

IN THE CRYPT: THE IMPORTANCE OF PLANNING FOR DISTRIBUTION OF CRYPTOCURRENCY ASSETS AFTER DEATH

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I. INTRODUCTION

Over the past two decades, our world has surged into a new era of information that exponentially increases each year.¹ Technology has transformed everything about daily life.² Schools, businesses, home management, governments, communication, and much more rely on technology in some form or fashion.³ It is natural then that this technological transformation would reach today's monetary system.⁴ Money has taken many forms, from precious metals to fiat currency.⁵ Now that technology is

1. *The Exponential Growth of Data*, INSIDEBIGDATA (Feb. 16, 2017), <https://insidebigdata.com/2017/02/16/the-exponential-growth-of-data/> [https://perma.cc/QG2H-JGKQ]; Mark Fenwick & Erik P.M. Vermeulen, *Technology and Corporate Governance*, 48 TEX. J. BUS. L. 1, 4 (2019).

2. See Fenwick & Vermeulen, *supra* note 1, at 4.

3. See *id.*

4. See *id.* at 1–2.

5. Andrew Beattie, *The History of Money*, INVESTOPEDIA, https://www.investopedia.com/articles/07/roots_of_money.asp (Feb. 21, 2022) [https://perma.cc/8VTB-79FG].

an integral part of life, a potentially new and unique digital asset class has emerged.⁶

Cryptocurrency (crypto) is based on an algorithm that can function as virtual property, a medium of currency, or a base for various applications, as discussed later in this Comment.⁷ Crypto is well known around the world and is accessible to most nations.⁸ While there are still unknowns about crypto or any virtual currency, its popularity is growing so that eventually, the world will likely transition toward some form of digital currency.⁹ With this in mind, it is important to stay ahead of the game and prepare to handle this new form of technology.¹⁰ Specifically, crypto has a lot to offer in maintaining the wealth and security of individual estates, and estate planners need to be aware of crypto's opportunities for helping plan and manage different estates.¹¹ Crypto technology supports the ability to provide a store of wealth and to execute wills and other estate planning documents (provided this becomes permissible under law).¹² The benefit of using crypto technology as an estate planning tool is that crypto has the potential to become faster, more secure, and ultimately more efficient than the current documentation system.¹³

Currently, crypto is treated as property in the United States (U.S.), meaning there is a taxable event every time a crypto transaction occurs.¹⁴ These taxable events could unnecessarily inhibit the potential benefits that crypto offers.¹⁵ Even if an estate planner has no interest in crypto, the estate planner cannot avoid it because many individuals acquire crypto as part of their estate assets.¹⁶ Tax planning is an essential part of estate planning; therefore, estate planning attorneys need to be aware of the taxable implications crypto assets may have on a client's estate.¹⁷

Part II of this Comment will cover background on how crypto works and discuss the various technological functions that blockchain technology offers.¹⁸ Part III will examine the current law and regulations regarding crypto in the U.S. and other countries.¹⁹ After discussing the laws governing crypto, Part IV will outline a hypothetical situation of an individual's crypto

6. Jordan Bass, *Crypto Taxes in 2021: A Guide to Tax Rules for Cryptocurrency*, TAXING CRYPTOCURRENCY (Jan. 29, 2021), <https://www.taxingcryptocurrency.com/blog/2021/1/29/guide-to-crypto-taxes-in-2021> [<https://perma.cc/B5XW-J6N8>].

7. See Fenwick & Vermeulen, *supra* note 1, at 3–4.

8. See *id.*

9. See *id.*

10. See *id.*

11. See *id.*

12. See Abigail Earthman, *Building Blocks of Blockchain: A Primer on Cryptocurrency for Estate Plans*, ST. BAR TEX., INT. EST. PLAN. & PROB. 1, 1–4 (June 2, 2020).

13. See *id.*

14. I.R.S. Notice 2014-21, 2014-16 I.R.B. 938; see *infra* Part IV.

15. See Earthman, *supra* note 12, at 1–4.

16. See *id.*

17. See *id.*

18. See *infra* Part II.

19. See *infra* Part III.

transactions, and Part V will analyze how an estate planner would incorporate crypto assets into an estate plan based on the hypothetical.²⁰ Finally, Part VI of this Comment will address realistic short- and long-term steps the U.S. government should take to provide better guidance and regulation for crypto transactions, so that this technological advancement will be effectively utilized moving forward.²¹ The Appendix at the end of this Comment contains a glossary of terms that will serve as a source of reference to better understand crypto concepts.²²

II. WHAT IS CRYPTO?

Crypto was created as “a purely peer-to-peer version of electronic cash [that] would allow online payments to be sent directly from one party to another without going through a financial institution.”²³ Satoshi Nakamoto, the creator of Bitcoin, is a pseudonymous person or team who created Bitcoin technology and released it in a 2008 white paper.²⁴ The purpose behind having a “peer-to-peer” payment system is to “decentralize” transactions as opposed to having a central authority (e.g., a bank) that monitors and facilitates transactions.²⁵ Trust is a primary driver for why people favor a decentralized system.²⁶ Critics of centralized banking systems have existed since its inception and continue to be skeptical of the effectiveness of the banking system over the years.²⁷ After the 2008 financial crisis, a greater loss of trust arose in the banking system and institutions that were supposed to protect the public.²⁸ The desire for a more secure financial transaction system coupled with expansion in technology led to the development of crypto and blockchain technology.²⁹

20. See *infra* Parts IV–V.

21. See *infra* Part VI.

22. See *infra* Appendix–Glossary.

23. Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, BITCOIN.ORG 1 (Oct. 31, 2008), <https://bitcoin.org/bitcoin.pdf> [<https://perma.cc/2LZM-7U6V>].

24. *What is Bitcoin?*, COINBASE, <https://www.coinbase.com/learn/crypto-basics/what-is-bitcoin> (last visited March 10, 2022) [<https://perma.cc/55B8-9LJ5>].

25. Earthman, *supra* note 12, at 1–4.

26. Nakamoto, *supra* note 23, at 8; CuriousInventor, *How Bitcoin Works Under the Hood*, YOUTUBE (July 14, 2013), <https://www.youtube.com/watch?v=Lx9zgZCMqXE> [<https://perma.cc/83FE-N6AY>].

27. See *Jefferson versus Hamilton*, TEACHINGHISTORY.ORG, <https://teachinghistory.org/history-content/ask-a-historian/24094> (last visited Mar. 10, 2022) [<https://perma.cc/3VXS-VTVS>].

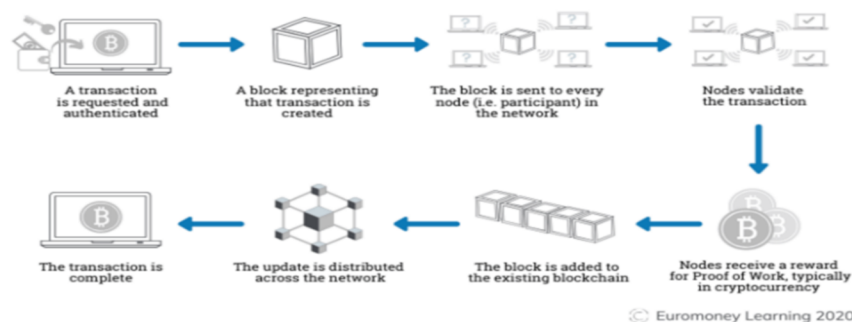
28. Earthman, *supra* note 12, at 2.

29. *Id.*; Fenwick & Vermeulen, *supra* note 1, at 1–4.

A. Blockchain Technology: How It Works

The blockchain lists transactions that anyone can view and verify through a distributed ledger and validators.³⁰ For example, one “block” of the blockchain contains a list of transactions from different people that other users have verified.³¹ This verification is possible because every blockchain user has access to a list of the transactions that have occurred, so when a new transaction is attempted, everyone can verify it.³² When a list of transactions has been verified, those transactions are combined into a block, which is added to a chain of previously verified transaction blocks, thus forming a blockchain.³³ In its basic form, the blockchain keeps track of digital transactions.³⁴ In the case of Bitcoin, there is a blockchain that is specifically designed for tracking Bitcoin transactions.³⁵ However, blockchain capabilities have expanded beyond tracking a single digital currency.³⁶ Other blockchains, such as Ethereum and Cardano, can track more than just one digital currency and can support other functions on their blockchains.³⁷

How does a transaction get into the blockchain?



This diagram is a basic overview of how a blockchain records and affirms a transaction.³⁸ The “nodes” referred to in the image are other computers in the network that affirm such transactions.³⁹

30. *What is a Blockchain?*, COINBASE, <https://www.coinbase.com/learn/crypto-basics/what-is-a-blockchain> (last visited Mar. 10, 2022) [<https://perma.cc/LFE6-MUTV>].

31. *Id.*

32. *See id.*

33. *See id.*

34. Bernard Marr, *What is the Difference Between Blockchain and Bitcoin?*, BERNARD MARR & CO., <https://bernardmarr.com/what-is-the-difference-between-blockchain-and-bitcoin/> (last visited Mar. 10, 2022) [<https://perma.cc/D8LY-QC56>].

35. *Id.*

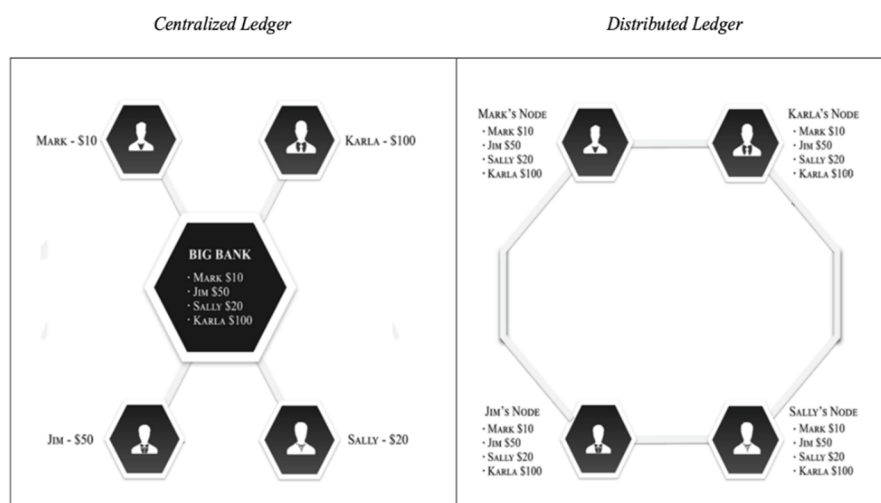
36. *Id.*

37. *See id.*

38. *How Does a Transaction Get Into the Blockchain?*, EUROMONEY LEARNING, <https://www.euromoney.com/learning/blockchain-explained/how-transactions-get-into-the-blockchain> (last visited Mar. 10, 2022) [<https://perma.cc/Q3DF-FVWH>].

39. *Id.*

In a centralized banking system, the bank acts as a middleman verifying transactions because the bank has a centralized ledger to make this determination.⁴⁰ Conversely, the blockchain is on a distributed ledger, such that every person participating on the blockchain may verify the transaction.⁴¹ This is why Satoshi Nakamoto's white paper calls the blockchain a peer-to-peer version of electronic cash.⁴²



This diagram shows the difference between a centralized ledger (on the left) and a distributed, decentralized ledger (on the right).⁴³ The key difference is centralized ledgers are all in one place, whereas distributed ledgers are held by each individual.⁴⁴

B. Mining and Staking

While all users have access to a distributed ledger, the transaction must be validated for a transaction to become a part of the blockchain.⁴⁵ Validation of transactions occurs by one of two processes: mining (proof of work) or staking (proof of stake).⁴⁶ Bitcoin uses the mining method of creating new coins, Ethereum started with mining but is transitioning to staking, and

40. Earthman, *supra* note 12, at 4.

41. See *What is a Blockchain?*, *supra* note 30.

42. See Nakamoto, *supra* note 23, at 1.

43. Earthman, *supra* note 12, at 4.

44. *Id.*

45. See *Mining*, BINANCE ACAD., <https://academy.binance.com/en/glossary/mining> (last visited Mar. 10, 2022) [<https://perma.cc/RK9J-BJNH>]; Aaron, *Proof of Stake (PoS)*, BINANCE ACADEMY, <https://academy.binance.com/en/glossary/proof-of-stake> (Mar. 10, 2022) [<https://perma.cc/MVD8-FQZX>].

46. See *Mining*, *supra* note 45; Aaron, *supra* note 45.

Cardano uses staking.⁴⁷ Through this process, new coins are created as rewards to the validators.⁴⁸ Both mining and staking work as part of the consensus mechanism that affirms transactions, but the process of affirming is different.⁴⁹

1. Proof of Work

In a proof of work system, or mining, the consensus mechanism involves multiple computers in a competition to solve a problem.⁵⁰ When one computer “wins” or solves the problem, that computer gets to update the blockchain (validate the transaction).⁵¹ As a result, the winning computer will get a reward in the form of new digital currency coins (e.g., one Bitcoin).⁵² The computers participating in this system are called nodes, and the size of the node (mega-hash, giga-hash, etc.) will determine how many guesses a computer can make per second.⁵³ The more guesses a computer has, the more likely the computer will be able to solve the problem and get the reward.⁵⁴ Having more guesses per second takes a lot of computing power because the computer is trying to guess as fast as possible, and unfortunately, mining consumes large amounts of energy.⁵⁵

In the beginning of a proof of work system with a small number of nodes, the computers making the guesses are solving easier problems, and there is less competition.⁵⁶ Once several computers start competing, the problems become harder to solve, and more energy is needed to make guesses.⁵⁷ It is hard to become a miner for blockchains like Bitcoin (one that will win, anyways) because only the high-powered computers with greater hash capacity will win the rewards.⁵⁸ This requires special expensive computer equipment, which mainly big corporations can afford to maintain.⁵⁹

47. *How Does Bitcoin Work?*, BITCOIN, <https://bitcoin.org/en/how-it-works> (last visited Mar. 10, 2022) [<https://perma.cc/9T9G-929Y>]; *Proof-of-Work (POW)*, ETHEREUM (Feb. 4, 2022), <https://ethereum.org/en/developers/docs/consensus-mechanisms/pow/> [<https://perma.cc/DGS3-E6JC>]; *Ouroboros*, CARDANO, <https://cardano.org/ouroboros/> (last visited Mar. 10, 2022) [<https://perma.cc/9JTN-AXTG>].

48. Euny Hong, *How Does Bitcoin Mining Work?*, INVESTOPEDIA (Sept. 21, 2021), <https://www.investopedia.com/tech/how-does-bitcoin-mining-work/> [<https://perma.cc/S6F3-DPED>].

49. Jake Frankenfield, *Consensus Mechanism (Cryptocurrency)*, INVESTOPEDIA (Aug. 4, 2021), <https://www.investopedia.com/terms/c/consensus-mechanism-cryptocurrency.asp> [<https://perma.cc/TT5P-NLGA>].

