TAXING A MOVING TARGET: TAX ISSUES INVOLVING CRYPTOCURRENCY

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Lamborghinis lined New York City's Javits Center for a day this past May. The occasion was not a car show but a cryptocurrency conference. Cryptocurrencies and the related blockchain technology have proven very lucrative over the past few years, and many organizations—from technology behemoths and big banks to the U.S. government—are incorporating the technology into what they do.

Cryptocurrencies raise many tax issues, with reporting of income front and center. After providing some background, this article will review some of the tax issues. The reader will quickly see that many of the tax questions remain unanswered. Much of this results from complexities of the technology itself—it is difficult for a person not versed in technology to understand much of what has happened. In Parts I and II, we will provide some background and review the basics. In Part III, we will provide an overview of the tax issues. Next, in Part IV we will review developments in the enforcement area. We will then review IRS guidance (Part V) and the tax treatment of common transactions that arise in these areas, such as forks (Part VI) and coin offerings (Part VII). We will end with a discussion of tax reporting issues in Part VIII.

The considerable uncertainty in this area appears to have led to large-scale underreporting of income. Many professional organizations such as the ABA Tax Section, the AICPA and the Information Reporting Program Advisory Committee have weighed in on the need for guidance in this area. Others will surely join the chorus.

I. Background

A. Cryptocurrencies, Past and Present

Bitcoin was the first cryptocurrency, introduced in 2008 through an anonymous white paper as a solution to the problem of relying on large financial institutions to implement e-commerce. A single Bitcoin,
in 2009 valued at a fraction of a penny, by 2011 was trading for more than $30\textsuperscript{7} and was trading more recently for nearly $20,000.\textsuperscript{8}

There are more than 1,000 tradable cryptocurrencies,\textsuperscript{9} with a combined market capitalization that has been as high as $710 billion.\textsuperscript{10} At least 39 cryptocurrencies have had a market cap of more than $1 billion,\textsuperscript{11} with Bitcoin’s currently being the largest at $113 billion.\textsuperscript{12} Some of the most popular cryptocurrencies besides Bitcoin are Bitcoin Cash, Ether and Ripple.

B. Cryptocurrencies’ Strengths and Weaknesses

Cryptocurrencies have many advantages over government-issued currencies. The supply cannot be manipulated by a central government, so massive inflation is unlikely. Traditional forms of fraud—in this case altering a previous transaction or changing the order of transactions—is prohibitively expensive to commit in the most popular cryptocurrencies. And international transactions can be completed in a matter of a few hours and for very small fees.

However, it can also be risky to store one’s wealth in cryptocurrencies. Cryptocurrencies tend to be very volatile—as recently as November 2017, Bitcoin’s value in U.S. dollars fluctuated more than 20% in a single day.\textsuperscript{13} Further, cryptocurrencies are accessed via digital wallets that require a unique passcode. If a user forgets or misplaces their passcode, he cannot access his wallet and essentially loses the cryptocurrencies the wallet stored. A digital forensics firm found that upwards of 2.78 million Bitcoin have been lost.\textsuperscript{14}

C. Crypto-Companies

Despite the drawbacks of Bitcoin, recent surveys estimate that nearly 5% of Americans have a cryptocurrency wallet.\textsuperscript{15} These consumers have been aided by technology that makes it easier to transact in cryptocurrencies. There are dozens of companies that will set up a wallet for users so that they can transact in cryptocurrencies, and there are exchanges where users can buy and sell cryptocurrencies for fiat currencies like U.S. dollars.\textsuperscript{16} Wallets may be either custodial or non-custodial.

\textsuperscript{7} https://www.coindesk.com/price/
\textsuperscript{8} https://www.coindesk.com/900-20000-bitcoins-historic-2017-price-run-revisited/
\textsuperscript{9} https://coinmarketcap.com/all/views/all/ https://www.ft.com/content/a6b90a8c-f4b7-11e7-8715-e94187b3017e
\textsuperscript{10} https://www.ft.com/content/a6b90a8c-f4b7-11e7-8715-e94187b3017e
\textsuperscript{11} Id.
\textsuperscript{12} https://coinmarketcap.com/all/views/all/ https://www.forbes.com/sites/petertchir/2017/11/29/bitcoin-was-insanely-volatile-today-even-for-bitcoin/#457c2065fa4d
\textsuperscript{13} http://fortune.com/2017/11/25/lost-bitcoins/
\textsuperscript{15} Coinbase is one example of a company that is both a wallet and an exchange. https://www.coinbase.com/about
A custodial wallet is a service that houses a user’s private key and therefore is actually the entity that interacts with the blockchain. A custodial wallet has access to information about all of the user’s activity on the blockchain. A non-custodial wallet is a service that may improve the user experience of interacting with the blockchain but does not know the user’s private key—so it is the user him- or herself that interacts with the blockchain. Thus, a non-custodial wallet may not have access to information about the user’s activity on the blockchain.

There are even BTMs (Bitcoin Teller Machines) set up in shopping districts where people can exchange their Bitcoin for cash—or vice versa—and retail stores that will accept Bitcoin as payment.

In addition to the emergence of companies that help consumers use traditional cryptocurrencies like Bitcoin, there has also been a rise in the number of companies that are attempting to build their own blockchains and, occasionally, issue their own cryptocurrencies. For instance, the e-commerce company Overstock developed a cryptocurrency, tZERO, and the social network company Facebook is considering developing a cryptocurrency as well. A popular way that these companies have raised money is through Initial Coin Offerings, or ICOs, and Simple Agreements for Future Tokens, or SAFTs. Between January and May of 2018, companies raised $13.8 billion in ICOs.

II. Blockchain Nuts and Bolts

A. Blockchains

A blockchain is a list kept by a network of computers—the “nodes”—all storing the list independently. It is called a “blockchain” because new items are grouped together into “blocks” by computers called “miners” before being distributed to all of the nodes to be entered into the list. As more blocks are added to the list, they are added to the end of the chain of previously existing blocks—the blockchain—thereby cementing the order in which the list is kept. While there are no formal definitions, the attached glossary sets forth a summary of some of the terms commonly used.

Miners create blocks by taking the items that need to be added to the blockchain and performing slight variations of a function on those items until they are in a form that can be recognized by the nodes as the next block. Each item can only be in the list once, so once a miner creates a block and distributes it to the nodes, all of the other miners will stop trying to form a new block with any items from a previous
block. To incentivize miners, the network protocol can allow each miner that successfully creates a block to receive a block reward—in the case of Bitcoin, the block reward is currently 12.5 Bitcoin.\textsuperscript{22}

B. Cryptocurrencies and Network Protocols

A cryptocurrency is a blockchain in which the list that the nodes keep is a list of transactions of a digital currency, like Bitcoin. It is called “crypto” because cryptography—digital encryption—is used by both miners to create blocks and nodes (computers) to validate new blocks.\textsuperscript{23} It is called “currency” because digital currencies are merely a store of value and are not useful besides what others are willing to trade for it.

