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Cryptocurrency and the § 1031 Like Kind Exchange

by ELI COLE*

Abstract

Cryptocurrency has been called "a fraud" by some and "the next internet" by others. However, since the first Bitcoin was mined in 2009, the growth of the cryptocurrency market capitalization has been exponential—surpassing $800 billion at the beginning of 2018. Not surprisingly, the regulations governing these digital pieces of property have lagged the economic growth. In this Article, I attempt to answer the question: should 26 U.S.C. § 1031 apply to an exchange between cryptocurrencies?

This Article argues that the Internal Revenue Service's decision to classify cryptocurrency as property, combined with the Securities and Exchange Commission's hesitancy to classify all forms of cryptocurrency as securities, paves the way for taxpayer use of the like kind exchange between cryptocurrency. A future IRS ruling stating such would be in line with both past IRS and federal court rulings. The IRS has been liberal in the allowance of like kind exchanges in the past – doing so here would reduce the amount of complexity for the IRS and the taxpayer, while increasing revenues over time. Although the Tax Cuts and Jobs Act of 2017 disallows like kind exchanges of personal property starting in 2018, this Article is relevant for transactions that predate the 2018 tax reform.

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Introduction

Cryptocurrency as an asset class is one of the fastest growing in centuries.[1] The aggregate market capitalization of cryptocurrencies has exceeded $100 billion[2]—but was $0 in 2008. In fact, its growth is so astonishing that some distinguished economists are calling it the next bubble.* Yet, as technologist Marc Andreessen points out, "the fact that Bitcoin has risen in value in part because of speculation is making the reality of its usefulness arrive much faster than it would have otherwise."[3]

Perhaps even more astonishing is that this asset class can be accessed by almost anyone with an internet connection. Due to the lack of barriers to entry, cryptocurrency has spread virally with more than 20 million Bitcoin wallet users across the globe[4]—compared to only 10,000 in 2011.[5] Unlike tulips,[6] cryptocurrency is fungible and divisible, which promotes wider market participation: a smaller investor does not need to afford the higher price of an entire coin.[7]

Bitcoin is the most popular cryptocurrency, but since its inception in 2009, more than 1000 different forms of cryptocurrency have been created.

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1. $1000 of Bitcoin purchased in 2010 is worth more than $100 million in 2018. *Top 100 Cryptocurrencies by Market Capitalization*, COINMARKETCAP, https://coinmarketcap.com.

2. *See* Manoj Viswanathan, *Tax Compliance in a Decentralizing Economy*, 34 GA. ST. U. L. REV. 283, 320 (2018).

* Robert J. Shiller, *In Search of a Stable Electronic Currency*, N.Y. TIMES, Mar. 1, 2014, at BU4. Professor Shiller was awarded the 2013 Nobel Prize in Economic Sciences along with Professors Eugene Fama and Lars Peter Hansen for their research into market prices and asset bubbles. *The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2013*, NOBELPRIZE.ORG (Oct. 28, 2015), http://perma.cc/6XEW-GUG6.

3. Marc Andreessen, *Why Bitcoin Matters*, N.Y. TIMES (Jan. 21, 2014), https://dealbook.nytimes.com/2014/01/21/why-bitcoin-matters/.

4. *Blockchain Wallet Users*, BLOCKCHAIN, https://blockchain.info/charts/my-wallet-n-users (last visited Dec. 11, 2017).

5. Turpin, Jonathan, *Bitcoin: Economic Case for a Global, Virtual Currency Operating in an Unexplored Legal Framework,* 21 IND. J. GLOBAL LEGAL STUD. 335, 342 (2014) (reporting that according to the European Central Bank, there were only about 10,000 Bitcoin wallet users in June 2011).

6. *See* Hugh Son et al., *Jamie Dimon Slams Bitcoin as a 'Fraud*', BLOOMBERG (Sept. 12, 2017), https://www.bloomberg.com/news/articles/2017-09-12/jpmorgan-s-ceo-says-he-d-fire-traders-who-bet-on-fraud-bitcoin. Jamie Dimon, CEO at JP Morgan Chase, called Bitcoin "a fraud" and compared it to the famed Tulip Mania of the 17th century. *Id.*

7. *See* WARREN E. BUFFETT, THE ESSAYS OF WARREN BUFFETT: LESSONS FOR CORPORATE AMERICA19 (Lawrence A. Cunningham ed., 4th ed. 2015) (explaining that the author has resisted stock splits of BRK.A partly because a higher share price discourages short-term speculative trading).

The pseudonymous inventor of Bitcoin, Satoshi Nakamoto, sparked this rise of cryptocurrency with the release of a whitepaper, "Bitcoin: A Peer-to-Peer Electronic Cash System" in 2008.[8] Although the whitepaper cites to research that dates back over 50 years, the technology underlying Bitcoin solves certain computer science problems that previously inhibited decentralized peer-to-peer transactions.[9] These breakthroughs allow for the exchange of value without a trusted intermediary, such as a financial institution or clearinghouse.

Individuals trading cryptocurrency often assume that exchanging one cryptocurrency for another cryptocurrency is not a taxable transaction—that only exchanging cryptocurrency for fiat currency is taxable. But, under United States tax law, any exchange of value (i.e., property) is generally a taxable event. However, a special rule (section 1031 of the Internal Revenue Code) provides that no gain or loss is recognized when one like kind property is exchanged for another like kind property.[10] Prior to the enactment of the 2018 tax reform, the like kind exchange rule applied to a wide range of property from real estate to intangibles.[11] Like kind exchanges permit a taxpayer to conduct a series of purchases and sales of property without paying tax on the gains until the final property is sold. Additionally, the holding period of the property is tacked, meaning that a taxpayer can theoretically convert multiple short-term gains into a single long-term gain. However, this tax deferral mechanism is only available if the exchanged properties are considered like kind by the Internal Revenue Service ("IRS").

8. SATOSHI NAKAMOTO, BITCOIN: A PEER-TO-PEER ELECTRONIC CASH SYSTEM 1 (2018), https://bitcoin.org/bitcoin.pdf.

9. One of the problems is "handl[ing] malfunctioning components that give conflicting information to different parts of the system. This situation can be expressed abstractly in terms of a group of generals of the Byzantine army camped with their troops around an enemy city. Communicating only by messenger, the generals must agree upon a common battle plan. However, one or more of them may be traitors who will try to confuse the others. The problem is to find an algorithm to ensure that the loyal generals will reach [an] agreement." Leslie Lamport et al., *The Byzantine Generals Problem*, 4 ACM TRANSACTIONS ON PROGRAMMING LANGUAGES & SYSTEMS 382, 382 (1982). Satoshi Nakamoto introduced a general solution to the Byzantine Generals Problem by developing blockchain technology. Karan Kwatra, *Blockchain: The Byzantine Generals Problem*, WOLVERINE BLOCKCHAIN (NOV. 22, 2017), https://medium.com/wolverineblockchain/blockchain-the-byzantine-generals-problem-2f17097bad73.

10. 26 U.S.C. § 1031 (2017).

11. *See id.*; *see also* Act effective Dec. 31, 2017, Pub. L. No. 115-97, § 13303, 131 Stat. 2054 (amending section 1031(a)(1) by striking "property" and inserting "real property").

In general, the IRS defines like kind by evaluating the similarities in "nature and character" of the property.[12] The IRS has not yet announced whether cryptocurrency tokens are like kind property. Therefore, due to the insufficient amount of promulgated regulations,[13] cryptocurrency token holders are left wondering about the tax consequences of token exchanges.[14]

This Article proceeds as follows: Part I argues that section 1031 ("§ 1031") like kind exchange between cryptocurrency prior to 2018 is permissible according to the posture of the IRS and Securities and Exchange Commission ("SEC"). Part II argues that such an exchange is appropriate given the past treatment of like kind exchanges by the IRS and federal courts. Part III explores the likely results of a decisive ruling on the issue by the IRS and argues for the allowance of a like kind exchange between cryptocurrency.

Part I

A. **Cryptocurrency: Definition and Relevance**

Cryptocurrency is digital or virtual currency in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds, operating independently of a central bank.[15] It is secured by software and hardware located in a variety of locations controlled by various independent actors. Its decentralization makes it a unique cross-border tool that operates sans government control without a central point of failure.[16]

Interestingly, according to the IRS, cryptocurrency is not considered a currency at all, but instead is classified as a form of property. [17] The

12. 26 C.F.R. § 1.1031(a)-1(b).