50. Hong, *supra* note 48.

51. *Id.*

52. *Id.*

53. *Id.*

54. *Id.*

55. *Id.*

56. *Id.*

57. *Id.*

58. *See id.*

59. *See id.*

However, mining pools are available for individual miners to pool computing resources to increase each individual's probability of winning a block.⁶⁰

2. Proof of Stake

Proof of stake, or staking, is a newer consensus mechanism in which individuals, called validators, are chosen to validate transactions based on the number of coins they have staked.⁶¹ When an individual "stakes," the individual's coins are designated (or locked) into a certain position to be chosen to validate the blockchain transactions.⁶² The more coins a validator stakes, the more likely the validator will be chosen to validate the transaction.⁶³ A validator can have more staked coins by becoming a pool operator.⁶⁴ A pool operator opens up a staking pool that allows other people to stake their digital currency into the pool for use by the pool operator.⁶⁵ This gives the pool operator a higher chance of being selected, which would result in a reward.⁶⁶ Owners who allow their digital currency to be staked in a pool will receive a percentage of the reward for allowing their assets to be staked.⁶⁷ The reward is not a cash payment but rather a reward of digital currency.⁶⁸ Depending on the pool size, these rewards can occur weekly.⁶⁹ Ethereum staking requires individuals to "lock in" their crypto, meaning that once it is locked in, it cannot be taken out for a certain period of time.⁷⁰ Conversely, some crypto, like Cardano, has a staking process resembling a designation of staked coins rather than a lock (meaning the staked coins can be removed at any point).⁷¹

There is nothing else quite like this reward process in the investment world, and therefore, there is not much guidance on how to treat the

60. *See id.*

61. *See* Aaron, *supra* note 45.

62. Lyle Daly, *What Is Staking in Crypto?*, MOTLEY FOOL, <https://www.fool.com/investing/stock-market/market-sectors/financials/cryptocurrency-stocks/what-is-staking/> (Mar. 7, 2022) [<https://perma.cc/DL5G-ZLRV>].

63. Luke Conway, *Proof-of-Work vs. Proof-of-Stake: Which Is Better?*, BLOCKWORKS (Feb. 18, 2022, 2:25 PM), <https://blockworks.co/proof-of-work-vs-proof-of-stake-whats-the-difference/> [<https://perma.cc/9JRX-J3CA>].

64. *See* Tanwa Arpornthip, *Staking Pool*, BINANCE ACADEMY, <https://academy.binance.com/en/glossary/staking-pool> (last visited Mar. 10, 2022) [<https://perma.cc/783A-ZZ8J>].

65. *See id.*

66. *See id.*

67. *See id.*

68. Krakenfx, *What is Staking? Frequently Asked Questions About a New Way to Earn Crypto*, KRAKEN (Apr. 24, 2020), <https://blog.kraken.com/post/4736/what-is-staking-frequently-asked-questions-about-a-new-way-to-earn-crypto/> [<https://perma.cc/Q9VX-9WHE>].

69. *See id.*

70. *See* Sarah Tran, *Cardano vs. Ethereum: How do They Compare?*, FXSTREET (Sep. 14, 2021, 1:29:47 PM), <https://www.fxstreet.com/cryptocurrencies/news/cardano-vs-ethereum-how-do-they-comp> [<https://perma.cc/9HDL-J7H7>].

71. *See id.*

acquisition of digital currency in this manner.⁷² Every time a crypto owner receives a staking reward, the crypto owner must recognize income, even though the crypto owner has not sold or exchanged the coin.⁷³

C. Keys and Wallets

When an individual owns crypto, the individual has a public key and a private key that control a wallet.⁷⁴ The public key is where funds are deposited or received, and the private key gives the individual the ability to control the wallet, giving that person permission to accept and send coins from the wallet.⁷⁵ Public keys may be shared with the public, but private keys are not shared.⁷⁶ When individuals first purchase crypto on an exchange, they deposit money, such as the U.S. dollar or other fiat currency, onto the exchange and purchase a type of crypto (Bitcoin, Ethereum, etc.).⁷⁷ At this point, the exchange acts as a custodian for an individual's crypto, and the account on the exchange is like the private key.⁷⁸ Once the individual has purchased crypto on the exchange, the individual may make exchanges between other types of crypto.⁷⁹ However, due to security issues, it is best not to leave your crypto on an exchange like you would leave stocks on an exchange.⁸⁰ At this point, an individual should purchase a personal wallet for the individual's crypto.⁸¹ These wallets can come in two forms: a cold wallet, which is typically in the form of a flash drive, or a hot wallet, which is an online computer program.⁸² Some examples of cold wallets are Ledger and Trezor, and some examples of hot wallets are MetaMask and Edge.⁸³ Cold wallets are beneficial because they cannot be hacked, whereas a hot wallet has the potential to be hacked because it exists online.⁸⁴ However, hot wallets facilitate the ability to participate in transactions on the blockchain because

72. See Krakenfx, *supra* note 68.

73. Bass, *supra* note 6.

74. Simply Explained, *How Bitcoin Wallets Work (Public & Private Key Explained)*, YOUTUBE (Aug. 6, 2019), <https://www.youtube.com/watch?v=GStiKjnBaes> [<https://perma.cc/B9H8-EB4Y>].

75. *Id.*

76. *Id.*

77. *Id.*

78. *Difference Between Cryptocurrency Wallet vs Exchange*, DIFFERENCEBETWEEN.NET (July 17, 2021), <http://www.differencebetween.net/business/investment-business/difference-between-cryptocurrency-wallet-vs-exchange/> [<https://perma.cc/82A7-6EYF>].

79. *Id.*

80. *Id.*

81. *Id.*

82. *The Best Cold Wallets of 2021*, ALEXANDRIA (Dec. 2021), <https://coinmarketcap.com/alexandria/article/best-crypto-cold-wallets> [<https://perma.cc/WET2-EGRU>]; Hassan Shafiq, *10 Best Crypto Hot Wallets for Beginners*, ALEXANDRIA (Oct. 2021), <https://coinmarketcap.com/alexandria/article/10-best-crypto-hot-wallets-for-beginners> [<https://perma.cc/4TCN-N8SP>].

83. Luke Conway, *Best Bitcoin Wallets*, INVESTOPEDIA (Dec. 21, 2021), <https://www.investopedia.com/best-bitcoin-wallets-5070283> [<https://perma.cc/9SR5-FB9E>]; Shafiq, *supra* note 82.

84. *Hot Wallets vs. Cold Wallets*, CRYPTOPEDIA (July 4, 2021), <https://www.gemini.com/cryptopedia/crypto-wallets-hot-cold> [<https://perma.cc/4NJX-78UA>].

they can be directly linked to a blockchain.⁸⁵ Whether you have a hot or a cold wallet, both contain a public key and a private key that allow crypto from exchanges or other wallets to be sent and stored in the personal wallet.⁸⁶ Wallets are the safest place to store crypto; however, if one loses access to the private key that controls the wallet, the crypto that was transferred to those wallets is lost forever and cannot be recovered.⁸⁷

D. Types of Crypto

There are various types of crypto that all utilize blockchain technology, but different types of crypto can perform different functions or allow certain benefits.⁸⁸

1. Bitcoin

Blockchain technology was introduced as Bitcoin.⁸⁹ It is one of the most widely known and traded crypto assets with the highest market cap.⁹⁰ Bitcoin may be a good option to add to an investment portfolio, but its use as a currency (i.e., using Bitcoin to buy goods or services) is not practical for the time being.⁹¹ Bitcoin's transaction speed is not currently sustainable for high volumes of transactions, but there is potential for the Bitcoin blockchain to increase its transaction speed through blockchain protocols that modify the blockchain.⁹² In 2017, the Bitcoin community activated a protocol called SegWit to increase transaction speed, but its effects were not significant.⁹³ Now another protocol, called the Lightning Network, is in the works to be implemented on Bitcoin's blockchain, but some issues with the Lightning Network could arise, and it is yet to be determined whether it will actually increase Bitcoin's transaction speed.⁹⁴

85. *See id.*

86. *Id.*

87. Simply Explained, *supra* note 74.

88. *See* Earthman, *supra* note 12, at 4.

89. Marr, *supra* note 34.

90. *See What is Bitcoin?*, *supra* note 24; *Cryptocurrency Prices by Market Cap*, COINGECKO, <https://www.coingecko.com/> (last visited Mar. 10, 2022) [<https://perma.cc/VS6T-F6JL>].

91. *See The Problem of Scalability in the Bitcoin Network*, BITPANDA, <https://www.bitpanda.com/academy/en/lessons/the-problem-of-scalability-in-the-bitcoin-network/> (last visited Mar. 10, 2022) [<https://perma.cc/M3F4-8TS4>].

92. *Id.*

93. Kenny L., *The Blockchain Scalability Problem & the Race for Visa-like Transaction Speed*, TOWARDS DATA SCI. (Jan. 30, 2019), <https://towardsdatascience.com/the-blockchain-scalability-problem-the-race-for-visa-like-transaction-speed-5cce48f9d44> [<https://perma.cc/ZRS9-XN7Q>].

94. *Id.*; *The Problem of Scalability in the Bitcoin Network*, *supra* note 91.

2. Ethereum

Ethereum is the second-largest crypto coin and blockchain by market cap.⁹⁵ Ethereum differs from Bitcoin in that it supports smart contracts and dApps (further discussion of smart contracts and dApps will occur in later sections).⁹⁶ Although the Ethereum blockchain's native token is Ethereum, the Ethereum blockchain supports multiple types of digital tokens.⁹⁷ Ethereum allows users to utilize the blockchain for various purposes, such as creating and developing games, advanced databases, complex financial instruments, NFTs, or smart contracts.⁹⁸ Ethereum has also developed what is called a stable coin, which is a digital currency that is backed by an asset to maintain a stable value.⁹⁹ A stable coin may be backed by a fiat currency (e.g., U.S. dollar), an asset such as precious metal, or be crypto-backed (on Ethereum, crypto-backed stable coins are backed by Ethereum).¹⁰⁰ Ethereum originally had a proof of work consensus mechanism, but it is currently transitioning to a proof of stake mechanism.¹⁰¹

3. Cardano

Cardano is a proof of stake blockchain platform founded on peer-reviewed research.¹⁰² Cardano was originally a research project that sought to explore how crypto could be improved.¹⁰³ A peer-reviewed approach means that any new features and developments for Cardano's blockchain must first be reviewed and agreed upon by academics before it can be implemented.¹⁰⁴ This research-based approach is different from blockchains like Ethereum, where a group controls improvements.¹⁰⁵

95. *What is Ethereum?*, COINBASE, <https://www.coinbase.com/learn/crypto-basics/what-is-ethereum> (last visited Mar. 10, 2022) [<https://perma.cc/4FX3-RHC6>].

96. *Id.*

97. *Id.*; *Top 100 Ethereum Tokens*, ETHEREUMPRICE, <https://ethereumprice.org/tokens/> (last visited Mar. 10, 2022) [<https://perma.cc/9QMU-96FH>].

98. *What is Ethereum?*, *supra* note 95.

99. *Digital Money for Everyday Use*, ETHEREUM.ORG, <https://ethereum.org/en/stablecoins/#how> (last visited Mar. 10, 2022) [<https://perma.cc/8XQC-WZ6D>].

100. *Id.*

101. *What is Ethereum?*, *supra* note 95.

102. *Cardano is a Research-Driven Cryptocurrency*, KRAKEN, https://www.kraken.com/prices/ada-cardano-price-chart/usd-us-dollar?__cf_chl_jschl_tk__=pmd_DKbdZ.Vg5Sryglkmmi4aTay6BcbiYvJNokjPMIVk3g-1634777965-0-gqNtZGzNAvujcnBszQil&gclid=CjwKCAjw_L6LBhBbEiwA4c46up5A5xBG0nju6rWtMAdk2TNJSon37vRTOfxEQwWKPmsxLu2ZUZPmuhoCT8EQAvD_BwE&interval=1m (last visited Mar. 10, 2022) [<https://perma.cc/9QPA-L6VW>].

103. Matt Hussey, Adriana Hamacher, & Scott Chipolina, *What is Cardano (ADA)? The Peer-Reviewed Blockchain*, DECRYPT (Oct. 12, 2021), <https://decrypt.co/resources/cardano> [<https://perma.cc/GP7F-KXRP>].

104. *Id.*

105. *Id.*

Cardano's native coin is called ADA, and its consensus mechanism is called Ouroboros.¹⁰⁶

4. XRP

Ripple is a company that created a blockchain-based digital payment network to facilitate financial transactions across the world using its own crypto token, XRP.¹⁰⁷ The idea was to emulate the SWIFT (Society for Worldwide Interbank Financial Telecommunications) system, which provides secure international financial transactions, and Ripple uses the blockchain to accomplish this objective.¹⁰⁸ Ripple's blockchain uses a different consensus mechanism than mining and staking; it uses a group of bank-owned servers to confirm transactions on the blockchain.¹⁰⁹ Because Ripple controls the consensus mechanism, XRP could be considered "centralized" crypto.¹¹⁰ Having a centralized consensus mechanism allows owners of XRP to have a sort of "customer support" if something goes wrong (such as losing access to XRP tokens in a wallet), and XRP tokens can be managed or recovered.¹¹¹

Currently, Ripple's centralization system is causing it to be involved in a lawsuit with the Securities and Exchange Commission (SEC).¹¹² The SEC is attempting to classify XRP as a security, and therefore is suing Ripple for selling unregistered securities.¹¹³ Bitcoin and other altcoins have no central figure governing their blockchain, so they cannot technically be considered securities because no company exists to issue tokens or be sued.¹¹⁴ The outcome of *SEC v. Ripple Labs Inc.* opens up the possibility of certain crypto being treated as securities, which are then subject to SEC laws and regulations.¹¹⁵

106. *What is Cardano? (ADA)*, KRAKEN, <https://www.kraken.com/en-us/learn/what-is-cardano-ada/> (last visited Mar. 10, 2022) [<https://perma.cc/TLP5-HBUA>].

107. Jake Frankenfield, *Ripple*, INVESTOPEDIA, <https://www.investopedia.com/terms/r/ripple-crypto-currency.asp> (Nov. 3, 2021) [<https://perma.cc/A5FE-2CNJ>].

108. *Id.*

109. *Id.*

110. See Grace Ferguson, *How a Cryptocurrency Fortune Crippled a Deceased Billionaire's Estate*, DAILYDOT (Dec. 23, 2021), <https://www.dailydot.com/debug/death-internet-cryptocurrency-matthew-mellon/> [<https://perma.cc/JLL4-96MC>].

