹¹⁵ Further, miners have a stabilizing effect on energy grids because they can turn on and off during high and low energy usage times.¹¹⁶

A second major criticism is that virtual assets are just a fad and ownership of NFTs is silly because a person could just screenshot an image (in the case of an art NFT) and copy and paste it elsewhere. However, the high price tags on NFTs and increasing number of buyers suggest otherwise. Just like art collectors see the value in originals over printed replicas, NFTs are similarly valuable due to their unique identifying characteristics and the ability to easily verify their originality. Similar to how art collectors would not equate taking a photo of the Mona Lisa to ownership, taking a screenshot of an NFT is not the same as owning it.

Finally, due to their highly speculative nature, NFTs have been the subject of multiple fraudulent scams known as "rug pulls," even where

^{111.} See Cristina Criddle, Bitcoin Consumes 'More Electricity Than Argentina,' BBC News (Feb. 10, 2021), https://bbc.in/3GuvTLb; Judith Lewis Mernit, Bitcoin Requires an Immense Amount of Energy. Here's Why That's Sparking a Crypto Backlash, PBS News Hour (July 14, 2022), https://to.pbs.org/3RQE8pI (explaining Plattsburgh, New York imposed a moratorium on new crypto-mining operations when Bitcoin company Coinmint established themselves there and substantially increased their electricity usage).

^{112.} See id.

^{113.} See Criddle, supra note 111.

^{114.} See id.; Oscar Gonzalez, Thinking About Giving the Gift of an NFT? What to Know About Digital Tokens, CNET (Dec. 10, 2021, 5:00 AM), https://cnet.co/3ySVKuk.

^{115.} Peter Van Valkenburgh, *Understanding Bitcoin's Energy Use*, COIN CTR. (June 9, 2021), https://bit.ly/3qH0cao.

^{116.} Allyson Chiu, *Limiting Crypto Helped the Texas Power Grid Weather a Heat Wave*, The Tex. Trib. (July 15, 2022, 8:00 PM), https://bit.ly/3qFQIvT; Nic Carter, *Bitcoin Mining is Reshaping the Energy Sector and No One is Talking About It*, CoinDesk: Opinion (Oct. 11, 2021, 4:04 PM), https://bit.ly/3diSZdq.

^{117.} See a16z, All About NFTs, FUTURE, at 04:20 (Nov. 25, 2021), https://bit.ly/3L6YxlU.

^{118.} See Kastrenakes, supra note 4.

^{119.} See Non-Fungible Tokens (NFT), supra note 53.

the creators go through a verification process. 120 Rug pulls occur when NFT creators announce a new NFT project via Twitter, Discord, or other social media platforms and raise capital from investors. 121 However, the creators either never deliver the product and disappear with the investors' money or deliver a product that is not what was promised to them. 122 In October 2021, the Department of Justice formed its National Cryptocurrency Enforcement Team ("NCET"). 123 Subsequently, in March 2022, the Department of Justice arrested two 21-year-old men, Ethan Nguyen and Andre Llacuna, and charged them with wire fraud and one count of conspiracy to commit money laundering after they allegedly defrauded investors in the "Frosties" NFTs out of \$1.1 million when they failed to produce a promised NFT.¹²⁴ Developers have responded in an attempt to facilitate new investors in the NFT market by creating new "token standard[s]" to help guarantee refunds for investments in fraudulent projects. 125 As a result, private and public entities appear to be taking greater notice and action to protect against future NFT fraud. Further, in June 2022, the Department of Justice charged Nathaniel Chastain, former product manager at OpenSea NFT marketplace, in the Department of Justice's first digital asset insider trading scheme for allegedly trading information about NFTs that were going to be featured on the OpenSea homepage. 126 These heightened protective measures can help provide security to investors hoping to invest in NFT collections. 127

^{120.} Isabelle Lee, NFT Scammers Made off with \$1.3 Million in Solana After a 'Rug Pull' Despite the Project Creators Being Vetted, MARKETS INSIDER (Jan. 21, 2022, 11:05 AM), https://bit.ly/3RZZ25Y.

^{121.} See id. As an example, in 2021, an NFT seller of "Evolved Apes" NFTs received \$2.7 million after promising a collection of ten thousand NFTs. See Gonzalez, supra note 114. The seller opened a marketplace for public sale and just as suddenly, removed the social media page and website, never delivering on his promise. See id.

^{122.} See Lee, supra note 120.

^{123.} See id.

^{124.} Brian Quarmby, DOJ Cracks Down on 'Rug Pulls,' Charging Frosties NFT Project Founders, Cointelegraph (Mar. 25, 2022), https://bit.ly/3zamHrJ; Steve Kaaru, Frosties NFT: 2 Charged in US Over \$1.3M Rug Pull, Coin Geek (Mar. 29, 2022), https://bit.ly/3eRyuou (explaining the founders of the Frosties NFT project, Ethan Nguyen and Andre Llacuna originally advertised their Frosties NFT collection featuring "colorful ice-cream-scoop characters with quirky outfits." Nguyen and Llacuna promised investors extra perks, including "giveaways, early access to metaverse games they claimed to be working on, and exclusive mint passes to upcoming Frosties seasons").

^{125.} Meanix, *The End of NFT Rug Pulls?*, COINDESK (Apr. 19, 2022, 9:22 AM), https://bit.ly/3Sc3DSW (explaining the new token standard, ERC-721R guaranteed refunds to buyers if they fell victim to a rug pull by locking in funds transferred to a smart contract for a set number of days (the "refund period")).

^{126.} Press Release, Dept. of Just., Former Employee of NFT Marketplace Charged in First Ever Digital Asset Insider Trading Scheme (June 1, 2022), https://bit.ly/3eLQfW9.

^{127.} Meanix, supra note 125.

F. The Expanding "Metaverse"

People have begun using the phrase "the metaverse" to describe a relatively unknown, but up-and-coming, concept, similar to how "the Internet" was first referenced. 128 The term "metaverse" was first used in Neal Stephenson's 1992 science fiction novel *Snow Crash*. 129 It is now most commonly used to refer to a "superset of virtual reality, augmented reality, and the [I]nternet" 130 that exemplifies the "future of social connection." 131 Separate virtual communities already exist in the metaverse through popular games like Roblox, Fortnite, and Animal Crossing. 132 The metaverse connects these virtual communities so users can move from one community to another and engage in activities together like taking a virtual walk, attending virtual concerts, and, relevantly for this Article, exchanging virtual currency in a digital economy. 133

Both cryptocurrency and NFTs have pivotal roles within the metaverse, appealing to companies as a means of streamlined business. ¹³⁴ Companies including Decentraland and The Sandbox both have developed virtual worlds where gamers can use cryptocurrency to buy land, build structures, and monetize them. ¹³⁵ Decentraland specifically uses a cryptocurrency called MANA, which people can purchase on cryptocurrency exchanges like Coinbase. After acquiring MANA coin, Decentraland gamers can purchase land to display their NFT collections, advertise their companies, or conduct other business. ¹³⁶ Virtual real estate parcels in Decentraland have sold for over 1.2 million MANA, or \$900,000. ¹³⁷ American rapper, Snoop Dogg, famously purchased and is building a virtual NFT house on The Sandbox. ¹³⁸

^{128.} John Herrman & Kellen Browning, *Are We in the Metaverse Yet?*, N.Y. TIMES (Oct. 29, 2021), https://nyti.ms/3OuJeG4.

^{129.} See Eli Tan, A Crypto Guide to the Metaverse, COINDESK (May 23, 2022, 11:15 AM), https://bit.ly/39Pn1TU.

^{130.} Id.

^{131.} Herrman & Browning, supra note 128.

^{132.} See id.

^{133.} See id.; Eric Ravenscraft, What is the Metaverse, Exactly?, WIRED (Apr. 25, 2022, 7:00 AM), https://bit.ly/3wYvrOC.

^{134.} See Tan, supra note 129.

^{135.} See id.

^{136.} See id.

^{137.} See Howcroft, supra note 103.

^{138.} See Stern, supra note 96. See Carmela Chirinos, Someone Just Paid \$450,000 to be Snoop Dogg's Neighbor in the Metaverse. Here's How You Can Live by A Celebrity Too, FORTUNE (Feb. 2, 2022, 4:04 PM), https://bit.ly/3Lwso9z.

G. Property Division Models in Divorce Cases

To understand how cryptocurrency may be divided in a divorce proceeding, it is necessary to have a general understanding of the two major property division schemes used by American courts. The two primary property division models in American divorce cases are equitable distribution and community property models. 139 The majority of states have adopted the equitable distribution model for property distribution.¹⁴⁰ In equitable distribution states, property acquired during the marriage is traditionally characterized as "marital property" whereas property owned prior to marriage, or received through inheritance or gift is "separate" or "non-marital" property. 141 When dividing property, courts may consider a list of factors to determine what the appropriate allocation of assets is, including each party's contribution to the acquisition and preservation of assets, the duration of marriage, the particular economic circumstances of each spouse, age and employment of each party, and the reasonable opportunity for each spouse to acquire other assets in the future. 142 Nine states use the community property model for property division. 143 Typically, property acquired by either party during the marriage is characterized as "community property" and similar to in equitable division states, "separate property" is property acquired prior to marriage, or pursuant to inheritance or gift. 144 Community property states are split between jurisdictions that employ a fixed equal split of all property acquired during the marriage, or a presumption of equal division, or a division of property based on a "just and right division."145 In both equitable distribution states and community property states, there is a presumption that property acquired during the marriage is marital or community property and the party attacking the presumption has a burden of proof of proving the property is separate, typically by clear and convincing evidence. 146

^{139.} See Joseph W. McKnight, *Defining Property Subject to Division at Divorce*, 23 Fam. L. Q. 193, 201 (1989); Douglas E. Abrams, Naomi R. Cahn, Catherine J. Ross, & Linda C. McClain, Contemporary Family Law 563–70 (5th ed. 2019).

^{140.} See id.; Richard Stim, Property Division by State, DIVORCENET, https://bit.ly/38t62GF (last visited Dec. 29, 2021).

^{141.} See, e.g., 750 Ill. Comp. Stat. § 5/503 (2022) (Illinois).

^{142.} See, e.g., id.; N.Y. DOM. REL. LAW § 236 (Consol. 2022).

^{143.} See Stim, supra note 140.

^{144.} See, e.g., Tex. Fam. Code § 7.001 (2021).

^{145.} See, e.g., CAL. FAM. CODE § 2581 (Deering 2022); Nat'l Legal Rsch. Grp., Inc., The Issue of Equal Division, 15(3) EQUITABLE DISTRIB. J. 25, 25 (1998), contra Tex. FAM. CODE § 7.001 (2021). The minority of states employ a "hotchpot" approach where courts may divide both marital and separate property in the event of a divorce. WYO. STAT. ANN. § 20-1-201 (2022); Kane v. Kane, 706 P.2d 676, 680 (Wyo. 1985).

^{146.} See, e.g., Tex. Fam. Code § 3.003 (2021); Lischynsky v. Lischynsky, 501 N.Y.S.2d 938, 941 (N.Y. App. Div. 1986); Zagorski v. Zagorski, 116 S.W.3d 309, 316

Under both property schemes, family courts must consider three critical questions: (1) when the cryptocurrency was initially acquired; (2) what the source of funds used was; and (3) whether there was an increase in the value of the cryptocurrency during the marriage, and to what extent each spouse contributed to the increase in value. If marital or community funds were used to acquire the cryptocurrency, the cryptocurrency would be considered a marital or community asset subject to division. Leven if the cryptocurrency was acquired prior to the marriage, the non-holder spouse may still argue that any increase or enhancement in value or contributions during the marriage are subject to reimbursement, depending on the case law or statutory authority of the state. Leven 148

III. CURRENT FRAMEWORK FOR ADDRESSING VIRTUAL ASSETS IN DIVORCE PROCEEDINGS

As the popularity of virtual assets increases, divorce cases concerning the division of these assets have become more common. In these situations, practitioners and judges tend to be extra cautious when handling the virtual assets because there is sparse case law surrounding their division and new types of cryptocurrencies are being mined every year. However, as discussed below, there are existing tools currently

(Tex. App. 2003); Kleet v. Kleet, 264 S.W.3d 610, 614 (Ky. Ct. App. 2007); Wright v. Cramer, 107 N.E.3d 836, 846 (Ohio Ct. App. 2018); *In re* Marriage of Ciprari, 242 Cal. Rptr. 3d 900, 910 (Cal. Ct. App. 2019). Overcoming this presumption often requires hiring of "tracing experts" to trace a party's separate property interest. *See, e.g., Kleet*, 264 S.W.3d at 613; *Wright*, 107 N.E.3d at 843; *Ciprari*, 242 Cal. Rptr. 3d at 914.

147. See generally McKnight, supra note 139 (generally, property acquired using marital funds is presumed marital).

148. See, e.g., Anderson v. Gilliland, 684 S.W.2d 673, 674 (Tex. 1985) (holding "the proper measure of reimbursement to an estate which has expended funds to erect improvements on another estate is the enhancement of value to the receiving estate or the cost of improvements, whichever is less"); 750 ILL. COMP. STAT. § 5/503 (2022) (codifying the "right of reimbursement" where "an increase of non-marital property, irrespective of whether the increase results from a contribution of marital property, non-marital property, the personal effort of a spouse, or otherwise"). This is similar to a claim for reimbursement a party may make for a non-marital parcel of real estate where the parties contribute substantial marital funds to the residence during the marriage through payment of expenses, mortgage, taxes, and other capital improvements. Alternatively, in a hotchpot jurisdiction, the court may divide both marital and separate property in the event of a divorce. Wyo. Stat. Ann. § 20-1-201; Kane v. Kane, 706 P.2d 676, 680 (Wyo. 1985).