13. *See* TREASURY INSPECTOR GEN. FOR TAX ADMIN., REF. 2016-30-083, AS THE USE OF VIRTUAL CURRENCIES IN TAXABLE TRANSACTIONS BECOMES MORE COMMON, ADDITIONAL ACTIONS ARE NEEDED TO ENSURE Taxpayer Compliance (Sept. 21, 2016), https://www.treasury.gov/tigta/auditreports/2016reports/201630083fr.pdf ("[T]he IRS's current guidance related to virtual currencies is insufficient.").

14. *See id.* ("The IRS agreed that additional guidance would be helpful.").

15. *Cryptocurrency*, OXFORD DICTIONARIES, https://en.oxforddictionaries.com/definition/cryptocurrency (last visited Feb. 3, 2018).

16. *See* Viswanathan, *supra* note 2.

17. In 1875, the English economist William Stanley Jevons expressed money in four functions: a medium of exchange, a common measure of value, a standard of value, and store of value. *See* W. STANLEY JEVONS, MONEY AND THE MECHANISM OF EXCHANGE 8 (1919). Arguably, cryptocurrency maintains each of these four functions. This article focuses on the first function, medium of exchange.

Internal Revenue Code ("IRC") treats currency (or legal tender) differently than it treats forms of property such as gold.[18] Currency taxation is structured to encourage transactions, but property taxation is structured to encourage long-term investigations.[19] Due to this classification, only the sections of the IRC that pertain to property govern cryptocurrency.[20]

According to the IRS, property can be divided into two types: real and personal.[21] Real property is fixed by location, whereas, personal property is moveable. Within personal property, items are subdivided into tangible and intangible.[22] The IRS has not ruled on whether cryptocurrency is tangible or intangible, but cryptocurrency should be considered intangible property because it is comprised of bits, not atoms. The IRS and federal courts treat tangible property and intangible property slightly differently for the purposes of § 1031.[23]

The lagging IRS regulation of cryptocurrency in combination with near instantaneous real-time trading capabilities allows individual investors and traders to accumulate profits on volumes of "day" trades per year. Consequently, increasing amounts of cryptocurrency "hedge" funds are beginning to form as profiteers look to institutionalize the process.[24] In a

18. Notice, 2014-16 I.R.B. 938 (2014).

19. *See* Nicole Mirjanich, *Digital Money: Bitcoin's Financial and Tax Future Despite Regulatory Uncertainty*, 64 DEPAUL L. REV. 213, 237-42 (2014).

20. *See* JAMES S. EUSTICE & BORIS I. BITTKER, FEDERAL INCOME TAXATION OF CORPORATIONS AND SHAREHOLDERS § 5.01 (7th ed., 1998) ("Because corporations do not receive preferential capital gains treatment, the gain recognized on the sale or exchange of Bitcoin in any transaction would be taxed to most corporations at thirty-four percent or thirty-five percent. Moreover, corporations must recognize a gain on any non-liquidating distribution of appreciated property. 26 U.S.C. § 311(a) (1988). As such, Bitcoin distributions to shareholders are subject to both a corporate and shareholder level tax in addition to the income the corporation recognizes on the sale or exchange of Bitcoin.").

21. *See* IRM § 1.14.4.1.5 (2017) ("Personal Property Any property other than real estate. The distinguishing factor between personal property and real property is that personal property is movable and not fixed permanently to one location, such as land or buildings. Interchangeable with asset.").

22. *See* H. Hosmer, *The Tax Situs of Personal Property*, 1 ST. LOUIS L. REV. 320, 320 (1916) ("The tax laws of American states generally follow the common law division of property into real and personal, the latter of which, according to the classification of Blackstone, includes chattels real (estates in real property less than freeholds) and chattels personal, subdivided into choses in possession (tangible personalty) and choses in action (intangible personalty)."); *see* Act effective Dec. 31, 2017, Pub. L. No. 115-97, § 13310, 131 Stat. 2054.

23. *See* 26 U.S.C. § 1031(h) (2017); *see also* discussion *infra* Section I.C.2.b.

24. Evelyn Cheng, *There Are Now More than 120 Hedge Funds Focused Solely on Bitcoin, Digital Currencies*, CNBC (Oct. 27, 2017), https://www.cnbc.com/2017/10/27/there-are-now-more-than-120-hedge-funds-focused-solely-on-bitcoin.html (reporting that

2017 report issued by Goldman Sachs, the bank insisted that "whether or not you believe in the merit of investing in cryptocurrencies (you know who you are), real dollars are at work here and warrant watching."[25] Therefore, it would be prudent for the IRS to provide a more in depth analysis of the tax treatment for cryptocurrency due to the increasing daily market trading volume.[26]

1. *Online Exchanges*

The volatility of cryptocurrency[27] has captured the fascination of short-term traders who attempt to profit from intra-day price swings via online exchanges. These exchanges permit users to view bids and asks for different cryptocurrencies and act on the information by trading over the internet. Many of these exchanges list hundreds of different forms of cryptocurrency, similar to the way a stock market lists companies. Traders are able to swap cryptocurrency with each other online at different prices usually denominated in Bitcoin. The online exchanges act as central intermediaries between the buyer-seller exchange by requiring each party to hold an account on the platform. The account serves the function of a digital wallet by storing the private keys[28] of the property owner. The benefit of using an online exchange is the buyer and seller never need to interact directly with one another in order to complete an exchange.

As a reference point, cryptocurrency exchanges are similar to unregulated barter exchanges. Barter exchanges, which became popular during the Great Depression, are platforms where members can exchange goods or services without currency.[29] For example, some State Bar

about 124 cryptocurrency "hedge" funds have been formed, according to the financial research firm, Autonomous Next).

25. Mark Molloy, *Bitcoin Continues Record Price Run as Ethereum Nears $400*, THE TELEGRAPH (Sept. 1, 2017), http://www.telegraph.co.uk/technology/2017/09/01/bitcoin-continues-record-price-run-ethereum-nears-400/.

26. *See* TREASURY INSPECTOR GEN. FOR TAX ADMIN., REF. 2016-30-083, AS THE USE OF VIRTUAL CURRENCIES IN TAXABLE TRANSACTIONS BECOMES MORE COMMON, ADDITIONAL ACTIONS ARE NEEDED TO ENSURE Taxpayer Compliance (Sept. 21, 2016), https://www.treasury.gov/tigta/auditreports/2016reports/201630083fr.pdf ("[T]he IRS's current guidance related to virtual currencies is insufficient.").

27. Trevor I. Kiviat, *Beyond Bitcoin: Issues in Regulating Blockchain Transactions*, 65 DUKE L.J. 569, 571 (2015).

28. The private keys are some combinations of characters (comprised of letters and numbers) that allow cryptocurrency to be spent. The private key is analogous to a key for a safety deposit box; whereas, the digital wallet address is analogous to the safety deposit box number and location.

29. *Barter Exchanges*, INTERNAL REVENUE SERV. (Oct. 5, 2017), https://www.irs.gov/businesses/small-businesses-self-employed/barter-exchanges.

Associations have approved the participation of attorneys in organized barter exchanges by allowing attorneys to swap legal services for "trade dollars" to spend on a range of products or services.[30] Similarly, on cryptocurrency exchanges, traders swap coins with each other, and each coin's value is measured in Bitcoin (the modern day "trade dollar"). However, these cryptocurrency exchanges have not yet been regulated by the IRS; whereas, a 1982 law[31] requires a barter exchange to initiate back-up withholding[32] if a participant doesn't submit a valid Social Security number or other tax identification number.[33]

a. Decentralized Transactions

Centralized online exchanges are not the only way to exchange cryptocurrency; swaps between cryptocurrency often occur without intermediaries. Cryptocurrency token holders organize in person meetups where different tokens are exchanged directly face-to-face. Additionally, a new method, known as atomic swaps,[34] may be utilized more heavily in the future. Although initially foreseen by Satoshi Nakamoto in 2010,[35] technological limitations have inhibited the widespread use of atomic swaps. However, recent innovations indicate increased future use of decentralized exchanges between cryptocurrency.[36]

30. Tracey Keys & Thomas Malnight, *The Exploding Business of Bartering*, HARV. BUS. REV. (Sept. 12, 2012), https://hbr.org/2012/09/the-exploding-business-of-bart.