111. *See id.*

112. *See id.*

113. *See id.*

114. *See id.*

115. *Id.*

E. Crypto Platforms

There are various third-party platforms that individuals may purchase and exchange crypto on.¹¹⁶ Crypto other than Bitcoin are referred to as altcoins, and the type of altcoin an individual wishes to purchase will determine which platform the individual will use.¹¹⁷ Some other factors that an individual should consider when choosing a platform are pricing, withdrawal options, and security.¹¹⁸ Estate planners should become familiar with the various platforms' functions to effectively advise clients on the tax effects of transactions on these platforms.¹¹⁹

1. Exchanges

A crypto exchange is the optimal place to purchase crypto because it allows users to purchase crypto, exchange altcoins, and depending on the exchange, stake their coins.¹²⁰ Some examples of crypto exchanges are Coinbase, Kraken, and Binance.¹²¹

Coinbase is a popular crypto exchange due to its selection of altcoins available for purchase and user-friendly interface.¹²² Coinbase allows users to directly invest U.S. dollars and has an extensive list of coins available for purchase.¹²³ After the court case *United States v. Coinbase, Inc.*, Coinbase must report to the Internal Revenue Service (IRS) any individuals who make a transfer on its platform to ensure that individuals are reporting their crypto transactions on their tax returns.¹²⁴

Another popular exchange is Kraken, one of the safest crypto exchanges for individuals to use with a vast variety of altcoins.¹²⁵ Kraken initially had a larger selection of more valuable crypto, but now Coinbase has caught up with its selection of altcoins.¹²⁶ Finally, Binance is one of the cheaper

116. Luke Conway, *Best Crypto Exchanges*, INVESTOPEDIA, <https://www.investopedia.com/best-crypto-exchanges-5071855> (Nov. 8, 2021) [<https://perma.cc/4L7M-V9FV>].

117. *Id.*; Jake Frankenfield, *What Investors Need to Know About Altcoins*, INVESTOPEDIA, <https://www.investopedia.com/terms/a/altcoin.asp> (Nov. 14, 2021) [<https://perma.cc/PSG5-TZ25>].

118. Conway, *supra* note 116.

119. See Earthman, *supra* note 12, at 17–19.

120. See Conway, *supra* note 116.

121. See *id.*

122. Taylor Tepper & John Schmidt, *The Best Crypto Exchanges of 2021*, FORBES ADVISOR, <https://www.forbes.com/advisor/investing/best-crypto-exchanges/> (Mar. 1, 2022, 10:59 AM) [<https://perma.cc/598H-XK25>].

123. Robert Farrington, *The Top 10 Bitcoin and Crypto Investing Sites*, COLL. INV., <https://thecollegeinvestor.com/21245/top-10-bitcoin-crypto-investing-sites/> (Mar. 1, 2022) [<https://perma.cc/GYC2-DL92>].

124. See *United States v. Coinbase, Inc.*, No.17-cv-01431, 2017 WL 5890052, at *1 (N.D. Cal. Nov. 28, 2017).

125. See Tepper & Schmidt, *supra* note 122.

126. See *id.*

exchanges in regard to fees when purchasing crypto.¹²⁷ It has the highest trading volume over Coinbase and Kraken.¹²⁸

2. Other Third Parties

Individuals may buy and sell crypto on Venmo and PayPal even though these are not crypto exchanges.¹²⁹ In addition to allowing the purchase and sale of crypto, these platforms allow individuals to make purchases with crypto.¹³⁰ However, purchasing crypto on platforms like Venmo and PayPal limits the ability to make certain transactions that are only possible on an exchange.¹³¹ For example, crypto purchased on Venmo or PayPal cannot be transferred to other accounts, and there is no private key, which prevents crypto purchased on these platforms from being sent to a wallet.¹³² These platforms are also typically limited to Bitcoin and a few other altcoins.¹³³

Venmo, an app that allows individuals to make fast payments to friends or for business, now has a section on the app just for crypto.¹³⁴ On it, an individual may purchase Bitcoin, Ethereum, Bitcoin cash, or Litecoin.¹³⁵ Venmo will allow users to view their prior activity, manage transaction disputes, and, if required, generate tax forms for reporting earnings from the sale of crypto.¹³⁶ This will be helpful for individuals to keep track of their transactions using crypto.¹³⁷

PayPal was one of the first companies to start accepting Bitcoin.¹³⁸ PayPal only allows users to purchase Bitcoin, Ethereum, Bitcoin Cash, or Litecoin.¹³⁹ PayPal facilitates the purchase and sale of crypto and allows a

127. *Id.*

128. *Id.*

129. *Cryptocurrency on PayPal – Purchase Questions*, PAYPAL, <https://www.PayPal.com/us/smarthelp/article/cryptocurrency-on-PayPal-%E2%80%93-purchase-questions-faq4487> (last visited Mar. 10, 2022) [<https://perma.cc/ESW8-8UCX>].

130. *Id.*

131. *Id.*

132. Tyler Harttraft, *PayPal Makes Significant Step into Cryptocurrency Industry*, BULL BLOCKCHAIN L., LLP (Oct. 27, 2020), <https://bullblockchainlaw.com/PayPal-makes-significant-step-into-the-cryptocurrency-industry/> [<https://perma.cc/4LCK-7E7J>].

133. *PayPal and Venmo Taxes: What You Need to Know About P2P Platforms*, INTUIT TURBOTAX (Jan. 21, 2022, 1:57 PM), <https://turbotax.intuit.com/tax-tips/self-employment-taxes/paypal-and-venmo-taxes-what-you-need-to-know-about-p2p-platforms/L5DNjOUM1> [<https://perma.cc/MBC9-ACJF>].

134. *Crypto on Venmo Your Journey Starts Here*, VENMO, <https://venmo.com/about/crypto/> (last visited Mar. 16, 2021) [<https://perma.cc/3EUQ-U4KA>].

135. *Id.*

136. *See PayPal and Venmo Taxes: What You Need to Know About P2P Platforms*, *supra* note 133.

137. *See id.*

138. Andrew Lisa, *10 Major Companies That Accept Bitcoin*, YAHOO! (Aug. 25, 2021), <https://www.yahoo.com/now/10-major-companies-accept-bitcoin-190340692.html> [<https://perma.cc/Y6DS-CU5W>].

139. *See How to use Crypto at Checkout*, PAYPAL, <https://www.PayPal.com/us/smarthelp/article/how-to-use-crypto-at-checkout-faq4477> (last visited Mar. 16, 2022) [<https://perma.cc/K8HW-2Q94>].

user to use crypto to purchase at checkout.¹⁴⁰ However, individuals cannot purchase or exchange other types of crypto on PayPal.¹⁴¹ PayPal currently only allows crypto transactions to occur within the U.S. However, PayPal is planning to expand the service to certain global markets, facilitating easier international transactions without the multiple bank middlemen.¹⁴²

Having platforms outside of exchanges can add to the complexity of managing crypto assets of an individual's estate because the individual must keep track of all transactions on these platforms as well as on exchanges.¹⁴³ If a taxpayer purchases Venmo or PayPal using crypto, the taxpayer will need to be aware of the fair market value (FMV) of the crypto at the time of the purchase in order to calculate the recognized gain or loss on the sale.¹⁴⁴

F. Technology on the Blockchain

Some other popular uses of the blockchain include smart contracts, NFTs, dApps, and DeFi.¹⁴⁵ These uses of the blockchain have risen in popularity over the past few years and have potential to become a regular part of societal operations.¹⁴⁶ Individuals who participate in these blockchain functions can add to or affect the individual's assets, and therefore estate planners should be aware of these different types of blockchain applications.¹⁴⁷

1. Smart Contracts

Blockchain technology has the capability of executing smart contracts.¹⁴⁸ Smart contracts digitally facilitate, verify, and enforce the performance of transactions between individuals.¹⁴⁹ Smart contracts are self-executing, meaning there is no third party required to facilitate the transaction; once the conditions of the contract are met, the contract is executed.¹⁵⁰ Even with the creation of a smart contract, there is a taxable

140. *Id.*

141. *Cryptocurrency on PayPal – Purchase Questions*, *supra* note 129.

142. *Cryptocurrency on PayPal – FAQs | PayPal US*, PAYPAL, <https://www.PayPal.com/us/smarthelp/article/cryptocurrency-on-PayPal---faqs-%7C-PayPal-us-faq4398> (last visited Mar. 16, 2022) [<https://perma.cc/4XRE-L2A8>].

143. See *Why Crypto Asset Management Is the Next Big Thing*, INVESTOPEDIA, <https://www.investopedia.com/tech/why-crypto-asset-management-next-big-thing/> (Jan. 26, 2022) [<https://perma.cc/3QGM-N8QM>].

144. *See id.*

145. *Cryptocurrency on PayPal – FAQs | PayPal US*, *supra* note 142.

146. *Id.*

147. *Id.*

148. See Ameer Rosic, *Smart Contracts: The Blockchain Technology That Will Replace Lawyers*, BLOCKGEEKS, <https://blockgeeks.com/guides/smart-contracts/> (Nov. 25, 2020) [<https://perma.cc/KNS3-F8Z7>].

149. *See id.*

150. *See id.*

event.¹⁵¹ Individuals must pay crypto to form a contract on the blockchain.¹⁵² Smart contracts are essentially computer programs using if/then computer code programming that is stored inside a block of the blockchain.¹⁵³ Going back to wallets, a smart contract is a wallet that is controlled by a computer program rather than a private key, but it has a public key for information or coins to be received and sent.¹⁵⁴ Some things to note about smart contracts are that they are immutable, meaning that once they are created, they cannot be changed.¹⁵⁵ This can be beneficial for security purposes in that no one can change a contract behind another person's back.¹⁵⁶ However, because it cannot be changed, if amendments need to be made, a whole new contract has to be formed.¹⁵⁷ Also, the contract is validated by other users, so an attempt by a person to hack a contract to release funds prematurely or to a different party will be invalidated by others on the distributed ledger network.¹⁵⁸

A simple example of how a smart contract works: if person X wants to give five ETH to person Y in exchange for person Y giving person X ten LTC, a basic smart contract can be formed to make this transaction happen.¹⁵⁹ The contract rules would be that X can only receive ten LTC if X deposits five ETH.¹⁶⁰ If X transfers five ETH to the smart contract (by sending the ETH to the smart contract's public key), the smart contract will automatically transfer ten LTC from Y's wallet to X's wallet.¹⁶¹ Once X meets the "if" condition of transferring five ETH, this triggers the "then" result of transferring ten LTC from Y's account.¹⁶²

With the way crypto is currently treated for tax purposes, the tax consequences are that both person X and person Y have realized a gain or loss from the exchange of their respective crypto.¹⁶³ Additionally, whoever created the smart contract would have had to use crypto to generate the smart contract, another taxable transaction.¹⁶⁴

Estate planners should be aware of this type of technology because smart contracts have the potential to execute wills and other estate planning

151. *See id.*

152. *See id.*

153. Simply Explained, *Smart Contracts – Simply Explained*, YOUTUBE (Nov. 20, 2017), <https://www.youtube.com/watch?v=ZE2HxTmxfrI> [<https://perma.cc/3PF9-R578>].

154. *See id.*

155. *Id.*

156. *See id.*

157. *Id.*

158. *See* Whiteboard Crypto, *What are Smart Contracts in Crypto? (4 Examples + Animated)*, YOUTUBE (May 9, 2021), <https://www.youtube.com/watch?v=pyalppMhuic> [<https://perma.cc/2UQZ-SX8T>].

159. *See id.*

160. *See id.*

161. *See id.*

162. *See id.*

163. *See* Rosic, *supra* note 148.

164. *See id.*

instruments on the blockchain.¹⁶⁵ Wills can be developed as an NFT (described in a later section), based on smart contract coding.¹⁶⁶

2. Decentralized Apps (dApps)

Decentralized apps, or dApps, are built on decentralized technology, i.e., blockchain technology.¹⁶⁷ Not all blockchains can support dApps; for example, the Bitcoin blockchain does not support dApps but Ethereum's does.¹⁶⁸ DApps are reliable because they are open-sourced, meaning that anyone can see the coding to understand how the smart contracts are being executed, free from censorship or government control, and they never go offline because blockchain technology running the dApps runs on multiple servers.¹⁶⁹

There are several categories of dApps, and popular categories include game dApps, marketplace dApps, and DeFi dApps.¹⁷⁰ A marketplace dApp allows for the exchange of crypto and other blockchain assets (such as NFTs).¹⁷¹ Cryptokitties is a game and marketplace dApp on which individuals can buy blockchain tokens that represent a kitty.¹⁷² These kitties are very popular and can be very expensive.¹⁷³ Cryptokitties originally started out as a game, but as it became more popular, marketplace dApps, such as OpenSea, began trading cryptokitties.¹⁷⁴ The possibilities for dApps are endless; there can be dApps that are coded to fit any industry need, and dApps are secure and transparent because they are based on blockchain technology.¹⁷⁵

3. Non-fungible Tokens (NFTs)

A non-fungible token, or NFT, is a type of cryptographic token stored on the blockchain that represents ownership of a digitally scarce good, such

165. See Whiteboard Crypto, *supra* note 158.

166. See *id.*

167. See Whiteboard Crypto, *What are dApps? (12 Decentralized Application Examples)*, YOUTUBE (July 28, 2021), <https://www.youtube.com/watch?v=oPlupbsVimc> [<https://perma.cc/6NNR-UREK>].

168. *Id.*

169. *Id.*

170. *Id.*

171. Yan Kulakov, *See What is the Blockchain Marketplace and How to Start One*, CS.CART (May 12, 2021), <https://www.cs-cart.com/blog/what-is-the-blockchain-marketplace-and-how-to-start-one/> [<https://perma.cc/9NWC-FCM2>].

172. Whiteboard Crypto, *supra* note 167.

173. *Id.*

174. Rakesh Sharma, *Cryptokitties Are Still a Thing. Here's Why*, INVESTOPEDIA, <https://www.investopedia.com/news/cryptokitties-are-still-thing-heres-why/> (June 25, 2019) [<https://perma.cc/3NW5-N9T6>].

175. See Whiteboard Crypto, *supra* note 167.

as a piece of art or collectible.¹⁷⁶ To understand what an NFT really is, it helps to break down the meaning of the name itself.¹⁷⁷ The word “fungible” means something that is able to be interchanged with another thing of equal value.¹⁷⁸ For example, if you have two cans of the same type of soda in the same size, you can exchange those two sodas to get the same value.¹⁷⁹ However, something like an original painting by a famous artist does not have anything exactly equal to it because it is original and unique, and therefore is “non-fungible.”¹⁸⁰ With this in mind, a “non-fungible token” means that unique property is stored within a token on the blockchain.¹⁸¹ Examples of current uses of NFTs are art, games, and domain names.¹⁸²

NFTs can be purchased by transferring crypto, like Ethereum, to a digital (hot) wallet and then joining an online marketplace dApp.¹⁸³ Some examples of marketplace dApps are Zora, Decentraland, and OpenSea.¹⁸⁴ Decentraland is a game that allows players to buy digital land (NFTs) that can be sold, exchanged, and advertised.¹⁸⁵ With the development of the Metaverse, estate planners should be aware of the potential property acquired within the Metaverse that will become a part of the assets that individuals own.¹⁸⁶

Estate planners should be aware of NFTs because clients may own a variety of NFTs and want to pass these assets on after death or gift them during life.¹⁸⁷ Another reason NFTs are important is that they could be used to represent ownership of any asset, such as the deeds, copyrights, titles, etc.¹⁸⁸ If the title to certain assets is in the form of an NFT, the estate planner must advise the estate planner’s client on giving instructions to the fiduciary or executor of the estate on how to access NFT titles.¹⁸⁹ NFTs could even represent a will, and if this becomes a legal way of executing a will, then estate planners must be aware of how to create them.¹⁹⁰

176. Finematics, *What Are NFTs and How Can They Be Used in Decentralized Finance? DEFI Explained*, YOUTUBE (Sep. 29, 2020), <https://www.youtube.com/watch?v=Xdkkux6OxfM&t=58s> [<https://perma.cc/DKT7-EG3S>].