149. See CoinMarketCap, https://bit.ly/3S00FAC (last visited June 29, 2022) (listing 20,067 current cryptocurrencies). As of August 24, 2022, there are only a handful of published opinions addressing cryptocurrency and divorce in the United States. See generally Leonova v. Leonov, 242 A.3d 713 (Conn. App. Ct. 2020); In re Marriage of DeSouza, 266 Cal. Rptr. 3d 890 (Cal. Ct. App. 2020); see also infra Section III.C.1.i. As of August 21, 2022, there are only three unpublished opinions which mention cryptocurrency in the context of a divorce. See Crowder v. Sanger, No. 03-21-00291-CV,

available for addressing how to best identify, characterize, value, and divide virtual assets in divorce proceedings.

A. Existing Discovery Tools

The discovery process in divorce proceedings is critical to understanding what assets and liabilities a spouse has. Discovery not only helps litigants determine what assets and liabilities their spouse holds in pre-judgment proceedings, but it also helps preserve claims for fraudulent concealment of assets in post-judgment proceedings. Many states generally require that, for a spouse to prevail on a motion to vacate, set aside, or modify a judgment seeking to divide assets not discussed during the pre-judgment proceedings, the filing spouse must demonstrate they engaged in due diligence to discover their spouse's assets and liabilities during the original discovery period of the divorce proceeding. The exception to this is where their spouse fraudulently concealed or misrepresented the value of those assets and the spouse relied on that misrepresentation.

Litigants should first take all reasonable steps to preserve any evidence of cryptocurrency to protect against future claims of

2022 WL 2291213, at *6 (Tex. App. June 24, 2022) (referencing that the Husband had recently obtained \$21,000 in cryptocurrency through a "\$1,000 company gift and \$20,000 from his salary," but finding no error in his disclosure of the cryptocurrency amount in his net worth statement at the time he filed his affidavit); In re Marriage of Williams, No. 2-19-1149, 2020 WL 5016734, at *3 (Ill. App. Ct. Aug. 25, 2020) (affirming a trial court's order modifying allocation of parenting time between parties to equal parenting time where an expert custody evaluator took into account concerns by the Mother that the Father was unemployed, involved in mining Bitcoin, and allegedly told the child "money is not real and that Bitcoin is real"); Khadim v. Al Emara, 2022 WL 3131062 (Aug. 4, 2022) (noting that in a divorce decree, Appellant was awarded 100% of the cryptocurrency assets, but not discussing this issue further); LaFond v. LaFond, No. 82486-COA, 2022 WL 714430 (Nev. Ct. App. Mar. 9, 2022) (affirming a trial court's decision to equally divide the parties' marital cryptocurrency); In re Marriage of Liu & Chang, No. 80670-0-I, 2021 WL 861790 (Wash Ct. App. Mar. 8, 2021) (finding the trial court did not err in denying Respondent's Motion to Vacate where Respondent failed to pursue the issue surrounding Bitcoin valuation at trial, did not appeal it, and had no persuasive explanation for not pursuing it); see also Liu v. Chang, No. 78999-6-I, 2020 WL 1921123 (Wash. Ct. App. Apr. 20, 2020) (affirming the trial court's finding that Respondent had 53+ Bitcoin when he failed to provide credible documentary evidence to the contrary); Lykins v. Lykins, 2021 WL 321419 (Ohio Ct. App. 2021) (in analyzing a spouse's ability to pay spousal support, the court found the reason Husband's retirement account was lower than Wife's was because he made a mistimed investment in Bitcoin resulting in a significant loss).

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^{150.} See Smith v. Airoom, Inc., 499 N.E.2d 1381, 1387 (Ill. 1986).

^{151.} See id.; In re Marriage of Brubaker, No. 2-20-0160, 2022 WL 130886, at *9 (Ill. App. Ct. Jan. 14, 2022).

^{152.} See Smith v. Airoom, Inc., 499 N.E.2d 1381, 1387 (Ill. 1986); In re Marriage of Brubaker, No. 2-20-0160, 2022 WL 130886, at *9 (Ill. App. Ct. Jan. 14, 2022).

spoliation.¹⁵³ To do so, practitioners should send a "preservation letter"¹⁵⁴ to the opposing spouse's attorney at the inception of a case demanding that they preserve evidence relevant to the dissolution of marriage proceedings.¹⁵⁵ Relevantly, for a divorce where one spouse holds cryptocurrency, the letter should specify that the other party should not destroy any evidence showing texts, emails, or communications with third parties regarding acquisitions or transactions of cryptocurrency or NFTs.¹⁵⁶ The letter should further specify that the attorney's obligation to preserve evidence extends to underlying metadata as well.¹⁵⁷ If the evidence is not preserved, the letter will help establish a claim for spoliation, which requires a showing of bad faith and a conscious disregard of the duty to preserve relevant evidence.¹⁵⁸ If a court makes a finding of spoliation, it may bar evidence from being introduced, or can make an adverse inference at trial.¹⁵⁹

Whether in an equitable distribution or community property state, family courts have broad authority to interpret facts as they relate to the valuation and division of marital and separate assets.¹⁶⁰ Many states

^{153.} See ALI SHAHAAB ET AL., PREVENTING SPOLIATION OF EVIDENCE WITH BLOCKCHAIN: A PERSPECTIVE FROM SOUTH ASIA 1 (2021), https://bit.ly/3oqR7kR. (Spoliation of evidence occurs when there is alteration, destruction, tampering, fabrication, or withholding of evidence in a pending matter).

^{154.} Preservation letters are also referred to as a "litigation hold notices." *See generally* Amy Burton Loggins & Joseph C. Sullivan, *Don't Get Spoiled by Spoliation: The Importance of Litigation Hold Notices*, 33(4) ACC DOCKET 54 (2015). In some counties, these efforts may be supplemented by the existence of an automatic order that is entered upon filing of a Petition for Divorce enjoining the parties from destroying property during the pendency of the divorce. *See* DALLAS CNTY. FAM. DIST. CTS., STANDING ORDER REGARDING: CHILDREN, PETS, PROPERTY AND CONDUCT OF THE PARTIES 2–3 (2021), https://bit.ly/3J81y6p; CONN. SEC'Y OF STATE, CONNECTICUT PRACTICE BOOK 296, § 25-5 (2022), https://bit.ly/3vlEsTV.

^{155.} See Mass. Continuing Legal Educ., Inc. Doing Your Digging: Discovery In Divorce Actions § 7.7 (6th ed. 2020). Notably, if there is already a demonstrated pattern of concealment of assets, attorneys may consider seeking a preliminary injunction contemporaneously with the preservation letter, seeking to enjoin the cryptocurrency holding spouse from transferring assets during the pendency of a divorce. See, e.g., Injunctions Odyssey Reinsurance Co. v. Nagby, No. 16-cv-3038, 2019 WL 2717223 (S.D. Cal. June 27, 2019). To prevail on a restraining order, must "establish that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest." Winter v. Nat. Res. Def. Council, Inc., 555 U.S. 7, 20 (2008). As part of showing irreparable harm, the plaintiff must show monetary relief should be insufficient to compensate for injury. See, e.g., eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006).

^{156.} Loggins & Sullivan, supra note 154, at *57.

^{157.} Katherine W. Dandy, *Metadata: What Lawyers Need to Know*, 41 Westchester Bar J. 7, 10 (2016).

^{158.} See 18 Am Jur Proof of Facts 3D 515 Intentional Spoliation of Evidence § 7.4 (2022).

^{159.} See id.

^{160.} See MASS. CONTINUING LEGAL EDUC., INC., supra note 155, at § 7.7.

require parties to produce sworn initial disclosures of their incomes, assets, and liabilities, which should include any virtual assets. ¹⁶¹ Although these initial disclosure forms may not have a specific portion to list virtual assets, case law supports that cryptocurrency is "money" and should therefore be listed as a "cash" or "cash equivalent," similar to a traditional bank account. ¹⁶² Many local county rules and state rules of procedure also require initial document disclosures in this period of time as well, often requiring the last few years of tax returns, most recent paystubs, and bank account statements to be produced. ¹⁶³ This is usually the first opportunity for parties to acquire a list of their spouse's assets and liabilities.

Following the exchange of initial disclosures, the parties can choose to stop discovery at this juncture, or they may choose to issue additional discovery in the form of Requests for Production of Documents and Matrimonial Interrogatories, which are often served contemporaneously.¹⁶⁴ A Request for Production of Documents is a list of requests seeking specific relevant documents (financial or otherwise) from the opposing party. 165 Examples of requests to produce in divorce cases commonly include tax returns, bank statements, credit card statements, and statements related to any other financial accounts. 166 Matrimonial Interrogatories seek information from the opposing litigant regarding whether the party has certain accounts, when the accounts were acquired, how accounts are held, and the cost of acquisition. ¹⁶⁷ The

^{161.} See, e.g., Cook Cnty. Loc. Ct. R. 13.3.1; Ill. Sup. Ct., Financial Affidavit (2021), https://bit.ly/3PTq39q (Cook County, Illinois disclosure form); Ariz. R. of Fam. L. P. 49; Sup. Ct. of Ariz. Maricopa Cnty., Disclosure Statement, https://bit.ly/3wWpwLX (Maricopa County, Arizona disclosure form); Fla. R. P. Form 12.932, https://bit.ly/3qEB57R (Florida initial disclosure form).

^{162.} See generally U.S. v. Faiella, 39 F. Supp. 3d 544, 545 (S.D.N.Y. 2014) ("Bitcoin clearly qualifies as 'money' or 'funds' . . . Bitcoin can be easily purchased in exchange for ordinary currency, acts as a denominator of value, and is used to conduct financial transactions.")

^{163.} See, e.g., COOK CNTY. LOC. CT. R. 13.3.2; TEX. R. CIV. P. 194.2; MASS. SUPP. Prob. Ct. R. 410.

^{164.} See, e.g., Alabama (Ala. R. Civ. P. R. 33); Arizona (Ariz. R. Fam. L. P. 60, 62); Florida (Fla. R. Civ. P. 1.340, 1.350); Georgia (Ga. Code Ann. §§ 9-11-33, 9-11-34 (2022)); Idaho (Idaho R. Fam. L. P. 405, 406); Illinois (Ill. Sup. Ct. R. 213, 214), Iowa (Iowa R. Civ. P. 1.509, 1.512); Maryland (Md. R. Civ. P. 2-421, 2-422); Massachusetts (Mass. R. Dom. Rel. P. 33, 34); New York (N.Y. C.P.L.R. 3132); North Carolina (N.C. R. Civ. P. § 1A-1, R. 33); Ohio (Ohio R. Civ. P. 33, 34); Oklahoma (Okla. Stat. tit. 12 §§ 3233, 3234); Pennsylvania (231 Pa. Code § 4000 (2022)); Texas (Tex. R. Civ. P. 197.1); Wisconsin (Wis. Stat. §§ 804.08, 804.09 (2022)).

^{165.} See generally 10 Jeffrey S. Kinsler & Jay E. Grenig, Ill. Prac., Civil Discovery \S 13:6 (2d ed. 2021); Jeffrey S. Kinsler & Jay E. Grenig, Va. Prac. Civil Discovery \S 11:6 (2021).

^{166.} See, e.g., Dale M. Cecka et al., Va. Prac. Family Law § 16:18 (2022).

^{167.} See id.; See, e.g., Ill. Sup. Ct., Matrimonial Interrogatories, https://bit.ly/3Gtt1Ou.

receiving party has a fixed amount of time to respond or object to the discovery requests. ¹⁶⁸ If, after a hearing on any objections, the court finds the requests seek relevant information and are not overly burdensome, the court may then compel the litigant to comply and produce any outstanding documents or information pursuant to the discovery requests. ¹⁶⁹ Parties may also opt to serve Requests for Admission of Fact contemporaneously or following the issuance of formal discovery. Once served, the opposing party must "admit" or "deny" the statements set forth, including statements regarding whether the spouse has transacted in virtual currency or whether the spouse holds a cryptocurrency wallet. ¹⁷⁰

Typically following receipt of responses to discovery requests, attorneys discuss with their clients whether they should conduct an oral deposition of the opposing litigant to gain more information about the documents or information produced. These depositions are taken pursuant to notice, which may also include a supplemental rider requesting additional documents or supplemental disclosures from the party who will be deposed. Depositions are typically restricted in length by local court or state rules, unless otherwise agreed upon or ordered by the court. At a deposition, attorneys may ask a party to clarify information obtained during the discovery process, including explaining certain statement transactions, circumstances regarding the acquisition or disposition of an asset, and clarification on unclear income and asset distribution.

Finally, attorneys may consider issuing subpoenas to obtain more information about a party's physical or virtual assets. For purposes of uncovering cryptocurrency, if an attorney issues an interrogatory seeking the opposing party's wallet address, and one is disclosed, the attorney can then issue a subpoena to various cryptocurrency exchanges to obtain records that would show a history of any transactions.¹⁷⁵ Prior case law

^{168.} See, e.g., Alabama (ALA. R. CIV. P. 33); Illinois (ILL. SUP. CT. R. 213, 214).

^{169.} See, e.g., California (EILEEN C. MOORE & MICHAEL PAUL THOMAS, CAL. CIV. PRAC. PROCEDURE § 14:1.50 (2021)); Georgia (3 STEPHANIE A. GIGGETTS, GA. PROC. DISCOVERY § 6:1 (2022)).

^{170.} See, e.g., ILL. SUP. CT. R. 216. (Requests for Admission of Facts may seek admission or denial of the opposing party as to whether they own cryptocurrency, whether they have any virtual wallets, if they own a certain type of cryptocurrency, etc. There are often limits on the number of Requests for Admission of Fact and Interrogatories a party is able to propound, unless otherwise ordered by the court).

^{171.} See generally 4 Am. Jur. Trials 119 Discovery—Oral Depositions (2022).

^{172.} See, e.g., ILL. SUP. CT. R. 206.