31. Tax Equity and Fiscal Responsibility Act of 1982, Pub. L. No. 97–248, § 311, 96 Stat. 324 (1982).

32. *See* Cara R. Baros, *Barter, Bearer, and Bitcoin: The Likely Future of Stateless Virtual Money*, 23 U. MIAMI BUS. L. REV. 201, 205 (2014) (explaining that withholding requires a payer to withhold tax from income not otherwise subject to withholding).

33. Robert W. Wood, *Do You Barter? the IRS Wants Its Cut*, FORBES (Nov. 11, 2009), https://www.forbes.com/2009/11/11/irs-tax-barter-exchange-income-personal-finance-wood.html.

34. In an atomic swap, no centralized authority exists to match buyers with sellers. Instead, the software itself facilitates the exchange via a distributed network of computers. The software runs on multiple different computers owned by multiple different parties. In this exchange process, the property owner never relinquishes the private keys to an entity. Therefore, it is much more difficult to argue that an intermediary exists in the transaction.

35. Satoshi, Comment to *BitDNS and Generalizing Bitcoin*, BITCOIN FORUM (Dec. 10, 2010), https://bitcointalk.org/index.php?topic=1790.msg28917#msg28917 ("[I]t's cryptographically possible to make a risk free trade. The two parties would set up transactions on both sides such that when they both sign the transactions, the second signer's signature triggers the release of both. The second signer can't release one without releasing the other.").

36. *See* Alyssa Hertig, *Bitcoin-Ethereum Atomic Swap Code Now Open Source*, COINDESK (Oct. 11, 2017), https://www.coindesk.com/bitcoin-ethereum-atomic-swap-code-

B. **Historical Background: Like Kind Exchange**

The history of § 1031 is important in understanding how the law may be applied to cryptocurrency. The first tax-deferred like kind exchange was authorized as part of the Revenue Act of 1921. Under Section 202(c) of the Revenue Act of 1921, no gain or loss was recognized for a like-kind exchange even though the acquired property had a "readily realizable market value."[37] The section was amended several times[38] and replaced by § 1031, which provides:

No gain or loss shall be recognized on the exchange of property held for productive use in a trade or business or for investment if such property is exchanged solely for property of like kind which is to be held either for productive use in a trade or business or for investment.[39]

In 1979, the United States Court of Appeals, Ninth Circuit acknowledged that the "legislative history reveals that the provision was designed to avoid the imposition of a tax on those who do not 'cash in' on their investments in trade or business property."[40] The court concluded the opinion by stating: "If our holding today adds a degree of uncertainty to this area, Congress can clarify its meaning."[41] Consequently, in the Deficit Reduction Act of 1984, Congress codified the narrower § 1031 framework that exists in our current tax code and outlined the procedural requirements for completing a respected like kind exchange.[42]

§ 1031 exchanges are popular in the context of real estate transactions.[43] For example, an investor in real estate may use the § 1031

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now-open-source/ (arguing that Altcoin Exchange open-sourced technology enables trustless trading between the Bitcoin and Ethereum blockchains); *see also* Radar Relay, *Ledger Integration Update*, MEDIUM (Jan. 17, 2018), https://medium.com/radarrelay/ledger-integration-update-994ce2c5ac93 (launching "a peer-to-peer trading platform for Ethereum-based tokens" to enable decentralized exchanges of cryptocurrency).

37. Revenue Act of 1921, ch. 136, § 202(c), 42 Stat. 227, 230.

38. *See* Bradley T. Borden, *Reverse Like-Kind Exchanges: A Principled Approach*, 20 VA TAX REV. 659, 664–87 (2001); *see also* Marjorie E. Kornhauser, *Section 1031: We Don't Need Another Hero*, 60 S. CAL. L. REV. 397, 400–41 (1987) (discussing the origins of section 1031, traditional explanations of its purpose, and possible factors influencing its enactment).

39. 26 U.S.C § 1031(a)(1) (2017).

40. Starker v. United States, 602 F.2d 1341, 1345 (9th Cir. 1979).

41. *Id*. at 1356.

42. Deficit Reduction Act of 1984, Pub. L. No. 98–369, §77 98 Stat. 494 (1984).

43. *See* Bradley T. Borden, *Like-Kind Exchange Equity Conundrum*, 60 FLA. L. REV. 643, 648, n. 26 (2008) ("In addition to the favorable tax treatment that section 1031 affords to a large cross section of the taxpayer population, section 1031 also provides a living to

exchange to sell one property (which normally results in a tax event on the net capital gains) and buy another property without paying capital gains tax. If the real estate investor purchased the first property for $1,000,000 and sold it for $2,000,000, then the investor would ordinarily pay tax on the net capital gains ($1,000,000 taxed at a 20% long-term capital gain rate is $200,000). However, the investor may choose to re-invest the cash before paying tax by purchasing another more expensive property for $2,000,000. The investor may continue this process with each subsequent sale and purchase and defer the tax payment for years. This tax deferment advantage is not available to investors in stocks, which has been argued as inequitable.[44]

1. *Procedural requirements for completing a like kind exchange*

In general, the taxpayer has 45 days after disposing of the relinquished property to identify the replacement property and 180 days to receive the replacement property.[45] The taxpayer is required to submit a form 8824, which is a three-part descriptive form that provides the IRS with the relevant details of the exchange.[46] To properly submit the form, the taxpayer will attach it to the annual income tax return.[47] If the taxpayer conducts more than one like kind exchange in a year, the taxpayer may file a summary of all of the completed exchanges by attaching a statement with the standard information requested on form 8824 for every completed exchange.[48]

a. Qualified Intermediaries

Like kind exchanges must not involve constructive receipt of cash for the property relinquished, otherwise the IRS will not allow the deferment

thousands of tax advisors, lawyers, and exchange accommodators. Each of these constituents supports section 1031.”).

44. *See* Martin J. McMahon, Jr., *Individual Tax Reform for Fairness and Simplicity: Let Economic Growth Fend for Itself*, 50 WASH. & LEE L. REV. 459, 479 (“There is no good reason that investors should be able to move among various real estate investments without paying taxes on realized gains when the same privilege is not accorded to reinvestment of sales proceeds in a different investment.”).

45. 26 U.S.C. § 1031(a)(3) (2017).

46. INTERNAL REVENUE SERV., U.S. DEP’T OF THE TREASURY, CAT. NO. 12597K, 2017 INSTRUCTIONS FOR FORM 8824 (Sept. 26, 2017), https://www.irs.gov/pub/irs-pdf/i8824.pdf.

47. *Id*.

48. *Id*.

of taxable gains.[49] The simplest type of exchange is a two-party simultaneous swap. However, the IRS allows for more complex exchanges, including deferred exchanges and multi-party exchanges. In order to assist the taxpayer in complying with the cash receipt prohibition for complex exchanges, the taxpayer may use a qualified intermediary that facilitates the exchange using escrow accounts. This qualified intermediary promises to return the proceeds of the exchange to the transferor of the property. The proceeds are used to purchase replacement property of like kind. The requirements for qualified intermediaries were outlined by the IRS in a published 2004 information letter.[50]

b. Limitations of Multi-Party Exchanges

Multi-party § 1031 exchanges, transactions among three or more actors, often utilize qualified intermediaries in order to avoid non-compliance.[51] Limitations on multi-party exchanges among related parties exist due to the potential for tax avoidance.[52] Transactions structured specifically for the purpose of avoiding income tax liabilities utilizing a related party[53] structure will be disqualified by the IRS.[54] For example, assume Related Party A owns an appreciated like kind token (e.g. Bitcoin) and Related Party B owns an non-appreciated like kind token (e.g. LiteCoin) with an adjusted basis that equals its fair market value. Related Party A hopes to dispose of the appreciated token without recognizing any gain. Consequently, Related Party B sells the non-appreciated token to Qualified Intermediary. Subsequently, Qualified Intermediary executes a § 1031 exchange with Related Party A by exchanging the unappreciated token for the appreciated token (Related Party A does not recognize any gain). Then, Qualified Intermediary sells the appreciated token to a third party at fair market value. Lastly, Qualified Intermediary distributes the

49. Carlton v. United States, 385 F.2d 238, 242-43 (5th Cir. 1967).

50. *See* I.R.S. Info. Letter 2004-0230 (Dec. 31, 2004), https://www.irs.gov/pub/irs-wd/04-0230.pdf. ("Section 1.1031(k)-1(g)(4)(iii) provides that a qualified intermediary is a person that (A) is not a disqualified person and (B) enters into a written agreement with the taxpayer (the 'exchange agreement') and, as required by the exchange agreement, acquires the relinquished property from the taxpayer, transfers the relinquished property, acquires the replacement property, and transfers the replacement property to the taxpayer."). *Id.*

51. *See* Swaim v. United States, 651 F.2d 1066, 1069 (5th Cir. 1981) ("[T]axpayers have been allowed wide latitude in structuring [tax-free exchange] transactions.").