177. *See id.*

178. *See* Jake Frankenfield, *Fungibility*, INVESTOPEDIA, <https://www.investopedia.com/terms/f/fungibility.asp> (Jan. 23, 2021) [<https://perma.cc/EYH6-GTXA>].

179. *See* Finematics, *supra* note 176.

180. *See id.*

181. *See id.*

182. *See id.*

183. *See* Rakesh Sharma, *Non-Fungible Token (NFT) Definition*, INVESTOPEDIA, <https://www.investopedia.com/non-fungible-tokens-nft-5115211> (Feb. 26, 2022) [<https://perma.cc/2HAB-EL5B>].

184. *Id.*

185. *See* Finematics, *supra* note 176.

186. *See* Marr, *supra* note 34.

187. *See* *Non-fungible tokens (NFT)*, ETHEREUM, <https://ethereum.org/en/nft/> (last visited Mar. 16, 2022) [<https://perma.cc/H6CN-MC5R>].

188. *Id.*

189. *Id.*

190. *Id.*

4. Decentralized Finance (DeFi)

Decentralized Finance, or DeFi, is a decentralized financial system based on smart contracts (mainly on Ethereum) and run by dApps that can perform all sorts of financial services such as lending, borrowing, buying insurance, and investing.¹⁹¹ DeFi does not require intermediaries and is open to everyone.¹⁹² It brings together lenders and borrowers without relying on a third party, which significantly saves both parties from paying large fees.¹⁹³ The concept of DeFi developed due to the current financial system being slow, discriminatory, and expensive.¹⁹⁴ The current financial system is run by third parties, i.e., banks, that charge high fees and can block individuals from accessing certain services or blocking payments.¹⁹⁵

Individuals can participate in DeFi services through dApps that are a collection of smart contracts on the blockchain called protocols.¹⁹⁶ DApps have coins of their own that individuals can purchase along with the ability to perform some sort of DeFi service.¹⁹⁷ Many popular DeFi protocols take place on the Ethereum blockchain, and any exchange that occurs within the protocol requires a “gas fee” of Ethereum coin.¹⁹⁸ Some examples of DeFi protocols are Maker, Uniswap, and Compound.¹⁹⁹

Maker, the token of the dApp MakerDao, has a blockchain protocol that has automated crypto lending and is the operator of the Ethereum stable coin DAI.²⁰⁰ Uniswap is a popular DeFi protocol that facilitates the automated trading of crypto tokens.²⁰¹ In other words, individuals can use Uniswap instead of an exchange like Kraken, and the process is much quicker.²⁰² Compound is a lending and borrowing DeFi protocol that allows users to earn interest on the user’s crypto through deposits into different Compound liquidity pools.²⁰³ When an individual lends crypto to a liquidity pool, the individual receives Compound coins in return that represent the individual’s

191. *Decentralized Finance (DeFi)*, ETHEREUM, <https://ethereum.org/en/defi/> (last visited Mar. 16, 2022) [<https://perma.cc/2VHS-KQFG>].

192. Finematics, *What is DEFI? Decentralized Finance Explained (Ethereum, MakerDAO, Compound, Uniswap, Kyber)*, YOUTUBE (July 2, 2020), <https://www.youtube.com/watch?v=k9HYC0EJU6E> [<https://perma.cc/AX57-7XF2>]; Whiteboard Crypto, *supra* note 167.

193. *See* Finematics, *supra* note 192.

194. *See* *Decentralized Finance (DeFi)*, *supra* note 191.

195. *Id.*

196. *See* *Frequently Asked Questions*, UNISWAP, <https://uniswap.org/faq> (last visited Mar. 16, 2022) [<https://perma.cc/H2BE-PR7K>].

197. Alexandra Pankratyeva, *Best DeFi Coins 2021: Three ‘Blue Crypt’ Tokens to Watch and Trade*, CAPITAL.COM (Apr. 23, 2021, 11:48), <https://capital.com/best-defi-coins-to-watch-and-trade-in-2021> [<https://perma.cc/5RGN-NDTD>].

198. *See id.*; *see* *Frequently Asked Questions*, *supra* note 196.

199. *See* Pankratyeva, *supra* note 197.

200. *Id.*

201. *Id.*

202. *See id.*

203. *Id.*

assets in the liquidity pool.²⁰⁴ These loaned assets to the liquidity pool may be redeemed at any time.²⁰⁵ NFTs can also play a part in DeFi because they can serve as collateral in the lending protocol.²⁰⁶

Insurance is also available in a decentralized form on DeFi platforms.²⁰⁷ Individuals might buy insurance on a DeFi platform to insure smart contracts or deposits.²⁰⁸ Two examples of DeFi insurance platforms are Nexus Mutual and Opyn.²⁰⁹ In a white paper from Nexus Mutual, the goal of decentralized insurance is to bring back transparency and remove third-party agencies that have high insurance premiums and are not always acting in the best interest of their customers.²¹⁰ DeFi insurance markets are still in early stages because there are several risks and downsides, such as not being able to price risk or the lack of platform decentralization if the platform is controlled by a group of individuals.²¹¹ DeFi transactions are relevant to estate planners because a client may have assets on one of these platforms (as a lender, borrower, insurance owner, etc.), and it is important to determine what will happen to these assets after death.²¹² Additionally, as decentralized insurance continues to develop and overcome some of its weaknesses, individuals may want to create a life insurance plan on a DeFi platform, and estate planners will need to be prepared to advise on these matters.²¹³

III. HOW IS CRYPTO LEGALLY CLASSIFIED IN THE UNITED STATES?

The U.S. has not released a clear classification of crypto as an asset class; however, different regulatory organizations have different views of how it should be classified.²¹⁴ For example, the SEC views crypto as a security in certain instances, the Commodity Futures Trading Commission

204. Adam Bavosa, *Supplying Assets to the Compound Protocol*, COMPOUND (Feb. 12, 2020), <https://medium.com/compound-finance/supplying-assets-to-the-compound-protocol-ec2cf5df5aa> [<https://perma.cc/2FK7-J8EZ>].

205. *Id.*

206. *See* Finematics, *supra* note 176.

207. *See* Finematics, *supra* note 192.

208. *See id.*

209. *See id.*

210. *See* Hugh Karp & Reinis Melbardis, *Nexus Mutual White Paper*, NEXUS MUTUAL 1–2, https://nexusmutual.io/assets/docs/nmx_white_paper_v2_3.pdf (last visited Mar. 16, 2022) [<https://perma.cc/BF45-73VD>].

211. *See Around the Block #14: DeFi Insurance*, COINBASE (May 13, 2021), <https://blog.coinbase.com/around-the-block-14-defi-insurance-ebf8e278da13> [<https://perma.cc/VB2A-9A4Z>]; Finematics, *supra* note 192.

212. *See Around the Block #14: DeFi Insurance*, *supra* note 211.

213. *See id.*

214. Timothy Smith, *Cryptocurrency Regulations Around the World*, INVESTOPEDIA, <https://www.investopedia.com/cryptocurrency-regulations-around-the-world-5202122> (Sep. 21, 2021) [<https://perma.cc/KCQ8-EM3U>].

(CFTC) calls crypto a commodity, and the IRS classifies crypto as property for tax purposes.²¹⁵

A. Crypto Classified as Property

In 2014, the IRS released Notice 2014-21, which describes how general tax principles would apply to virtual currencies.²¹⁶ This was the first time the IRS addressed how crypto would be classified and how it would be reported.²¹⁷ Bitcoin and other altcoins had not been taken too seriously by the general public up to that point, but because it was experiencing growth, the IRS took a stance.²¹⁸ The IRS refers to crypto as “virtual currency,” but despite the word “currency,” the IRS gave notice that virtual currency is not “real” currency in that “it does not have legal tender status in any jurisdiction.”²¹⁹

The IRS further classified crypto as convertible virtual currency, which is a “[v]irtual currency that has an equivalent value in real currency, or that acts as a substitute for real currency.”²²⁰

B. Tax Treatment of Crypto as Property

Because crypto is treated as property and, in most cases, is held as an investment, crypto would be considered a capital asset according to Section 1221 of the Internal Revenue Code (IRC).²²¹ This means that a taxpayer will recognize a gain or loss for the sale or exchange of the taxpayer’s crypto.²²² Capital gains or losses are reported on IRS Form 8949 (reports sale of capital assets), which then roll up to Schedule D on a Form 1040 (Schedule D reports the sale or exchange of capital assets).²²³ If the taxpayer sells crypto, uses crypto to purchase goods or services, or exchanges one type of crypto for another, this will result in a capital gain or loss.²²⁴ Taxpayers need to keep

215. *Id.*

216. Stanley L. Blend, *Recent Developments in Federal Income Taxation*, U.T. L. CLE TAX CONFERENCE 1, 25 (2020).

217. *Id.*; I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

218. See Rachel Abrams, *I.R.S. Takes a Position on Bitcoin: It’s Property*, N.Y. TIMES (Mar. 25, 2014, 2:59 PM), <https://dealbook.nytimes.com/2014/03/25/i-r-s-says-bitcoin-should-be-considered-property-not-currency/> [<https://perma.cc/D6DW-RCUQ>].

219. I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

220. *Id.*

221. I.R.C. § 1221.

222. See *id.* § 1222.

223. Bass, *supra* note 6; *About Schedule D (Form 1040), Capital Gains and Losses*, IRS, <https://www.irs.gov/forms-pubs/about-schedule-d-form-1040> (July 15, 2021) [<https://perma.cc/MC4F-R2PL>]; *id.* § 61(a)(3); Treas. Reg. § 1.61-6; *Instructions for Form 8949 (2020)*, IRS, <https://www.irs.gov/instructions/i8949> (Jan. 13, 2022) [<https://perma.cc/9AX9-QDJJ>].

224. See Bass, *supra* note 6.

track of the FMV of their crypto when participating in a taxable event in order to maintain accurate records.²²⁵

Income from activities such as “mining, staking, earning interest, or getting paid for services in crypto” are not considered capital gains, initially.²²⁶ Every time a staking reward is received, ordinary income is recognized.²²⁷ In order to recognize the income on staking rewards, the taxpayer will need to keep track of the FMV at the time the staking reward is received.²²⁸ However, although staking rewards are initially reported as ordinary income that a taxpayer must pay taxes on in the year received, when the taxpayer sells crypto acquired from the staking reward, the taxpayer must realize a capital gain or loss.²²⁹ For example, if a taxpayer were to receive one ADA (Cardano’s coin) as a staking reward, and at the time, one ADA equaled \$2.17, the taxpayer would recognize ordinary income of \$2.17 and will pay taxes on it as if the taxpayer had received \$2.17.²³⁰ The taxpayer may hold the ADA for a while, but if later decides to sell it, the taxpayer will be taxed on the sale as a capital asset.²³¹

The difficulty that can arise from keeping track of staking rewards for ordinary income is that these rewards can happen weekly, and it is up to the taxpayer to keep a record of the price of the crypto when the reward was received.²³² Additionally, paying taxes on a staking reward when received could have consequences later if the taxpayer sells the crypto reward at a loss, which will be governed by the capital loss rules.²³³

C. State Specific Treatment of Crypto

There is currently no uniformity on how states handle businesses that deal in virtual currencies.²³⁴ Some states have not provided any guidance or regulations for crypto, some have guided handling and transmitting, some have provided “friendly” regulations, and some have implemented heavy regulations.²³⁵ Some regulations can require a license to transmit crypto,

225. See *Do You Pay Taxes on Crypto Staking Rewards?*, COINTRACKING (July 15, 2021), <https://blog.cointracking.info/do-you-pay-taxes-on-crypto-staking-rewards/> [<https://perma.cc/S8LC-NGEN>].

226. Bass, *supra* note 6.

227. *Do You Pay Taxes on Crypto Staking Rewards?*, *supra* note 225; see I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

228. *Do You Pay Taxes on Crypto Staking Rewards?*, *supra* note 225.

229. *Id.*

230. Author’s original example.

231. Author’s original example.

232. See *Do You Pay Taxes on Crypto Staking Rewards?*, *supra* note 225.

233. I.R.C. §§ 1211–12.

234. Matthew E. Kohen, *State Regulations on Virtual Currency and Blockchain Technology*, CARLTON FIELDS, <https://www.carltonfields.com/insights/publications/2018/state-regulations-on-virtual-currency-and-blockchain-technologies> (Aug. 29, 2019) [<https://perma.cc/88W2-W8B7>].

235. *Id.*

while other states do not impose a license.²³⁶ Most states at least address the transmission of crypto.²³⁷

1. States Friendly to Crypto

Texas was one of the first states to take a position on crypto through Memorandum 1037 from the Texas Department of Banking, clarifying that no money transmitter's license is required to sell Bitcoin.²³⁸ Recently, the Texas state legislature passed Texas House Bills 1576 and 4474, and Governor Abbott signed these bills into law in May 2021, establishing a blockchain working group in the state and amended Texas's Uniform Commercial Code to recognize crypto under commercial law.²³⁹

Another state with regulations friendly to crypto is Wyoming.²⁴⁰ Wyoming enacted legislation to make it easier to operate a crypto business with the Utility Token Bill, which exempts "Utility Tokens" from the state's securities laws provided that the tokens meet certain requirements.²⁴¹ Additionally, Wyoming has passed legislation that allows corporations to store records on the blockchain and has exempted virtual currencies from the state property tax.²⁴²

2. States Difficult for Crypto

Both Washington and New York have heavily regulated crypto by requiring licenses and other regulations that make it difficult for people in the business of trading crypto.²⁴³ This largely affects people involved in operations related to transactions involving crypto but does not necessarily negatively affect crypto owners who are simply buying and selling crypto.²⁴⁴

Washington classified virtual currency as within the definition of money transmission under Washington's Uniform Money Services Act and required virtual currency exchange operators to comply with the licensing requirements like a traditional money transmitter would.²⁴⁵ These regulations have caused crypto exchanges to leave states like Washington due to the overbearing costs of the license requirements.²⁴⁶

236. *Id.*

237. *Id.*

238. TEX. EST. CODE ANN. §§ 2001.051, 2001.053; see Kohen, *supra* note 234.

239. Turner Wright, *Cryptocurrencies Now Recognized Under Commercial Law in Texas*, COINTELEGRAPH (Sept. 2, 2021), <https://cointelegraph.com/news/cryptocurrencies-now-legally-recognized-under-commercial-law-in-texas> [https://perma.cc/WM8U-4QN9].