^{173.} See id.

^{174.} See Divorce Deposition Sample Questions, DIVORCEHOW.COM, https://bit.ly/3t2pukH (last visited Jan. 20, 2022).

^{175.} See United States v. Coinbase, Inc., No. 17-cv-01431, 2017 WL 5890052, at *12 (N.D. Cal. Nov. 28, 2017).

supports a party's ability to obtain information regarding virtual currency transactions. ¹⁷⁶

B. Expert Witness Testimony and Forensic Accounting in Cryptocurrency Disputes

With cryptocurrency gaining popularity over the past decade, there is a growing need for expert witnesses to testify and analyze the transaction histories of parties' wallet addresses. To address this need, courts have started qualifying witnesses as experts on cryptocurrency. 177 Various providers now offer a course certification where individuals who complete the courses become a "Certified Cryptocurrency Forensic Investigator" or a "Certified Cryptocurrency Expert" geared towards learning methods and tools for tracing and investigating cryptocurrency. 178 However, parties will also want to ensure their expert has traditional financial expertise, ideally having completed tracing and valuation services for assets in divorce cases as well. 179 Cryptocurrency experts can assist attorneys by demystifying cryptocurrency, tracing and analyzing transactions between parties, and identifying how those transactions may become altered or erased. 180 At trial, attorneys may then request that these experts create graphics to illustrate or trace cryptocurrency transactions for judges and jurors with little or no blockchain experience.¹⁸¹

There are several considerations when determining whether to hire a cryptocurrency expert, primarily: cost, terminology, and valuation

^{176.} In the 2017 case *United States v. Coinbase, Inc.*, the Internal Revenue Service successfully enforced a summons to obtain records of Coinbase's customers to determine if they have paid federal taxes on their virtual currency profits, and required transaction logs, records of payments processed, and correspondence between the exchange and its users to be turned over. *See id.* Coinbase directly links website visitors to the contact information for the registered agent in their state. *See CT Corporation Service of Process Locations*, WOLTERS KLUWER, https://bit.ly/3z7IosM (last visited June 29, 2022).

^{177.} See LaFond v. LaFond, No. 82486-COA, 2022 WL 714430, at *2 (Nev. Ct. App. Mar. 9, 2022) (referring to the Wife's cryptocurrency expert in a divorce case); Dani Alexis Ryskamp, CipherTrace CEO Serves as Bitcoin Expert Witness in \$1.4 Million Darkweb Crypto Case, Expert Inst. (June 25, 2020), https://bit.ly/3t2EoaK; see Stephen Castell, Expert Witness Testimony in Blockchain and Cryptocurrency Disputes, Az. Atty., Mar. 2020, at 14, 15; cf Jeff John Roberts, Who Qualifies as a Crypto Expert? Not This Guy, Court Rules, DECRYPT (Apr. 29, 2021), https://bit.ly/3S2p8W4.

^{178.} See, e.g., Certified Cryptocurrency Investigator, BLOCKCHAIN INTEL. GRP., https://bit.ly/3PEXrkq (last visited June 30, 2022); Certified Cryptocurrency Forensic Investigator (CCFI), McAfee Inst., https://bit.ly/3wReoA1 (last visited June 21, 2022); Certified Cryptocurrency ExpertTM (CCE), BLOCKCHAIN COUNCIL, https://bit.ly/3zlIJtF (last visited Jun. 20, 2022).

^{179.} Haraminac, supra note 45, at 4. (Ex: MAFF, CFE or CFF designation)

^{180.} See Ryskamp, supra note 177.

^{181.} See LaFond, 2022 WL 714430, at *2; Blockchain Technology and Cryptocurrency, CIPHERBLADE, https://bit.ly/3NZ0naH (last visited Dec. 28, 2021).

methodology. When conducting a cost-benefit analysis, attorneys should first and foremost counsel clients as to the potential cost of an expert to trace, identify, value, and testify on a party's cryptocurrency holdings. Expert witnesses often charge a retainer of a few thousand dollars upon retention and an hourly rate of a few hundred dollars an hour for their work. If the cryptocurrency holdings are minimal, there is no pattern of non-disclosure, assets are easily divisible, you have detailed tax filings since 2014, and both clients are amicable, it likely is not worth seeking the additional analysis. 182 Next, for any expert hired to testify as to cryptocurrency holdings, the attorney should make sure they use the same terminology the expert uses. If the spouse holds multiple types of cryptocurrency, the attorney should specify each type in their discovery requests and testimony, rather than using the blanket term "cryptocurrency." Similarly, if the attorney represents the spouse who holds the cryptocurrency, the spouse should make sure to specify any and all types of cryptocurrency as needed. 184

Lastly, the attorney should ensure that any retained expert follows an accepted valuation methodology. Unfortunately, financial professionals have opined that some of the commonly used valuation methodologies and processes used for other types of volatile assets like traditional stocks are not directly applicable to valuing virtual currency. Rather, these professionals propose using alternative methodologies, including a network value-to-transaction ratio, market-value-to-real-value ratio, market sizing method, or a cost of mining

^{182.} See generally Expert Witness Fees: How Much Does an Expert Witness Cost?, SEAK, https://bit.ly/3t1En6E (last visited Jan. 20, 2022); Haraminac, supra note 45.

^{183.} See generally CoinMarketCap, https://bit.ly/3z6Iv7U (last visited Sept. 22, 2022) (showing various types of cryptocurrency).

^{184.} See Odyssey Reinsurance Company v. Nagby, No. 16-cv-3038, 2019 WL 2717223, at *7 n.5 (S.D. Cal. June 27, 2019) (wherein the court clarified its understanding that when the witness testified as to her "Bitcoin" investments, she was referring to her "cryptocurrency" investments generally).

^{185.} See generally Wiegers v. Richards-Wiegers, 420 P.3d 1180 (Alaska 2018).

^{186.} Excluding "meme stocks" and other fad-based stocks. *See* Christopher Robbins, *How Do You Value Digital Assets?*, CoinDesk (Oct. 19, 2021, 5:36 PM), https://bit.ly/3auE7H9 (noting that use of a ratio of a stock's current price to the book value of its business and discounted cash flow methodologies are not appropriate for cryptocurrency); LANRE IGE & MICHAEL GOTIMER, AMUN, VALUING BITCOIN 3 (n.d.), https://bit.ly/3MWzljS.

^{187.} Calculated by dividing the market capitalization of a digital asset by the transaction value over a set period of time. *See* Robbins, *supra* note 186.

^{188.} Calculated using the ratio of the market capitalization of a cryptocurrency over the value of tokens stuck or abandoned in inactive wallets. *See id.*

^{189.} See IGE & GOTIMER, supra note 186, at 3 (A Market Sizing Method "compare[s] the value of the Bitcoin market to other global remittances and gold. The price of an individual Bitcoin can then be calculated by dividing the total market value by its fully-diluted circulating supply.").

method.¹⁹⁰ Regardless of methodology, if the expert completes a report, it should not only state the conclusions, but also compare these conclusions against valuations that would have otherwise been reached through other valuation methods, and explain why the other methods are inappropriate.¹⁹¹

C. Valuation of Cryptocurrency, NFTs, Volatile Assets, and Collectibles in Divorce

Generally, the value of cryptocurrency is difficult to determine as it is set based on factors like its restricted supply, marketplace demand, and speculative interest by well-known investors.¹⁹² Like other assets with a limited supply, such as gold or precious metals, investors purchase cryptocurrency because they believe it will be worth more in the future due to its scarcity.¹⁹³ As of January 2022, 18.9 million Bitcoins out of the total possible 21 million Bitcoins had been mined.¹⁹⁴ As cryptocurrency is still relatively new, there is little guidance from published cases that act as precedent for courts to follow in divorce cases.¹⁹⁵ Further, other areas of law where courts are valuing cryptocurrency have run into similar confusion as to how to classify cryptocurrency and what date to use for its valuation.¹⁹⁶

1. Judicial Analysis of Cryptocurrency in Divorce Cases

Unlike stocks, where the value is tied to the ownership in a company, it is more difficult to pinpoint or predict the value of a decentralized currency with a short and volatile history. ¹⁹⁷ Over the span of five years, the price of a single Bitcoin fluctuated from \$2,000 in May 2017, to \$66,878 in October 2021, and back down to \$21,605 as of August 2022. ¹⁹⁸ The volatility of cryptocurrency makes it particularly

^{190.} See id. (Using a Network-Value-to-Transactions ratio).

^{191.} See generally Lavene v. Lavene, 392 A.2d 621 (N.J. Super. Ct. Ch. Div. 1978).

^{192.} See John P. Kelleher, Why Do Bitcoins Have Value?, INVESTOPEDIA (Mar. 15, 2022), https://bit.ly/3t5awdP; Josephine Shawver, Commodity or Currency: Cryptocurrency Valuation in Bankruptcy and the Trustee's Recovery Powers, 62 B.C. L. REV. 2013, 2031 (2021).

^{193.} See Ryan Haar, Why Do Bitcoins Have Value?, TIME: NEXTADVISOR, (Apr. 19, 2022), https://bit.ly/3wXZ99C.

^{194.} The maximum number of Bitcoin that can be issued is 21 million, designed to parallel the quantity of physical gold. *See* Hayes, *supra* note 36.

^{195.} See id.

^{196.} See Shawver, supra note 192, at 2017 (analyzing the court split as to whether to classify cryptocurrency as "currency" or a "commodity").

^{197.} See Haar, supra note 193.

^{198.} See Bitcoin, COINMARKETCAP, https://bit.ly/3NZ9FU7 (last visited August 24, 2022) (listing the Bitcoin price as of June 30, 2022, was \$18,936).

difficult to value at a given date or time. 199 Currently, there are only a few published cases in the United States addressing cryptocurrency in divorce and a handful of unpublished opinions. 200 One unpublished opinion from Nevada, *LaFond v. LaFond*, provides a helpful framework for how a court may approach valuation and division of cryptocurrency in a divorce setting. 201 As these are all cases of first impression in their respective jurisdictions, this section will summarize these rulings in chronological order of decision and note key takeaways.

a. In re Marriage of DeSouza

In *In re Marriage of DeSouza*, the California Court of Appeals affirmed the trial court's ruling in a post-dissolution proceeding concerning Husband's failure to disclose material information about his Bitcoin and other cryptocurrency holdings.²⁰² The court found Husband's failure to disclose these assets was in breach of his fiduciary duty to his former wife.²⁰³ Husband argued Wife did not take an interest in the couple's finances during or after their marriage, and she would not have done anything to protect her interest in the cryptocurrency investments if he had informed her of them.²⁰⁴ However, the court found that even if

^{199.} See id. See also Faverio & Massarat, supra note 9.

^{200.} See generally Leonova v. Leonov, 242 A.3d 713 (Conn. App. Ct. 2020); In re Marriage of DeSouza, 266 Cal. Rptr. 3d 890 (Cal. Ct. App. 2020); see also infra Section III.C.1.i. As of August 21, 2022, there are only three unpublished opinions which mention cryptocurrency in the context of a divorce. See Crowder v. Sanger, No. 03-21-00291-CV, 2022 WL 2291213, at *6 (Tex. App. June 24, 2022) (referencing that the Husband had recently obtained \$21,000 in cryptocurrency through a "\$1,000 company gift and \$20,000 from his salary," but finding no error in his disclosure of the cryptocurrency amount in his net worth statement at the time he filed his affidavit); In re Marriage of Williams, No. 2-19-1149, 2020 WL 5016734 (Ill. App. Ct. Aug. 25, 2020), at *3 (affirming a trial court's order modifying allocation of parenting time between parties to equal parenting time where an expert custody evaluator took into account concerns by the Mother that the Father was unemployed, involved in mining Bitcoin, and allegedly told the child "money is not real and that Bitcoin is real"); LaFond v. LaFond, No. 82486-COA, 2022 WL 714430 (Nev. Ct. App. Mar. 9, 2022) (affirming a trial court's decision to equally divide the parties' marital cryptocurrency); In re Marriage of Liu and Chang, No. 80670-0-I, 2021 WL 861790 (Wash Ct. App. Mar. 8, 2021) (finding the trial court did not err in denying Respondent's Motion to Vacate where Respondent failed to pursue the issue surrounding Bitcoin valuation at trial, did not appeal it, and had no persuasive explanation for not pursuing it); see also Liu v. Chang, No. 78999-6-I, 2020 WL 1921123 (Wash. Ct. App. Apr. 20, 2020) (affirming the trial court's finding that Respondent had 53+ Bitcoin when he failed to provide credible documentary evidence to the contrary); Khadim v. Al Emara, 2022 WL 3131062 (Aug. 4, 2022) (noting that in a divorce decree, Appellant was awarded 100% of the cryptocurrency assets, but not discussing this issue further).

^{201.} See generally LaFond, 2022 WL 714430.

^{202.} See DeSouza, 266 Cal. Rptr. 3d at 894.

^{203.} See id.

^{204.} See id. at 896.

Wife did not show interest in their finances during the marriage, that did not indicate what steps she would have taken to protect her interests after she retained divorce counsel and filed for divorce. Notably, Wife also filed for multiple restraining orders against Husband seeking to bar him from making unilateral decisions about the community estate.²⁰⁵ The court ordered Husband to transfer Bitcoins and other cryptocurrency to Wife pursuant to the parties' judgment, and to pay her attorney's fees and costs.²⁰⁶

b. Leonova v. Leonov

Leonova v. Leonov addressed whether a spouse's investment in cryptocurrency during a divorce constitutes a transaction conducted in the "usual course of business." 207 In the case, the court entered an automatic order upon filing of the parties' divorce petition providing that neither party should dispose of property without consent of the other except in the "usual course of business." The trial court granted Wife's Motion for Contempt against Husband after he invested \$39,000 in cryptocurrency, which she alleged was in violation of the automatic order.²⁰⁹ As a sanction, the trial court ordered Husband to reimburse Wife one-half of the loss he incurred as a result of the investment because it was not in the "usual course of business." The appellate court affirmed both the contempt finding and sanction, relying on Husband's testimony that he did not request consent from Wife prior to the investment, he purchased the cryptocurrency for the first time after the divorce was filed as opposed to a "continuation of prior activities," and he did not have any cryptocurrency accounts prior to the filing.²¹¹ This case extends the concept of dissipation of marital assets²¹² to cryptocurrency, cautioning parties that if they incur a loss on a

^{205.} See id.