52. 26 U.S.C. § 1031(f)(4) (2017).

53. 26 U.S.C §§ 267(b), 707(b) (2017).

54. Rev. Rul. 2002-83, 2002-2 C.B. 927 (2002).

cash from the sale to Related Party B. The end result is that Related Parties A and B have swapped Bitcoin for LiteCoin and then sold the Bitcoin without recognizing any gain. IRS Revenue Ruling 2002-83 states that this type of transaction will not be respected unless the parties wait two years before selling the Bitcoin.

C. § 1031 Does not Patently Prevent a Like Kind Exchange Between Cryptocurrency

1. *Subsection (a) of § 1031*

IRC § 1031(a): "No gain or loss shall be recognized on the exchange of property **held** for productive use in a trade or business or **for investment** if such property is exchanged solely for property of like kind which is to be **held** either for productive use in a trade or business or **for investment**."[55] (emphasis added)

Prior to 2018, § 1031 applied to property either held for productive use in a trade or business or for investment purposes. There are exceptions to this general class of applicable property, which is outlined in subsection (a)(1) and may be summarized as: inventory, securities, partnership interests, or trusts.

a. Whether Cryptocurrency Is a Security

§ 1031 does *not* have its own section-specific definition for "other securities." The IRS has its own code section-specific definitions of "a security," but none of those definitions have been updated to include cryptocurrency.[56] Lastly, the IRS has not issued any direct guidance regarding the issue of whether cryptocurrency is a security.

If an IRS code section does not include a section-specific definition for "a security," then the IRS has often looked to legislative history or case law.[57] Because the legislative history is outdated, and the case law is not relevant to cryptocurrency,[58] the IRS may look to the SEC. If the IRS follows the SEC's guidance on this issue, then certain forms of cryptocurrency are not likely to be considered a security.

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55. 26 U.S.C. § 1031(a)(1) (2017).

56. *See* 26 U.S.C. § 475(c)(2) (2017); *see also* 26 U.S.C § 1236 (2017).

57. *See* Rev. Rul. 2006-1, 2006-1 C.B. 261 (2005) (using legislative intent); *see also* Rev. Rul. 2004-78, 2004-2 C.B. 108 (2004) (using case law).

58. *See* discussion *infra* Sections I.C.*1*.a.i. and I.C.*1*.a.ii.

i. Legislative History

The exclusion of stock and "other securities" from the scope of § 1031 dates back to 1923 and was enacted to combat customers of brokerage firms trading appreciated securities without recognizing gain.[59] Originally, the Revenue Act of 1921 provided that no gain or loss would be recognized when property held for investment or for productive use in a trade or business was exchanged for property of a like kind or use (stock-in-trade included). However, in 1923, the Act was amended to exclude not only stock-in-trade, but also "other securities" in order to correct the abuse that resulted from the 1921 inclusion.[60] However, it should be noted that according to the Court of Appeals for the Ninth Circuit, "The concept behind [§ 1031] derives from the assumption that when an investor exchanges a piece of property for another of like kind, he is merely continuing an ongoing investment, rather than ridding himself of one investment to obtain another."[61]

The Tax Cuts and Jobs Act of 2017 significantly limits the scope of § 1031 by restricting application of the statute to real property.[62] Therefore, § 1031 patently prevents any like kind exchange between cryptocurrency post-2017. Although likely a deviation from legislative intent, every cryptocurrency trade is considered a taxable event under the IRC post-2017.

ii. Case Law

There is an abundance of case law[63] regarding tax-deferred exchanges of partnership interests because § 1031 did not explicitly prohibit[64] that

59. *See* J.S. SEIDMAN, LEGISLATIVE HISTORY OF FEDERAL INCOME TAX LAWS, 1851–1938, 798 (1938).

60. *See* S. REPT. NO. 1113, 67th Cong., 4th Sess. (1923), 1939-1 (Part 2) C.B. 845-846 (In fact, brokers established exchange departments and advertised that they would affect exchange securities for customers that would result in no taxable gain).

61. Teruya Bros., Ltd. v. Comm'r of Internal Revenue, 580 F.3d 1038, 1042 (9th Cir. 2009).

62. *See* Act effective Dec. 31, 2017, Pub. L. No. 115-97, 131 Stat. 2054.

63. *See generally* Miller v. United States, No. NA 61-C-62., 1963 U.S. Dist. LEXIS 9403, 12 A.F.T.R.2d (RIA) 5244 (S.D. Ind. June 14, 1963); Pappas v. Comm'r, 78 T.C. 1078 (1982); Long v. Comm'r, 77 T.C. 1045 (1981); Gulfstream Land & Dev. Corp. & Subsidiaries v. Comm'r, 71 T.C. 587 (1979); Meyer's Est. v. Comm'r, 58 T.C. 311 (1972). *See generally* Banoff & Fried, *An Analysis of Recent IRS Attempts to Narrow the Scope of the Tax-Free Like kind Exchange*, 51 J. TAX'N 66 (1979); James H. Boyd & Kenneth H. Heller, *Like kind Exchanges of Partnership Interests: A Comprehensive Analysis*, 3 REV. TAX'N INDIVIS. 87 (1979); Howard L. Braitman, *Do Miller and Meyer Suggest a Solution*

exchange until 1984.[65] However, prior to 1984, the IRS contended that tax-deferred exchanges of partnership interests were prohibited, which generated the disputes. However, as a result, the IRS and federal courts focused on interpreting the meaning of "other securities" specifically in relation to partnership interests – not to investment products in general. As a result, the case law will not apply to the issue of whether cryptocurrency is a security for the purposes of § 1031.

iii. SEC Guidance

The Securities and Exchange Commission ("SEC") issued a 2017 report on cryptocurrencies, which implicitly suggested that some tokens may not be considered securities. The report provided a general framework for how cryptocurrencies will be evaluated and likely regulated by the SEC.[66] The report all but assured that at least one cryptocurrency, DAO token, is considered a security by the SEC in accordance with case law.[67]

The baseline four-prong test that the SEC intends to use to evaluate the properties of each cryptocurrency is colloquially known as the *Howey* test: "A [security] is [1] an investment of money [2] in a common enterprise [3] with a reasonable expectation of profits [4] to be derived from the entrepreneurial or managerial efforts of others."[68] Under the *Howey* test, a cryptocurrency token should *not* be considered a security if it has "practical utility—such as widespread recognition as a general medium of exchange, or current exchangeability for an available product or service—and if participants are purchasing the token to actually use it, either now or in the future, rather than for speculative purposes."[69] Bitcoin, the most dominant cryptocurrency,[70] is accepted by a growing number of merchants,[71]

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for the "Crossover Point"? 54 TAXES 168 (1976); John Zimmerman, *A Select Problem in Section 1031 Partnership Exchanges*, 59 TAXES 139 (1981).

64. 26 U.S.C. § 1031(a)(2)(D) (2017).

65. *See* Deficit Reduction Act of 1984, Pub. L. No. 98–369, 98 Stat. 494. (applies to exchanges after July 18, 1984).

66. Report of Investigation, Exchange Act Release No. 81207, 2017 WL 7184670 (July 25, 2017).

67. *Id*.

68. *See* SEC v. Edwards, 540 U.S. 389, 393 (2004); SEC v. W.J. Howey Co., 328 U.S. 293, 301 (1946); United Housing Found., Inc. v. Forman, 421 U.S. 837, 852-53 (1975).