240. Kohen, *supra* note 234.

241. *Id.*

242. *Id.*

243. *Id.*

244. See *id.*

245. *Id.*

246. *Id.*

In New York, under 23 CRR-NY 200.2(q), this rule requires “[a] person (whether an individual or a company) that engages in Virtual Currency Business Activity [to have or obtain] a BitLicense.”²⁴⁷ Virtual currency business activity includes:

- (1) receiving virtual currency for transmission or transmitting virtual currency, except where the transaction is undertaken for non-financial purposes and does not involve the transfer of more than a nominal amount of virtual currency;
- (2) storing, holding, or maintaining custody or control of virtual currency on behalf of others;
- (3) buying and selling virtual currency as a customer business;
- (4) performing exchange services as a customer business; or
- (5) controlling, administering, or issuing a virtual currency.²⁴⁸

Taxpayers simply buying and selling crypto for investment purposes or businesses that accept crypto as payment do not have to obtain a BitLicense.²⁴⁹ For individual estate planning purposes, these imposed regulations do not greatly affect the taxpayer directly.²⁵⁰ However, they affect crypto businesses and will likely cause these businesses to leave and go to other states with fewer regulations.²⁵¹

3. *Uniform Law Commission—Regulation of Virtual-Currency Businesses Act*

The Uniform Law Commission has introduced the Regulation of Virtual-Currency Businesses Act to assist states in creating legislation on crypto.²⁵² So far, only a few states have adopted some of the provisions in the Act, but no states have fully implemented the Act in its entirety.²⁵³

D. *Businesses Accepting Crypto*

Several prominent businesses accept crypto (typically Bitcoin) as payment for goods or services.²⁵⁴ Most recently, Elon Musk announced that Tesla is buying \$1.5 billion worth of Bitcoin.²⁵⁵ Large businesses that accept

247. *BitLicense FAQs*, NEWYORKSTATE, https://www.dfs.ny.gov/apps_and_licensing/virtual_currency_businesses/bitlicense_faqs (last visited Mar. 16, 2021) [<https://perma.cc/CAA4-3RMM>].

248. 23 CRR-NY 200.2(q).

249. *BitLicense FAQs*, *supra* note 247.

250. *See id.*

251. *See* Kohen, *supra* note 234.

252. *Id.*

253. *Id.*

254. *See* Lisa, *supra* note 138.

255. *Id.*

crypto include Microsoft, Etsy, Whole Foods, Starbucks, and more.²⁵⁶ Moreover, many large and small businesses across the U.S. also accept crypto as payment.²⁵⁷

E. How Do Other Countries Classify Crypto?

Countries across the world have all reacted differently to crypto.²⁵⁸ Some countries have embraced the new technology with open arms, while others see it as a threat and have gone as far as making it illegal.²⁵⁹ Several countries have little guidance on handling crypto or their regulations on it are vague.²⁶⁰ With crypto being so new and still in the development process, there has been little time to put regulations that can effectively meet crypto needs.²⁶¹

1. Crypto as Legal Tender

As of June 9, 2021, El Salvador is the first and only country to approve crypto (specifically Bitcoin) as legal tender.²⁶² In sixty-two out of eighty-four votes, Salvadoran Congress voted for Bitcoin to be legal tender.²⁶³ El Salvador's President, Nayib Bukele, stated this would make it easier for Salvadorans abroad to send money back home.²⁶⁴ It is expected that other countries will soon follow El Salvador in this move.²⁶⁵

2. Bans on Crypto

Some countries, including China, Egypt, Iran, Iraq, Russia, Turkey, Vietnam, have restricted or illegalized crypto.²⁶⁶ Many of these countries'

256. *Id.*

257. *Id.*

258. *Cryptocurrency Regulations Around the World*, COMPLY ADVANTAGE (Feb. 6, 2020), <https://complyadvantage.com/insights/cryptocurrency-regulations-around-world/> [<https://perma.cc/UBX3-2JN9>].

259. *Id.*

260. *Id.*

261. See Smith, *supra* note 214.

262. *Has Any Country Other Than El Salvador Classified Bitcoin as Legal Tender? Find Out*, NDTVPROFIT, <https://www.ndtv.com/business/how-many-countries-have-provided-bitcoin-the-status-of-legal-tender-2517591> (Aug. 28, 2021, 11:49 AM) [<https://perma.cc/4TCP-A9UH>].

263. *Id.*

264. *Id.*

265. Jay L. Zagorsky, *This Country Has Just Made Bitcoin Legal Tender. Here's What It Means*, WORLD ECON. F. (Sep. 7, 2021), <https://www.weforum.org/agenda/2021/09/bitcoin-legal-tender-el-salvador-economics-finance/> [<https://perma.cc/KA39-VFKU>].

266. Chloe Orji, *Bitcoin Ban: These Are the Countries Where Crypto is Restricted or Illegal*, EURONEWS.NEXT, <https://www.euronews.com/next/2021/09/24/bitcoin-ban-these-are-the-countries-where-crypto-is-restricted-or-illegal2> (Nov. 1, 2022) [<https://perma.cc/L523-JGSV>].

central banks have imposed these bans due to the inability to regulate crypto or because the central bank is seeking to promote its own e-currency.²⁶⁷

3. Other Classifications

Many countries, including the U.S., fall into a middle zone of treating and regulating crypto.²⁶⁸ Like the U.S., other countries that have classified crypto as property are the United Kingdom, Australia, and Singapore.²⁶⁹ Canada treats crypto similar to other commodities, Japan treats crypto as legal property that is taxed as miscellaneous income, and in South Korea, crypto is closely monitored, but because it has not been classified as currency or a financial asset, crypto transactions are currently tax free.²⁷⁰ Several countries, such as Afghanistan, Cuba, and India, have not released any guidance for or against crypto but are in the process of creating a framework.²⁷¹ It is clear that every country has had difficulty classifying or determining how to treat and regulate crypto, which points to a need for an entirely new classification and regulatory scheme specifically for crypto.²⁷²

IV. HYPOTHETICAL: THE CRYPTO TRANSACTIONS OF SCARLET

There are many different types of transactions and platforms that involve crypto.²⁷³ Each of these various transactions have various tax consequences, and depending on the platform or wallet that the crypto is stored on, it could be difficult to access when a person passes on.²⁷⁴ Estate planners need to be aware of the different types of crypto actions a person takes during that person's lifetime to create the best plan for individuals who would like to pass on crypto assets after death.²⁷⁵ This section will go through a hypothetical situation of an individual who makes various crypto transactions.²⁷⁶ The following sections will analyze how estate planners should handle these types of transactions in preparing crypto assets to be

267. *See id.*

268. *See* Smith, *supra* note 214.

269. *Id.*

270. *Cryptocurrency Regulations Around the World*, *supra* note 258.

271. *Countries Where Bitcoin is Banned or Legal in 2021*, CRYPTONEWS, <https://cryptonews.com/guides/countries-in-which-bitcoin-is-banned-or-legal.htm> (last visited Mar. 16, 2022) [<https://perma.cc/TFJ5-SP73>].

272. *See supra* Section III.E.

273. *See supra* Section II.D; *infra* Part III.

274. *See infra* Part III, Section V.C.

275. *See* Parker F. Taylor, Vanessa A. Woods, & Jack Tanenbaum, *Estate Planning with Cryptocurrency*, ABA, https://www.americanbar.org/groups/real_property_trust_estate/publications/probate-property-magazine/2019/july-august/estate-planning-cryptocurrency/ (last visited Mar. 16, 2022) [<https://perma.cc/88RH-M4WS>].

276. *See infra* Part V.

passed on and the possible consequences of inadequate planning.²⁷⁷ Note that the relative increases/decreases in Scarlet's crypto assets are not exactly accurate to the actual crypto price fluctuations.²⁷⁸

A. The Rookie Crypto Investor

Scarlet is a taxpayer who has several different investments and has been hearing more about crypto as an asset.²⁷⁹ Scarlet has not had time to research crypto, but she does not want to miss out on a potential investment.²⁸⁰ Not knowing much about crypto exchanges, Scarlet chooses to use PayPal to purchase crypto, a platform she is already familiar with and has an account on.²⁸¹ Because Scarlet is new to crypto investments, she only wants to invest \$2,000 into crypto assets.²⁸² The process of buying crypto on PayPal is relatively straightforward, and in December 2020, Scarlet invests \$1,000 in Bitcoin, \$500 in Ethereum, and \$500 in Litecoin.²⁸³

If Scarlet sticks with her ownership of crypto only on PayPal, she will easily keep track of her transactions.²⁸⁴ However, now that Scarlet has started investing in crypto, she wants to learn more.²⁸⁵

Scarlet meets up with her friend Jeannie, who has been investing in crypto for years and has learned about the different investment opportunities and uses of crypto.²⁸⁶ Jeannie tells Scarlet about a crypto exchange, Kraken, where she was able to stake her Ethereum coins and is now receiving staking rewards that are passively increasing her crypto assets.²⁸⁷ Scarlet, intrigued by all the possibilities crypto has to offer, begins researching crypto and looking into the staking process.²⁸⁸ Scarlet decides she would like to stake some of her Ethereum on Kraken.²⁸⁹ However, Scarlet realizes that she will not be able to transfer her crypto from PayPal to Kraken and retain her original basis; the only way to get her crypto off of PayPal is to sell it.²⁹⁰ At this point, Scarlet has two choices: she can either sell the current crypto she has and then repurchase it on Kraken, or she can leave what she has in PayPal

277. See *infra* Parts IV–V.

278. See *infra* Section IV.A–C.

279. Author's hypothetical.

280. Author's hypothetical.

281. Author's hypothetical.

282. Author's hypothetical.

283. Author's hypothetical.

284. Author's hypothetical.

285. Author's hypothetical.

286. Author's hypothetical.

287. Author's hypothetical.

288. Author's hypothetical.

289. Author's hypothetical.

290. Author's hypothetical.

and invest more money in Ethereum on Kraken.²⁹¹ Scarlet's current crypto ledger:

<u>Scarlet's Crypto</u>	
PayPal	Amount Invested:
Bitcoin	\$1,000
Ethereum	\$500
Litecoin	\$500

Scarlet's crypto balance as of December 2020

B. From Novice to Expert

Scarlet decides to wait a few months before making any new investment moves in crypto and, in the meantime, does some further research.²⁹² She has learned more about several other altcoins and has specifically become interested in Cardano and XRP.²⁹³ She decides she would like to start investing more money but wishes she could use some of her gain with Bitcoin and Ethereum to buy XRP.²⁹⁴ If Scarlet had been on an exchange, like Kraken, she could have easily exchanged some of her Bitcoin and Ethereum for XRP, but because her crypto is still stored on PayPal, she cannot make this type of exchange.²⁹⁵ Scarlet sells her Bitcoin and Ethereum on PayPal at a gain and then uses the money from the sale to repurchase them on Kraken.²⁹⁶ Scarlet also decides to invest an extra \$1,000 in Cardano and \$500 in XRP.²⁹⁷ Scarlet decides to stake 20% of her Ethereum and 100% of her Cardano.²⁹⁸ Scarlet now has the following crypto ledger:

291. Author's hypothetical.

292. Author's hypothetical.

293. Author's hypothetical.

294. Author's hypothetical.

295. Author's hypothetical.

296. Author's hypothetical.

297. Author's hypothetical.

298. Author's hypothetical.

<u>Scarlet's Crypto</u>	
PayPal	Amount Invested
Litecoin	\$500
Kraken	Amount Invested
Bitcoin	\$1,200
Ethereum	\$800 (20% staked)
Cardano	\$1,000 (100% staked)
XRP	\$500

Scarlet's crypto investment as of May 2021

C. The Seasoned Investor

Scarlet had some time off during the summer and could do a lot more research on crypto.²⁹⁹ Additionally, she has learned about NFTs and some DeFi services through dApps.³⁰⁰ Scarlet has also decided to store some of her crypto in wallets.³⁰¹ In order for Scarlet to purchase NFTs and participate in DeFi services, she must transfer some of her crypto to a hot wallet, so Scarlet transfers \$640 worth of Ethereum to a hot wallet called Metamask.³⁰² Scarlet has heard of a crypto game called cryptokitties where you can buy kitties in the form of NFTs.³⁰³ Scarlet decides she would like to purchase a cryptokitty for what would be worth \$50 in Ethereum.³⁰⁴ In order to purchase the cryptokitty, Scarlet has to pay a gas fee worth \$10 of Ethereum.³⁰⁵ Scarlet's cryptokitty is transferred to her MetaMask wallet, where she plans to keep it.³⁰⁶

Scarlet decides she would like to earn interest on her crypto, so she gets on the DeFi dApp Compound to lend some of her Ethereum in order to gain interest on it.³⁰⁷ Scarlet decides to lend \$300 worth of Ethereum, and she does this by transferring \$300 worth of Ethereum from her MetaMask wallet.³⁰⁸ As a lender, Scarlet will earn interest on her crypto and will also earn COMP, the Compound coin.³⁰⁹

299. Author's hypothetical.

300. Author's hypothetical.

301. Author's hypothetical.

302. Author's hypothetical.

303. Author's hypothetical.

304. Author's hypothetical.

305. Author's hypothetical.

306. Author's hypothetical.

307. Author's hypothetical.

308. Author's hypothetical.

309. Author's hypothetical.

Scarlet wants to experiment with making an automatic exchange on a dApp called Uniswap, and she plans to exchange some of her Ethereum for a coin called Sands.³¹⁰ Scarlet uses Metamask to transfer \$100 worth of Ethereum in exchange for Sands.³¹¹ The Sands Scarlet received is transferred to her MetaMask wallet.³¹² Scarlet had to pay a gas fee worth \$15 of Ethereum.³¹³

Finally, Scarlet would like to transfer the crypto she is not actively exchanging or staking on a cold wallet for safekeeping.³¹⁴ She buys a Ledger hardware wallet, transfers her Bitcoin and XRP off Kraken, and then transfers her Sands from MetaMask.³¹⁵

<u>Scarlet's Crypto</u>	
	<u>Amount Invested</u>
PayPal	
Litecoin	\$500
Kraken (Exchange)	
Ethereum	\$160 (staked)
Cardano	\$1,000 (staked)
MetaMask (Hot Wallet)	
Ethereum	\$165
Cryptokitty NFT	\$50
Compound (DeFi)	
Ethereum	\$300
COMP	TBD
Ledger (Cold Wallet)	
Bitcoin	\$1,200
XRP	\$500
Sands	\$100

Scarlet's ending crypto balance as of August 2021

310. Author's hypothetical.

311. Author's hypothetical.

312. Author's hypothetical.

313. Author's hypothetical.

314. Author's hypothetical.

315. Author's hypothetical.

V. ESTATE PLANNING WITH CRYPTO

Estate planners need to start incorporating specific plans for managing crypto assets.³¹⁶ As evidenced in the Scarlet hypothetical, there are many qualities about crypto that are different from other assets, and therefore require special treatment when it comes to estate planning.³¹⁷ Additionally, there are several different places where Scarlet's assets are located.³¹⁸ There are two main objectives estate planners need to consider when estate planning with crypto assets: access and tax planning.³¹⁹ This section will cover how estate planners can manage crypto assets by making an estate plan for Scarlet.³²⁰

A. Essentials for the Estate Planner

When planning the estate, the first step is to gather the facts, or in other words, gather all the relevant information about an individual's assets.³²¹ Once the facts are gathered, the next step is to plan how the individual would like to distribute the assets with the best possible tax outcome and prevent the loss of crypto assets due to procedural issues.³²²

There are several important facts that an estate planner must have in order to properly manage crypto assets.³²³ Here is a list of questions that estate planners should ask when planning for crypto:

- Do you own any cryptocurrency or blockchain related assets? If so, please list the various types of cryptocurrencies you own (Bitcoin, NFTs, etc.).³²⁴
- Please list every platform, exchange, or wallets that your cryptocurrency may be stored on.³²⁵
- Are any of your cryptocurrencies currently staked? Please list the different cryptocurrencies you have staked and the percentage of each cryptocurrency that is staked.³²⁶

316. See *infra* Part V.

317. Gerry W. Beyer & Kerri G. Nipp, *Cyber Estate Planning and Administration*, SSRN, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2166422 (Dec. 29, 2021) [<https://perma.cc/2ECN-37AA>].

