A TOKEN GESTURE:
TAX CONSIDERATIONS FOR
CRYPTOCURRENCIES AND UTILITY TOKENS

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March 19, 2018

The Honorable David Kautter
Acting Commissioner
Internal Revenue Service
1111 Constitution Avenue, NW
Washington, DC 20024

Re: Tax Treatment of Cryptocurrency Hard Forks for Taxable Year 2017

Dear Acting Commissioner Kautter:

Enclosed please find comments regarding the federal income tax treatment of cryptocurrency hard forks that have taken place in 2017 ("Comments"). These Comments are submitted on behalf of the American Bar Association Section of Taxation and have not been approved by the House of Delegates or the Board of Governors of the American Bar Association.

The Section of Taxation will be pleased to discuss the Comments with you or your staff.

Sincerely,

Karen L. Hawkins
Chair, Section of Taxation

Enclosure

cc: Hon. William M. Paul, Acting Chief Counsel and Deputy Chief Counsel (Technical), Internal Revenue Service
Hon. David Kautter, Assistant Secretary (Tax Policy), Department of the Treasury
Thomas West, Tax Legislative Counsel, Department of the Treasury
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AMERICAN BAR ASSOCIATION
SECTION OF TAXATION
COMMENTS ON THE TAX TREATMENT OF HARD FORKS

The following comments ("Comments") are submitted on behalf of the American Bar Association Section of Taxation (the "Section") and have not been approved by the House of Delegates or Board of Governors of the American Bar Association. Accordingly, they should not be construed as representing the position of the American Bar Association.

Omri Marian, Vice Chair of the Section's Teaching Taxation Committee (the "Committee"), and Kerry Ryan, Chair of the Committee, had the principal responsibility for preparing these Comments. Substantive contributions were made by Adam Chodorow, James Creech, Elizabeth Crouse, Diane Ring, and Lisa Zarlenga. The Comments were reviewed by Lisa Zarlenga, Chair of the Section's Committee on Government Submissions.

Although some of the members of the Section who participated in preparing these Comments have clients who may be affected by the federal income tax principles addressed herein, no such member, or the firm or organization to which such member belongs, has been engaged by a client to make a government submission with respect to, or otherwise to influence the development or outcome of, the specific subject matter of these Comments.

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Date: March 19, 2018

Executive Summary

In 2014, the Internal Revenue Service (the "Service") issued Notice 2014-21 (the "2014 Notice"),[1] addressing the federal income tax treatment of "virtual currencies." The Section offered comments to the 2014 Notice in a letter dated March 24, 2015.[2] Since then, several important developments in the cryptocurrency[3] economy have taken place that are not addressed in the 2014 Notice. These developments raise important federal income tax questions, and we appreciate the opportunity to respond to the Service's request for comments on these issues.

An important issue, and the focus of these Comments, is the proper federal income tax treatment of a cryptocurrency hard fork ("Hard Fork"). A Hard Fork is a "change to the software of the digital currency that creates two separate versions of the blockchain with a shared history."[4] After a Hard Fork takes place, the original owner of the cryptocurrency retains its interest in the original coin and also has the right to use the forked coin. Hard Forks raise unique tax issues. Specifically, does a holder of a cryptocurrency that experiences a Hard Fork realize income for federal income tax purposes? If so, how much and when? The significant volatility in the exchange prices of cryptocurrency make valuation difficult and inconsistent among taxpayers.

As discussed further in these Comments, current law provides no clear answers to these questions. There are reasonable analogies to both taxable and nontaxable events. In light of the legal ambiguity, the significant valuation issues, and need for immediate guidance regarding the 2017 Hard Forks, the Section recommends that the Service consider issuing guidance that offers a temporary rule, in the form of a safe-harbor, to taxpayers who were able to transact in a forked currency as a result of a Hard Fork during the 2017 tax year. We recommend that such guidance prescribe the following:

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.

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[1] Notice 2014-21, 2014-16 I.R.B 938.

[2] https://www.americanbar.org/content/dam/aba/administrative/taxation/policy/032415comments.authcheckdam.pdf.

[3] These Comments also refer to virtual currency as "digital currency," "cryptocurrency," or "coins."

[4] David Farmer, *What is a Bitcoin fork?*, THE COINBASE BLOG (Jul. 27, 2017), https://blog.coinbase.com/what-is-a-bitcoin-fork-cba07fe73ef1.