69. Joseph A. Hall & Reuben Grinberg, *SEC Confirms that Some Initial Coin Offerings Are Illegal Unregistered Securities Offerings*, HARV. LAW SCH. F. ON CORP. GOVERNANCE AND FIN. REG. (Aug. 10, 2017), https://corpgov.law.harvard.edu/2017/08/10/sec-confirms-that-some-initial-coin-offerings-are-illegal-unregistered-securities-offerings/.

70. *Cryptocurrency Market Capitalizations*, COINMARKETCAP, https://coinmarketcap.com ("BTC Dominance: 54.8%") (last updated Oct. 14, 2017).

including Microsoft, Overstock, and the Sacramento Kings.[72] Although Bitcoin has likely satisfied the "practical utility" requirement, other forms of cryptocurrency may be considered a security by the SEC unless they are classified as a utility token.

A utility token is a company-specific currency that represents ownership of some product or service that the company provides. Under the *Howey* test definition, a utility token will not be classified as a security unless it is purchased for speculative purposes—not for actual use of the token "either now or in the future."[73] As an over-simplified way to perceive utility tokens, imagine the following scenario: a new arcade announces plans to open by publishing 3-D renderings of the establishment and a list of arcade game machines that will be available for customer use. In addition, the arcade declares that customers will only be allowed to play the arcade games with company-issued tokens, and that the arcade will only issue a finite number of tokens. Assuming that the proposition is enticing enough, customers may purchase the tokens prior to the arcade opening in anticipation of frequenting the establishment. As the arcade's opening night nears, exuberance around the arcade heightens, and the price of the tokens rise due to the increasing demand and finite supply. Part of the struggle for the SEC lies in determining whether purchasers are intending to use the token, or whether they are strictly intending to sell to the next highest bidder. An answer to this hypothetical will rely on the facts and circumstances surrounding the cryptocurrency token issuance and subsequent investor behavior.[74]

b. "Held for Investment"

The IRS and federal courts look to the taxpayer's intent to determine whether the property was held for investment.[75] In order to satisfy the statute, the taxpayer's *primary* intent must be an investment intent.[76]

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71. Kevin V. Tu & Michael W. Meredith, *Rethinking Virtual Currency Regulation in the Bitcoin Age*, 90 WASH. L. REV. 271 (2015).

72. *Sacramento Kings Become First Professional Sports Team to Accept Virtual Currency Bitcoin*, NBA (Jan. 16, 2014), http://www.nba.com/kings/news/sacramento-kings-become-first-professional-sports-team-accept-virtual-currency-bitcoin/.

73. *See* Hall & Grinberg, *supra* note 70.

74. *See* Report of Investigation, Exchange Act Release No. 81207, 2017 WL 7184670 (July 25, 2017) ("Whether or not a particular transaction involves the offer and sale of a security—regardless of the terminology used—will depend on the facts and circumstances, including the economic realities of the transaction.").

75. *See* Bolker v. Comm'r, 81 T.C. 782, 804 (1983), affd. 760 F.2d 1039 (9th Cir. 1985).

76. *See* Moore v. Comm'r, 93 T.C.M. (CCH) 1275, at 9 (T.C. 2007).

The IRS has already acknowledged that cryptocurrency "may be . . . held for investment."[77] Additionally, a federal court held that a Texas Bitcoin Ponzi scheme met "the definition of investment" and was therefore subject to regulation pursuant to Sections 20 and 22 of the Securities Act of 1933 and Sections 21 and 27 of the Exchange Act of 1934.[78] Both the IRS and the federal court system agree that cryptocurrency may be held for investment in accordance with the language in the statute.

However, taxpayer intent may vary based on facts and circumstances. In one instance, a taxpayer may hold some amount of cryptocurrency with investment as the primary intent, while simultaneously holding other cryptocurrency with personal use as the primary intent. In this instance, the taxpayer should be allowed to designate certain cryptocurrency as "held for investment" and the other cryptocurrency as "personal use property". The IRS allows taxpayers to pick and choose intent with other assets such as real estate where the taxpayer can designate one house as a residence and another house as an investment property.[79]

In order to bolster a taxpayer's argument that property was held for investment rather than for personal use, the taxpayer should keep the property "in storage."[80] Relating this argument to cryptocurrency, the taxpayer should keep the cryptocurrency in cold storage (paper or hardware) rather than on a hot wallet (mobile or desktop).[81] By doing so, the taxpayer signals an intent to store the cryptocurrency for safe-keeping rather than having it readily accessible to send at a moment's notice.

2. *Subsection (h) of § 1031*

IRC § 1031(h): Personal property used predominantly within the United States and personal property used predominantly outside the United States are not property of a like kind.[82]

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77. Notice, 2014-16 I.R.B. 938 (2014) ("The Internal Revenue Service (IRS) is aware that 'virtual currency' may be used to pay for goods or services, or held for investment.").

78. *See* SEC v. Shavers, No. 4:13-CV-416, 2014 WL 4652121, at 8 (E.D. Tex. Sept. 18, 2014).

79. *See* FS-2008-18, Like-Kind Exchanges Under IRC Section 1031, INTERNAL REVENUE SERVICE (Feb. 2008), https://www.irs.gov/pub/irs-news/fs-08-18.pdf.

80. Tyler v. Comm'r, 6 T.C.M. (CCH) 275 (T.C. 1947); Reynolds v. Comm'r, 4 T.C.M. (CCH) 837 (T.C. 1945).

81. In cold storage, the private keys are kept separate from a mobile device or desktop; whereas, with a hot wallet, the private keys are readily accessible with access to the mobile device or desktop. *See* ARVIND NARAYANAN ET AL., BITCOIN AND CRYPTOCURRENCY TECHNOLOGIES: A COMPREHENSIVE INTRODUCTION 103-04 (2016).

82. 26 U.S.C. § 1031(h) (2017).

For example, a § 1031 exchange between—personal property that was stored predominantly in the United States—and—personal property that was stored predominantly in Japan—will be disallowed under subsection (h).

a. Where Is Cryptocurrency Held?

Cryptocurrency held for investment in the hands of an individual taxpayer will be considered personal property because it is moveable—in contrast to real property, which is fixed. Subsection (h) does not distinguish between tangible and intangible personal property, so both types of property are treated similarly by the statute.[83]

i. Intangible Property's Location

The IRS has ruled that for specific application to subsection (h), "intangible assets are used where they are enjoyed," and "the location of the use of the intangible asset can be determined by where the property is licensed to be enjoyed."[84] The only way to enjoy the use of cryptocurrency is to have access to the private key.[85] In essence, the owner of the cryptocurrency is the holder of the private key. Under subsection (h), where the private key is held may be a reasonable method to determine where the cryptocurrency is located because the holder of the private key is theoretically licensed to enjoy the use of the cryptocurrency.

Private keys are stored in a variety of forms: memorized, written on a paper wallet, stored digitally in a mobile hot wallet, in a desktop hot wallet, in an online wallet, or in a cold storage device. In addition, multi-signature wallets add an extra layer of security by requiring multiple parties to authorize the spending of the cryptocurrency. Some taxpayers may choose to separate themselves from the private key, similar to the way that some taxpayers have chosen to bury treasure on a deserted island.[86] The security mechanisms for taxpayer property tend to cover a wide spectrum and have done so long before the invention of cryptocurrency. Therefore, determining the location of a private key is a fact-dependent inquiry that

83. *See* I.R.S. Tech. Adv. Mem. 200602034 (JAN. 13, 2006).

84. *See id.*

85. *See* NARAYANAN, *supra* note 82.