318. See *supra* Part IV.

319. See *supra* Part IV.

320. See *infra* Sections V.A–C.

321. See Beyer & Nipp, *supra* note 317.

322. See Earthman, *supra* note 12, at 10–20.

323. See Beyer & Nipp, *supra* note 317.

324. See *id.*

325. See *id.*

326. See *id.*

- Are any of your cryptocurrencies involved on a DeFi platform or have you lent U.S. Dollars on a DeFi platform?³²⁷
- How are you currently preserving your private keys and passwords?³²⁸

Going back to the Scarlet hypothetical, Scarlet has decided to create an estate plan for passing on her crypto assets, and she hires an attorney who is familiar with managing crypto.³²⁹ Scarlet's attorney gives her a form with questions about her crypto assets, and this is what her completed form would look like:

Do you own any cryptocurrency or blockchain related assets? If so, please list the various types of cryptocurrencies you own (Bitcoin, NFTs, etc.):

- Bitcoin, Ethereum, Sands, Litecoin, Cardano, XRP, COMP, one NFTs (Cryptokitty)

Please list every platform, exchange, or wallets where your cryptocurrency may be stored on and where each crypto asset is stored:

- PayPal: Litecoin
- Kraken: Staked Ethereum, and Staked Cardano
- Cold wallet: Bitcoin, Sands, XRP
- Metamask (Hot wallet): Non-staked Ethereum, 1 NFT
- Ledger (Cold wallet): COMP, Ethereum

Are any of your cryptocurrencies currently staked? Please list the different cryptocurrencies you have staked and the percentage of each cryptocurrency that is staked:

- Ethereum on Kraken is staked, Cardano 100% staked

Are any of your cryptocurrencies involved on a DeFi platform or have you lent USD on a DeFi platform?

- Compound, lending Ethereum and receiving interest plus rewards of COMP

How are you currently preserving your private keys and passwords?

- Online secure password website

327. *See id.*

328. *See id.*

329. Author's hypothetical.

Given the various places where Scarlet's crypto is stored, the estate planner needs to make sure that the executor or fiduciary of Scarlet's estate has been granted permission to access these various platforms by Scarlet.³³⁰ The executor or fiduciary must have access to Scarlet's various passwords and private keys to either sell the crypto or to pass down the assets to her beneficiaries to have access.³³¹

B. Estate Plan

Several issues can arise when creating a plan for passing an individual's estate to the beneficiaries, and individuals with crypto add to the challenges estate planners already face in preparing an individual's estate plan.³³²

In Scarlet's case, she has acquired several crypto assets, and now she would like to add her crypto assets to her will.³³³ Scarlet is single and has only one son named Ronin that she would like to bequeath the majority of her estate to.³³⁴ However, because her friend Jeannie was so helpful in getting her started with crypto, she would like to gift some of her crypto assets upon her death to Jeannie.³³⁵

With crypto being so volatile, she will have to be careful about how her crypto assets will pass to her beneficiaries.³³⁶ Assets are valued on the date of death so that a person's beneficiary may have a step-up basis in the assets they acquire from an estate.³³⁷ This could be bad for beneficiaries inheriting a volatile asset because if it has a high value on the day of death but then drops in price, it may be difficult for the estate to pay any estate tax.³³⁸

1. Planning with a Will

If Scarlet simply wants to create a will to bequeath her assets, Scarlet can have her entire estate pass to Ronin, except for bequests to Jeannie of the specific assets she would like to pass on to her.³³⁹ Scarlet stores all of her crypto information, such as passwords to any accounts, private keys, seed phrases, and authenticator apps, on a secure online password website.³⁴⁰

Scarlet's attorney will need to make sure her will provides adequate instruction on obtaining these passwords to Scarlet's accounts.³⁴¹ If Scarlet

330. See Beyer & Nipp, *supra* note 317.

331. Author's hypothetical.

332. See Ferguson, *supra* note 110.

333. Author's hypothetical.

334. Author's hypothetical.

335. Author's hypothetical.

336. Author's hypothetical.

337. I.R.C. § 1014.

338. See Ferguson, *supra* note 110.

339. TEX. EST. CODE ANN. § 22.008.

340. Author's hypothetical.

341. See Taylor, Woods, & Tanenbaum, *supra* note 275.

does not want to directly include her passwords within the will, she can provide instructions of how the executor or fiduciary can access her passwords upon death, such as being given access to a bank deposit box that contains a letter with all the relevant password information.³⁴² In addition to instructions, Scarlet must also provide express permission for the executor or fiduciary of her estate to have access to all her accounts.³⁴³ This permission is essential due to the Revised Uniform Fiduciary Access to Digital Assets Act (RUFADAA), which requires individuals to provide express consent to a fiduciary or executor to access digital accounts or assets.³⁴⁴ Estate planners must advise their clients to include this consent for access to their clients' crypto accounts.³⁴⁵

Next, Scarlet and her attorney will need to determine how her assets will be distributed.³⁴⁶ The most simple and straightforward way Scarlet can bequeath her crypto assets is by giving Ronin direct access to her accounts.³⁴⁷ This would not require the executor to transfer funds from a wallet or make any transactions on an exchange or DeFi platform.³⁴⁸ However, because Scarlet is giving some of her crypto to Jeannie, this will require a transfer of assets to Jeannie's wallet.³⁴⁹

If Scarlet wants to transfer some of her Bitcoin to Jeannie, the executor will need to access Scarlet's cold wallet and use the private key to send the Bitcoin to Jeannie.³⁵⁰ However, things could get complicated if Scarlet wants to transfer all of her Ethereum to Jeannie.³⁵¹ This would require the executor getting on Kraken and un-staking the Ethereum (which is not always something that can be done immediately) before making the transfer.³⁵² Then, the executor would have to get on Compound and redeem the money Scarlet lent to a liquidity pool.³⁵³ Finally, the executor would send over the remaining Ethereum on Scarlet's MetaMask wallet.³⁵⁴ This process could be difficult for an executor who has no knowledge of crypto assets or how they work, and in the process, there may have been new transactions that have incurred a tax consequence for which the estate is liable.³⁵⁵ This is when it is ideal to

342. *See id.*

343. *See infra* note 360.

344. REVISED UNIF. FIDUCIARY ACCESS TO DIGIT. ASSETS ACT § 15 (UNIF. LAW COMM'N 2015); *see* Beyer & Nipp, *supra* note 317.

345. REVISED UNIF. FIDUCIARY ACCESS TO DIGIT. ASSETS ACT § 15 (UNIF. LAW COMM'N 2015); *see* Beyer & Nipp, *supra* note 317.

346. Author's hypothetical.

347. *See* Taylor, Woods, & Tanenbaum, *supra* note 275.

348. *See id.*

349. Author's hypothetical.

350. *See* Taylor, Woods, & Tanenbaum, *supra* note 275.

351. *See id.*

352. *See id.*

353. *See id.*

354. *See id.*

355. *See infra* Section V.C.

have an estate planner who is aware of these types of consequences and who could advise Scarlet to keep any amount she might want passed on to Jeannie in a wallet that is easy to transfer.³⁵⁶

2. Planning with a Trust

If Scarlet wanted to put some of her assets in a trust, this arrangement could potentially help with tax planning, but there are some steps she must follow to ensure that her crypto assets are not sold while in the trust.³⁵⁷ Under the Uniform Prudent Investor Act (UPIA), which many states have adopted in some form, a trustee has a duty to manage the assets within a trust account in a reasonable manner.³⁵⁸ Crypto assets are volatile and thus risky assets to keep within a trust, and therefore would likely require a trustee to sell any crypto assets within the trust.³⁵⁹ UPIA does allow itself to be overridden through specific instructions from the settlor that allow the trust to hold crypto assets despite their volatility.³⁶⁰ Estate planners should also be aware of the upcoming tax laws that could affect the use of trusts; in particular, the Build Better Back Act has recently been passed by the House, and some of the proposals in the act have direct effects on trusts.³⁶¹

C. Tax Planning

As seen in the hypothetical, it is easy for a taxpayer to accumulate several taxable events within a short period, possibly without understanding all the tax consequences.³⁶² Because of these regular tax events, a taxpayer needs to maintain accurate records of the FMV of crypto any time a transaction occurs or a reward is received.³⁶³ It can be strenuous and complex for the taxpayer and, by extension, the tax attorney or CPA managing the taxpayer's estate to keep track of the FMV for each of these taxable events.³⁶⁴ Tracking transactions is relevant because, upon the taxpayer's death, the

356. See *supra* Section VI.B.2.

357. See UNIF. PRUDENT INV. ACT § 1(b) (AM. L. INST. 1994).

358. UNIF. PRUDENT INV. ACT § 2 (AM. L. INST. 1994); see Earthman, *supra* note 12, at 15–16; see Beyer & Nipp, *supra* note 317.

359. See Beyer & Nipp, *supra* note 317; Jeff Vandrew Jr., *5 Things Bitcoin Owners Must Do When Estate Planning*, COINDESK, <https://www.coindesk.com/markets/2015/07/28/5-things-bitcoin-owners-must-do-when-estate-planning/> (Sept. 11, 2021, 6:47 AM) [<https://perma.cc/CX36-DN84>]

360. UNIF. PRUDENT INV. ACT § 1(b) (AM. L. INST. 1994).

361. Katherine L. Jeffrey, *Proposed Federal Tax Law Affecting Estate Planning*, DAVIS WRIGHT TREMAINE, LLP (Oct. 10, 2021), <https://www.dwt.com/insights/2021/10/federal-estate-tax-changes-2022> [<https://perma.cc/PX42-8SG4>]; Edward Karl, *Build Back Better Tax Changes Are Coming. . . But When?*, AICPA (Dec. 2021), <https://www.aicpa.org/news/article/build-back-better-tax-changes-are-coming-but-when> [<https://perma.cc/KTW8-38HK>].

362. See *Why Crypto Asset Management Is the Next Big Thing*, *supra* note 143.

363. See *id.*

364. See *id.*

taxes for gains and losses of all the crypto transactions will be reported on the taxpayer's income tax return for the year of the taxpayer's death, which is then paid out of the estate.³⁶⁵ Additionally, as seen in the situation where Scarlet wants to transfer some of her crypto assets to a friend, several taxable events can occur just in distributing the estate.³⁶⁶ A helpful tool that estate planners can recommend to clients to keep accurate records of crypto transactions is a website called CoinTracker.³⁶⁷

An analysis of Scarlet's transactions and potential asset distribution will show just how easily Scarlet's tax consequences can accumulate when dealing with crypto.³⁶⁸ Scarlet sold her Ethereum and Bitcoin that were on PayPal, and because she held them less than a year, she will realize short-term capital gains (STCG) for 2021.³⁶⁹ Scarlet now has to pay taxes on STCG.³⁷⁰ Additionally, Scarlet has lost her lower basis with her original purchase, and when she repurchased the crypto on Kraken, she purchased it at a higher price with money that had been taxed.³⁷¹ Had Scarlet originally purchased her crypto on Kraken, she could have immediately staked her Ethereum without being taxed.³⁷²

Transfers between wallets that do not involve an exchange, like when Scarlet transferred her crypto on Kraken to her personal wallets, do not involve a taxable event because no sale or exchange has occurred.³⁷³ However, when Scarlet lent her Ethereum on Compound, she received COMP in exchange for the amount she lent, and she will earn interest and more COMP rewards over time.³⁷⁴ Scarlet will have to pay taxes on the interest and additional COMP rewards, but it is unclear when Scarlet should pay taxes on the COMP that represents her lent Ethereum in the year she receives the COMP.³⁷⁵ While this technically is a transaction, because the COMP represents her portion of Ethereum in the liquidity pool, she may not need to realize a gain until she redeems her COMP for her Ethereum, at which point she will have realized a gain or loss.³⁷⁶ Estate planners need to be aware of how taxpayers choose to report crypto income regarding transactions like

365. *Topic No. 365 Decedents*, IRS, <https://www.irs.gov/taxtopics/tc356> (Mar. 14, 2022) [<https://perma.cc/ND6X-3TWH>].

366. *See supra* notes 350–56.

367. *See CoinTracker*, CB, <https://www.crunchbase.com/organization/cointracker> (last visited Mar. 16, 2022) [<https://perma.cc/6QJP-FBBT>].

368. *See infra* notes 369–87.

369. I.R.C. § 1222.

370. Author's hypothetical.

371. Author's hypothetical.

372. Author's hypothetical.

373. *See* I.R.C. § 1222.

374. *See* Jason B. Freeman, *The Tax Implications of DeFi: A General Overview*, FREEMAN L., <https://freemanlaw.com/defi/> (last visited Mar. 16, 2022) [<https://perma.cc/9TMZ-UHPR>].

375. *Id.*

376. David Kemmerer, *DeFi Crypto Tax Guide (2021)*, CRYPTOTRADER.TAX, <https://cryptotrader.tax/blog/defi-crypto-tax-guide> (Feb 11, 2022) [<https://perma.cc/LF6R-4T9A>].

this.³⁷⁷ This type of transaction is not specifically addressed in Notice 2014-21, and while the safest option would be to report the COMP as income upon receiving it, some taxpayers may choose the riskier option of waiting to report the income upon redemption of the COMP for Ethereum.³⁷⁸ If Scarlet were to choose the latter tax filing option, this would make a difference when reporting the estate income tax.³⁷⁹

Regarding Scarlet's purchase of the cryptokitty and the exchange of Ethereum for Sands on Uniswap, both required a gas fee of Ethereum to make these transactions happen.³⁸⁰ This gas fee would technically be an exchange: payment of Ethereum in exchange for a smart contract function.³⁸¹ It does not seem fair that this portion of the exchange should be taxed by recognizing a gain or loss on the Ethereum used to pay the gas fee; however, the only guidance we have from the IRS is that anytime there is a sale or exchange, there is a taxable event.³⁸² It is unclear whether the gas fee should be part of the taxable transaction because, in the case of the cryptokitty, the gas fee could be assumed to be a part of the price of the cryptokitty, such that it is the number used to calculate the gain or loss on the exchange.³⁸³ However, in the case of an Ethereum exchange for Sands on Uniswap, this is a like-kind exchange, and the gas fee is not a part of the transaction price.³⁸⁴

The staking rewards that Scarlet receives from her staked Ethereum and Cardano are taxed as ordinary income, similar to the interest Scarlet receives on the money she lent on Compound.³⁸⁵

Any of these transactions that create income (according to the IRS) after death is income generated to the estate and will require the executor or fiduciary to file a Form 1041.³⁸⁶ If Scarlet plans to give her Ethereum to Jeannie, transferring the Ethereum from being staked and from the liquidity pool will result in taxable events, and therefore the executor will need to know the FMV of the assets in order to properly file the gains (or losses) on the Form 1041.³⁸⁷

377. *See id.*

378. *See id.*

379. Author's hypothetical.

380. *See* Zac McClure, *Are Ethereum (ETH) Gas Fees Tax Deductible?*, TOKEN TAX, <https://tokentax.co/blog/are-ethereum-gas-fees-tax-deductible/> (Feb. 2, 2022) [<https://perma.cc/6X6K-3V25>].