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]

5. The Service would not assert that any taxpayer who availed themselves 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 Service, 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.

This temporary rule has the benefit of encouraging consistency among taxpayers with respect to 2017 Hard Forks, avoiding difficult timing and valuation issues (including the ability of taxpayers to benefit from hindsight depending on how the values fluctuated during 2017), and providing information to the Service regarding holders of the original and forked cryptocurrencies. Although the treatment may result in capital gain as opposed to ordinary income treatment, it preserves the full value of the forked coin for taxation when the taxpayer sells it. In addition, it restarts the holding period, thus resulting in sales occurring within a year being taxed as short-term capital gains.

The Section will continue to develop its position on the tax treatment of future Hard Forks and is considering other issues for comment in the cryptocurrency area. The Section looks forward to working with the Service on these issues.

[5] The guidance could provide for a simplified disclosure procedure for taxpayers who may already have filed a 2017 return, but who otherwise have taken a position consistent with the guidance with respect to Hard Forks.

I. Hard Forks in General

Cryptocurrencies are digital tokens, the ownership of which is recorded on a decentralized ledger. Cryptocurrencies are held in "wallets," which may be a type of hardware (*e.g.*, a device similar to a USB drive) or a type of software. Hardware wallets must be physically available to access certain security keys stored on the hardware that are required to control the disposition of the relevant cryptocurrency. Software wallets are just that: software stores the security keys that are required to control the disposition of the relevant cryptocurrency. Software wallets may be hosted in a variety of ways, including on the cloud, a desktop computer, or a mobile phone.

The security keys necessary to transfer cryptocurrency consist of a public key and a private key. Both are large strings of numbers that are mathematically linked to the wallet address. The private key is used to generate a "signature" for each blockchain transaction a user sends out. The private key is used to mathematically derive the public key, which is transformed with a hash function to produce the address that other people can see.

Cryptocurrencies generally may be traded for other cryptocurrencies or fiat currencies, for example the U.S. dollar, on exchanges that function much like stock exchanges. Cryptocurrency exchanges may also provide a software wallet in which users can store security keys for relevant cryptocurrencies. Trading on these platforms occurs in a manner analogous to trading in "street name" when an owner has an account with a large brokerage. That is, the exchange controls the owner's security keys and conducts batch trades for multiple users. This is a high-level description of how some intermediaries operate, though there are numerous variations.

Because the software that runs the ledger generally is 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. Hard Forks, sometimes also known as "Chain Splits" or "Coin Splits," are one example of such modifications. When a Hard Fork occurs, a new "branch" splits from the original ledger and is thereafter separately maintained. This means that the network of computers separates into subgroups, which separately verify transactions on the original ledger and the split or forked ledger. Those people whose ownership of a cryptocurrency was recorded on the original ledger maintain their ownership of the original cryptocurrency, but they are also entitled to claim ownership of the cryptocurrency maintained on the forked ledger. When an owner holds a cryptocurrency wallet directly (rather than through a custodial wallet), the owner does not actually receive anything new in a Hard Fork. Instead, the owner—once he or she has taken the necessary steps (as described below)—is able to use the same private key to transact on each of the ledgers. If the owner uses his or her private key to transact in the original cryptocurrency, the network participants verifying transactions on the original ledger will add it to that ledger, but the network participants verifying transactions on the forked ledger will not recognize it. This enables the owner to use his or her private key separately to transact in the forked coin and the original coin. The ownership history of both the original and forked cryptocurrency trace back to the same block on the blockchain, but going forward, the ledger of each cryptocurrency is independent (*i.e.*, they are not interchangeable).

It may be helpful to compare Hard Forks with "soft forks," which are more similar to a software upgrade. In a soft fork, the same blockchain is maintained (there is no split or branching), but some changes to the related software are made such that the blockchain functions somewhat differently after the soft fork. By analogy, a soft fork is more similar to the release of a new version of an existing variety of word processing software, for example, Microsoft Word. The new version typically recognizes documents created using the original version, but the original version may not recognize documents created using the new version unless the original software is updated.