All the miners and all of the nodes within a given blockchain generally agree on a set of rules and restrictions, called the network protocol, that define the blockchain. Examples of rules include the maximum size of a block and how to confirm that a new block doesn’t contain items already on the list.

The network protocol is programmed into the software that operates the nodes and miners. The software of most popular blockchains is open-source, meaning that individual users of a blockchain program can see the software they’re running and rewrite it so that it works differently on their computers.

C. Soft Forks, Hard Forks and Chain Splits

Because many blockchains’ network protocols are open-source, users can change the software that is operating their nodes or miners. This is called “forking.” When users update their software, the update may possibly interfere with important network protocols. If it does so, the blocks that the changed nodes accept going forward may be different than the blocks that the unchanged nodes—traditional nodes—accept, creating a “chain split”. In those instances, the traditional nodes’ and updated nodes’ lists will be identical up to the point of the fork but different from that point forward.

Two well-known “forks” that resulted in chain splits are the August 2017 fork of Bitcoin into Bitcoin and Bitcoin Cash\textsuperscript{24} and the July 2016 fork of Ethereum into Ethereum and Ethereum Classic.\textsuperscript{25} The terms “fork” and “chain split” are often used interchangeably, though technically a fork is any software update that changes a blockchain’s network protocol and a chain split is the result of a fork if different nodes on the network accept different blocks as a result of their updated software.

\textsuperscript{22} https://techcrunch.com/2016/07/09/the-reward-for-mining-bitcoin-was-just-cut-in-half/
\textsuperscript{23} https://www.investopedia.com/tech/explaining-crypto-cryptocurrency/
\textsuperscript{24} https://www.economist.com/finance-and-economics/2017/08/05/bitcoin-divides-to-rule
\textsuperscript{25} https://www.wsj.com/articles/cryptocurrency-platform-ethereum-gets-a-controversial-update-1469055722
Before the fork, all nodes keep the same list of blocks. After the fork, there is a chain split, wherein the updated nodes accept different blocks than the legacy nodes accept. Note that both updated and legacy nodes keep all of the blocks from before the fork, here blocks 1-3.

There are two types of forks that might result in a chain split. The first is a “hard fork,” in which the updated nodes and miners loosen the restrictions on blocks, like by increasing the maximum size of a block from 1MB to 4MB. Because of the loosened restrictions, legacy nodes may not accept blocks that updated miners create and that updated nodes do accept.

A “soft fork” occurs when the rewritten software tightens restrictions on new blocks; for instance, it may decrease the maximum size of a block from 1MB to 500KB. In this case, the updated nodes may not accept blocks that traditional miners create and that traditional nodes accept.

Both hard forks and soft forks may result in a chain split so long as at least one miner and at least one node are updated. However, because cryptocurrency derives part of its value from being widely accepted, most forks are either completely abandoned—wherein the new chain loses all value—or completely adopted—wherein the legacy chain loses all value. When some users adopt the new software and others do not, a chain split will be sustained and users who owned cryptocurrency before the fork will have their value replicated on both the forked chain and the legacy chain. Forks and chain splits will be reviewed in the tax discussion in Part VI.
D. **Tokens**

Blockchains can track not only transactions in digital currencies but also transactions in “tokens,” which derive their value through an underlying asset or utility. The difference is that—whereas digital currency blockchains track the ownership of a “coin” that is not inherently redeemable for value—token blockchains track the ownership of a digital good that derives value either as a representation of a real-world asset or because it can be used to access a real-world service. The two ways that tokens derive value are explained in more detail below.

A “security token” derives its value from the promise of a future stream of payments based on the value of an asset. For instance, a security token might represent the rights to a digital copyright, a real-world diamond or even an equity stake in a company. Examples of security tokens include tZERO, mentioned above—which will represent ownership in the gross revenues of a company—and USDC, which will represent ownership of one U.S. dollar.26 “Tokenization,” then, is the method by which rights to an asset—such as a company’s equity or a U.S. dollar—are converted into a digital representation on a blockchain.

A “utility token” derives its value from allowing the holder to access a product or service. For instance, Filecoins are a utility token that will allow holders to access a cloud storage platform27 and BATs are a utility token that will allow holders to purchase digital advertising.28 These will be discussed again as we review the tax consequences of coin offerings in Part VII.

III. **What are the Tax Issues?**

There are a number of tax issues. The principal ones are set forth below:

- What is cryptocurrency? Is it property or a form of foreign currency?
- Does one recognize gain or loss from transactions in cryptocurrency?
- What is the tax treatment of miners?
- How are payments for tokens treated?
- What is the tax treatment of forks?
- What is the treatment of capital-raising activities such as Initial Coin Offerings (“ICOs”) or Simple Agreements for Future Tokens (“SAFTs”)?

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27 [https://filecoin.io/filecoin.pdf](https://filecoin.io/filecoin.pdf)
28 [https://basicattentiontoken.org/faq/#representation](https://basicattentiontoken.org/faq/#representation)
• What issues surround tax reporting?

The IRS believes that there is a vast amount of underreporting in this area. In addition, anonymity associated with cryptocurrency makes it conducive to tax avoidance. Indeed, this was recently confirmed in a report by the Commissioner’s Information Reporting Program Advisory (“IRPAC”).

Citing a recent article by Fundstrat Global Advisers, the report noted that the cryptocurrency market grew from about $19 billion at the start of January 2017 to more than $500 billion at the end of December 2017, according to data from CoinMarketCap. United States persons comprise 30% of the investors. The article estimates that $90 billion should have been reported, resulting in a tax liability of $25 billion. Assuming a noncompliance rate equal to 50%, potentially unreported cryptocurrency tax liabilities represent approximately 2.5% of the estimated $458 billion tax gap.

The IRS Criminal Division is also concerned. According to IRS Criminal Investigation Division Chief Don Fort, the IRS is focusing on three areas:

1. The reporting of gains on disposition of virtual currency;
2. The use of cryptocurrency accounts as alternatives for other financial accounts like bank accounts; and
3. The use of virtual currencies in business transactions.

IV. U.S. v Coinbase

The saga of the Coinbase summons and the IRS suit to enforce it is illustrative of how extensive the problem is.