^{206.} See id. at 893.

^{207.} See generally Leonova v. Leonov, 242 A.3d 713, 718, 733–37 (Conn. App. Ct. 2020).

^{208.} See id. (Following the procedures set forth in Connecticut Practice Book § 25-5). Notably, other jurisdictions enter similar automatic orders requiring the parties to maintain "status quo" during pending divorce proceedings by not transferring monies or closing existing accounts. See, e.g., DALLAS CNTY., supra note 154, at 2.

^{209.} See Leonova, 242 A.3d at 722–23.

^{210.} See id. at 737.

^{211.} See id. at 736.

^{212.} Dissipation or waste occurs where one spouse intentionally spends or disposes of marital property after the breakdown of the marriage to prevent the other spouse from accessing or receiving it. *See* Jeff Landers, *What Is Dissipation of Assets in Divorce and What, if Anything, Can You Do About It?*, FORBES (Nov. 1, 2016, 9:51 AM), https://bit.ly/3Sf2iL8. *See*, e.g., Tex. FAM. CODE § 7.009 (2021); 750 ILL. COMP. STAT. § 5/503 (2022); N.Y. DOM. REL. LAW § 236 (Consol. 2022).

cryptocurrency investment, they may be ordered to reimburse the marital estate or other spouse for a percentage of that loss.²¹³

c. LaFond v. LaFond

Although unpublished, this Nevada opinion is particularly illustrative of how to structure language to protect against volatile valuations in cryptocurrency. 214 In LaFond v. LaFond, the parties entered a stipulated final divorce decree that provided, in relevant part, that each party was awarded 50% of Husband's marital Bitcoins, valued at approximately \$80,000.²¹⁵ The decree further provided that Husband was required to provide proof of any and all Bitcoin accounts spanning at least four months prior to entry of the parties' decree to allow Wife to verify the transactions.²¹⁶ Wife filed a Motion to Set Aside the decree, alleging, as it related to the Bitcoin holdings, that Husband had converted some of the Bitcoins into other cryptocurrency to make profits and misrepresented the true value of the Bitcoins. ²¹⁷ Following an evidentiary hearing, the district court granted Wife's motion and concluded it was the parties' intent to divide the Bitcoins equally. The court ordered Husband to grant Wife access to the Bitcoin accounts and any other cryptocurrency accounts he had transferred Bitcoin to and awarded Wife 50% of all cryptocurrency assets identified by her expert as acquired during the marriage.²¹⁸

On appeal, Husband argued that the stipulated decree only indicated Wife would receive \$40,000 as her share of the community property interest in the cryptocurrency. In rejecting this argument, the appellate court found Husband either purposely or mistakenly misrepresented the value of the cryptocurrency, as it was worth substantially more than \$80,000, and Husband failed to distribute Wife's 50% interest or provide the required accounting. The appellate court emphasized that Husband failed to contest that he purposely or mistakenly misrepresented the value of cryptocurrency, and rejected his argument that Wife's motion should

^{213.} See generally Leonova, 242 A.3d 713. Here, the spouse was a new investor in cryptocurrency and perhaps if he had extensive experience in trading and investing in cryptocurrency prior to the initiation of the parties' divorce, the same analysis may not have applied. *Id.*

^{214.} See generally LaFond v. LaFond, No. 82486-COA, 2022 WL 714430 (Nev. Ct. App. Mar. 9, 2022). Nevada follows the Community Property model, which is discussed in *supra* Section II.G.

^{215.} See LaFond, 2022 WL 714430, at *1.

^{216.} See id.

^{217.} See id.

^{218.} See id.

^{219.} See id. (Forty thousand dollars representing 50% of the \$80,000 total approximated value of the cryptocurrency per the decree.)

^{220.} See id. at *2.

be denied because she could have done more to investigate its actual value prior to entry of the decree.²²¹ The court found Wife reasonably relied upon Husband's misrepresentations through testimony, exhibits, and expert witness testimony.²²² In assessing credibility of the parties' respective experts, the court found Wife's expert traced all of the cryptocurrency accounts and movement of cryptocurrency between the accounts.²²³ In contrast, Husband's expert testified he never conducted any tracing and was not hired to determine whether Husband owned any cryptocurrency.²²⁴ Although the opinion did not directly address findings regarding the credibility of the parties' respective experts, the district court generally found Wife's testimony credible and Husband's testimony not credible. 225 The appellate court affirmed the district court's ruling and awarded Wife 50% of the Bitcoin holdings.²²⁶

There are three primary takeaways from LaFond that can guide parties in cryptocurrency disputes in divorce cases moving forward as it relates to valuation.²²⁷ First, divorce decrees dividing cryptocurrency should provide a clear percentage delineation, and where possible, provide a date of division to avoid disputes over value on a particular date or time.²²⁸ Second, courts should consider requiring the cryptocurrency holder spouse to provide an accounting of all cryptocurrency assets to allow the non-holder spouse to verify any cryptocurrency transferred to them.²²⁹ Finally, when retaining experts to testify as to the value and characterization of cryptocurrency, parties should ensure they are able to conduct the necessary tracing to credibly demonstrate to the court movement of cryptocurrency between accounts.230

^{221.} See id. The court highlighted that under the relevant Nevada statute, N.R.C.P. 60(b), even if the party could have done more to investigate the value of an asset, they will not be precluded from seeking relief if they reasonably relied upon the other party's fraudulent misrepresentation of value. See generally In re Marriage of Brubaker, No. 2-20-0160, 2022 WL 130886 (Ill. App. Ct. Jan. 14, 2022) (holding that under Illinois law, where Wife fraudulently concealed assets, Husbands decision to forego formal discovery was not a per se lack of diligence. The appellate court remanded the matter, directing the court to hold an evidentiary hearing to make findings on Husband's diligence to determine existence of an asset, whether Wife intentionally concealed existence of the asset, and whether Husband's reliance on Wife's statements was reasonable).

^{222.} See LaFond, 2022 WL 714430, at *2.

^{223.} See id.

^{224.} See id.

^{225.} See id.

^{226.} See id. at *3.

^{227.} See generally id.

^{228.} See generally id.

^{229.} See generally id.

^{230.} See generally id.

2. Valuation of Other Classes of Volatile Assets

Given the lack of case law regarding the date of valuation of cryptocurrency, it is helpful to examine the wide breadth of cases addressing other volatile assets, specifically, division of stocks. Generally, assets are divided as close to the date of divorce as possible.²³¹ This is particularly critical in the case of assets like cryptocurrency and stocks that have values that fluctuate substantially from week to week. State courts are divided on whether they deem it appropriate to value and divide stocks as of the date of trial, date of division, or date of dissolution of marriage.²³² Some states employ a hybrid approach, wherein courts value assets as of the date of divorce, unless good cause exists warranting a deviation.²³³

The Wisconsin cases *Brandt v. Brandt* and *Wikel v. Wikel* demonstrate when and how courts should apply the hybrid approach for asset valuation.²³⁴ In both cases, there was a substantial delay between the date of the commencement of trial and date of entry of the final judgment for dissolution of marriage.²³⁵ In *Brandt*, both parties contributed to the four-and-a-half year period between the date of divorce and the division of property, so the court found there was no special circumstance warranting valuation as of the date of commencement of trial.²³⁶ Conversely, in *Wikel*, the delays were outside of the parties' control and solely due to scheduling issues by the court. Accordingly, the appellate court found the trial court appropriately valued Husband's stocks based on the date the trial commenced.²³⁷

In *In re Marriage of Wood*, the Missouri Court of Appeals offered an alternative solution where there was a material delay between the trial and date of distribution, as final judgments are seldom entered contemporaneously with trial.²³⁸ In Missouri, courts are expected to value assets as of the date of trial.²³⁹ However, the court of appeals found

^{231.} See Fredrick, supra note 36; Lee R. Russ, Annotation, Proper Date for Valuation of Property Being Distributed Pursuant to Divorce, 34 A.L.R.4th 63 (1984).

^{232.} See Russ, supra note 231; see also Holbrook v. Holbrook, 309 N.W.2d 343, 347 (Wis. Ct. App. 1981) ("The values of some assets can fluctuate markedly throughout the months of a divorce proceeding and, even on one given date, there may be several conflicting opinions of the value of a certain asset. As the fact finder, it is the trial judge who must draw reasonable inferences and come to reasonable, albeit disputable, conclusions as to the value of assets as of the date the divorce is granted.").

^{233.} See, e.g., Sample v. Sample, 731 P.2d 604, 606-07 (Ariz. Ct. App. 1986).

^{234.} See Wikel v. Wikel, 483 N.W.2d 292, 295 (Wis. Ct. App. 1992); Brandt v. Brandt, 427 N.W.2d 126, 136 (Wis. Ct. App. 1988).

^{235.} See Wikel, 483 N.W.2d at 295; Brandt, 427 N.W.2d at 136.

^{236.} See Brandt, 427 N.W.2d at 136.

^{237.} See Wikel, 483 N.W.2d at 295.

^{238.} See In re Marriage of Wood, 262 S.W.3d 267, 274 (Mo. Ct. App. 2008).

^{239.} See id. (citing Taylor v. Taylor, 736 S.W.2d 388, 391 (Mo. 1987) (en banc)).

that where the effective date of distribution of an asset is "not reasonably proximate to the date of valuation," then the trial court should hold a separate hearing to establish valuation as close to the date of division as possible. The court particularly highlighted that this separate hearing may be warranted if the property being valued was highly volatile in nature. ²⁴¹

3. Valuation of Non-Fungible Tokens

The valuation analysis of virtual assets is tricky when specifically looking at NFTs. Currently, there are no published opinions addressing NFTs in the divorce context. The primary issue with valuing NFTs is that purchasing an NFT does not confer outright ownership rights to the subsequent buyer.²⁴² For example, with digital artwork NFTs, buyers receive limited rights to display the digital art and the ability to resell it later. 243 In February 2021, the creator of the meme "Nyan Cat" sold it for 300 Ethereum.²⁴⁴ However, the purchaser only owns the NFT, not the actual meme, because the creator retained the intellectual and creative rights.²⁴⁵ Instead, the NFT purchaser has transaction records showing their ownership of the token associated with the digital asset.²⁴⁶ However, the NFT holder may choose to fractionalize an NFT, permitting multiple users to own a portion of an NFT.²⁴⁷ A family court may therefore divide proceeds generated from the eventual sale of the NFT or portion of the NFT ("F-NFT"), or order a party to fractionalize and transfer a fractional share of the NFT to their spouse's wallet address.248

^{240.} *Id.* (quoting *In re* Marriage of Gustin, 861 S.W.2d 639, 644 (Mo. Ct. App. 1993)).

^{241.} See id. (citing McCallum v. McCallum, 128 S.W.3d 62, 67 (Mo. Ct. App. 2003)).

^{242.} See Gonzalez, supra note 114.

^{243.} See Kastrenakes, supra note 4.

^{244.} See Daniel Kuhn, Nyan Cat NFT Sells for 300 ETH, Opening Door to the 'Meme Economy', CoinDesk (Sept. 14, 2021, 8:14 AM), https://bit.ly/38ydIaQ.

^{245.} See id.

^{246.} See id.

^{247.} See Ekin Genç, How Can You Share an NFT? Fractional NFTs Explained, COINDESK (May 6, 2022, 4:51 PM), https://bit.ly/3zyaLlg.

^{248.} See a16z, supra note 117. Platforms like Niftex, Unic.ly, and Fractional.art fractionalize NFTs into "shards," allowing each holder to own a fractional share of an NFT. See Ian Kane, What are Fractionalized NFTs & How to Invest in Them, DAPPRADAR (Oct. 19, 2021), https://bit.ly/3z4zMVf; Karen J. Garnett et al., NFTs Are Interesting but Fractionalized Non-Fungible Tokens (F-NFTs) May Present Even More Challenging Legal Issues, PROSKAUER (Apr. 22, 2021), https://bit.ly/3t5M77Y.

Like cryptocurrency, every NFT transaction is permanently recorded and often available on marketplace websites. Likewise, the value of NFTs is largely dictated by market demand and often experiences similar large swings in sales prices. As an example, NFT collector and co-founder of the Museum of Crypto Art, Pablo Rodriguez Fraile, purchased a Beeple NFT for \$66,666 and resold it for a hundred times more than that just four months later. However, unlike cryptocurrency, NFTs can also be a source of income for NFT creators through royalties. An NFT creator can select what percentage of future sales they may receive as a royalty, with the standard royalty ranging from 5–10%. Thus, when valuing an NFT, a court should consider any royalties that may eventually be paid out.

During the valuation process, NFT owners must also be conscious of NFT scams. With the rise of NFT scams, ²⁵⁵ an individual's investment in NFTs may plummet to zero dollars or a substantially reduced amount. ²⁵⁶ Extending the analysis from the *Leonov* case, ²⁵⁷ an investor spouse may be ordered to reimburse the non-investor spouse for any losses associated with NFTs, particularly where the spouse had no prior experience investing prior to the pendency of the divorce. ²⁵⁸

Fees associated with the creation and acquisition of NFTs are also included in the NFT's valuation. When a user first creates or mints an NFT, they will need to mine or otherwise acquire Ether or the applicable cryptocurrency.²⁵⁹ An NFT purchaser in turn will be charged a "gas" fee, representing the energy required to complete and record the transaction

^{249.} See, e.g., KnownOrigin, Stop Talking About Crypto, OPENSEA, https://bit.ly/3PNOrtX (last visited Dec. 22, 2021). Rarible is one marketplace store. See RARIBLE, https://bit.ly/3NfD8Ih (last visited June 30, 2022).