There are many reasons for network participants to agree to Hard Forks. For example, one reason for Hard Forks is that users of the network agree that a fundamental upgrade to the ledger software is required. For example, on August 1, 2017, Bitcoin split into bitcoin (BTC) and bitcoin cash (BCH).[6] The purpose in creating BCH was to allow for a quicker generation of forked coins, as well as other improvements. Nonetheless, both BCH and BTC remain in existence, and both enjoy considerable trust of the cryptocurrency community. In contrast, some forks are a response to user mistrust in the original coin. For example, 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 (Classic Ethereum) and the volume of trading in it plummeted due to the loss of user trust, while the forked coin (Ethereum), which is viewed more favorably by the market, essentially usurped the original coin. Even though original owners of Ethereum owned both the original and forked coins on the day of the split, the original coins became nearly worthless in comparison on that day (though both still trade and the original coin has since reached a greater price than it had prior to the fork).

In the case of a Hard Fork, an owner of the original coin must take active steps in order to transact in the forked coin. An owner that holds the original coin in a basic wallet (whether hardware or software), generally must download new software to a computer to use the forked coin. This requires some level of technological sophistication

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[6] Other examples of Bitcoin chain splits include bitcoin gold in October 2017, bitcoin diamond in November 2017, and superbitcoin, bitcoin hot, and lightning bitcoin in December 2017.

and is inconvenient, but is not unduly burdensome for a reasonably experienced computer user. An owner that holds the original coin through certain other types of wallets is not required to download the software because the wallet service provider downloads the software, thus "supporting" the forked coin created in the Hard Fork. This is much easier for the average owner, but means that owners who use a custodial wallet service depend on the wallet service provider to permit them access to the forked coin.

For example, a few days before the BCH Hard Fork, Coinbase sent an e-mail to its customers stating that Coinbase has "no plans to support the Bitcoin Cash fork… Customers will not have access to, or be able to withdraw, bitcoin cash."[7] Only three days after the Hard Fork happened, Coinbase announced that it would support BCH, and would credit their customers' accounts accordingly.[8] Similarly, Xapo announced that customers had until December 14, 2017 to transfer or convert their BCH to BTC, or they would automatically convert it.[9] Many owners and wallet service providers take no action to claim the forked currency until the security risks have been sufficiently evaluated and mitigated. Nonetheless, it is generally possible for an owner to transfer the original coin from one wallet that will not support a Hard Fork and into another wallet that will support the Hard Fork prior to the occurrence of the Hard Fork. In that manner, the owner generally should be able to go through the processes necessary to claim the forked coin, at least if the owner is aware that a Hard Fork is going to occur.

II. Potential Tax Treatments of Hard Forks

Hard Forks raise the question of whether owners of an original coin who become entitled to use a forked coin by reason of a Hard Fork, realize income. We believe reasonable arguments may be made both ways because Hard Forks may be analogized to existing taxable and nontaxable events.

A. Hard Fork as a Realization Event

The Supreme Court in *Commissioner v. Glenshaw Glass*[10] liberally construed the term "gross income" as "instances of undeniable accessions to wealth, clearly realized, and over which the taxpayers have complete dominion," reflecting Congress' intent to tax

[7] David Farmer, *Update for customers with bitcoin stored on Coinbase*, THE COINBASE BLOG (Jul. 27, 2017), https://blog.coinbase.com/update-for-customers-with-bitcoin-stored-on-coinbase-99e2d4790a53.
[8] David Farmer, *Update of Bitcoin Cash*, THE COINBASE BLOG (Aug. 3, 2017), https://blog.coinbase.com/update-on-bitcoin-cash-8a67a7e8dbdf.
[9] Xapo Bitcoin Cash Update, https://support.xapo.com/xapo-bitcoin-cash-update.
[10] 348 U.S. 426, 431 (1955).

all gains except those specifically exempted. One could argue that the ability to use the forked coin in addition to the original coin represents such an accession to wealth.

In *Eisner v. Macomber,* the Supreme Court considered whether a pro-rata stock dividend paid to a common shareholder by a corporation with one class of stock constituted income. In holding that it did not, the Court distinguished taxable "gain derived from capital" from unrealized—and therefore nontaxable—"gain accruing to capital or a growth or increment of value in the investment."[11] The pro-rata stock dividend in *Macomber* fell into the latter category because it was simply an additional piece of paper evidencing the increased worth of the taxpayer's original investment in the company—the shareholder has received nothing out of the corporation's assets for his use and benefit, and the corporation has not experienced a change in its aggregate assets or its outstanding liabilities.[12] In contrast, the Court defined a taxable "gain derived from capital" as "something of exchangeable value proceeding from the property, severed from the capital . . . and received or drawn by the [taxpayer] for his separate use, benefit and disposal."[13]

In *Macomber,* the receipt of additional stock was a consequence of owning the original stock, and the same could be said for forked coins, such as BCH, received in a Hard Fork. However, unlike in *Macomber*, BCH has unique properties, and it is unrelated to BTC except by the shared historical ownership. Thus, unlike the taxpayer in *Macomber*, one could argue that an owner of BTC who received BCH at the time of the fork received a new and different asset of exchangeable value for the owner's separate use rather than something representing an increase in the underlying value of the previously held BTC.