A. Background

Formed in 2012, Coinbase is the largest U.S. exchange of Bitcoin into dollars, with at least 5.9 million customers served and $6 billion in transactions. In December 2016, the Internal Revenue Service issued a summons (the “Initial Summons”) demanding that Coinbase produce a wide range of records relating to approximately 500,000 Coinbase customers. Coinbase fought this summons in court in an effort to protect its customers, and the industry as a whole, from unwarranted intrusions by the government. As discussed below, the summons was further narrowed by the IRS and ultimately by the court.

30 “IRS Official Says Virtual Currencies are a Threat Now”, Tax Notes, March 12, 2018, Doc. 2018011166.
The Initial Summons sought “information regarding United States persons who at any time during the period January 1, 2013 through December 31, 2015 conducted transactions in a convertible virtual currency as defined in IRS Notice 2014-21.” It requested nine categories of documents including: complete user profiles, know-your-customer due diligence, documents regarding third-party access, transaction logs, records of payments processed, correspondence between Coinbase and Coinbase users, account or invoice statements, records of payments and exception records produced by Coinbase’s Anti-Money Laundering system. Based upon a review of the Petition to Serve and supporting documents, the court granted permission to serve the Initial Summons upon Coinbase.

In support of its petition, the government submitted a declaration from IRS agent David Utzke. Agent Utzke was a senior revenue agent in the IRS’s offshore compliance initiatives program and is assigned to virtual currency matters. Agent Utzke stated that the IRS “is investigating to determine the identity and correct federal income tax liability of United States persons who conducted transactions in a convertible virtual currency .... or the years ended December 31, 2013, 2014, and 2015.” The court noted that the IRS believed that virtual currency gains were underreported. In particular, of the more than 100 million tax returns filed and stored electronically on the Modernized Tax Return Database for each of the three named years, fewer than 1,000 each year included a Form 8949, *Sales and Other Dispositions of Capital Assets*, a companion form to Schedule D, *Capital Gains and Losses*, to account for Bitcoin-related gains or losses.

**B. The Revised Summons**

Eight months later, the IRS revised its summons (the “Narrowed Summons”). As modified, the IRS now seeks information regarding accounts “with at least the equivalent of $20,000 in any one transaction type (buy, sell, send, or receive) in any one year during the 2013-2015 period.” The Narrowed Summons “do[es] not include users: (a) who only bought and held Bitcoin during the 2013-15 period; or (b) for which Coinbase filed Forms 1099-K during the 2013-15 period.” According to Coinbase, the Narrowed Summons requested information regarding 8.9 million transactions and 14,355 account holders.

The relevance of Form 1099-K is interesting. This form is used to report credit card transactions, but the IRS effectively expanded it to include exchanges of virtual currency in Notice 2014-21. There, it noted that a Form 1099-K, *Payment Card and Third-Party Network Transactions*, may be issued for payments made in settlement of reportable payment transactions, including those made by virtual currency.

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31 Case No. 16-cv06658-JSC, Dkt. No. 2-4 at 13 ¶ 48. Northern District of California, November 28, 2017
The items requested under the Narrowed Summons were still broad, but, according to the IRS, they were necessary. These included the following:

**Request 1:** Account/wallet/vault registration records for each account/wallet/vault owned or controlled by the user during the period stated above, limited to name, address, tax identification number, date of birth, account opening records, copies of passport or driver’s license, all wallet addresses, and all public keys for all accounts/wallets/vaults.

**Request 2:** Records of Know-Your-Customer diligence.

**Request 3:** Agreements or instructions granting a third-party access, control, or transaction approval authority.

**Request 4:** All records of account/wallet/vault activity including transaction logs or other records identifying the date, amount, and type of transaction (purchase/sale/exchange), the post transaction balance, the names or other identifiers of counterparties to the transaction; requests or instructions to send or receive Bitcoin; and, where counterparties transact through their own Coinbase accounts/wallets/vaults and all available information identifying the users of such accounts and their contact information.

**Request 5:** Correspondence between Coinbase and the user or any third party with access to the account/wallet/vault pertaining to the account/wallet/vault opening, closing, or transaction activity.

**Request 6:** All periodic statements of account or invoices (or the equivalent).

To evaluate a summons request, the requesting party must show that there is a legitimate purpose for the summons and that the information being requested is relevant.

According to a declaration submitted by Agent Utzke, only 800 to 900 taxpayers a year have electronically filed returns with a property description related to Bitcoin from 2013 through 2015. This discrepancy creates an inference that more Coinbase users are trading Bitcoin than are reporting gains on their tax returns.

The court next examined each of the items on the Narrowed Summons. On the relevance point, the court agreed that the Coinbase account holder’s identity and transaction records will permit the government to investigate whether the holder had taxable gains that were not properly declared. But the government sought more than that information; it also seeks account-opening records, copies of passports or driver’s licenses, all wallet addresses, all public keys for all accounts/wallets/vaults, records of Know-Your-Customer diligence, agreements or instructions granting a third-party access, control, or transaction approval authority and correspondence between Coinbase and the account holder. The government claimed to need these records to verify an account holder’s identity and determine if the holder used others to make transactions on the account holder’s behalf.
The court was unpersuaded as to the need for all the identity information. The court said that the government would only need some of the information if the account holder has a taxable gain. If the account holder did not, then correspondence between Coinbase and a user was not even potentially relevant. Similarly, while the government needs an account holder’s name, date of birth, taxpayer identification and address to determine if a taxable gain was reported, it only needs additional identity information such as copies of passports and driver’s licenses or “Know-Your-Customer” due diligence if there is potentially a taxable gain and if there is some doubt as to the taxpayer’s identity. If there is not, these additional records will not shed any light on a legitimate investigation. At oral argument, the government explained that it included such broad swaths of records in its summons so that it will not need to return to court to ask for them if and when needed.

The court was not convinced. The court examined whether there was a legitimate purpose for the information being requested. As a result, it further reduced the scope of the summons by eliminating the following:

**Request 2:** Records of Know-Your-Customer diligence,

**Request 3:** Agreements or instructions granting a third-party access, control, or transaction approval authority, and

**Request 5:** Correspondence between Coinbase and the user or any third party with access to the account/wallet/vault pertaining to the account/wallet/vault opening, closing, or transaction activity.

The court noted that these records may become necessary for a specific account holder once the IRS reviews the relevant records but, for many or even most of the account holders, they may never be relevant.

C. **The Final Summons**

The court order modified the summons to require Coinbase to produce documents for accounts with at least the equivalent of $20,000 in any one transaction type (buy, sell, send, or receive) in any one year during the 2013 to 2015 period. The order required production of: (1) the taxpayer’s ID number, name, birthdate and address; (2) records of account activity including transaction logs or other records identifying the date, amount and type of transaction purchase/sale/exchange, the post-transaction balance and the names of counterparties to the transaction; and (3) all periodic statements of account or invoices (or the equivalent).