^{250.} See Richard West & Jonathan Fields, A Divorce Practitioner's Bitcoin Primer, 33 J. Am. Acad. Matrim. L. 177, 178 (2020).

^{251.} See Kastrenakes, supra note 4.

^{252.} See Non-Fungible Tokens (NFT), supra note 53.

^{253.} Rossolillo, *supra* note 3.

^{254.} State statutes generally define "income" as income from all sources. *See, e.g.*, Colo. Rev. Stat. § 14-10-115(5)(a) (2022); 750 Ill. Comp. Stat. § 5/505(a)(3)(A) (2022); Ky. Rev. Stat. Ann. § 403.212(2)(b) (West 2022); Va. Code Ann. § 20-108.2(C) (2022).

^{255.} See supra Section II.E.

^{256.} See Amiah Taylor, Watch Out For the "Rug Pull" Crypto Scam That's Tricking Investors Out of Millions, FORTUNE (Mar. 2, 2022, 7:36 PM), https://bit.ly/3zK3JtT.

^{257.} See supra Section III.C.1.

^{258.} See Leonova v. Leonov, 242 A.3d 713, 736 (Conn. App. Ct. 2020).

^{259.} See Megan DeMatteo, Minting Your First NFT: A Beginner's Guide to Creating an NFT, Coin Desk (Apr. 14, 2022), https://bit.ly/3BGH2aG.

on the blockchain.²⁶⁰ If they want the NFT instantaneously, the gas fee may be higher.²⁶¹

4. Valuation of Collectibles

Valuing NFTs is challenging. Unlike cryptocurrency, NFTs are usually illiquid.²⁶² Additionally, the appeal of many NFTs is in the eye of the beholder, based primarily on individual taste, scarcity, access, marketplace where it is listed, utility,²⁶³ or even whether a widely recognized celebrity purchased one.²⁶⁴ Accordingly, in addition to analyzing how courts value highly volatile assets, it is helpful to consider how courts value other collectible items with highly subjective characteristics, such as rare artwork. Generally, the burden is on the party seeking equitable distribution to prove a collectible has a certain value.²⁶⁵ If only one party presents evidence of an asset's value, courts have discretion to adopt the valuation proffered by that party absent any competing valuation.²⁶⁶ Still, the court also has discretion to reject the uncontested value.²⁶⁷

If a party believes it is necessary to conduct an appraisal on a collectible or other marital asset, they have the option of seeking an expert appraisal.²⁶⁸ Absent an expert appraisal, the court may set a value based on opinion testimony of the parties or other prior indicators of value.²⁶⁹ Where both parties present competing appraisals, the court can

^{260.} See id.

^{261.} See Iyengar, supra note 12.

^{262.} Jordan Awoye, *Op-ed: The Good, the Bad, and the Ugly When It Comes to Non-Fungible Tokens*, CNBC (Feb. 2, 2022, 12:39 PM), https://cnb.cx/3vl01US.

^{263.} See How to Assess the Value of an NFT?, BINANCE: BINANCE BLOG (July 15, 2021), https://bit.ly/3OyOhVn.

^{264.} See Maria L. Murphy, NFTs Come with Big Valuation Challenges, J. ACCOUNTANCY (July 15, 2021), https://bit.ly/3S6coxO; Chirinos, supra note 138.

^{265. 2} John Tingley et al., Marital Property Law § 43:5 (2d ed. 2022).

^{266.} See, e.g., In re Marriage of Caras, 270 P.3d 48, 56 (Mt. Ct. App. 2012) (finding no abuse of discretion where trial court relied on Husband's valuation and Wife did not present any independent valuation of assets at trial); Monroe v. Monroe, 358 S.W.3d 711, 718 (Tex. App. 2011) (holding the trial court did not abuse its discretion in using the purchase price of antiques and artwork to ascertain its value where Wife provided no alternative valuation method).

^{267.} See In re Marriage of Kotler, 385 P.3d 1200, 1209 (Or. Ct. App. 2016) (Finding the expert's testimony "was not entitled to greater weight simply because [he was] an expert" and the court was able to accept Husband's testimony even though he did not hire an expert); Tritschler v. Tritschler, 273 So.3d 1161, 1168 (Fla. Dist. Ct. App. 2019) (finding the judge abused its discretion by adopting the expert's use of multiple valuation dates).

^{268.} See 128 Am. Jur. Trials 337 Uncovering Marital Assets in Divorce Proceedings § 7.

^{269.} See Urban v. Urban, 314 P.3d 513, 515 (Alaska Ct. App. 2013) (finding no abuse of discretion where trial court used property tax assessment value over real estate agent's opinion absent formal appraisal); *In re* Marriage of Anderson, 637 P.2d 615, 618

either accept one valuation over the other, average the valuations, or conduct its own independent valuation.²⁷⁰ Alternatively, in cases where courts were faced with two competing expert valuations that were vastly different due to the rare and unique characteristics of the asset, courts may properly exercise discretion to order the asset sold and for the proceeds to be distributed equally between the spouses.²⁷¹ Given the unique and highly speculative nature of NFTs, courts will likely face scenarios where parties' valuations differ substantially from each other, which may warrant sale of the NFT to effectuate an equitable division.²⁷²

D. Royalties from Virtual Asset Ownership

As discussed above, NFT creators may receive income from their NFTs any time they are subsequently sold.²⁷³ This is similar to royalties received whenever a creator allows someone to use their property.²⁷⁴ Individuals typically receive royalties in conjunction with ownership of patents, copyrighted works, natural resources, or franchises.²⁷⁵ Courts consider two primary factors when determining a spouse's entitlement to a portion of future royalty payments from other sources.²⁷⁶ These factors are: (1) the extent to which the other spouse contributed to the acquisition or creation of the underlying asset generating the royalties and (2) how speculative the future royalty payments are.²⁷⁷

(Or. Ct. App. 1981) (finding no abuse of discretion where trial court set value of real estate at purchase price); *In re* Marriage of Harding, 545 N.E.2d 459, 466 (Ill. App. Ct. 1989) (finding the trial court did not abuse its discretion in finding the value of Wife's stamp collection at the \$150,000 despite expert evidence of a present value of \$8,000, where both parties testified Wife spent more than \$150,000 purchasing the collection); Ingram v. Ingram, 602 So.2d 418, 420 (Ala. Civ. App. 1992) (finding Husband was permitted to testify to his opinion on the fair market value of the house despite not being qualified as an expert).

270. See Brett R. Turner, Theories and Methods for Valuing Marital Assets, 25 J. Am. AML 1, 16 (2012).

271. See Macklowe v. Macklowe, 112 N.Y.S.3d 95, 96–97 (N.Y. App. Div. 2019) (finding the court properly ordered the parties' artwork collection sold where the appraisals varied by as much as \$30 million); Smith v. Winter, 883 N.Y.S.2d 412, 414 (N.Y. App. Div. 2009) (finding the trial court did not abuse its discretion in distributing marital artwork where neither party got the artwork appraised and only provided evidence as to cost of acquisition).

- 272. See Murphy, supra note 264.
- 273. See supra Section III.C; Non-Fungible Tokens (NFT), supra note 53.
- 274. See Royalty Income, BANKRATE, https://bit.ly/3GrZkxf (last visited Dec. 22, 2021).
 - 275. See id.
 - 276. See, e.g., copyrighted works, patents, or other licensed intellectual property.
- 277. See, e.g., In re Matter of Marriage of Monslow, 912 P.2d 735, 746 (Kan. 1996); In re Marriage of Heinze, 631 N.E.2d 728, 731–32 (Ill. App. Ct. 1994); Dunn v. Dunn, 802 P.2d 1314, 1318–19 (Utah Ct. App. 1990); Yannas v. Frondistou-Yannas, 481 N.E.2d 1153, 1160 (Mass. 1985); Gallo v. Gallo, 440 A.2d 782, 788 (Conn. 1981).

Prior case law supports that where one spouse did a substantial amount of the work to create the asset generating royalties, courts have found it appropriate to award that spouse a larger percentage of the royalty payments.²⁷⁸ In Gallo v. Gallo, the Connecticut appellate court affirmed the trial court's decision awarding Wife 20% of all future royalties received from Husband's book authored during the marriage.²⁷⁹ Although the exact amount of future royalties was unknown, the court opined that the percentage split was akin to awarding a spouse a percentage of future net sales proceeds from sale of a marital residence. 280 Similarly, in *In re Marriage of Heinze*, the Illinois appellate court awarded Husband a 25% interest in future royalties from books Wife wrote during the marriage.²⁸¹ The court noted that the books had a proven cash value and therefore the future royalties were neither unproven nor speculative.²⁸² However, the court did find it was appropriate to deviate from an equal division and instead awarded Wife the majority of the royalty payments as her reputation, engagement in book promotions, and writing efforts primarily contributed to generation of the royalty payments.²⁸³ Moreover, the court found it was appropriate for Husband's percentage to be calculated after Wife's tax liability had been subtracted from the gross royalty payment because Wife would otherwise be incurring and paying the entire federal and state tax liability for royalties received.²⁸⁴

In contrast, where the royalty is too speculative, courts have declined to award any portion of future royalties to the other spouse.²⁸⁵ In *Yannas v. Frondistou-Yannas*, the Supreme Judicial Court of Massachusetts found the trial court did not abuse its discretion by not dividing any speculative future royalties that may be received from Husband's patents on artificial skin for burn victims where the royalties were too speculative to consider.²⁸⁶ However, even where there is a mere possibility that future benefits may be received, the majority of courts

^{278.} See, e.g., Heinze, 631 N.E.2d at 732; Gallo, 440 A.2d at 788.

^{279.} See Gallo, 440 A.2d at 788.

^{280.} See id.

^{281.} See Heinze, 631 N.E.2d at 733.

^{282.} See id. at 731.

^{283.} See id. at 732.

^{284.} See id. at 733. Community property states likewise have found it appropriate to divide future royalty payments received following dissolution from work created during the marriage as community property between spouses. See, e.g., In re Marriage of Curtis, 256 Cal. Rptr. 76, 78 (Cal. Ct. App. 1989); In re Marriage of Worth, 241 Cal. Rptr. 135, 137 (Cal. Ct. App. 1987); but see Alsenz v. Alsenz, 101 S.W.3d 648, 653 (Tex. App. 2003) (noting an exception for oil and gas royalties for payment of extraction of separate property).

^{285.} See, e.g., Yannas v. Frondistou-Yannas, 481 N.E.2d 1153, 1160 (Mass. 1985). 286. See id.

provide any future payments should be divided if, and when, they become payable.²⁸⁷

IV. APPLICATION OF CURRENT FRAMEWORK TO VIRTUAL ASSETS

Like the asset divisions in the divorce cases discussed above, when handling virtual assets, courts must consider the same four basic steps: (1) identifying the asset, (2) classifying the asset as marital or non-marital, (3) valuing the asset, and finally, (4) dividing the asset. This Section will recommend drawing on pre-existing tools and prior case law discussed above to prevent unnecessarily reinventing the wheel, and instead, expand the framework and guidance already in place.

A. Identifying Virtual Assets: Adopting Uniform Discovery Requests and Notices of Deposition

Courts have broad discretion to value assets at trial.²⁸⁸ Therefore, practitioners must present as much accurate information as possible to help courts value all assets, particularly assets with large value fluctuations, appropriately.²⁸⁹ States should consider adopting uniform initial disclosures, standard requests for production of documents, and matrimonial interrogatories to help parties discover all necessary information about these assets right off the bat. Where permissible, these requests should also be appended to Notices of Deposition when seeking to depose a spouse regarding cryptocurrency, and counsel should seek seasonable updates as permitted by their state's local rules prior to deposing the spouse.²⁹⁰

First, the discovery request should provide a clear definition of "virtual currency." A Massachusetts Continuing Legal Education program recommends the following:

"Virtual Currency" as used herein means any medium of exchange that operates like a currency in some environments but does not have all the attributes of fiat currency, irrespective of whether that medium of exchange or token of value conveyed by that medium of exchange is recognized as legal tender by any jurisdiction. This definition expressly includes Bitcoin, Ethereum, and other so-called "alt-coins," fungible and non-fungible tokens (NFTs). This definition also includes De-centralized Virtual Currencies and Centralized Virtual

^{287.} See In re Matter of Marriage of Monslow, 912 P.2d 735, 746 (Kan. 1996) (quoting Brett R. Turner, Equitable Distribution of Property § 6.23 (2d ed. 1994)).

^{288.} A court's valuation of property will not be disturbed absent an abuse of discretion. See Russ, supra note 231.

^{289.} See Fredrick, supra note 36.

^{290.} See, e.g., ILL. SUP. Ct. R. 201(k); MASS. R. DOM. REL. P. R. 26(e)(1)(B).

^{291.} See Mass. Continuing Legal Educ., Inc., supra note 155, at Ex. 7D.