The regulations under section 1001[14] define a realized gain or loss as, *inter alia*, one from "the exchange of property for other property differing materially in either kind or extent."[15] The Supreme Court in *Cottage Savings Association v. Commissioner* defined materially different properties as those where "their respective possessors enjoy legal entitlements that are different in kind or extent."[16] Although there was not an exchange of BTC for BCH at the time of the Hard Fork, such that *Cottage Savings* is not precisely on point, the definition is useful in determining whether a holder of BTC at the

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[11] 252 U.S .189, 207 (1920). This case involved a number of Constitutional issues that are not relevant here. Rather, we cite the case for the proposition that realization is an important element of income.

[12] *Id*. at 210-11.

[13] *Id.* at 207.

[14] References to a "section" are to a section of the Internal Revenue Code of 1986, as amended (the "Code"), unless otherwise indicated.

[15] Reg. § 1.1001-1(a).

[16] 499 U.S. 554, 555 (1991).

Hard Fork received something materially different than the previously held BTC. One might argue that the upgrade reflected in the forked cryptocurrency represents a significant change in the protocol that mattered to users (otherwise the fork would not have been permanent), thus representing a material change. Although the forked cryptocurrencies share a pre-split transaction history, a Hard Fork represents a permanent split in the blockchain. Thereafter, transactions on the original blockchain are valid only in BTC, but invalid in BCH, and vice versa. In addition, BTC and BCH are traded separately, each with its own value.

Based on the above authorities, we believe a reasonable argument can be made that the receipt of a forked coin resulting from a Hard Fork constitutes a realization event.[17] However, even if one accepts such a view, there remains ambiguity as to *when* the realization occurs, and what is the *amount* realized.

Timing of realization

As mentioned above, the Supreme Court in *Commissioner v. Glenshaw Glass* defined taxable income as “instances of undeniable accessions to wealth, clearly realized, and over which the taxpayers have complete dominion.” [18] It is the last part of this definition—complete dominion—that raises an issue as to the timing of realization with regard to Hard Forks.

One possible argument is that realization happens at the time of the Hard Fork. At that point, an owner of the original coin becomes (at least in theory) unconditionally eligible to claim the forked coin, and he or she therefore must include the value of the forked coin at that time. However, when an owner holds an original coin in an account maintained by an intermediary such as Coinbase, the timing of realization becomes murky. In that case, a financial intermediary—whether the owner’s agent or not—is preventing the owner from controlling the forked coin, which arguably may prevent the owner from experiencing a realization event.[19] On the other hand, cryptocurrencies are virtual currency and can be transferred to other intermediaries or the owner relatively easily and quickly. Consequently, it can be argued that the owner has voluntarily failed

[17] Other possible analogies to taxable transactions include dividends of property (§§ 301, 316), found property or treasure trove (Reg. § 1.61-14(a); *Cesarini v. United States*, 296 F. Supp. 3 (N.D. Ohio 1969)), awards (*Hornung v. Commissioner*, 47 T.C. 428 (1967)), or free samples (*Haverly v. United States*, 513 F.2d 224 (7th Cir. 1975)).

[18] 348 U.S. at 431.

[19] *See, e.g.*, *Maryland Casualty v. U.S.*, 251 U.S. 342 (1920). Even if the owner does not hold an original coin through a third-party wallet, he or she may still take no action to claim the forked currency until the security risks have been sufficiently evaluated and mitigated.

to meet the conditions under which the forked coin can be claimed and is in constructive receipt of it.[20]

Amount Realized

Assuming realization, one must determine the amount realized, meaning, the value of the forked coin when realization occurs. Given the complexities in the cryptocurrency market, valuation is as much a problem of administrability and predictability as it is of consistency with existing U.S. federal income tax law.