86. Pirate Captain Kidd's 17th century "treasure" was found in Madagascar in 2015. Additionally, cryptocurrency holders have been the target of violent criminal attempts to gain access to private keys. *See Da Vance: Man Indicted for Stealing $1.8 Million in Cryptocurrency*, MANHATTAN DISTRICT ATT'YS OFF. (Dec. 12, 2017), http://manhattanda.org/press-release/da-vance-man-indicted-stealing-18-million-cryptocurrency.

will vary and may pose a difficult conundrum for a federal court when discerning the "predominant" location[87] of the cryptocurrency.[88]

b. Subsection (h) Limitations to a § 1031 Exchange

A potential application of subsection (h): if a taxpayer conducts an exchange with a counterparty that predominantly held the cryptocurrency private key outside of the United States, then the taxpayer may not be able to conduct a lawful § 1031 exchange. This limitation obstructs one of the major benefits of a universal currency: cross-border transactions. Therefore, in order to satisfy subsection (h), the taxpayer must only exchange cryptocurrency with cryptocurrency that was predominantly held within the United States.[89]

Part II

A. **The Definition of Like Kind**

1. *Nature and Character*

As guidance to the taxpayer, the IRS generally defines like kind personal property as property that is of the same nature or character, irrespective of grade or class.[90] Unfortunately, the IRS has not provided a comprehensive definition for "nature or character" that can be applied to cryptocurrency. For § 1031, the IRS analyzes intangible personal property in a two-part test: comparing (1) "the nature or character of the rights involved (e.g., a patent or a copyright)" and (2) "the nature or character of the underlying property to which the intangible personal property relates."[91]

When interpreting "nature or character" of intangible property, the IRS has analyzed "the substance of the specific rights granted," and "not merely

87. In determining whether the property was held "predominantly outside the United States," the time period is limited to (1) the two years prior to the exchange or (2) however long the property was held by the counterparty, whichever is shorter.

88. Imagine a situation where half of a private key was memorized by a taxpayer residing abroad and the other half was memorized by a taxpayer residing in the United States. In order to spend the cryptocurrency, either taxpayer is forced to acquire the missing half. How should the "predominant" location of the private key be determined?

89. Kelly E. Alton and Louis S. Weller, *New IRS Ruling Unveils Restrictive Approach to Like Kind Exchanges of Intangibles*, 104 J. TAX'N 208, 209 (2007) ("The location of personal property . . . uses a two-year look-back rule for relinquished property and a two-year look-forward rule for replacement property to determine where the property is predominantly used.").

90. 26 C.F.R. § 1.1031(a)-2(a)

91. 26 C.F.R. § 1.1031(a)-2(c)(1).

the labels."[92] In other words, simply because two pieces of intangible property are labeled differently does not bar a like kind exchange as long as they are substantively similar. As the IRS clarifies, "even the narrowest interpretation of the like kind standard does not require that one property be identical to another or that they be completely interchangeable."[93] In further explanation, the IRS provides two simple examples of exchanges:

> Example 1. Taxpayer K exchanges a copyright on a novel for a copyright on a different novel. The properties exchanged are of a like kind.
>
> Example 2. Taxpayer J exchanges a copyright on a novel for a copyright on a song. The properties exchanged are not of a like kind.[94]

Therefore, a simple question to keep in mind in determining whether intangible property is like kind may be: Is this more analogous to a novel-novel exchange, or more analogous to a novel-song exchange?

2. *Prior Allowed and Disallowed Like Kind Exchanges*

In order to ascertain a more comprehensive definition of like kind property, it is useful to compare the different § 1031 exchanges that the IRS has allowed and disallowed in the past. The most relevant comparisons are exchanges involving intangible personal property. However, since exchanges of tangible personal property are analyzed under the same "nature or character" standard that governs intangible personal property, comparing tangible personal property rulings can help further exemplify the "nature or character" standard.[95]

a. Allowed Exchange of an FCC Radio License for an FCC Television License[96]

The IRS allowed the exchange of intangible licenses despite the fact that one FCC license was for radio and the other FCC license was for

92. *See* I.R.S. Tech. Adv. Mem. 200035005 (Sept. 1, 2000).
93. *Id*.
94. 26 C.F.R. § 1.1031(a)-2(c)(3).
95. 26 C.F.R. § 1.1031(a)-2(c).
96. *See* I.R.S. Tech. Adv. Mem. 200035005 (Sept. 1, 2000).

television. When applying the two-part test described in the IRC, the IRS stated: "Other than the different labels, the only differences between the various FCC licenses are the specific operating parameters (such as frequency, operating hours, power, and antenna information) and geographic location."[97] The IRS concluded that these differences are differences in grade or quality, not nature or character. When the IRS analyzed the underlying assets of the intangible property (i.e., novel-novel or novel-song comparison), the IRS rejected the argument that a radio apparatus and a television apparatus were the underlying assets. Instead, the IRS concluded that the underlying assets were the "*use* of the apparatus" (emphasis added). Due to that distinction, the exchange was deemed "like kind" for the purposes of § 1031.

b. Allowed Exchange of Baseball Player Contracts

In a 1967 ruling lacking substantive analysis, the IRS declared that baseball player contracts are considered like kind intangible property for the purposes of § 1031. Therefore, when major league baseball clubs trade players, the gain may be deferred. Based on the ruling, it can be assumed that differing player positions are not differing nature or character, but rather differing grade or class.

c. Allowed Exchange of Fishing Permits[98]

In a 2011 version of the IRS Fishing Audit Technique Guide, the IRS discussed the use of § 1031 to defer gain on the exchange of intangible property in the form of fishing permits. The IRS declared that a § 1031 exchange is allowed "regardless of whether the permit is for a different fishery, a different species of fish, or a different type of fishing gear." When compared with FCC licenses and baseball player contracts, it appears that the IRS views the underlying assets of the licenses as the *use* of the fisheries, which are of the same nature or character.

d. Exchanges of Coins

The IRS and federal courts have ruled on multiple occasions regarding § 1031 exchanges of coins,[99] which have been argued as most closely

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97. *See id.*

98. INTERNAL REVENUE SERV., U.S. DEP'T OF THE TREASURY, FINISHING AUDIT TECHNIQUE GUIDE (Aug. 2011), https://www.irs.gov/pub/irs-utl/fishing_atg.pdf (tax guidance for the fishing industry).

resembling cryptocurrency.[100] In these rulings, the IRS held that coins valued for different purposes are not like kind. For example, gold coins with value determined by bullion content, and gold coins with value determined by numismatists, are not like kind.[101] Additionally, gold coins and silver coins, both with value determined by bullion content, are also not like kind[102] because silver is primarily used as an industrial commodity whereas gold is used primarily as an investment.[103] However, coins of the same metal with value determined by the same content (i.e., bullion or numismatists) are considered like kind despite differences in size, weight, grade, or historical background.[104] Therefore, by logical conclusion, the IRS and federal courts are concerned with the method and reason that the coins have value when determining whether coins (tangible personal property) are like kind.

e. Disallowed Exchange of Livestock of Different Sexes

As a particularly unique addition to § 1031, § 1031(e) states that an exchange between male livestock and female livestock is not like kind.[105] Congress sought to prevent the practice of exchanging slaughter cattle (male livestock) for breeding cattle (female livestock) in a tax deferred setting.[106] Congress' livestock logic can be contrasted with the IRS' baseball player logic because cattle acquired for different purposes are not like kind, yet players acquired for different purposes (i.e., pitchers exchanged with position players) are like kind.

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99. *Compare* I.R.S. Rev. Rul. 79-143, 1979-1 C.B. 264, I.R.S. Rev. Rul. 82-96, 1982-1 C.B. 113, *and* California Fed. Life Ins. Co. v. Comm'r, 76 T.C. 107 (1981) (United States double eagle gold coins and Swiss francs are not like kind), *with* I.R.S. Rev. Rul. 76214, 1976-1 C.B. 218 (exchange of peso bullion type coins for corona bullion type coins was a like kind exchange), *and* I.R.S. Rev. Rul. 82-166, 1982-2 C.B. 190 (gold bullion is not like kind to silver bullion).

100. Aswath Damodaran, *The Bitcoin Boom: Asset, Currency, Commodity or Collectible?* MUSINGS ON MARKETS (Oct. 24, 2017), https://aswathdamodaran.blogspot.com/2017/10/the-bitcoin-boom-asset-currency.html.

101. *See* I.R.S. Rev. Rul. 79-143, 1979-1 C.B. 264 (United States $20 numismatic-type gold coins were not like kind to South African bullion-type Krugerrand gold coins).

102. Rev. Rul. 76-214, 1976-1 C.B. 218 (1976).

103. Although this was arguably true in 1982, the argument is less true today.

104. *See* Rev. Rul. 76-214, 1976-1 C.B. 218 (1976) (categorizing an exchange of peso bullion-type coins for corona bullion-type coins as a like kind exchange).