D. **Aftermath**

In March 2018, Coinbase informed 13,000 of its customers that it would be giving information on their accounts to the IRS after the U.S. District Court for the Northern District of California ordered the
cryptocurrency exchange to provide documents on the final summons. The notification to its customers also highlighted Coinbase’s success in narrowing the summons from potentially sweeping in 500,000 customers and narrowing the categories of information the company will deliver to the IRS. Tax Notes reports that the Criminal Investigation division has been expecting fraud referrals from the Coinbase summons response.

V. **Notice 2014-21**

In what may seem like centuries ago, the IRS issued guidance regarding cryptocurrencies in Notice 2014-21 (the “Notice”) by addressing a series of frequently asked questions (“FAQs”). The Notice refers to cryptocurrencies as “virtual currency” and specifically references Bitcoin in one of the FAQs. The Notice addresses some of the more basic questions that had arisen prior to the Notice’s issuance, such as characterization of cryptocurrency and transactions in cryptocurrency, the treatment of miners and information reporting.

1. **Treatment of cryptocurrency as property.** The Notice states that cryptocurrency is property, despite its digital nature. In a sense, cryptocurrency can be thought of a form of a digital gold. A separate question exists whether cryptocurrency should be classified as either a commodity or a security for tax purposes.

2. **Cryptocurrency is not a foreign currency.** The Notice then states that cryptocurrency is not foreign currency. Many people had been concerned that this was the approach that the IRS would take. This is significant in that the rules relating to foreign currency—in particular, section 988—will not apply. Thus, all gain or loss for the ordinary investor will be capital gain and it will not require any component to be treated as ordinary income.

3. **Cryptocurrency that is received as payment for goods and services.** The Notice states that a taxpayer who receives cryptocurrency as payment for goods or services must, in computing gross income, include the fair market value of the cryptocurrency in income.

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35 FAQ No. 1.
36 The CFTC has ruled that Bitcoin and other virtual currencies are properly defined as commodities. See RELEASE Number 7231-15E.3-15
37 All “section” references are to the sections of the Internal Revenue Code of 1986, as amended and all “Treas. Reg.” references are to the regulations issued thereunder.
38 FAQ No. 2.
39 FAQ No. 3.
4. **How is the basis in cryptocurrency determined?** The Notice states that the basis of cryptocurrency that a taxpayer receives as payment for goods or services is the fair market value of the virtual currency in U.S. dollars as of the date of receipt.40

5. **How is the fair market value of cryptocurrency determined?** The Notice states that transactions in cryptocurrency must be reported in U.S. dollars as of the date of payment or receipt. It goes on to state that, if the cryptocurrency is listed on an exchange and the exchange rate is established by market supply and demand, the fair market value determined by converting the cryptocurrency into U.S. dollars (or into another “real” currency that in turn can be converted into U.S. dollars) at the exchange rate in a reasonable manner that is consistently applied.41

6. **Is the exchange of cryptocurrency for other property a recognition event?** The Notice addresses the case where cryptocurrency is exchanged for other property. It states that the taxpayer has a taxable gain if the fair market value of property received exceeds the taxpayer’s adjusted basis in the cryptocurrency. The taxpayer has a loss if the fair market value of the property received is less than the adjusted basis of the cryptocurrency.42 The Notice does not address the potential application exchanges of cryptocurrency for another form of cryptocurrency, nor does it address possible application of the straddle or wash-sale rules.

7. **Character of gain or loss on the sale or exchange of cryptocurrency?** Regarding character, the Notice states that the character of the gain or loss generally depends on whether the cryptocurrency is a capital asset in the hands of the taxpayer. A taxpayer generally realizes capital gain or loss on the sale or exchange of cryptocurrency that is a capital asset in the hands of the taxpayer but is ordinary gain or loss on property that is not a capital asset in the hands of the taxpayer. It then points out that inventory and other property held mainly for sale to customers in a trade or business are examples of property that is not a capital asset.43

8. **Treatment of miners.** The Notice addresses the treatment of a taxpayer who mines virtual currency. When a taxpayer successfully “mines” virtual currency, the fair market value of the virtual currency the miner receives as a reward as of the date of receipt is includible in gross income. The Notice addresses this in the context of a person who uses computer resources to validate Bitcoin transactions and maintain the public Bitcoin transaction ledger.44

9. **Treatment of cryptocurrency received by miners as subject to self-employment tax.** The Notice states that, if a taxpayer’s “mining” of virtual currency constitutes a trade or business and the
“mining” activity is not undertaken by the taxpayer as an employee, then the net earnings from self-employment resulting from those activities constitute self-employment income and are subject to the self-employment tax.45

10. Payments made to an independent contractor as self-employment income.46 The Notice also addresses cryptocurrency received by persons in a nonemployee capacity. It states the fair market value of virtual currency received for services performed as an independent contractor, measured in U.S. dollars as of the date of receipt, constitutes self-employment income and is subject to the self-employment tax.

11. Payments in cryptocurrency are wages for employment tax purposes.47 It then addresses the treatment of cryptocurrency received as wages, stating that the fair market value of virtual currency paid as wages is subject to federal income tax withholding, Federal Insurance Contributions Act (“FICA”) tax and Federal Unemployment Tax Act (“FUTA”) tax and must be reported on Form W-2 Wage and Tax Statement.

12. Payments made subject information reporting. The Notice next turns to information-reporting issues. It states that a payment made using cryptocurrency is subject to information reporting to the same extent as any other payment made in property.48 We will return to some of the reporting issues in Part VIII.