After a Hard Fork occurs, there is a process of market price discovery. However, this process often takes place on multiple exchanges that do not "talk" to each other. As a consequence, the same type of cryptocurrency—even established cryptocurrencies such as BTC—may have different values on different exchanges at the same time. Thus, even though market values for a forked coin may emerge quickly (though, in some cases, a market may fail to materialize), the same coin may have different market values on different exchanges even within the same country at any point in time. Nonetheless, at the moment that a Hard Fork occurs—the first moment at which an owner of the original coin may obtain an interest in the forked coin—the forked coin arguably has no market value because it has not been previously traded and it is not clear whether a market will emerge for the coin.

We note that in some instances (such as in the case of BCH), an exchange may permit futures contracts in a forked coin to be traded before a Hard Fork occurs. However, to the best of our knowledge, no such websites constitute an "established market"—a concept to which many provisions in the Code refer as a method for determining market price—and therefore should not be used as a definitive source for determining the value of the underlying property (*i.e.*, the forked coin) for tax purposes.[21]

If one determines that realization occurs when an owner first has clear control over the forked coin resulting from a Hard Fork, then it is reasonable to argue that the fair market value of the forked coin must be determined at that time. It is reasonable to argue that in the case of third-party exchanges that also function as a wallet provider (*e.g.*, Coinbase), the amount realized would be the U.S. dollar value of the forked coin on that exchange at the time it is credited to an owner's account (*i.e.*, the first moment that the

[20] Reg. § 1.451-2. If the value of the forked currency is included in income immediately upon the fork, but the modifications to the blockchain are ultimately not adopted by participants on the network so that the fork is not permanent and the blockchain re-merges, the owner should arguably be able to take a loss equal to its adjusted basis in the forked currency. I.R.C. § 165(c)(2).

[21] *See, e.g.*, Reg. § 1.1.1273-2(f) (determining issue price for purposes of determining original issue discount).

intermediary elects to recognize the forked coin on behalf of the owner). As a result, the owner would report the fair market value of the coin at the time of crediting as ordinary income, since the forked coin was not received in a sale or exchange, and would take a basis in the forked coin equal to its fair market value at that time.

However, an owner who holds the forked coin through another wallet provider or technological method that recognizes the forked coin and credits it to an owner's account at the moment of the Hard Fork may include a very different amount in ordinary income due to the different timing of the realization event (*i.e.*, when the user obtained clear control over the forked coin). The owner may also be able to select the most favorable exchange rate by shopping the various exchanges. This is not necessarily a problem of fairness given that the owner has a choice regarding how he or she holds the original coin involved in the Hard Fork, but it is a problem of predictability and administrability (and an opportunity for taxpayers to attempt to game the U.S. federal income tax system).

B. Hard Fork as a Non-Realization Event

Given that a forked coin resulting from a Hard Fork shares transactional and ownership history with the original coin, one could also argue that the original coin has always included the future potential to create a forked coin. For example, one could argue that part of the potential of BTC has always been the creation of additional coins (such as BCH), and that such a possibility is capitalized into the market value of BTC. In other words, the forked coin is like the stock dividend in *Macomber* in that it simply represents part of the value of the original coin and therefor is more in the nature of a change in the form of ownership than a realization event. In this way, a Hard Fork is arguably similar to the birth of young from pregnant livestock, which generally has not been treated as a realization event.[22] Notably, the fact that BCH has modestly different properties from BTC should not be seen as conclusively establishing that a realization event has occurred; a calf has different properties from the cow that gives birth to the calf, and stock received in a nontaxable stock dividend need not be identical to the stock on which the dividend is paid.

If this position is accepted, the creation of BCH should not be treated as a realization event until the disposition of BCH by the owner (and taxed as a capital gain if the cryptocurrency is held as a capital asset). This position is supported by a reduction in

[22] *See, e.g.*, *Metz v. United States*, 10 AFTR 2d 5443 (E.D. Ky. 1962); *Gamble v. Commissioner*, 68 T.C. 800 (1977); Rev. Rul. 86-24, 1986-1 C.B. 80. Other possible analogies to nontaxable transactions include the sale of minerals extracted (Reg. § 1.61-3(a)) or timber cut from land (*cf.* I.R.C. § 631(a)), the partition of property (Reg. § 1.61-6(a)), or the severance of a joint tenancy (Rev. Rul. 56-437, 1956-2 C.B. 507).

price of BTC that happened at the time of the Hard Fork with BCH.[23] One could argue that the reduction of BTC value was attributable to the split with BCH, the value of which was no longer integrated with the value of BTC. It is difficult, however, to empirically prove that the prices of BTC and BCH are so associated due to the volatility of both currencies.