Currencies, as defined by FinCEN Guidance FIN-2013-GOOI, issued March 18, 2013, http://fincen.gov/statutes_regs/guidance/html/FIN-2013-G001.html and Convertible Virtual Currencies, as defined by FinCEN Guidance FIN-2019-GOOI, 9, 2019, issued May https://www.fincen.gov/sites/default/files/2019-05/FinCEN%20Guidance%20CVC%20FINAL%20508.pdf. "Virtual Currency Assets" as used herein refer to the token created by any Virtual Currency. "Mine" or "Mining," as used herein related to Virtual Currency has the same definition as provided at https://Bitcoin.org/en/faq#whatis-Bitcoin-mining.²⁹²

It is critical that a party obtains all necessary discovery needed to support the cryptocurrency's and/or NFT's value. Below are examples of recommended requests for production of documents:

- 1. Any and all documents that display the current balance of all cryptocurrencies in each wallet, exchange, or other cryptocurrency account owned by you or any entity in which you have an ownership interest since the date of marriage.²⁹³
- 2. All documents regarding virtual currency in your possession, custody or control, including all documents relating to virtual currency wallets, virtual currency offline, or "cold" storage areas, web sites/web services wherein you store or hold virtual currency assets, and all documents evidencing any transfers of virtual currency made by you to and/or from any third party.²⁹⁴
- 3. All documents showing all public and private IDs, keys, wallet & exchange addresses, and web 3 (defi) service providers, transaction IDs, you have used to transact in virtual currency or other forms of virtual currency, use to receive block awards, or other payments resulting from mining activities.²⁹⁵
- 4. All documents relating to the person or entities you have transacted with in virtual currency. ²⁹⁶
- 5. All documents related to your purchase, transfer, exchange, sale, fork, ²⁹⁷ or other transaction in virtual currency or other forms of

^{292.} Id. at Addendum C.

^{293.} See Fredrick, supra note 36.

^{294.} See Mass. Continuing Legal Educ., Inc., supra note 155, at Addendum C.

^{295.} See id.; Stephanie L. Tang & Janice Boback, Is Cryptocurrency the New Swiss Bank Account?, in ILL. BAR. J., Mar. 2019, at 4, https://bit.ly/3b2RQFd.

^{296.} See Mass. Continuing Legal Educ., Inc., supra note 155, at Addendum C.

virtual currency including but not limited to, source of funds used to purchase, the person or entity from whom purchased, the time, date, and manner of purchase, and/or exchange or marketplace used for the transaction.²⁹⁸

- 6. All documents related to any past or present development or acquisition or sale of non-fungible tokens ("NFTs") (including fractions of NFTs or mint passes²⁹⁹) or other virtual holdings including but not limited to, any software used, source of funds, amount of funds used, and marketplaces used.³⁰⁰
- 7. All documents related to acquisition of any physical property or services directly or indirectly obtained through ownership of cryptocurrency or NFTs.
- 8. All documents and communications, including but not limited to email backup files, related to the purchase of equipment or software of any kind used to mine virtual currency, including but not limited to, receipts or evidence of payment for such equipment.³⁰¹
- 9. All documents, including but not limited to, all account records at internet markets ending in .onion, for each account, address, or exchange showing all transaction activity, including addresses and transaction identifiers.³⁰²
- 10. All documents or records related to cryptocurrency transactions or agreements, including but not limited to Initial Coin Offering(s) ("ICO") or Simple Agreement(s) for Future Token (SAFT).³⁰³
- 11. All documents or records reflecting any airdrops, mining awards, royalties, or any other physical awards, benefits, or income received from ownership and/or transaction in virtual currency.

^{297.} Haraminac, *supra* note 45, at 7 (Defining "cryptocurrency fork" as "any permanent diversion from a blockchain that results in a new cryptocurrency in addition to the original cryptocurrency from which the diversion occurred).

^{298.} See id.

^{299.} A "mint pass" grants NFT investors the guaranteed ability to claim an NFT when it is released to the public, similar to an early access list. *See Find New NFTs to Mint: A Guide to NFT Pre-Sales & Whitelists*, SEA LAUNCH, https://bit.ly/3OC40mG (last visited June 30, 2022).

^{300.} See id.

^{301.} See MASS. CONTINUING LEGAL EDUC., INC., supra note 155, at Addendum C.

^{302.} See Haraminac, supra note 45, at 9.

^{303.} See id.

- 12. A ledger of all transactions (purchases and sales of virtual currency or exchange of virtual currency for goods or services) for each wallet, exchange, or account listed above.³⁰⁴
- 13. Copies of all account statements (including but not limited to, bank, credit card, or brokerage account) that reflect transactions to or from a cryptocurrency wallet, exchange, or cryptocurrency account of any kind.³⁰⁵
- 14. Copies of all tax forms including but not limited to any 1099-Ks reflecting any income received, capital gains or losses, or other taxable events incurred as result of transacting in virtual currency.
- 15. Copies of all written communications (including but not limited to, texts, electronic chat, or emails) you have sent to another person or entity since the date of the marriage that discuss or pertain to any virtual currency interest owned by you at any point during the marriage (whether owned solely or jointly with another person or entity), expected interest in virtual currency (including but not limited to, communications or social media posts regarding any whitelists).³⁰⁶
- 16. Cryptocurrency agreements or transactions, or virtual currency pre-sales), and/or purchase of equipment or software used to mine virtual currency.³⁰⁷

If a party knows or confirms that their spouse is engaged in mining activity, the attorney should propound additional requests targeted to identify the location of mining equipment, mining software application used, IP addresses for mining equipment, and receipt for purchase of equipment and electricity, internet, and power consumption associated with mining.³⁰⁸ Jurisdictions often have limitations on the number of

^{304.} See Fredrick, supra note 36.

^{305.} See id.

^{306.} NFT "whitelists" grant investors access to pre-sales for NFTs, often to purchase NFTs at a lower price prior to the NFT being publicly released. To obtain a spot on a "whitelist," NFT creators often ask for public engagement including actively messaging and promoting the collection. Ekin Genç, *Buying NFTs During Presales and Public Mints: Things You Should Know*, CoinDesk (Feb. 9, 2022, 10:42 AM), https://bit.ly/3PVSB1Z.

^{307.} Compiled from MASS. CONTINUING LEGAL EDUC., INC., *supra* note 155, at Ex. 7C; Tang & Boback, *supra* note 295, at 1, 3; Fredrick, *supra* note 36; Haraminac, *supra* note 45, at 9.

^{308.} Haraminac, *supra* note 45, at 9.

interrogatories allowed to be propounded on the opposing spouse.³⁰⁹ Accordingly, to the extent allowed, limiting virtual currency interrogatories to include sub-parts under one interrogatory is preferable. For example:

- 1. **VIRTUAL CURRENCY.** In the past ____ years, have you owned or transacted or do you currently own any form of virtual currency or hold any virtual currency wallets either individually or through another entity or third party? If so, with regard to each cryptocurrency, state
 - a. The name of all exchanges used, usernames, wallet addresses, and public and private keys associated with each virtual currency;
 - b. The physical or digital location (including make, model, specifications, and modifications) of all virtual currency and any devices used to access, view, buy, sell, send, or receive cryptocurrency;
 - c. A list of all VPN software or traffic concealment software, such as Tor or the Freenet, along with any related account information, including a history of assigned IP addresses;
 - d. The present value of each virtual currency and source of valuation;
 - e. The date of acquisition of the virtual currency;
 - f. The cost of the virtual currency;
 - g. The name and physical address of any other owner or owners in such virtual currency;
 - h. For each wallet owned, list all transactions completed or in progress through this account since the account was created, including any purchases of non-fungible tokens (NFTs) (whole or sharded or otherwise fractionalized), or virtual real estate;

^{309.} See, e.g., Ala. R. Civ. P. 33 (limiting parties to 40 interrogatories); Fla R. Civ. P. 1.340 (limiting parties to 30 interrogatories); Ill Sup. Ct. R. 213 (limiting parties to 30 interrogatories); Md. R. Civ. P. Cir. Ct. R. 2-421 (limiting parties to 30 interrogatories); Mass. R. Dom. Rel. Proc. R. 33 (limiting parties to 30 interrogatories); Ohio R. Civ. P. 33 (limiting parties to 40 interrogatories); Okla. Stat. tit. 12, § 3233 (2019) (limiting parties to 30 interrogatories); Wis. Stat. § 804.08 (2018) (limiting parties to 25 interrogatories).

- i. If applicable, the date sold and the amount realized therefrom and any capital gains incurred.
- 2. **VIRTUAL CURRENCY TRANSACTIONS.** Over the past ____ years, provide a list of all transactions for any wallet accounts you own or previously owned, including but not limited to:
 - a. If cryptocurrency was sold for fiat currency, provide evidence of the date of sale or exchange, the sum received by the party, and where the proceeds of the sale were paid;
 - b. If it was exchanged for other cryptocurrency, non-fungible token (NFT), or other virtual asset, identify the cryptocurrency for which it was exchanged and the wallet or wallets into which it was transferred;
 - c. If it was transferred without consideration or consideration that was less than market value, please identify the public (or blockchain) address or addresses to which the transfer was made; and if the private key associated with that address is not under the control of party identify the person or persons under whose control it is.³¹⁰

If a party is able to obtain a list of a spouse's current cryptocurrency holdings, practitioners should consider including in their interrogatories a request for the spouse to identify the username, email, and public key and private key associated with the exchange account and list all wallet or exchange addresses used to identify and receive transfers of the virtual currency. Once the attorney obtains the wallet address, the address can be typed into the explorer for the specific currency to find incoming and outgoing transactions. 312

^{310.} Adapted in part from MASS. CONTINUING LEGAL EDUC., INC., *supra* note 155, at Exs. 7A, 7B, 7C, 7D; Tang & Boback, *supra* note 295, at 4; Fredrick, *supra* note 36; Hariminac, *supra* note 45.

^{311.} See Mass. Continuing Legal Educ., Inc., supra note 155, at Ex. 7C. It is unlikely that a party will simply agree to the disclosure of a private key, as it is similar to requesting a bank account password; however, having the wallet address should be sufficient for the preliminary task of looking up the cryptocurrency transactions a holder has performed. See Tang & Boback, supra note 295, at 4. Alternatively, parties may agree to disclose a few characters of a private key and redact the remaining characters. See Speer, supra note 23, at 1.

^{312.} Attorneys can also use transaction history from explorers to see whether a spouse may be hiding cryptocurrency by analyzing whether there are repeat or

These requests can (and should) be supplemented during depositions of a spouse. If the court permits any notices or subpoenas for these depositions, they should mirror the requested documents and seek updates of the same. At the deposition, practitioners should make sure they first ask whether the deponent owns any cryptocurrency or cryptocurrency wallets, and whether they have owned virtual currency during the marriage. The practitioner should make sure to ask what types of cryptocurrency the deponent holds, the amount and source of funds invested, and whether it has been reinvested (for example, in an NFT) or is being held as collateral. Even if the answer is no, practitioners should ask about any transactions that may appear on any documents produced by the deponent. This includes asking about any repeat wallet addresses that appear in the transaction history to determine if the spouse holds multiple wallets or is funneling money to a third party.

Finally, to exercise additional due diligence, practitioners should issue subpoenas to cryptocurrency exchanges for information about transactions, withdrawals, and deposits if the cryptocurrency holding spouse discloses their wallet addresses, particularly where they believe the spouse is concealing or misrepresenting the value of assets.³¹³ These subpoenas may also be targeted to a cryptocurrency holder's hard drive.³¹⁴ If this is the case, practitioners should be prepared for an objection and a request to have very specific protocols for searching a hard drive including search parameters, date range, and procedure or protective order for any private and confidential information obtained.³¹⁵

B. Identifying Virtual Assets: Look for Clues in Other Produced Documents

In addition to engaging in the discovery methods outlined above, attorneys should carefully review spouses' statements for transactions that may indicate the spouse transacts with virtual currency.

undisclosed addresses receiving cryptocurrency and allows a party to trace if their spouse transferred funds into a "node." SPEER, supra note 23, at 4.

^{313.} See Sibenik, supra note 29.

^{314.} Oftentimes investors backup their entire cryptocurrency wallet using a USB or hard drive. See Andrew M. Hinkes, Throw Away the Key, or the Key Holder? Coercive Contempt for Lost or Forgotten Cryptocurrency Private Keys, or Obstinate Holders, 16 Nw. J. Tech. & Intell. Prop. 225, 247 (2019); Luke Conway, What Are the Safest Ways to Store Bitcoin?, Investopedia (Feb. 28, 2021), https://bit.ly/3S4QY3R.

^{315.} See Mass. Continuing Legal Educ., Inc., supra note 155, at § 7.1.5.

1. Tax Returns

The Internal Revenue Service (IRS) issued its first guidance regarding taxability of cryptocurrency in 2014.³¹⁶ This guidance addressed the taxability of mining virtual currency and virtual currency transactions.³¹⁷ For individuals who mine virtual currency, the IRS directs them to include the fair market value of the virtual currency on their tax returns as of the date the transaction is recorded on the blockchain.³¹⁸

Further, for the more common transactions using virtual currency, the guidance provided that taxpayers must report capital gains or losses on the exchange of virtual currency or cash or for other property including other virtual currency. The taxpayer may choose to identify which coins or tokens they are selling if they can "specifically identify" the sold units. Otherwise, the IRS provides the "first in, first out" method should be used for tax purposes. The specifically identify the sold units.

On July 2, 2018, the IRS initiated their "Virtual Currency Compliance" campaign to address tax consequences resulting from virtual currency transactions. ³²² In 2019, the IRS began sending letters to 10,000 taxpayers who own cryptocurrency, advising them to pay any back taxes owed. ³²³ Cryptocurrency users typically follow one of two recommended approaches for reporting capital gains or losses from

^{316.} See generally I.R.S., Notice 2014-21, 2014-16 C.B. 938; See also Charlotte A. Erdmann, The Taxation of Cryptocurrencies, 95 Fl.A. B.J. 58, 58 (2021) ("The Internal Revenue Service defines cryptocurrency as a 'type of virtual currency that uses cryptography to secure transactions that are digitally recorded on a distributed ledger such as blockchain." (quoting Frequently Asked Questions on Virtual Currency Transactions, Q3, I.R.S., https://bit.ly/3zVM7vy (last visited June 21, 2022))).

^{317.} See Erdmann, supra note 316, at 59-60.