13. Information reporting for payments made to an independent contractor. Payments of cryptocurrency required to be reported on Form 1099-MISC, Miscellaneous Income, should be reported using the fair market value of the virtual currency in U.S. dollars as of the date of payment.49

14. Backup withholding for payments made using cryptocurrency. The Notice states that payments made using cryptocurrency are subject to backup withholding to the same extent as other payments made in property. It then notes the need to solicit a taxpayer identification number (“TIN”) from the payee under the backup withholding rules. The payor must backup withholding from the payment if a TIN is not obtained prior to payment or if the payor receives notification from the IRS that backup withholding is required.50

45 FAQ No. 9.
46 FAQ No. 10.
47 FAQ No. 11.
48 FAQ No. 12.
49 FAQ No. 13.
50 FAQ No. 14.
15. **Information reporting for persons who settle payments made in cryptocurrency.** The Notice then addresses the application of the rules for third parties that contract to settle payments between merchants and their customers. These persons are considered a third-party settlement organization ("TPSO"). Reporting by TPSO is done on Form 1099-K, *Payment Card and Third-Party Network Transactions*. The requirement to report comes into play if, for the calendar year, both (1) the number of transactions settled for the merchant exceeds 200 and (2) the gross amount of payments made to the merchant exceeds $20,000. The rules apply to credit card processors, for example, who make payments to merchants. The Notice provides instructions for completing Form 1099-K, perhaps contemplating that the requirements would apply to exchanges such as the Coinbase Exchange.\(^51\)

16. **Penalty relief.** The Notice says little about penalties. It says that penalties may be imposed for both the underreporting of virtual currency transactions under section 6662 and the failure to timely or correctly report virtual currency transactions subject to information-reporting penalties, which may be subject to penalties under sections 6721 and section 6722. It goes on to state that penalty relief may be available to taxpayers and persons required to file an information return who are able to establish that the underpayment or failure to properly file information returns is due to reasonable cause. The inference is that information-reporting penalties may be eligible for reasonable cause relief.\(^52\)

The October 2018 report (the “Report”) of the IRS Commissioner’s Information Reporting Advisory Committee (“IRPAC”) has identified the need for additional guidance on cryptocurrency transactions to enforce compliance. The Report heavily relies on the recent experience the IRS had in enforcing the Coinbase summons, and it expresses concern regarding the extent of unreported cryptocurrency-related income.

According to the Report, while the IRS has addressed certain of the issues in the Notice, there remain significant open issues, however, that will need additional analysis and further guidance to refine the reporting of these transactions, for example:

1. whether virtual currency held for investment is a capital asset;
2. whether the virtual currency ought to be treated as a security, subject or not subject to the wash-sale rules or affected by mark-to-market implications under section 475 of the Code;
3. whether a taxpayer may use LIFO or FIFO to determine the basis of virtual currency sold;
4. how to track basis through activities in the blockchain;
5. whether broker reporting is required under section 6045 of the Code for transactions using virtual currency;

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\(^{51}\) FAQ No. 15

\(^{52}\) FAQ No. 16.
(6) whether a taxpayer may contribute virtual currency to an IRA; and
(7) whether virtual currency is a commodity.\textsuperscript{53}

While the IRPAC report raised a number of important issues, it did not raise two very important ones: the failure of the Notice to provide any guidance on the treatment of forks or the filing of FBARs or Forms 8938.

VI. The Treatment of Forks and Chain Splits

Because the software that runs the ledger is generally open-source, and the network of computers that verify transactions generally operates via consensus, the software can be modified if enough participants on the network agree to do so. These software modifications are referred to as forks. A fork (a “hard fork” for purposes of the ABA Tax Section Proposal), which is discussed below, is a “change to the software of the digital currency that creates two separate versions of the blockchain with a shared history.”\textsuperscript{54} The original owner of the cryptocurrency still maintains its interest in the original cryptocurrency but also gains a right to the “forked” coin.

- **Bitcoin Cash (BCH).** Bitcoin Cash forked away from Bitcoin on August 1, 2017, with a larger 8MB block size to introduce cheaper and faster transactions.\textsuperscript{55}

- **Bitcoin Gold (BTG).** Bitcoin Gold forked away from Bitcoin on October 25, 2017, changing the mining system. It aimed to decentralize mining and take it out of the hands of powerful application-specific integrated circuit machines so that people could mine it with GPUs (home computers).\textsuperscript{56}

- **Dash (DASH).** As a relatively early Bitcoin fork from 2014, it was designed to enable quicker and cheaper transactions. It has been forked a number of times and has spawned other new coins.

- **Ethereum.** In 2016, the Ethereum blockchain was split into two in response to a hacking attack that affected the original ledger. In that case, the value of the original coin (Ethereum Classic) and the volume of trading in it plummeted due to the loss of user trust, while the

\textsuperscript{53} At least one commentator has expressed the view that Bitcoin is a commodity. See Jim Calvin, “Adequately Identifying Bitcoin Dispositions for Federal Income Tax Purposes,” 58 Tax Mgmt. Memo. 3639/1/17).)

\textsuperscript{54} \url{https://blog.coinbase.com/what-is-a-bitcoin-fork-cba07fe73ef1}

\textsuperscript{55} The developers modified Bitcoin Core by increasing the maximum base block size, adding/decreasing difficulty adjustments in the case of a low hash rate and removing the segregated witness functionality (or SegWit, BIP91/BIP148) from Bitcoin.

\textsuperscript{56} Bitcoin Gold adopted a proof-of-work algorithm (Equihash) intended to be resistant to specialized mining equipment, or ASICs (Application Specific Integrated Circuit), which enables mining using more common graphics processing units (GPUs).
forked coin (Ethereum), which is viewed more favorably by the market, essentially usurped the original coin.

In many cases, the new coin has an immediate value.\(^{57}\) In other cases, it takes more time for the currency to be accepted and for there to be a recognized value.

While chain splits caused by Bitcoin Cash and Bitcoin Gold are well known, obscure transactions that are similar in nature—and sometimes referred to as “airdrops”—can and do occur. An airdrop occurs when certain users receive an additional cryptocurrency as a reward for participating in the project or as a marketing initiative.\(^{58}\)

Chain splits can create significant risk that must be considered. The most often cited risks are security, generally, and “replay attacks”.\(^{59}\) Replays can cause the unintended transfer of the corresponding pre-split coin and vice versa.

Given the magnitude of the transactions, the reporting of transactions caused by the Bitcoin chain splits seem to be the most pressing issues raised by cryptocurrency.

A. How is the Transaction Categorized?

For the tax professional, the analysis is one of the more complicated aspects of cryptocurrency. The reason it is complicated is because, often, the analysis is centered around the nature of the modification to the blockchain’s protocol. However, when one gets past the technical aspects involved in the modification to the blockchain’s protocol, it may not matter. The issue is whether the modification results in a realization of some value to the holder. The realization event that seems the most relevant is the creation of a new coin.

A fork is potentially analogous to a number of transactions including: (1) a stock split, (2) the receipt of a prize or other windfall, (3) an exchange or (4) the purchase of a pregnant animal.