Alternatively, one may view the forked currency as not materially different than the original currency under the standard of *Cottage Savings*. The owner continues to use the same private key that permitted the owner to spend BTC prior to the Hard Fork to access BCH after the Hard Fork, and each are verified by a subset of the same network of computers. In addition, the ownership history of both BTC and BCH trace back to the same block on the blockchain; any changes emerge only going forward.

Even if one accepts the position that a Hard Fork is not a realization event, an important question remains. Specifically, one has to decide how to divide the basis between the original coin and the forked coin. One possible approach would be to adopt rules similar to those used in stock distributions, in which the basis is split based on the fair market value of the original and distributed stock.[24] However, in such a case, it will be necessary to determine the value of the forked coin at the time of the Hard Fork. As discussed above, there are real practical difficulties with determining the value of a forked coin.

III. PROPOSAL FOR 2017

The original intent of the Section was to fully develop the issues discussed herein. However, given that multiple Hard Forks took place in 2017, it is apparent that these issues are pressing and must be addressed in time to be of assistance for taxpayers during the current filing season. Therefore, the Section decided to leave the full development of these issues for later and instead proposes a temporary solution to apply only for the 2017 tax year.

Under the proposed temporary solution, we recommend that the Service issue guidance that offers a safe harbor to taxpayers who were able to transact in a forked coin as a result of a Hard Fork occurring during the 2017 tax year. Such safe harbor would prescribe the following:

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[23] Laura Shin, *Bitcoin Cash Skyrockets, Bitcoin Price Drops As Civil War Continues*, FORBES (Nov. 12, 2017), https://www.forbes.com/sites/laurashin/2017/11/12/bitcoin-cash-skyrockets-bitcoin-price-drops-as-civil-war-continues/#3968e99135b5.

[24] Reg. § 1.307-1.

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 Service would not assert that any taxpayer who availed themselves 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 Service, 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.

While the Section has not concluded that this is the proper U.S. federal income tax treatment of Hard Forks, we believe that such temporary solution represents a reasonable interpretation of current law. In addition, we believe that the temporary solution imposes a reasonable administrative burden on the Service and compliance burden on taxpayers in this filing season, as it avoids difficult timing and valuation issues.[25] It also minimizes the ability of taxpayers to benefit from hindsight depending on how the values fluctuated during 2017. Finally, by requiring disclosure, the Service will obtain valuable information about cryptocurrency transactions and taxpayers participating in them.

We acknowledge that the temporary treatment may result in capital gain as opposed to ordinary income treatment (assuming the cryptocurrency is held as a capital asset), but by assigning a zero value, it preserves tax on the full value of the forked currency for taxation when the taxpayer sells it. In addition, this approach restarts the holding period, thus resulting in sales occurring within a year being taxed as short-term capital gains.

The Section will continue to refine its position and is happy to assist the Service in developing a permanent position regarding the tax treatment of Hard Forks. The

[25] We note that the Service has previously adopted safe harbors to avoid difficult valuation issues. *See, e.g.*, Rev. Proc. 93-27, 1993-2 C.B. 343, *clarified by* Rev. Proc. 2001-43, 2001-2 C.B. 191.

Section also plans to comment on other issues in the cryptocurrency area and looks forward to prioritizing and working with the Service on those issues.

Taxation of Bitcoin, Its Progeny, and Derivatives: Coin Ex Machina

by Stevie D. Conlon, Anna Vayser, and Robert Schwaba

Stevie D. Conlon

Anna Vayser

Robert Schwaba

Stevie D. Conlon is a vice president and tax and regulatory counsel for Wolters Kluwer and coauthor of *Principles of Financial Derivatives: U.S. & International Taxation* (1999). Anna Vayser is a product manager with Wolters Kluwer and Robert Schwaba is a senior tax and regulatory specialist with Wolters Kluwer. The authors gratefully acknowledge the comments of Steven M. Rosenthal and the contributions of John Kareken and Cynthia Lapins of Wolters Kluwer.

In this report, Conlon, Vayser, and Schwaba provide a primer on income tax issues regarding cryptocurrencies and related financial derivatives, including cryptocurrency futures, in light of important developments in 2017. They explain that Form 1099-B reporting, straddles, tax arbitrage possibilities, taxable income resulting from forks of cryptocurrencies, and IRS audits are all new concerns.