381. *See id.*

382. *See* I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

383. *See* McClure, *supra* note 380.

384. *See id.*

385. *TokenTax's Guide to Cryptocurrency Taxes*, TOKEN TAX, <https://tokentax.co/cryptocurrency-tax-guide/> (last visited Mar. 16, 2022) [<https://perma.cc/68BW-DWGB>].

386. *2021 Instructions for Form 1041 and Schedules A, B, G, J, and K-1*, DEP'T TREASURY INTERNAL REVENUE SERV. (Jan. 12, 2022), <https://www.irs.gov/pub/irs-pdf/i1041.pdf> [<https://perma.cc/9CNL-4LCX>].

387. *See id.*

VI. WHAT IS THE FUTURE FOR CRYPTO?

It is evident through the Scarlet hypothetical that treating crypto as property for tax purposes poses challenges for both transactions and estate planning.³⁸⁸ Additionally, keeping up with securities and commodity rules that may soon apply in certain situations could also be difficult.³⁸⁹ There are a few different paths the government could take for future treatment of crypto, such as promulgating more uniform and informative regulations that would make transacting in crypto more practical.³⁹⁰ However, governmental objections must be considered when making predictions or recommendations for how crypto should be regulated in the future.³⁹¹

A. A Simple Solution, or Is It?

A beginner looking into crypto and learning about it for the first time may think that crypto should just be used as a currency and that the government should make crypto legal tender.³⁹² However, there is currently a challenge with crypto being used as a currency to make purchases and sales, and there are far more uses of crypto than just as a currency.³⁹³ Additionally, even if crypto did not have price volatility, governmental objectives could be disrupted if crypto were to be used as legal tender.³⁹⁴ Other concerns, such as tax fraud or illegal activity, might arise if crypto were to become legal tender.³⁹⁵

The U.S. government has spent the past century developing the U.S. central banking system through the federal reserve system (the Fed).³⁹⁶ The goal of the Fed is “to promote the health of the U.S. economy and the stability of the U.S. financial system.”³⁹⁷ The Fed achieves this goal by conducting monetary policy, promoting financial system stability, supervising and regulating financial institutions and activities, fostering payment and settlement system safety and efficiency, and promoting consumer protection

388. Author’s original thought.

389. See Section II.D.4.

390. Author’s original thought.

391. See *infra* Sections VI.A–B.

392. See Ryan Haar, *You Can Buy More Things Than Ever with Crypto. Here’s Why You Shouldn’t*, NEXT ADVISOR (June 29, 2021), <https://time.com/nextadvisor/investing/cryptocurrency/should-you-use-crypto-like-cash/> [<https://perma.cc/69QC-K6H9>].

393. See *id.*

394. See *infra* Sections VI.A.1–2.

395. See *infra* Section VI.A.2.

396. *The Fed Explained*, FED. RSRV., <https://www.federalreserve.gov/default.htm> (Mar. 16, 2022) [<https://perma.cc/M3LR-T43H>].

397. *Id.*

and community development.³⁹⁸ Crypto is essentially the direct opposite function of the central banking system.³⁹⁹

1. Loss of Monetary Policy

Monetary policy is used to control the quantity of money available in the economy.⁴⁰⁰ The central bank achieves this by controlling the interest rates it charges to banks, which affects the interest rates on loans that ultimately generate more money through interest payments.⁴⁰¹ Ignoring the price volatility of crypto as a factor, if crypto became legal tender and people began using crypto as a currency in replacement of the U.S. dollar, this could undermine the effects of monetary policy.⁴⁰² This outcome is not favorable for the Fed because not only would it lose power, but also the Fed's economic goals would not be achieved.⁴⁰³

On a more extreme level, some would say the goal of crypto is complete removal of intermediaries, including the central bank, in favor of a decentralized system.⁴⁰⁴ However, the government probably will not want to do away with the central bank, as it is a form of control over the economy.⁴⁰⁵ In any event, Bitcoin and other altcoins are not technologically ready to handle an entire country's financial system, and there would still need to be acceptance of this form of currency among the people.⁴⁰⁶ This centralized versus decentralized banking tension reflects the government's hesitancy to establish crypto as a legal tender.⁴⁰⁷

2. Less Ability for Regulation

Another concern the government has about crypto is the potential for illegal activity and tax fraud.⁴⁰⁸ Because crypto transactions are anonymous, illegal transactions can easily go unnoticed.⁴⁰⁹ There is also potential for tax

398. *Id.*

399. See James McWhinney, *Why Governments are Wary of Bitcoin*, INVESTOPEDIA, <https://www.investopedia.com/articles/forex/042015/why-governments-are-afraid-bitcoin.asp> (Sep. 21, 2021) [<https://perma.cc/SN2T-ZL34>].

400. *Monetary Policy*, INVESTOPEDIA, <https://www.investopedia.com/terms/m/monetarypolicy.asp> (Aug. 29, 2021) [<https://perma.cc/L4VB-9Q47>].

401. *Id.*

402. See McWhinney, *supra* note 399.

403. See *id.*

404. See *id.*

405. See *id.*

406. See *id.*

407. See *id.*

408. See *id.*; *Fact Sheet – Cryptocurrency Tax Evasion and National Security Threats*, OPEN MKTS. (Aug. 5, 2021), <https://www.openmarketsinstitute.org/publications/fact-sheet-cryptocurrency-tax-evasion-and-national-security-threats> [<https://perma.cc/EAH8-Y6XE>].

409. *Fact Sheet – Cryptocurrency Tax Evasion and National Security Threats*, *supra* note 408.

fraud with crypto.⁴¹⁰ As evidenced through the hypothetical, a taxpayer could easily fail to report some of the taxpayer's crypto transactions, and no one would know the difference.⁴¹¹ This could happen intentionally or by accident, which is another reason why estate planners should be aware of all the potential transactions that can happen with crypto so that taxpayers are not unintentionally evading taxes.⁴¹²

It is important to note that fraud and illegal activity will happen in any financial structure or system.⁴¹³ Research shows that from 2017 to 2020, there was an overwhelming criminal economic activity conducted through traditional financial institutions.⁴¹⁴ A primary reason the financial crisis of 2008 happened was because of fraudulent activity within the current monetary system.⁴¹⁵ Additionally, cash is still one of the largest mechanisms funding illegal transactions.⁴¹⁶ Obviously, when approaching a new system for financial transactions, it is important to be aware of the potential illegal activities, and steps should be taken to avoid such activities.⁴¹⁷ Just because there is an opportunity for illegal activity does not mean incorporating crypto into the financial system is the wrong move, but it is a factor in why the government might be hesitant to move forward with promoting growth in crypto transactions before a plan is developed to monitor illegal activity that occurs within crypto transactions.⁴¹⁸

B. Other Solutions Outside of Legalizing Crypto as Currency

Crypto has generally been classified into three categories: commodities, securities, and property.⁴¹⁹ Commodities are generally defined as a basic good that is interchangeable with other goods of the same type.⁴²⁰ A security is a financial instrument that has a monetary value that represents ownership in a publicly-traded company through a stock or bond.⁴²¹ Property, in general

410. *Id.*

411. *See supra* Section IV.

412. *See* Earthman, *supra* note 12, at 17–18.

413. *See FACT CHECK: Crypto Is Increasingly Being Used for Criminal Activity and Is a Haven for Illicit Finance*, COINBASE BLOG, <https://blog.coinbase.com/fact-check-crypto-is-increasingly-being-used-for-criminal-activity-and-is-a-haven-for-illicit-856a71dfb399> [<https://perma.cc/KJ2R-92UA>].

414. *See id.*

415. *See* Earthman, *supra* note 12, at 17–18.

416. *See FACT CHECK: Crypto Is Increasingly Being Used for Criminal Activity and Is a Haven for Illicit Finance*, *supra* note 413.

417. *See* McWhinney, *supra* note 399.

418. *See id.*

419. *See supra* Section III.

420. Jason Fernando, *Commodity*, INVESTOPEDIA (May 26, 2021), <https://www.investopedia.com/terms/c/commodity.asp> (Jan. 4, 2022) [<https://perma.cc/EPZ9-ZWBD>]; *see* 7 U.S.C. § 1a(9), 5.

421. 15 U.S. Code § 77b(a)(1); Will Kenton, *Security*, INVESTOPEDIA, <https://www.investopedia.com/terms/s/security.asp> (Mar. 20, 2021) [<https://perma.cc/XWY2-XBWM>]; *see Security*, INVESTOR.GOV, <https://www.investor.gov/introduction-investing/investing-basics/glossary/security> (last visited Mar. 16, 2022) [<https://perma.cc/54LD-UFZS>].

terms, is anything that a person can have legal title over, which gives a person rights to a particular thing.⁴²² Specifically, crypto seems to fall into the intangible property category, although the blockchain underlying crypto starts getting closer to the meaning of intellectual property (intangible having no intrinsic value, intellectual having significant value).⁴²³

Crypto does not exactly fit into any of these categories.⁴²⁴ Crypto is not really a good within the definition of a commodity as described by the Commodity Exchange Act (CEA).⁴²⁵ The similarity, however, is that crypto can be exchanged with other types of crypto (e.g., Bitcoin for Ethereum).⁴²⁶ Crypto is similar to securities in that, in a sense, it is an investment instrument on which the individual has ownership, but it does not represent a claim to a share in a corporation's assets (in most circumstances) or claim over debt.⁴²⁷ Crypto does fall within the meaning of property, but this classification is too broad and results in tax liabilities that are overly burdensome and unnecessary.⁴²⁸ For crypto to be optimally functional, the government should either develop a specific asset class for crypto with an accompanying regulatory body that attempts to encompass the possible uses of crypto, or it should continue classifying crypto as property but create a specific set of tax laws governing how certain crypto transactions should be treated.⁴²⁹ For both of these options, the government's objectives can be met while also allowing room for change as crypto technology continues to grow.⁴³⁰

1. Crypto as a New Asset Class

The word "currency" as part of the "cryptocurrency" name leads people to believe its only function is to serve as a new form of currency, but as discussed throughout this Comment, there is so much more to crypto than its use as a currency.⁴³¹ Cryptographical assets, on the other hand, have an all-encompassing meaning that indicates there is more to crypto than just as a currency.⁴³² In creating a new asset class, it is important to use language that

422. Andrew Bloomental, *Property*, INVESTOPEDIA, <https://www.investopedia.com/terms/p/property.asp> (Jan. 24, 2022) [<https://perma.cc/4VML-A2NA>].

423. *Id.*

424. *See supra* notes 419–23.

425. 7 U.S.C. § 1(a)(9).

426. *See id.*

427. *See* 15 U.S.C. § 77b(a)(3); *Stock*, INVESTOR.GOV, <https://www.investor.gov/introduction-investing/investing-basics/glossary/stock> (last visited Mar. 16, 2022) [<https://perma.cc/G9KC-CC2U>]; *Bonds*, INVESTOR.GOV, <https://www.investor.gov/introduction-investing/investing-basics/glossary/bonds> (last visited Mar. 16, 2022) [<https://perma.cc/QS5G-WWDU>].

428. *See* I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

429. Author's original thought.

430. *See* I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

431. *See supra* Parts II, III, V.

432. *See supra* Parts II, III, V.

is helpful for an entire population to understand.⁴³³ There is success in creating a new asset class for crypto because doing so allows a fresh start instead of attempting to retrofit a new idea into an old framework that does not meet the needs of the new technology.⁴³⁴

In creating this asset class, there should be an umbrella term for the class and any subclasses.⁴³⁵ For example, securities as an umbrella term are investment instruments, and their subclasses are stocks and bonds.⁴³⁶ For crypto, the umbrella term should be cryptographical assets, and some potential subclasses include transactional, contract, collectibles, and investment crypto.⁴³⁷ Creating a new asset class is beneficial because crypto would have its own rules and regulations, but this will take time.⁴³⁸ Additionally, until more people use crypto, it will be difficult to determine all the rules that should be in place for crypto as a new asset class.⁴³⁹ Like the SEC or CFTC, a governmental agency should be created as oversight for cryptographical assets with designated chairmen and commissioners with several divisions that oversee the various types of crypto transactions.⁴⁴⁰ If crypto experts could be hired in this type of agency, the development of regulations regarding crypto transactions could be thoroughly explored and used to a greater potential.⁴⁴¹ This would be especially helpful in exploring and implementing blockchain technology into various governmental systems for better security, such as using the blockchain for elections and storing documents.⁴⁴² As crypto grows in popularity, the general public and professionals will begin incorporating this technology into life and business, so it is likely this type of agency will need to be formed in the near future.⁴⁴³

433. See *supra* notes 431–32.

434. See *Global Cryptocurrencies & Digital Assets: Could Crypto-Based Digital Assets Form A New Asset Class?*, B A SECS., <https://business.bofa.com/en-us/content/crypto-based-digital-assets-new-asset-class.html> [<https://perma.cc/YJF9-HC7W>] (last visited Mar. 16, 2022).

435. See *supra* notes 431–35.

436. See Kenton, *supra* note 421.

437. Author's original thought.

438. See *Global Cryptocurrencies & Digital Assets: Could Crypto-Based Digital Assets Form A New Asset Class?*, *supra* note 434.

439. See *id.*

440. See *About the SEC*, U.S. SECS & EXCH. COMM'N, <https://www.sec.gov/about.shtml> (Nov. 22, 2016) [<https://perma.cc/K5E3-B5PT>]; *CFTC Organization*, CFTC, <https://www.cftc.gov/About/CFTCOrganization/index.htm> (last visited Mar. 16, 2022) [<https://perma.cc/EC4P-9ZNK>].

441. See *Global Cryptocurrencies & Digital Assets: Could Crypto-Based Digital Assets Form A New Asset Class?*, *supra* note 434.

442. Joe Liebkind, *How Blockchain Technology Can Prevent Voter Fraud*, INVESTOPEDIA, <https://www.investopedia.com/news/how-blockchain-technology-can-prevent-voter-fraud/> (Dec. 9, 2020) [<https://perma.cc/E4VK-6W3T>].

443. See *What are the Benefits of Blockchain in Government and the Public Sector?*, CONSENSYS, <https://consensys.net/blockchain-use-cases/government-and-the-public-sector/> (last visited Mar 16, 2022) [<https://perma.cc/YV59-TNUR>].