The receipt of new coins is not a gift. There is no gratuitous aspect to the transfer. Instead, it will be an economic gain. But the property right is not an economic gain until the taxpayer exercises dominion and control. Thus, the mere receipt of the item does not create taxable income. For example, in Rev. Rul. 63-225,\(^{60}\) the taxpayer, by being a shareholder in a corporation, received rights to purchase debentures

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\(^{57}\) On the date of the fork that created Bitcoin Cash, Bitcoin Cash was already trading on an exchange for upwards of $300. [https://coinmarketcap.com/currencies/bitcoin-cash/](https://coinmarketcap.com/currencies/bitcoin-cash/)


\(^{59}\) Jim Calvin, “When (and If) Income is Realized from Bitcoin Chain-Splits,” 58 Tax Mgmt. Memo. 479 (11/27/2017)

\(^{60}\) 1963–2 C.B. 339.
and common stock of the corporation. The taxpayer subsequently sold the rights. The taxpayer was treated as not realizing any taxable income upon his receipt of the rights, and his basis was zero.

Some often raise the question of whether the authorities related to pregnant animals are relevant. Under the authorities relating to pregnant cows and horses, no taxable income is recognized by the knowing purchaser on the delivery of the calf. Instead, basis is split between the cow and the calf. The analogy is interesting but not dispositive.61

However, while the receipt of new coins may be an accession to wealth, it is not an exchange, as there is no transfer of the underlying coins. The holder always continues to own the shares whether or not the new coins are transferred.

B. Tax Basis

An owner of Bitcoin became entitled to Bitcoin Cash, merely on the basis of his ownership. What is the basis of the new currency? Is it zero? Is it fair market value? Or is there a split in the basis of the underlying currency?

The tax basis of the new coin would turn on whether the receipt of the Bitcoin Cash was a realization event. If it was a realization event, then the tax basis would equal its fair market value on the date of realization. If it was not a realization event, then the tax basis of Bitcoin would be split based on relative fair market values.62

When does the event occur, and when is the fair market value determined? It might occur the first time a node in the network updates to the forked network protocol. It might occur when the first cryptocurrency exchange lists the forked coins, or it might occur when the owner first has access to the forked cryptocurrency.

C. The ABA Tax Section’s and the AICPA’s Proposals

Given the uncertainty, the ABA Tax Section recommended a temporary rule permitting taxpayers to treat the amount realized upon receipt of the new coins as zero for the taxable year 2017:

62 See Treas. Reg. §1.307-1(a) (allocation of basis on the case of a non-taxable stock distribution based on fair market value). But see Rev. Rul. 79-431, 1979-2 CB 108, where the taxpayer received discount coupons on the purchase of full fare tickets; no basis was allocated to the discount fare coupons upon donation to charity.
1. Taxpayers who owned a coin that was subject to a hard fork in 2017 would be treated as having realized the forked coin resulting from the hard fork in a taxable event.

2. The deemed value of the forked coin at the time of the realization event would be zero, which would also be the taxpayer’s basis in the forked coin.

3. The holding period in the forked coin would start on the day of the hard fork.

4. Taxpayers choosing the safe-harbor treatment as set forth in the guidance would be required to disclose this on their tax returns.

5. The IRS would not assert that any taxpayer who availed himself of the safe-harbor treatment as set forth in the guidance has understated federal tax liability because of the receipt of a forked coin in a 2017 hard fork.

6. The IRS, with input from the Section and other stakeholders, will continue to develop its position regarding the tax treatment for future hard forks, and such position may be different from the one noted above and will apply prospectively.

The AICPA also expressed concern regarding the consequences of transactions such as the Bitcoin split. Its proposal was to make reporting elective. Where the taxpayer did not make the election, then the virtual currency would be reported as ordinary income when a taxpayer later disposed of it.63

VII. Initial Coin Offerings and Simple Agreements for Future Tokens

A. Initial Coin Offerings

An Initial Coin Offering (“ICO”) by an issuer is generally similar to, but is different than, an Initial Public offering of equity and debt securities (“IPO”). An IPO is a highly regulated process in which a business entity offers its securities to the public for the first time for the various purposes, including raising investment capital. Generally, in an ICO, a business entity offers instruments referred to as tokens or coins (hereinafter collectively, “tokens”) for “fiat” or cryptocurrency that may be used for the purpose of developing a blockchain protocol or token ecosystem (commonly referred to as a “platform”) or may provide the purchaser the right to use a product or service provided by the issuer through its platform. An ICO that is issued to finance the development of a platform is generally coupled with representations that the tokens issued will be usable on the platform. Issuances of tokens through an ICO to raise capital have expanded significantly in the past two to three years and have also come under regulatory scrutiny by regulators, especially in the United States. Securities issues aside, the discussion below will focus on the potential tax

treatment of tokens. As we will see, the rights and powers represented by these tokens are not uniform. As a result, there is no single answer to how tokens should be treated for tax purposes.64

Broadly speaking, there are two types of tokens: non-security tokens, such as utility tokens, and security tokens. Some tokens combine features of both, making the analysis more difficult.

A utility token may represent access rights to a company's proprietary product, service or blockchain network. Thus, utility tokens may be viewed as prepayments for future services; one could compare them to a gift card or use rights or a software license. A utility token is meant to provide a token holder with access to a product, service or blockchain network. The non-tax characterization of utility tokens (like the tax counterpart) is not fully developed. For example, the U.S. Securities and Exchange Commission has not definitively classified any digital asset as a non-security token or as a “utility” token and, as such, they may be regulated as a security. On the other hand, the U.S. Commodity Futures Trading Commission has taken the broad position that virtual currencies are classified as commodities for CFTC regulatory purposes.65 The classification of tokens for regulatory purposes by the SEC or CFTC could impact their tax characterization.

While the IRS addressed the treatment of some aspects of cryptocurrency in Notice 2014-21, it did not address the treatment if a token is received as part of an ICO. Utility tokens can be thought of as prepayments for services. Ordinarily, prepayments for services are taxable. However, the IRS, through Rev. Proc. 2004-34,66 has administratively allowed taxpayers to defer income from prepaid services when the services were expected to be performed in the following tax year.67 It follows that amounts paid to the issuers for these tokens could be taxed under the rules of Rev. Proc. 2004-34. In other words, all the proceeds of an ICO could be taxable income. Rev. Proc. 2004-34 was codified in section 451(c) with the enactment of the Tax Cuts and Jobs Act.

The second type of token is a security token. Security tokens are also issued by a legal entity, but they do not have the same utility rights. Rather, they are a means of raising capital. Their characteristics include providing to the holder such rights as dividend rights and voting rights and the dependence of the holder on persons in control of the issuer to generate profits. Security tokens are also regulated as a security for purposes of other domestic and international laws encompassing tokens and digital assets. The tax consequences associated with security tokens will depend on the legal characteristics of the issuer. If the issuer is a corporation, the issuance and redemption of stock by the issuer have no tax consequences

64 ICOs also implicate issues under the CEA and anti-money laundering laws and state money services business laws.
67 For payments for contingent services, Rev. Proc. 2004-34 allows taxpayers to use a statistical basis for including the prepaid amounts in income, or any other method that satisfies the commissioner and results in a clear reflection of income.
to the issuer. However, the tax consequences to the holder will follow that of other equity instruments. For instance, redemptions might be characterized as dividends. However, depending on the terms of the underlying entity, the security could also represent a partnership interest.