^{318.} See Frequently Asked Questions on Virtual Currency Transactions, I.R.S., https://bit.ly/3z5VWXl (last visited Dec. 27, 2021) [hereinafter IRS FAQ].

^{319.} See Erdmann, supra note 316, at 59.

^{320.} See IRS FAQ, supra note 318, at Q40 ("You may identify a specific unit of virtual currency either by documenting the specific unit's unique digital identifier such as a private key, public key, and address, or by records showing the transaction information for all units of a specific virtual currency, such as Bitcoin, held in a single account, wallet, or address. This information must show (1) the date and time each unit was acquired, (2) your basis and the fair market value of each unit at the time it was acquired, (3) the date and time each unit was sold, exchanged, or otherwise disposed of, and (4) the fair market value of each unit when sold, exchanged, or disposed of, and the amount of money or the value of property received for each unit.").

321. Id. at Q41 (defining the "first in, first out" method as: "If you do not identify

^{321.} *Id.* at Q41 (defining the "first in, first out" method as: "If you do not identify specific units of virtual currency, the units are deemed to have been sold, exchanged, or otherwise disposed of in chronological order beginning with the earliest unit of the virtual currency you purchased or acquired; that is, on a first in, first out (FIFO) basis.").

^{322.} See CARROLL & MORENO, supra note 42.

^{323.} See id.

exchanges or sale of cryptocurrency.³²⁴ They will either: (1) convert the coin into dollars for each purchase and sale transaction using the coin's market price that day in dollars; or (2) use an average coin-to-dollar conversion rate for the tax year.³²⁵ Websites like https://Bitcoin.tax/ also allow anyone to estimate potential tax consequences of cryptocurrency transactions.³²⁶

Moreover, U.S. based exchanges like Coinbase complete a 1099-K for users who receive at least \$20,000 in cash for sales of virtual currency that are related to at least 200 separate transactions in a calendar year.³²⁷ At the state level, some states impose lower thresholds for issuance of 1099-Ks.³²⁸ The IRS specifies that even if an individual transacts in virtual currency, but does not receive a Form W-2 or Form 1099, the individual still must report any gains or losses experienced.³²⁹ The IRS directs these individuals to report any capital gains or losses on Form 8949 (Sales and other Dispositions of Capital Assets)³³⁰, Form 1031 (reporting asset transfers), and Schedule D on their Form 1040 (Capital Gains and Losses).³³¹ Otherwise, the IRS directs individuals to report any ordinary income received from virtual currency transactions on their Form 1040, which now explicitly asks taxpayers to identify whether they transacted in virtual currencies that year.³³²

Although at the time of this Article's publication the IRS has not yet released any official tax guidance on NFTs, accountants anticipate they will be taxed under Section 408(m)(2)(A) of the Internal Revenue Code for collectibles.³³³ Meaning, like cryptocurrency, capital gains received from NFT minting gains/losses and trades should be reported on IRS Form 8949 and Schedule D.³³⁴ Even if the cryptocurrency owner uses

^{324.} See Tang & Boback, supra note 295, at 3.

^{325.} See id.

^{326.} See id.

^{327.} See id.

^{328.} See MASS. CONTINUING LEGAL EDUC., INC., supra note 155, at § 7.7. See West, & Fields, supra note 250, at 184 (2020) (noting the following thresholds for 1099-Ks: Arkansas (\$2,500), Mississippi (\$600), Missouri (\$1,200), District of Columbia (\$600), New Jersey (\$1,000), Vermont (\$600)).

^{329.} See IRS FAQ, supra note 318, at Q42.

^{330.} See About Form 8949, Sales and Other Dispositions of Capital Assets, I.R.S., https://bit.ly/3zlVrbR (last visited Dec. 27, 2021).

^{331.} See Schedule D (Form 1040), Capital Gains and Losses, I.R.S., https://bit.ly/3NIYVck (last visited Dec. 27, 2021).

^{332.} See IRS FAO, supra note 318, at O5.

^{333.} See I.R.C. § 408; Shehan Chandrasekera, Guide to Non-Fungible Token (NFT) Taxes – 2022 Edition, CoinTracker (Mar. 14, 2022), https://bit.ly/3PZHia6 [hereinafter Chandrasekera, Guide to NFT Taxes]; See also Shehan Chandrasekera, IRS May Not Tax Passive Income from Holding Crypto Right Away, FORBES (Feb. 3, 2022, 10:24 AM), https://bit.ly/3Grmggd.

^{334.} See Chandrasekera, Guide to NFT Taxes, supra note 333.

cryptocurrency to buy an NFT, they may still be subject to capital gains taxes.³³⁵

Separate from reviewing tax documents, practitioners and judges should build in language into their judgments regarding any potential liability that may arise from failure to correctly report cryptocurrency on previously filed joint tax returns. While the Internal Revenue Code Innocent Spouse Safe Harbor³³⁶ may provide spouses with relief in certain circumstances, this relief would still only become available if the spouse seeking relief applied for it, typically following an audit.³³⁷

2. Cash Account Statements

Cryptocurrency wallets are often linked to bank accounts, credit cards, or brokerage account statements that are often produced during the discovery process. Attorneys should review these statements for large, unexplained cash withdrawals, wire transfers, or entries showing "localBitcoins.com," Coinbase, or other cryptocurrency exchange sites. Attorneys should also review statements for increases in transactions for goods or services for vendors who accept cryptocurrency. The attorney can flag these transactions and seek additional information during a deposition of the spouse.

3. Business Documents

If a spouse owns or is a shareholder in a business, reviewing their business documents produced through the discovery process may also provide some hints of cryptocurrency holdings. Businesses across all industries increasingly have started accepting cryptocurrency as payments.³⁴⁰ A 2020 study found more than 2,300 U.S. businesses accepted cryptocurrency, which excludes use of Bitcoin ATMs.³⁴¹ Businesses may also offer discounts for payments in cryptocurrency that are challenging to track.³⁴² However, there are some items to look for

^{335.} See Nova, supra note 6.

^{336.} See I.R.C. § 6015(b).

^{337.} See CARROLL & MORENO, supra note 42.

^{338.} See Tang & Boback, supra note 295, at 4; MASS. CONTINUING LEGAL EDUC., INC., supra note 155, at § 7.7; West & Fields, supra note 250, at 184 (noting that unlike Coinbase, LocalBitcoins.com allows transactions without verifying identification of the user).

^{339.} See Haraminac, supra note 45, at 5. See also Ofir Beigél, Who Accepts Bitcoin as Payment?, https://bit.ly/3bT0E1v (last visited Aug. 5, 2022).

^{340.} See Zahra Tayeb, More Companies, Including PayPal and Xbox, Are Accepting Bitcoin and Other Cryptocurrencies as Payment. Others Are Weighing Up Their Options., INSIDER (May 7, 2021, 11:52 AM), https://bit.ly/3MOkDeA.

^{341.} See Maddie Shepherd, How Many Businesses Accept Bitcoin? Full List (2021), FUNDERA (Dec. 16, 2020), https://bit.ly/3NxCbvL.

^{342.} *See* West & Fields, *supra* note 250, at 184.

within business documents to see if a company has any cryptocurrency holdings. Under the United States Generally Accepted Accounting Principles (GAAP), companies should record the value of cryptocurrency at the time of purchase and recognize any cryptocurrency on their balance sheet at its cost basis.³⁴³ Further, if the value of the cryptocurrency drops, the company is required to write down the value of the holdings as an impairment charge.³⁴⁴ If a business pays an independent contractor \$600 or more in a tax year in virtual currency, the payor must report the income received on a Form 1099-MISC.³⁴⁵ As part of the discovery process, attorneys should carefully examine the balance sheet of any companies a spouse may hold an interest in to determine if the company may be transacting in or holding cryptocurrency.

C. Characterizing Cryptocurrency: Increasing Retention of Forensic Experts and Cryptocurrency Software with Virtual Asset Specialization

Courts must next determine whether the cryptocurrency or NFT is non-marital or marital. Although acquisition and exchanges of virtual currency are publicly traceable via the blockchain, there can be hundreds or thousands of entries to trace back to the acquisition of the original unit. Further, over the past few years, cryptocurrency investors have increasingly begun using cryptocurrency "mixers" like Tornado.cash and Cashfusion to allow users to mix their coins with other users' coins, confusing their respective addresses. These two applications have reported over \$8 billion of Bitcoin and Ethereum that were purposely obfuscated. In cases where there is substantial non-compliance with discovery, or a spouse was virtually kept in the dark about the couple's finances during the marriage, courts and practitioners should consider retaining a forensic expert to conduct an examination, subject to

^{343.} See Tom Wilson et al., Explainer: Bitcoin on your Balance Sheet? Here's What You Need to Know, REUTERS: FUTURE OF MONEY (Mar. 8, 2021, 1:09 AM), https://reut.rs/3MvH4VX; Aaron Jacob, A Quick Guide to Accounting for Cryptocurrency, TAXBIT (Aug. 23, 2021), https://bit.ly/3yRpaJh.

^{344.} See Jacob, supra note 343.

^{345.} See I.R.S., Notice 2014-21, 2014-16 C.B. 938.

^{346.} See Meuse, supra note 19. On August 8, 2022, the U.S. Treasury imposed sanctions on Tornado Cash, blocking certain property and interests. The consequences and carrying out of these sanctions is still unknown as of date of writing this article. Press Release, U.S. Treasury Sanctions Notorious Virtual Currency Mixer Tornado Cash, Aug. 8, 2022, https://bit.ly/3dqW3UW.

^{347.} Also referred to as "tumblers." See Marcel Pechman, What are Bitcoin Mixers, and Why Do Exchanges Ban Them?, Cointelegraph (May 1, 2021), https://bit.ly/3MAz6Lp; Jamie Redman, Crypto Mixing Tools Tornado.cash and Cashfusion Obscure More Than \$8 Billion in Transactions, BITCOIN.COM: News (Dec. 25, 2021), https://bit.ly/3Gmb3O1.

^{348.} See Redman, supra note 347.

specified protocol.³⁴⁹ The purpose of the forensic examination should be in seeking evidence of past or present use of wallet applications or exchange applications, discovery of a user's wallet addresses, and if lucky, public and private keys. The expert may then examine the public ledger to trace movement of funds.³⁵⁰ Weighing against the hefty expert fees assessed by these specialized experts, attorneys should discuss whether a formal valuation and tracing would be justifiable depending on the size of the parties' marital and non-marital estate and involvement of the parties in acquiring and maintaining the cryptocurrency.

Aside from retaining an expert, practitioners may consider retaining blockchain software companies who offer services to help track cryptocurrency transactions and visuals or provide some limited analysis and investigation. Companies like Cipherblade, QLUE, and Blockchain Intelligence Group offer cryptocurrency investigation services that can help with tracing and general support for cases with complex cryptocurrency transactions.³⁵¹

D. Valuing Virtual Currency: Use Value as of Date and Time of Dissolution, Any Future Earnings Treated as Marital Property

1. Cryptocurrency

To attain the most accurate valuation of a spouse's cryptocurrency holdings at the time of divorce, the spouse should introduce a screenshot of the cryptocurrency wallet to reflect all the coins held by that spouse and the value as of a date certain. Due to the constantly changing values of virtual assets, where there is a long period of time between the date discovery closes for trial and entry of the court's final judgment or distribution of assets, as set forth above, courts should consider holding a separate evidentiary hearing to determine the value of the marital property at the time of division. Following the analysis set forth in *Wikel*³⁵² and *Brandt*,³⁵³ this would be particularly prudent if the delay was materially a result of one spouse's unilateral actions as opposed to a scheduling delay.

Additionally, particularly where no experts have been retained, just as values reflected on the New York Stock Exchange (NYSE) or other public market reports are commonly relied upon when valuing stocks or

^{349.} See Mass. Continuing Legal Educ., Inc., supra note 155, at § 7.1.5.

^{350.} See id.

^{351.} See Bitcoin in Divorce: Undisclosed Cryptocurrency, CIPHERBLADE, https://bit.ly/3lu2Z3V (last visited Dec. 27, 2021); Crypto Investigation Services, BLOCKCHAIN INTEL. GRP., https://bit.ly/3MCpq2S (last visited Dec. 27, 2021); QLUE, https://bit.ly/3yWvL5n (last visited June 21, 2022).

^{352.} See Wikel v. Wikel, 483 N.W.2d 292, 295 (Wis. Ct. App. 1992).

^{353.} See Brandt v. Brandt, 427 N.W.2d 126, 136 (Wis. Ct. App. 1988).

bonds, practitioners should introduce (and courts should consider) values assigned to particular cryptocurrency coins on the largest cryptocurrency exchanges.³⁵⁴ Currently, CoinMarketCap.com calculates the average coin price on all of the open cryptocurrency exchanges, as coin prices can vary across exchanges.³⁵⁵ Notably, unlike the NYSE, there is no "open" or "closing" time, so the court or drafting attorneys should also consider the specific time of day for valuation or agree to the average price in a given day.³⁵⁶ Looking at these exchanges can also help to verify the values listed on any wallet screenshots if obtained.

2. Non-Fungible Tokens or Other Income-Producing Virtual Currency

In cases where a cryptocurrency-owning spouse has received or is anticipated to receive distributions, physical assets, or royalties from their NFT or other virtual currency holdings, the court should enter an order dividing any future distributions from said asset if the underlying asset was acquired during the marriage. As set forth above, courts should consider factors including each spouse's contribution to the acquisition and preservation of an NFT or other virtual asset, as well as whether royalties are merely speculative, or whether they have been received during the marriage. Within the discretion of the court and dependent on the state's property division model, following the Connecticut case of *Gallo v. Gallo*³⁵⁷ and the Illinois case of *In re Marriage of Heinze*,³⁵⁸ if the non-holder spouse did not contribute to the acquisition and trading of the NFT, a court may consider whether it is appropriate to award the holder spouse a larger percentage of the sales proceeds or a larger fractional share of the NFT.³⁵⁹

E. Dividing Virtual Currency and NFTs: Encourage In-Kind Division Over Buyouts and Offsets

The final step of the process is to divide the virtual assets. As with other assets in divorce cases, the three primary options for dividing virtual currency are: (1) ordering that the spouse receives a cash buyout or offset for the non-holder spouse's portion of their spouse's

^{354.} See Gravenstine v. Gravenstine, 472 A.2d 1001, 1009 (Md. Ct. Spec. App. 1984).