2. Tax Laws Specifically Designed for Crypto

Creating a new asset class will take a lot of time, thought, and effort, and with the growing popularity of crypto, a reasonable approach for the short-term is to create tax law specific to crypto.⁴⁴⁴ Additionally, if new forms of crypto technology arise or if a law becomes outdated, Congress can always change or amend the tax law to reflect current crypto needs.⁴⁴⁵

Similar to the categories mentioned above, the IRS should identify the different areas of crypto and the specific treatment each one should receive; some code changes the IRS should make involve the gas fees used for transactions on the blockchain, DeFi transactions, and the timing of tax for staking and mining rewards.⁴⁴⁶

a. Gas Fees and Purchase of Virtual Assets

In a normal transaction to acquire property, whether it be the purchase of land or stock, the fees are typically included in the cost basis.⁴⁴⁷ However, these fees are usually paid in a currency, such as the U.S. dollar, so there is no taxable event associated solely with paying the fee.⁴⁴⁸ With gas fees on the blockchain, individuals are paying the gas fee with crypto, and therefore simply paying the gas fee triggers the recognition of a gain or loss.⁴⁴⁹ This is where the tax law could be adjusted to meet this specific gap regarding gain or loss recognition upon payment of a gas fee.⁴⁵⁰ In the future, if estate planning tools such as wills or other estate planning documents are executed on the blockchain and the tax code stays as it is, estate planners will have to pay capital gains tax on the gas fees for every single document they create on the blockchain.⁴⁵¹ For a year, this would accumulate many taxable events (that would likely be STCGs) that the firm will have to keep track of, report, and increase the firm's tax liability simply for doing business.⁴⁵² This would affect estate planners and all sorts of businesses that might utilize blockchain technology as an ordinary part of business.⁴⁵³ In this situation, the tax code

444. See Ephrat Livni & Eric Lipton, *Regulators Ask Congress to Create New Rules for Cryptocurrencies*, N.Y. TIMES (Nov. 1, 2021), <https://www.nytimes.com/2021/11/01/business/stablecoin-s-cryptocurrency-regulation.html> [<https://perma.cc/39RT-X6QM>].

445. See *id.*

446. See *id.*

447. Publication 550 (2020), *Investment Income and Expenses*, IRS, https://www.irs.gov/publications/p550#en_US_2020_publink100010383 (Mar. 15, 2022) [<https://perma.cc/A2K8-89S5>] (see Stocks and Bonds under title 4. Sales and Trades of Investment Property).

448. See James Chen, *Cost Basis*, INVESTOPEDIA, <https://www.investopedia.com/terms/c/costbasis.asp> (Dec. 7, 2021) [<https://perma.cc/3TJY-BFLU>].

449. See *id.*

450. See McClure, *supra* note 380; I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

451. See McClure, *supra* note 380; I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

452. See McClure, *supra* note 380; I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

453. See McClure, *supra* note 380; I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

should make provisions specifically addressing gas fees by waiving the capital gains tax upon the use of gas fees, and in addition, allow a business expense deduction if gas fees are paid for business purposes.⁴⁵⁴

Transactions on the blockchain could become a regular occurrence, especially with the development of the Metaverse.⁴⁵⁵ Even if the government is not ready to accept crypto as a currency for normal daily transactions (such as going to the grocery store, shopping, restaurants, etc.), the normalization of using crypto in the virtual world is going to make it difficult for people to keep track of every little transaction that occurs.⁴⁵⁶ Creating a provision in the tax code to allow the purchase or creation of virtual items on the blockchain without generating a taxable event would be a reasonable alternative to completely changing how crypto is generally classified.⁴⁵⁷

b. DeFi Taxation

Within the DeFi market, there are several opportunities for tax law to be implemented in the various aspects of DeFi services, but implementing these laws in a way that allows for efficiency on the blockchain is the issue.⁴⁵⁸ There are many different methods of earning interest and acquiring rewards through DeFi lending practices, so it is likely that any future tax law regarding these transactions could be extensive.⁴⁵⁹ To address the specific situation as seen in the Scarlet hypothetical, there should be a provision in the tax code that allows placeholder crypto to be recognized as income upon redemption rather than when the placeholder crypto is received.⁴⁶⁰ In that situation, the tax recognition event would occur whenever Scarlet redeems her COMP for her Ethereum after it has gained interest rather than when she initially received the COMP.⁴⁶¹ This is the most reasonable point in time for Scarlet to recognize any gains or losses from the transaction.⁴⁶² The IRS would not be losing any tax owed, it would just be deferred to a time where the taxpayer has the wherewithal to pay and has actually realized income.⁴⁶³

454. See McClure, *supra* note 380; I.R.S. Notice 2014-21, 2014-16 I.R.B. 938.

455. See Joel Frank, *Metaverse a Massive Opportunity for Crypto, Says BoA, YAHOO!* (Dec. 2, 2021), <https://www.yahoo.com/now/metaverse-massive-opportunity-crypto-says-085404063.html> <https://perma.cc/YHD2-VTFD>].

456. See Marr, *supra* note 34.

457. See *id.*

458. Freeman, *supra* note 374.

459. See McClure, *supra* note 380.

460. Freeman, *supra* note 374.

461. *Id.*

462. *Id.*

463. *Eisner v. Macomber*, 262 U.S. 189, 213 (1920).

c. Staking and Mining Rewards

Regarding staking and mining rewards, when a coin is received as a result of staking or mining, this should have the same treatment as a stock dividend.⁴⁶⁴ A stock dividend, when issued, is not considered income until the stock is actually sold.⁴⁶⁵ Staking and mining rewards are similar in nature to stock dividends.⁴⁶⁶ According to Section 305 of the IRC, the distribution of stock from a corporation to its shareholders is not considered income until the shareholder sells the stock.⁴⁶⁷ While crypto is decentralized and does not have a single overseer that is delegating stock like a corporation, a staking reward is similar to receiving a stock dividend and, therefore, should be treated as such.⁴⁶⁸

In *Eisner v. Macomber*, the court ruled that when a taxpayer receives stock as a dividend, the taxpayer has not actually realized any income and therefore does not have the wherewithal to pay.⁴⁶⁹ Not only is this a reasonable outcome, but this also could be a constitutional issue.⁴⁷⁰ *Eisner* determined that it was unconstitutional under the Sixteenth Amendment to tax earnings that the stockholder has not received.⁴⁷¹ In the case of staking and mining, earnings have not actually been received by the taxpayer, so it is possible that taxing staking and mining rewards could be unconstitutional.⁴⁷² While there have been subsequent cases limiting the broad scope of *Eisner*, because staking and mining are part of a new type of asset, this has the potential to be challenged from a constitutional standpoint.⁴⁷³

There is a pending case regarding this issue.⁴⁷⁴ In *Jarrett et al. v. United States*, taxpayers Joshua and Jessica Jarrett filed a lawsuit against the IRS to get a refund on the staking rewards from their staked Tezos coins.⁴⁷⁵ The couple was offered a refund from the IRS in December 2021, but the Jarrett's refused the refund and plan to move forward with the case in hopes of

464. *Court Case Challenges Filing Requirements for Crypto Staking Rewards*, RSM (June 9, 2021), <https://rsmus.com/what-we-do/services/tax/international-tax-planning/global-information-reporting/court-case-challenges-filing-requirements-for-crypto-staking-rew.html> [https://perma.cc/RB62-BLXG].

465. I.R.C. § 305; *Eisner*, 262 U.S. at 219.

466. *See* I.R.C. § 305.

467. *Id.*

468. *See Eisner*, 262 U.S. at 219.

469. *Id.* at 213.

470. *See id.*

471. *Id.*

472. *Id.* at 213, 219.

473. *Id.*

474. Ben Strack & Casey Wagner, *Fate of Millions of Taxpayers' Hangs in Balance of IRS Crypto Staking Case*, BLOCKWORKS (Feb. 3, 2022, 2:34 PM), <https://blockworks.co/fate-of-millions-of-taxpayers-hangs-in-balance-of-irs-crypto-staking-case/#:~:text=Metaverse-,Fate%20of%20Millions%20of%20Taxpayers%20Hangs%20in%20Balance,of%20IRS%20Crypto%20Staking%20Case&text=A%20Nashville%20couple%20declined%20a,staking%20on%20the%20Tezos%20blockchain> [https://perma.cc/2S23-VNR9].

475. *Id.*

obtaining a final court decision that will be binding on future tax years and may be used as precedent for all taxpayers.⁴⁷⁶ If the IRS was willing to offer a refund to these taxpayers, this opens up the opportunity for taxpayers across the U.S. to start making requests for refunds on staking and mining rewards, and it is likely further litigation will arise as well.⁴⁷⁷

VII. CONCLUSION

There is much potential for crypto and blockchain technology, and as a result, more people will start investing in crypto and utilizing all the various functions blockchain technology offers.⁴⁷⁸ As people begin acquiring these assets and participating in these markets, crypto will become a normal part of an individual's estate that will one day be passed on.⁴⁷⁹ Estate planners need to be aware of how to manage these assets within an estate plan and be watchful in the coming years as the laws surrounding crypto will likely change.⁴⁸⁰

Not only should estate planners be keeping up with the changing laws, but they should also be proactive about advocating for laws that would best suit their clients' needs.⁴⁸¹ In addition, estate planners should realize the potential that blockchain technology has as a tool for executing estate planning documents.⁴⁸² Blockchain technology has the potential to provide better security and accessibility for clients, and therefore estate planners should embrace this technology.⁴⁸³

476. *Id.*

477. *See id.*

478. *See supra* Part II.

479. *See supra* Part IV.

480. *See supra* Parts V–VI.

481. *See supra* Section VI.B.2.

482. *See supra* Section II.F, Parts VI–VII.

483. *See supra* Parts II–VI.

APPENDIX – GLOSSARY

Blockchain – a list or “chain” of blocks each containing a list of transactions that can be viewed and verified by anyone.⁴⁸⁴

Coins – refers to the particular digital currency used on a particular blockchain.⁴⁸⁵

Cryptocurrency – in general, cryptocurrency is decentralized digital money designed to operate on blockchain technology.⁴⁸⁶

Decentralized apps (dApps) – applications that run on a blockchain network that function based on a series of smart contracts.⁴⁸⁷

Decentralized Finance (DeFi) – a decentralized financial system that offers various financial services through dApps.⁴⁸⁸

Distributed Ledger – a database that is shared among multiple parties for data to be publicly witnessed.⁴⁸⁹

Fiat currency – legal tender that a government designates as currency.⁴⁹⁰

Hash – a function that meets the demands of a computer’s ability to solve a blockchain computation.⁴⁹¹

Marketplace dApps – dApps that offer a variety of services or exchange opportunities.⁴⁹²

Mining – a number of computers competing to validate transactions on the blockchain in order to receive a reward.⁴⁹³

484. *What is a Blockchain?*, *supra* note 30.

485. *Coin*, BINANCE ACADEMY, <https://academy.binance.com/en/glossary/coin> (last visited Mar. 16, 2021) [<https://perma.cc/5UR5-MN9V>].

486. *What is Cryptocurrency?*, COINBASE, <https://www.coinbase.com/learn/crypto-basics/what-is-cryptocurrency> (last visited Mar. 16, 2022) [<https://perma.cc/6YY4-SHNY>].

487. *Decentralized Application (DApp)*, BINANCE ACADEMY, <https://academy.binance.com/en/glossary/decentralized-application> (last visited Mar. 16, 2022) [<https://perma.cc/Z9WH-RY7A>].

488. *See id.*

489. Christina Majaski, *Distributed Ledger*, INVESTOPEDIA, <https://www.investopedia.com/terms/d/distributed-ledgers.asp> (Oct. 9, 2021) [<https://perma.cc/9WMR-4C7S>].

490. *See* Earthman, *supra* note 12, at 9.

491. Jake Frankenfield, *Hash*, INVESTOPEDIA, <https://www.investopedia.com/terms/h/hash.asp> (Jan. 13, 2022) [<https://perma.cc/LTU7-QZZF>].

492. *See* Kim Eun-jin, *Dapp Marketplaces Gaining Attention from Investors*, BUS. KOR. (Sept. 17, 2019, 11:22), <http://www.businesskorea.co.kr/news/articleView.html?idxno=36029> [<https://perma.cc/P7LX-TNYD>].

493. *Mining*, *supra* note 45.

Native Coin – a blockchain’s inherent digital currency that represents a certain unit of value (BTC = Bitcoin, ETH = Ethereum, ADA = Cardano).⁴⁹⁴

Nodes – the computers that participate in mining.⁴⁹⁵

Non-fungible Tokens (NFTs) – a cryptographic token that is unique and is a tokenized version of a digital or a real-world asset.⁴⁹⁶

Pool Operator – the person designated to keep the staking pool running; owns the server that pools staked coins to validate the transactions in a staking mechanism.⁴⁹⁷

Proof of Stake – a consensus mechanism where validators are randomly selected to validate the blockchain, and a validator’s chance of getting chosen increases with the more coins a validator has staked.⁴⁹⁸

Proof of Work – a consensus mechanism where validators compete to solve a mathematical puzzle in order to validate the blockchain.⁴⁹⁹

Scalability – the ability of an organization, system, or function to continue performing well under an increased workload.⁵⁰⁰

Staking – delegating assets to a pool in order to earn a reward.⁵⁰¹

Staking Pool – a “pool” of assets that have been delegated by stakeholders to increase the opportunity for the pool operator to be selected to proof the blockchain transactions. Stakeholders who contribute to the pool receive a percentage of the rewards obtained by the pool based on the amount of assets delegated to the pool.⁵⁰²

494. Jake Frankenfield, *Crypto Tokens*, INVESTOPEDIA, <https://www.investopedia.com/terms/c/crypto-token.asp> (Nov. 30, 2021) [<https://perma.cc/N2J5-57FD>].

495. *Node*, BINANCE ACADEMY, <https://academy.binance.com/en/glossary/node> (last visited Mar. 16, 2022) [<https://perma.cc/GCE5-6GNK>].

496. John Ma, *Non-Fungible Token (NFT)*, BINANCE ACADEMY, <https://academy.binance.com/en/glossary/non-fungible-token-nft> (last visited Mar. 16, 2022) [<https://perma.cc/X6AE-5E7A>].

497. *About Stake Pools, Operators, and Owners*, CARDANO DOCS, <https://docs.cardano.org/getting-started/operating-a-stake-pool/about-stake-pools> (last visited Mar. 16, 2022) [<https://perma.cc/MY75-TDN3>].

498. See Jake Frankenfield, *Proof of Stake (PoS)*, INVESTOPEDIA, <https://www.investopedia.com/terms/p/proof-stake-pos.asp> (Dec. 17, 2021) [<https://perma.cc/DY9W-P5UM>].

499. See Jake Frankenfield, *Proof of Work (PoW)*, INVESTOPEDIA, <https://www.investopedia.com/terms/p/proof-work.asp> (July 22, 2021) [<https://perma.cc/24SY-87D5>].

500. See Adam Hayes, *Scalability*, INVESTOPEDIA, <https://www.investopedia.com/terms/s/scalability.asp> (Nov. 28, 2020) [<https://perma.cc/BAR7-HYRX>].

501. See *What Is Staking?*, BINANCE ACADEMY, <https://academy.binance.com/en/articles/what-is-staking> (Mar. 15, 2022) [<https://perma.cc/4AN5-CAX8>].

502. See Arpornthip, *supra* note 64.

Validators – in proof of work or proof of staking, the validator is the individual (computer) that validates the transaction.⁵⁰³

503. *What is a Blockchain?*, *supra* note 30.