Sometimes to minimize the application of U.S. regulatory rules, the issuer will be a non-U.S. corporation. When the issuer is a non-U.S. corporation, other provisions of the tax law could be invoked such as the subpart F rules, the newly-enacted GILTI provisions, the transfer pricing provisions, or the effectively connected income rules.

B. The Simple Agreement for Future Tokens (“SAFT”)

If a company is raising funds to develop a platform through which a product or service may be offered but the platform is not fully functional, companies often enter into agreements with purchasers pursuant to which the company commits to issue tokens in the future, subject to the satisfaction of certain conditions, including that the platform is fully functional and that there is adequate assurance that the tokens, when issued, will be tokens that are not securities under the securities laws or else are securities issuable in transactions exempt from registration under the securities law. In such cases, the company may be regarded as conducting a token presale and not an ICO. However, both token presales and ICOs raise securities-law and other issues, as both may be classified as an investment contract under the Howey test. Generally, the requirements of the U.S. securities laws imposed on issuers of securities and the restrictions imposed upon the transfer of securities are such that the business plan of issuers cannot be implemented if the token is characterized as a security.

One structure that is commonly used is the Simple Agreement for Future Tokens, or SAFT structure. The SAFT structure is based on a SAFE, or Simple Agreement for Future Equity, which is commonly used by early-stage startups to raise money in exchange for a right to participate in the next equity funding round. This allows the company to raise capital without having to issue debt instruments such as convertible notes. The SAFT itself is regarded as an investment contract, and it is offered and sold in compliance with the securities laws. The status of the subsequent token upon issuance is to be determined in the future.

Like other financial products, the tax disclosure for SAFTs will discuss the intended tax treatment.

From the author’s experience, the disclosure takes two formats: In one format, the intended tax treatment of a SAFT is identified as current sale of the tokens. For those issuers taking the current sale approach, the pricing of the token is fixed, though often at a discount to the pricing other purchasers will receive. Both parties likely benefit from the fixed pricing arrangement. Issuers that take this approach will

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often have net operating losses so that, if there is current taxation (namely, of the product or service represented by the token), there is little adverse economic impact.

Another format provides that the intended treatment of the instrument for tax purposes is that of a forward contract. If this treatment is respected, then taxation of the purchase amount should be deferred until delivery of the tokens to the SAFT holder. Care must be taken to ensure such forward-contract treatment. Advisers often refer to Rev. Rul. 2003-7\textsuperscript{69} for guidance on how a contract for future delivery of shares might qualify for forward-contract treatment. A key factor in this revenue ruling was the fact that the number of shares that would be received could vary significantly depending on the value of the shares on delivery date.

VIII. **Cryptocurrency Information-Reporting Issues**

There are several information reports that could potentially apply to cryptocurrency.

These primarily include the so-called “FBAR” report and Form 8938. The FBAR report is shorthand for Form 114, “Report of Foreign Bank and Financial Accounts.”

Also discussed below are Form 8300, relating to the reporting of cash payments, and Form 1099-B, relating to the reporting of proceeds from sale.

Taxpayers with assets in domestic and foreign cryptocurrency exchanges and wallets are struggling to determine what rules apply to them and whether and how to report assets.\textsuperscript{70}

A. **FBAR**

“FBAR” is shorthand for Form 114, *Report of Foreign Bank and Financial Accounts*. The FBAR requirement is not part of filing a tax return. The FBAR is filed separately and directly with the Financial Crimes Enforcement Network (“FinCEN”), a bureau of the Treasury.

Taxpayers with an interest in, or signature or other authority over, foreign financial accounts whose aggregate value exceeded $10,000 at any time during the year must generally file the FBAR. The reporting obligation may exist even if there is no associated taxable income. If one fails to file, penalties of up to $10,000 per violation for non-willful violations\textsuperscript{71} and up to $100,000 or 50% of the balance in the account for willful violations may apply.\textsuperscript{72}

\textsuperscript{69} 2003-1 C.B. 363.
\textsuperscript{70} ABA Section of Taxation, “Comments Regarding the OVDP and Streamlined Procedures,” May 2, 2018, p. 19.
\textsuperscript{71} 31 U.S.C. §§ 5314 and 5321(a)(5)(A).
\textsuperscript{72} A civil penalty equivalent to the greater of $100,000 or 50% of the balance in the account at the time of the violation may be imposed on any person who “willfully” violates or causes any violation of any provision of 31 U.S.C. § § 5314 and 5321(a)(5)(A).
The types of reportable accounts are (1) bank accounts, (2) securities accounts and (3) other reportable accounts. 31 C.F.R. § 1010.350(c)(1) defines a bank account as “a savings deposit, demand deposit, checking, or any other account maintained with a person engaged in the business of banking.” A securities account is an account with a person in the business of buying, selling, holding or trading stocks or securities. 31 C.F.R. § 1010.350(c)(3) defines the term “other financial account” to mean: (i) an account with a person that is in the business of accepting deposits as a financial agency; (ii) an account that is an insurance or annuity policy with a cash value; (iii) an account with a person that acts as a broker or dealer for futures or options transactions in any commodity on, or subject to the rules of, a commodity exchange or association; or (iv) certain accounts with mutual funds or similar pooled funds.

While there is no formal statement regarding the reporting requirements, the following informal statement has attracted some attention.

The Financial Crimes Enforcement Network [FinCEN], which issues regulatory guidance pertaining to Reports of Foreign Bank and Financial Accounts (FBARs), is not requiring that digital (or virtual) currency accounts be reported on an FBAR at this time but may consider requiring such accounts to be reported in the future. No additional guidance is available at this time. [Erb, “IRS Says Bitcoin Not Reportable on FBAR (for Now),” Forbes (June 30, 2014), available at tinyurl.com/yav9z88v].

However, in the absence of a more formal statement, reporting seems prudent.