^{355.} See Top Cryptocurrency Spot Exchanges, COINMARKETCAP, https://bit.ly/3yMGzCV (last visited Dec. 23, 2021); Shawver, supra note 192, at 2032.

^{356.} See West & Fields, supra note 250, at 182.

^{357.} See Gallo v. Gallo, 440 A.2d 782, 788 (Conn. 1981).

^{358.} See In re Marriage of Heinze, 631 N.E.2d 728, 731–32 (Ill. App. Ct. 1994).

^{359.} As NFTs develop additional use cases, the court should consider dividing any additional non-monetary "perks" that may be derived from NFT ownership.

cryptocurrency holdings with a present valuation of the assets;³⁶⁰ (2) ordering an in-kind division;³⁶¹ or (3) ordering the holder spouse to sell and cash out the cryptocurrency and allocate the tax consequences.

If the party seeks or a judge orders an in-kind division of cryptocurrency, the final judgment or agreement should identify any wallet addresses, similar to how bank accounts are typically identified, and provide for the following steps:

- (1) Holder spouse needs to provide either (a) an accounting of all cryptocurrency they hold or (b) their wallet address within X number of days to the non-holder spouse so non-holder spouse can verify all existing coins.
- (2) Non-holder spouse has X number of days to obtain a cryptocurrency wallet and the necessary hardware and provide holder spouse with the wallet address.
- (3) Within X number of days of receiving the wallet address, holder spouse shall first transfer a test amount of Y coins to non-holder spouse to confirm they have the correct wallet address.
- (4) Non-holder spouse shall confirm in writing that the test amount was received within X hours of receipt.
- (5) Thereafter, the holder spouse shall transfer the remaining coins to the non-holder spouse's wallet within X number of days.³⁶²
- (6) The parties shall divide any fees associated with the transfer of cryptocurrency pursuant to this Paragraph on an equal (50-50) basis, including but not limited to, any "gas" fees.

Given the volatility surrounding virtual currency as discussed throughout this Article, courts should encourage like-kind division of virtual currency or a cashing out for fiat currency to ensure an equitable division of property and protect against motions to vacate on the grounds

^{360.} For example, if an individual was awarded \$100,000 in cryptocurrency, the court could offset that by awarding their spouse \$100,000 in equity from a marital residence.

^{361.} See Meuse, supra note 19.

^{362.} See Tang & Boback, supra note 295, at 5; SPEER, supra note 23, at 2 (suggesting divorce decrees should provide for transfer of a "test amount" of coins first as there is no cancellation policy or holding period to return incorrectly transferred cryptocurrency).

of unconscionability or fraud after the divorce judgment is entered. 363 When entering an order providing for a like-kind split of virtual currency, courts should consider steps to mitigate potential difficulty surrounding asset recovery.³⁶⁴ Specifically, because no third-party intermediaries are involved in cryptocurrency transactions, there are no controlling entities that can reverse a transaction if a spouse violates a judgment and transfers away their virtual currency unless their private key is obtained.³⁶⁵ The court should impose an affirmative obligation on the spouse holding cryptocurrency to provide an accounting over a specified period of time prior to division of the cryptocurrency so the non-holder spouse can verify the transactions.³⁶⁶ The court should consider incorporating by reference an exhibit to be kept out of the public record containing the virtual currency holder's private key information.³⁶⁷ This way, if a separate action for levy or replevin needs to be initiated, a court may follow a writ of execution or replevin.³⁶⁸ The court should further order that if a litigant fails to follow the order and transfers the funds, they will automatically be subjected to a purge and further contempt fines.³⁶⁹

Offsetting or "buying out" a spouse's interest in cryptocurrency gets more challenging given the extreme volatility of the coin prices on an hourly basis.³⁷⁰ In addition to specifying the date and time used for valuation as set forth above, courts and practitioners should include a clause in their agreement about what happens if the value between entry

^{363.} This is similar to in-kind division of physical currency/coin collections, an approach taken by several states in equitably dividing these collections in divorce cases. *See, e.g.*, Goodwin v. Goodwin, 508 S.W.3d 86, 89 (Ark. Ct. App. 2016) (finding Husband was in contempt of court where he was ordered to transfer an equal share of his 162-coin collection to Wife and he failed to provide evidence supporting he sold 70 additional coins during the marriage so they were no longer in his possession for division); Gambrell v. Gambrell, 369 S.E.2d 662, 664 (S.C. Ct. App. 1988); Lewanski v. Lewanski, 375 N.E.2d 961, 964 (Ill. App. Ct. 1978) (holding Wife was equitably awarded one half of Husband's coin collection despite it being purchased solely by Husband because her financial contribution towards the purchase of necessary family items indirectly freed up Husband's income to purchase the collection).

^{364.} See Andrew W. Balthazor, Comment, The Challenges of Cryptocurrency Asset Recovery, 13 FIU L. REV. 1207, 1207 (2019).

^{365.} See id. at 1213.

^{366.} See LaFond v. LaFond, No. 82486-COA, 2022 WL 714430, at *1 (Nev. Ct. App. Mar. 9, 2022).

^{367.} See Balthazor, supra note 364, at 1216.

^{368.} A Writ of Replevin allows a court to order seizure or attachment of illegally taken or wrongfully withheld property. See Writ of Replevin, U.S. MARSHALS SERV., https://bit.ly/3cLM0sX (last visited June 30, 2022). Similarly, courts issue Writs of Execution to direct a sheriff to enforce and satisfy a money judgment. See Writ of Execution, U.S. MARSHALS SERV., https://bit.ly/3zEhGco (last visited June 30, 2022).

^{369.} See Balthazor, supra note 364, at 1222.

^{370.} *See* West & Fields, *supra* note 250, at 182.

of judgment and division of the asset fluctuates by a percentage certain.³⁷¹ This clause can cut both ways, where if the cryptocurrency value increases by a percentage certain, the party who gets the cryptocurrency will compensate the other spouse for the shortfall.³⁷² Alternatively, if the cryptocurrency value decreases by a percentage certain, the cryptocurrency holder spouse may be entitled to an additional cash payment or other assets from the other spouse.³⁷³ Overall, given the high volatility of cryptocurrency values, the best practice would be to separate virtual currency from the rest of the marital estate and divide it separately from the rest of the estate rather than providing for an offset from another class of marital asset.³⁷⁴ This way, if the virtual currency value skyrockets or plummets immediately following entry of the divorce decree, a court would not have to potentially renegotiate the remainder of the marital or community property.³⁷⁵

For dividing NFTs, the court should provide a mechanism and timeline under which a spouse must mint and either: (1) list for sale and divide proceeds from an NFT; or (2) fractionalize and transfer a fraction of the NFT to their spouse. The most equitable and least burdensome option would be the former, to ensure both spouses receive an equal share of cash upon sale. When selling and dividing proceeds from the sale of an NFT, the court should follow a similar framework to selling a marital residence, identifying the following:

- (1) When the NFT must be listed for sale on an NFT marketplace (i.e., listing the NFT by a date certain or a condition precedent that must be satisfied prior to listing);
- (2) Terms of the sale, including whether the sale will be at a fixed price³⁷⁶or in a timed auction;³⁷⁷

^{371.} See What Happens to Crypto When There is a Divorce?!, NoMoreTax, https://bit.ly/3wGGNZJ (last visited Dec. 28, 2021).

^{372.} See id.

^{373.} See id.

^{374.} In practice, attorneys would list virtual currency separate from other assets such as real estate, other cash accounts, or retirement accounts.

^{375.} See, e.g., LaFond v. LaFond, No. 82486-COA, 2022 WL 714430, at *1 (Nev. Ct. App. Mar. 9, 2022) (where the court ordered each party to receive 50% of the cryptocurrency, it did not have to address division of other community assets when it granted Wife's Motion to Set Aside).

^{376.} See How Do I Sell an NFT?, OPENSEA, https://bit.ly/3oxlvdp (last visited June 30, 2022) ("In a Fixed Price sale, the seller establishes the NFT price.").

^{377.} See How Do Timed Auctions Work?, OPENSEA, https://bit.ly/3Q31ZRM (last visited June 30, 2022) (explaining auctions can be structured to sell to the highest bidder or sell with a declining price until someone purchases the NFT).

- (3) That the NFT holder spouse shall provide written proof that the NFT was listed for sale within a certain number of days of being listed;
- (4) That the NFT holder spouse shall provide written proof of the amount of proceeds received from the sale;
- (5) How the net proceeds from the NFT will be divided (including how the funds will be transferred), along with how any resulting tax liability and any gas or other fees associated with the sale will be allocated.

Similarly, where fractionalization of an NFT is an option, the court should additionally identify the following:

- (1) What platform the NFT holder will use to fractionalize the NFT;
- (2) How many fractionalized tokens should be created;
- (3) Timing for the non-holder spouse to open a wallet (if they do not already own one);
- (4) Timing to transfer the fractional NFT to the non-holder spouse.³⁷⁸

In determining an appropriate sales price, the court may consider indicators of comparable value, including the price listed as the "floor price" for the NFT on an NFT marketplace like OpenSea,³⁷⁹ or looking at comparable sales prices on rarity.tools, a website that ranks NFTs by their rarity and lets NFT holders know what NFTs with similar attributes are selling for.³⁸⁰ Alternatively, just as a party could hire an appraiser to appraise real estate, they could also hire an appraiser of NFTs.³⁸¹ The

^{378.} See Deeze, How to Fractionalize an NFT Using Fractional.art, MEDIUM, https://bit.ly/3yRQZRQ (last visited Feb. 5, 2022). If the ownership in an NFT is still at the mint pass stage, mint passes and fractionalized NFTs may be fungible and if there are multiple, they could be equally divided.

^{379.} See What is a Floor Price?, OPENSEA, https://bit.ly/39IdeiD (last visited June 30, 2022) ("Floor price is the lowest price for collection items[.]"). As the "floor price" is only the lowest price of any NFTs currently listed for sale, this may not be an accurate indicator of value, as these prices are arguably too high for anyone to be purchasing them. See The NFT 'Price Floor' Explained, CRYPTOCHRONICLE, https://bit.ly/3OGHuJc (last visited June 30, 2022).

^{380.} See RARITY.TOOLS, https://bit.ly/3PKRBOD (last visited June 30,2022).

^{381.} See, e.g., Nick Emmons, How to Appraise NFTs on Upshot, UPSHOTHQ (Nov. 19, 2021), https://bit.ly/3zbC57h. Platforms like Upshot allow for crowdsourced NFT

court may also consider after what amount of time the NFT holder spouse will be required to lower the list price of the NFT if it fails to sell or if the selected sales process does not automatically lower the price. 382 To anticipate the potential issue of an NFT not selling within a reasonable period of time, the court should consider setting forth a fallback "buyout procedure" whereby the parties would avail themselves of an expert appraisal of the NFT and the holder spouse would buyout the non-holder spouse's interest in cash based on the expert's appraised value. 383

F. Continuing Legal Education/Continuing Judicial Education

Overall, continuing legal education and continuing judicial education is imperative to ensure practitioners and courts have at least a cursory understanding of how to approach identifying, characterizing, valuing, and dividing virtual currency. Members from state bar associations and continuing legal education organizations should collaborate to promote uniformity across the methodology used within the context of each state's property division model. These programs can include written materials setting forth template litigation hold letters and discovery requests as set forth above, as well as draft language for divorce judgments.³⁸⁴ Additionally, program providers should stay up to date on forthcoming cases that address the division, tracing, and valuation of virtual assets and incorporate them into the education programs to develop a base of successful strategies for cases with virtual assets moving forward.

IV. CONCLUSION

Virtual assets are replacing offshore accounts as vehicles to hide assets from soon-to-be-ex-spouses because they are difficult to understand, difficult to value, and difficult to find. Considering virtual currencies are gaining popularity in real estate deals, private equity transactions, and even being used as collateral in loan agreements, virtual

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appraisals. See id. Nansen is another platform providing analytics for blockchain values. See Nansen, https://bit.ly/3Je3RF6 (last visited June 30, 2022).

^{382.} See How Do Timed Auctions Work?, supra note 377.

^{383.} This could either be an appraiser jointly agreed upon by the parties, or if the parties are unable to agree, they can both select an appraiser and their respective appraisers would select a third appraiser. *See generally* Andrews v. Andrews, 644 N.Y.S.2d 781 (N.Y. App. Div. 1996).

^{384.} See Stephanie L. Tang, MCLE Presentation for Illinois State Bar Association: Cryptocurrency, NFTs, and Divorce (June 23, 2022), https://bit.ly/3vlJUpR; Mark Unger, Presentation for State Bar of Texas, 44th Annual Marriage Dissolution Institute: Welcome to the Future: Finding and Dividing Digital Assets (Apr. 21, 2022), https://bit.ly/3Sc7QGi; Haraminac, supra note 45.

assets have demonstrated their staying power.³⁸⁵ Regardless of whether you reside in a state that follows a community property or equitable division model, family courts need to be able to identify, characterize, value, and divide these assets. Expanding upon the already existing legal discovery tools, existing software, and valuation and division methodologies will help both courts and practitioners grow more comfortable approaching cases with virtual holdings. Accordingly, it is necessary for family courts and practitioners to have a baseline understanding of virtual assets to draft durable judgments that fairly allocate these assets between spouses.