105. 26 U.S.C. § 1031(e) (2017).

106. *See* S. REP. No. 91-552, at 102 (1969), *as reprinted in* 1969 U.S.C.C.A.N. 2027, 2132; H.R. REP No. 91-413, at 66 (1969), *as reprinted in* 1969 U.S.C.C.A.N. 1645, 1712.

B. Arguments Against a Cryptocurrency § 1031 Exchange and Corresponding Counterarguments

1. *Arguments Against*

a. *Cryptocurrencies Differ in Nature and Character*

A central argument against allowing a § 1031 exchange for cryptocurrency is that they are too dissimilar in nature and character. With over 1000 different forms of cryptocurrency, many token issuers self-promote distinctions in order to stand out. The cryptocurrency world is divided into two groups: Bitcoin and Altcoins. Altcoins are simply every form of cryptocurrency excluding Bitcoin. Because most online exchanges only facilitate trading between Bitcoin and an Altcoin (as opposed to between an Altcoin and another Altcoin), it is most practical to analyze the differences between Bitcoin and popular Altcoins.

i. *Bitcoin Versus Zcash*

Bitcoin and Zcash are two popular forms of cryptocurrency that are unlikely to be classified as securities due to widespread utility, yet both have been regarded as distinct by technologists.[107] The main difference between Bitcoin and Zcash is Bitcoin's pseudonymity contrasted with Zcash's anonymity. For every Bitcoin transaction, the sender and receiver's public keys[108] and the amount of Bitcoin transacted are entirely visible by the public. For every Zcash transaction, those entries can be shielded from public view. Zcash was built on the premise that "[p]rivacy makes whole societies safer, stronger and more prosperous."[109] In order to achieve the heightened level of privacy, Zcash developers forked Bitcoin's code by implementing a series of technical changes.[110] In an analogy

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107. *See* Andy Greenberg, *Zcash, Untraceable Bitcoin Alternative, Launches in Alpha*, WEIRD (Jan. 20, 2016), https://www.wired.com/2016/01/zcash-an-untraceable-bitcoin-alternative-launches-in-alpha/; *see also Episode 8: Hit or Stay, Bet on 21.co*, SOUNDCLOUD (Feb. 2017), https://soundcloud.com/blockchannelshow/episode-8-hit-or-stay-a-bet-on-21co.

108. A public key in this context is essentially a public address for the wallet of the sender and receiver.

109. Greenberg, *supra* note 108.

110. *Hashing algorithm*: Bitcoin uses the double SHA-256 hash function, whereas, Zcash uses the Equihash hash function; *block size*: Bitcoin uses a 1-megabyte block size,

offered by the creators of Zcash: "If Bitcoin is like http for money, Zcash is https—a secure transport layer."[111] The key issue for the IRS and federal courts is whether these technical changes substantively alter the underlying assets of the license to use the cryptocurrency.

ii. Bitcoin Versus Litecoin

Litecoin was created in 2011 by former Google engineer Charles Lee and has been dubbed "the silver to Bitcoin's gold."[112] The IRS has previously ruled that an exchange between gold and silver bouillon is not a like kind exchange.[113] Litecoin is a form of cryptocurrency that effectively allows for faster transactions than Bitcoin through a more decentralized process with lower barriers to entry. Just as Zcash did, Litecoin implemented a series of technical changes to the Bitcoin framework in order to achieve the faster transaction times and greater decentralization.[114] Therefore, Litecoin's technical alterations make it more suitable as a medium of exchange (similar to silver), while Bitcoin is more suitable as a store of value (similar to gold).

b. Invalidation Due to an Improper Intermediary

The vast majority of exchanges between cryptocurrency are conducted simultaneously without the need for a qualified intermediary. But, the IRS may challenge the use of a like kind exchange between cryptocurrency by arguing that the aforementioned online exchanges act as *unqualified* intermediaries. A plausible argument can be made that the centralized online exchange is in possession of the property because it holds the private keys to the tokens, which is likely the most accurate metric for determining

whereas, Zcash uses a 2-megabyte block size; *block target interval*: Bitcoin uses a 10-minute block target interval, whereas, Zcash uses a 2.5-minute block target interval; *privacy Protocol*: Zcash implemented zero-knowledge proofs (specifically zk-SNARKs), developed by Eli Ben-Sasson, Alessandro Chiesa, Christina Garman, Matthew Green, Ian Miers, Eran Tromer, and Madars Virza in 2014.

111. *What Is Zcash?*, ZCASH, https://z.cash/ (last visited Dec. 21, 2017). "Https" is an acronym for "Hyper Text Transfer Protocol Secure." It is a more secure version of "http" because it certifies that communications between the browser and the website are encrypted. *Id.*

112. *Litecoin*, LITECOIN, https://litecoin.info/index.php/Litecoin (last visited Dec. 21, 2017).

113. REV. RUL. 82-166, 1982-2 C.B. 190 (1982).

114. Litecoin mainly differs from Bitcoin in coin limit, hashing algorithm, and mean block time. *Litecoin Versus Bitcoin: What's the Difference?*, GENESIS MINING, https://www.genesis-mining.com/litecoin-vs-bitcoin (last visited Oct. 21, 2018).

ownership of tokens. If that argument is accepted by a court, then the like kind exchange may not be respected if the online exchange used did not fit within IRS-designated qualified intermediary standards.[115]

2. *Counterarguments*

a. "Cryptocurrencies Differ in Nature and Character"

Although Bitcoin, Zcash, and Litecoin are not identical from a technical perspective, the nature and character of the cryptocurrencies should be considered like kind.[116] They are all forms of internet money that are meant to facilitate peer to peer value exchange. They all function on a decentralized network of computers and are rooted in the 2008 Bitcoin whitepaper framework. In determining the degree of similarity among those tokens, it is improper to compare the lines of their code.[117] Comparing tokens from a micro-technical perspective is akin to comparing copyrights on novels by pointing out differences in story line and chapter organization. Every novel is written in a distinct way for a distinct purpose, just as each cryptocurrency was created with a certain amount of proprietary code in order to accent certain characteristics.

The IRS and federal courts should apply the prior rulings on intangible property to cryptocurrencies (FCC radio and television licenses, baseball player contracts, and fishing permits). If the IRS applies its logic in the FCC radio license to FCC television license exchange, then the differing operating parameters of the cryptocurrencies are not differences in nature or character. The disregarded differences in frequency, operating hours, power, and antenna information between the television and radio licenses are similar to the differences in hash function, block size, and block target interval among the cryptocurrencies, which should be disregarded as well. If the IRS applies the baseball player contracts ruling, then the use of the underlying asset is allowed to differ somewhat in purpose. The underlying asset for a baseball player's contract is the ability to use the player. The

115. *See* I.R.S. Info. Letter 2004-0230 (Dec. 31, 2004), https://www.irs.gov/pub/irs-wd/04-0230.pdf.

116. It is important to note that many forms of cryptocurrency (known as ERC-20 tokens) are technically more similar to each other than Bitcoin, Litecoin, and Zcash are. This argument for a like-kind exchange between ERC-20 tokens is significantly easier to make and, thus, is assumed here, although it is a point of contention and not the focus of this article.GITHUB

117. Bitcoin's source codes used to be approximately 3,000 lines. Today, it contains more than 100,000 lines. *Bitcoin*, GITHUB, https://github.com/bitcoin (last visited Oc. 21, 2018).

IRS did not limit the exchange to pitchers for pitchers, but instead allows a pitcher to be exchanged for a field position player. The same deference should be afforded to cryptocurrencies that may be used for different purposes such as privacy (Zcash) or faster transactions (Litecoin). If the IRS applies the fishing permits ruling, then the use of the underlying asset is allowed to differ in method. In other words, how the underlying asset is used may differ somewhat. With regards to fishing permits, it does not bother the IRS that the methods can vary for catching different species of fish in different fisheries with different gear. In terms of cryptocurrency, it should also not bother the IRS that the cryptocurrencies are sent and received through different methods.