There may be differences for reporting purposes, depending on how the cryptocurrencies are held. Indeed, the ABA Tax Section requested guidance, stating that it would be helpful if guidance addressed the differences in filing requirements for cryptocurrency held on an exchange, cryptocurrency held through a wallet-service company (custodial or non-custodial) or cryptocurrency held directly through a wallet address maintained by the taxpayer. The ABA Tax Section further suggested that cryptocurrency that is held directly by a taxpayer or held through a non-custodial wallet should not be reportable on the FBAR, as there is no “financial account” maintained by a third party as there is with other reportable accounts.73

B. Form 8938

Form 8938, entitled Statement of Specified Foreign Financial Assets, is used to report specified foreign financial assets that reach a certain reporting threshold. Form 8938 is filed with the IRS.

Reporting under Form 8938 is derived from Financial Account Tax Compliance ACT (“FATCA”) and is potentially broader than under the FBAR rules. Penalties of up to $10,000 for failure to disclose and

73 ABA Section of Taxation, “Comments Regarding the OVDP and Streamlined Procedures,” May 2, 2018, p. 19.
an additional $10,000 for each 30 days of non-filing after IRS notice of a failure to disclose for a potential maximum penalty of $60,000 may apply; criminal penalties may also apply.\textsuperscript{74}

Under FATCA and reporting on Form 8938, a key issue is whether there is a “foreign financial account.” Financial assets that must be reported on Form 8938 are broader than those required to be reported on an FBAR and include, among other categories, “any financial account . . . maintained by a foreign financial institution” and “any interest in a foreign entity.” Under section 6038D, a specified financial asset is (1) any financial account maintained by a foreign financial institution and (2) any of the following assets that are not held in an account maintained by a financial institution: (a) any stock or security issued by a person other than a United States person; (b) any financial instrument or contract held for investment that has an issuer or counterparty that is other than a United States person; and (c) any interest in a foreign entity.

The regulations under section 1471 define the term “financial institution.” The term “financial institution” has the meaning set forth in Treas. Reg. §1.1471-5(e) and includes a financial institution as defined in an applicable Model 1 or Model 2 IGA. Under Treas. Reg. §1.1471-5(e), the term “financial institution” means any entity that (i) accepts deposits in the ordinary course of a banking or similar business; (ii) holds, as a substantial portion of its business, financial assets for the benefit of one or more other persons; (iii) is an investment entity; (iv) is an insurance company or a holding company that is a member of an expanded affiliated group that includes an insurance company; or (v) is an entity that is a holding company or treasury center.

The ABA Tax Section raised concerns regarding the reporting obligation of a taxpayer holding cryptocurrencies on a foreign exchange (e.g., Xapo.com or Binance.com) or a wallet maintained by a foreign wallet service provider (e.g., Blockchain.com) on Form 8938, given that the taxpayer may be considered holding a financial account (the wallet) maintained by what may be considered a foreign financial institution (the exchange).\textsuperscript{75} Specifically, it suggested that the IRS issue a notice clarifying the reporting requirements for cryptocurrencies held “offshore” through an exchange or wallet service company (custodial or non-custodial) that is formed outside of the United States and for cryptocurrencies held directly by the taxpayer on a distributed blockchain.

C. \textbf{Form 8300}

Taxpayers are required to report cash payments exceeding $10,000 received in a trade or business on Form 8300, \textit{Report of Cash Payments Over $10,000 Received in a Trade or Business}. Cash is defined to include U.S. currency, currency of any other country, cashier’s checks, money orders and similar

\textsuperscript{74} Treas. Reg. § 1.6038D-8(a)(b) and (f).
\textsuperscript{75} ABA Section of Taxation, “Comments Regarding the OVDP and Streamlined Procedures,” May 2, 2018, p.19.
instruments. Consistent with the conclusion of the Notice that cryptocurrencies are not currency, it seems unlikely reporting is requiring under this provision.

D. Form 1099-B

Form 1099-B is used to report sales by brokers. The authority to require forms 1099-B derives from section 6045(a). Section 6045(a) requires brokers to report the gross proceeds of sales and such other information required by the Secretary by forms or regulations. Under section 6045, sales of securities, commodities, options, regulated futures contacts, securities future contracts or forward and short sales for cash are generally reportable. Treas. Reg. §1.6045-1(a)(5) defines a term as "any type of personal property or an interest therein (other than that which is a security) the trading of regulated futures contracts in which there has been approved."

The CFTC permitted the trading of regulated futures contracts on Bitcoin in connection with the introduction of Bitcoin futures contracts by the CME and CBOE on December 1, 2017. That action would appear to cause the related Bitcoin to fall within the definition of a commodity for purposes of Form 1099-B reporting. Consequently, Bitcoin sales for cash might be reportable by brokers on Form 1099-B. The treatment of other cryptocurrencies will turn on whether similar action has been taken.

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77 Commodity Futures Law Reporter, “CFTC Backgrounder on Self Certified Contracts for Bitcoin Products,” at 158, section 34.
Glossary

**Bitcoin** – Both the most popular cryptocurrency and the blockchain that tracks ownership of the Bitcoin cryptocurrency.

**Block** – A grouping of individual entries into a blockchain. Each blockchain is composed of an ordered list of blocks.

**Blockchain** – A database of information that is stored on a network of computers.

**Chain Split** – An event in which two ongoing, alternative versions of a blockchain coexist. The alternative versions of the blockchain have a shared ledger up to the point of the fork but have different records after the fork.

**Cryptocurrency** – A digital currency designed to work as a medium of exchange. Cryptocurrency ownership is often tracked by use of a blockchain.

**Cryptocurrency Exchange** – A platform that allows the buying and selling of cryptocurrencies using other cryptocurrencies and fiat currencies.

**Fiat Currency** – Money that a government has declared to be legal tender, but is not supported by a physical commodity.

**Fork** – A software update that affects what blocks a node will accept as valid blocks to append to the blockchain. Forks often result in chain splits, and the two terms are often used interchangeably.

**ICO** – An “Initial Coin Offering.” This is a funding mechanism by which tokens are sold for cash or other cryptocurrencies.

**Miner** – A computer that groups new entries to the blockchain into “blocks” and distributes blocks to the nodes, which add the block to the end of the blockchain.

**Node** – A computer that holds a copy of a blockchain and verifies that new blocks are compatible with the blockchain.

**SAFT** – A “Simple Agreement for Future Tokens.” This is a contract through which money is exchanged for a promise of access to tokens in the future.

**Security Token** – A token that represents ownership in an underlying off-chain asset.

**Token** – A token is a unit, the ownership of which is tracked by a blockchain, that derives its value from specific use or as a representation of an off-chain asset.
**Tokenization** – The method by which rights to an asset are converted into a digital representation on a blockchain.

**Utility Token** – A token that is used for a specific purpose.

**Wallet** – A piece of hardware or software that allows its user to receive and spend their digital assets. It is similar to an account, but it is digital.