The IRS and federal courts should not apply the disallowed gold bullion with silver bullion exchange to cryptocurrency because it is an outdated ruling regarding tangible property. The logic of the 1982 ruling relies on the fact that silver is primarily used as an industrial commodity, whereas gold is used primarily as an investment.[118] It is important to note that this ruling came on the heels of Silver Thursday,[119] which shook investor confidence in the silver market. Since the early 80's, the silver market has matured due to growing investor confidence.[120] Additionally, the ruling applies to tangible property, not intangible property, so it should carry less weight than the aforementioned rulings on intangible property because the statutory provisions differ.[121]

b. "Invalidation Due to an Improper Intermediary"

The user of an online exchange is allowed withdraw the property from the online exchange at the user's discretion. The online exchanges do not hold coins in escrow during the time lag between matching buyers with sellers. Instead, the trade is in a hypothetical state of flux until the counterparty is identified. Only at that point is the trade executed. In this situation, the online exchange never takes possession of the exchanged

118. Rev. Rul. 82-166, 1982-2 C.B. 190 (1982).

119. W.J. STREETER, THE SILVER MANIA: AN EXPOSÉ OF THE CAUSES OF HIGH PRICE VOLATILITY OF SILVER ix-x (1984) (discussing the Hunt Brothers attempt to corner the silver market in 1980).

120. Notably, Warren Buffett and Bill Gates both took large silver positions between 1995 and 1999. *See* Gretchen Morgenson, *Gates Putting Some Money in Silver Miner*, N.Y. TIMES (Sept. 29, 1999), http://www.nytimes.com/1999/09/29/business/gates-putting-some-money-in-silver-miner.html.

121. *Compare* 26 C.F.R. § 1.1031(a)-2(b), *with* 26 C.F.R. § 1.1031(a)-2(c).

property and only performs the service of matching buyers and sellers. For that service, the online exchange charges a value-based commission per trade by acting merely as a broker, not an intermediary. Additionally, it is important to note that centralized online exchanges may elect to pursue the necessary credentials to become qualified intermediaries in order to satisfy IRS regulations.

Part III

When deciding whether a § 1031 exchange between cryptocurrency prior to 2018 is permissible, the IRS has three options: (1) not permissible between any forms of cryptocurrency, (2) permissible between some forms of cryptocurrency, or (3) permissible between all forms of cryptocurrency.

A. Effects of Option (1)

If the IRS selects option (1) and bars a § 1031 exchange between any forms of cryptocurrency, then the trading of cryptocurrency will be taxed similarly to the trading of securities with respect to capital gains. A taxpayer with an actively traded portfolio of securities encounters tax liabilities annually. The same would apply to cryptocurrency traders as any exchange from one cryptocurrency to another would constitute a taxable event. For example, a purchase of Bitcoin and then a subsequent exchange of the Bitcoin for Litecoin is taxed as a purchase of Bitcoin, then a sale of Bitcoin, and then a purchase of Litecoin. Therefore, the taxpayer must pay tax on the capital gains of Bitcoin (assuming it appreciated between the time of purchase and sale) even though the taxpayer never received any cash. Taxpayers may encounter a liquidity issue because fiat poor taxpayers may be forced to sell cryptocurrency in order to pay a tax bill because the IRS only accepts taxes in legal tender.[122] It has been argued that liquidity issues lead to a higher incidence of tax avoidance.[123]

122. *See* S.B. 1091, 53 Leg., 2d Reg. Sess. (Ariz. 2018) (proposing that the Arizona legislature that would, if approved, let taxpayers make their payments in bitcoin or other cryptocurrencies).

123. Bryan T. Camp, *The Play's the Thing: A Theory of Taxing Virtual Worlds*, 59 HASTINGS L.J. 1, 41 (2007) ("[I]n the absence of cash, taxpayers may not understand they have reportable income and, if they do understand, may have difficulty in setting aside cash from other transactions to pay the resulting tax. Thus, when bartering is done informally and directly between taxpayers, there may be a high level of noncompliance in reporting the income received.").

B. Effects of Option (2)

If the IRS selects option (2) and permits a § 1031 exchange between some forms of cryptocurrency and not others, then the cryptocurrency markets will react to the changed conditions. Cryptocurrencies that are considered like kind by the IRS will experience increased trading volume among United States taxpayers. Additionally, tax avoidance measures regarding the non-like kind tokens will likely increase. A ruling of this nature is a dangerous precedent to set because it would burden the IRS with monitoring and analyzing the fast-moving developments of over 1000 forms cryptocurrency in order make accurate rulings on each challenged exchange. Because the IRS' current guidance related to cryptocurrency has already been deemed insufficient due to a lack of resources,[124] the task of monitoring cryptocurrency development seems impractical.

C. Effects of Option (3)

If the IRS selects option (3) and permits a § 1031 exchange between all forms of cryptocurrency, then the short-term cryptocurrency traders could receive identical tax treatment to long-term buy-and-hold investors. Essentially, there would be no difference in tax treatment for a trader that made thousands of like kind exchanges than a long-term investor that purchased cryptocurrency once and never made a single exchange. If compared to the stock market, high frequency traders would receive the same tax treatment as a value investor.

Warren Buffett, a value investor, persuasively explained the power of this type of tax treatment in his 1989 letter to Berkshire Hathaway shareholders:

> Imagine that Berkshire had only $1, which we put in a security that doubled by yearend and was then sold. Imagine further that we used the after-tax proceeds to repeat this process in each of the next 19 years, scoring a double each time. At the end of the 20 years, the 34% capital gains tax that we would have paid on the profits from each sale would have delivered about $13,000 to the government and we would be left with about $25,250. Not bad. If, however, we made a single fantastic investment that itself doubled

124. *See* TREASURY INSPECTOR GEN. FOR TAX ADMIN., REF. 2016-30-083, AS THE USE OF VIRTUAL CURRENCIES IN TAXABLE TRANSACTIONS BECOMES MORE COMMON, ADDITIONAL ACTIONS ARE NEEDED TO ENSURE Taxpayer Compliance (Sept. 21, 2016), https://www.treasury.gov/tigta/auditreports/2016reports/201630083fr.pdf ("[T]he IRS's current guidance related to virtual currencies is insufficient.").

> 20 times during the 20 years, our dollar would grow to $1,048,576. Were we then to cash out, we would pay a 34% tax of roughly $356,500 and be left with about $692,000.
>
> The sole reason for this staggering difference in results would be the timing of tax payments. Interestingly, the government would gain from Scenario 2 in exactly the same 27:1 ratio as we - taking in taxes of $356,500 vs. $13,000 - though, admittedly, it would have to wait for its money.[125]

When Berkshire's initial $1 is multiplied by the billion-dollar gains derived from cryptocurrency purchases, it becomes clear that a favorable decision on this tax issue had the ability to generate billions of dollars for taxpayers and the government over time.

Unfortunately, the Tax Cuts and Jobs Act of 2017 limits the use of the like kind exchange to real property,[126] so the statute does not apply to cryptocurrency for any trade after 2017. The limitation passed by Congress to § 1031 deviates from nearly a century of tax law.[127] The real estate industry remains unaffected by the limitation, yet other communities that rely on collecting and trading appreciating items, such as coins, may be dramatically affected. Nevertheless, cryptocurrency holders may attempt to file tax returns for transactions prior to 2018 and rely on § 1031 as it was enforced prior to the tax reform. The effect of a successful form 8824 filing for 2017 transactions would delay a tax payment on cryptocurrency gains until April of 2019.

In conclusion, when the IRS addresses cryptocurrency transactions, it benefits taxpayers and the government to permit like kind exchanges between cryptocurrency. A favorable ruling by the IRS is consistent with legislative intent and established legal precedent. Ironically, Congress' estimated revenue effects of the limitation of § 1031 to real property is a net $30 billion gain between 2018 and 2027;[128] however, as Warren Buffett professed almost 30 years ago, Congress' position is near-sighted at best.

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125. Warren E. Buffett, Buffett's Letter to the Shareholders, BERKSHIRE HATHAWAY INC. (Mar. 2, 1990), http://berkshirehathaway.com/letters/1989.html.

126. *See* Act effective Dec. 31, 2017, Pub. L. No. 115-97, 131 Stat. 2054.

127. *See* discussion *supra* Section I.C.*1*.a.i.

128. JOINT COMM. ON TAXATION, JXC-63-17, ESTIMATED REVENUE EFFECTS OF THE "TAX CUTS AND JOBS ACT" (Dec. 6, 2017), https://www.jct.gov/publications.html?func=startdown&id=5047.

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