Table of Contents

Financial markets and investments constantly change, and bitcoin, a cryptocurrency, has been the recent focus of much attention by the investing public, the markets, and non-luddites of all sorts.[1] This report provides a primer on the state of general U.S. income tax issues for investors regarding cryptocurrencies and related financial derivatives like cryptocurrency futures.

There were significant developments concerning cryptocurrencies in 2017. At the beginning of the year, a single bitcoin was valued at barely $1,000. By the end of 2017, however, that value exceeded $15,000. Market awareness and participation continued to grow in 2017, and the bitcoin blockchain forked twice (in August and November). In November came a published court decision on an IRS subpoena of bitcoin activities by participants,[2] and bitcoin futures were introduced in December.[3]

Much has been written about whether recent massive price fluctuations in bitcoin portend a tulip-mania-like market crash for cryptocurrencies.[4] We leave those discussions to others. Instead, our goal is to lay out the fundamental tax issues for virtual currencies and their related derivatives. An important caveat regarding any discussion of financial innovations like those covered here is that there is little specific tax law on many aspects of cryptocurrencies or their derivatives, and what law there is can change. Accordingly, in many cases we have tried to identify the relevant tax questions even if there is no clear answer. Moreover, given that cryptocurrencies are relatively new, general background information is appropriate.

[1]Daniel Shane, "Bitcoin: What's Driving the Frenzy?" CNN Money (Dec. 8, 2017).

[2]*United States v. Coinbase Inc.*, No. 3:17-cv-01431 (N.D. Cal. 2017).

[3]Alexander Osipovich and Gabriel T. Rubin, "U.S. Bitcoin Futures Climb in First Day of Trade," *The Wall Street Journal*, Dec. 11, 2017.

[4]Although many of the supposed excesses of the tulip craze are apparently more properly attributed to cautionary tales penned by Calvinists who had an axe to grind with what they saw as rampant, greed-driven consumerism than a systemic financial bubble fueled solely by ornamental horticulture (Lorraine Boissoneault, "There Never Was a Real Tulip Fever," Smithsonian.com, Sept. 18, 2017), the fact remains that bitcoin went from around $1,000 on the first day of 2017 to nearly $20,000 before the end of 2017. *See* Pete Rizzo, "Bitcoin Price Tops $1,000 in First Day of 2017 Trading," coindesk.com, Jan. 1, 2017; and Eric Mack, "As Bitcoin Flirts With $20,000, Let's Revisit Its Earlier Crashes," Forbes.com, Dec. 16, 2017.

I. Background

A. What Is a Bitcoin or a Cryptocurrency?

Bitcoin and other cryptocurrencies generally are types of decentralized digital currencies that are not typically managed by a central bank or administrator. Instead, they are specific applications of blockchain technology. Bitcoin was invented in 2009 by an unknown person or persons under the name Satoshi Nakamoto.[5] Fintech commentators have noted that major technological innovations like blockchain, bitcoin, and others related to finance emerged and were likely accelerated as a result of the financial market challenges and related global recession at that time.[6] It is noteworthy that the following block of text was embedded in the first, or "genesis," block of bitcoin: "The Times 03/Jan/2009 Chancellor on the brink of second bailout for banks."[7]

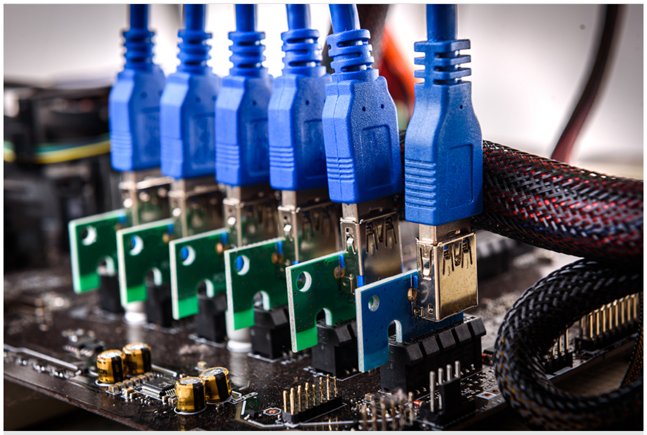
Like another paradigm-shifting technological initiative — artificial intelligence — it is important to understand that more generally, blockchain technology is being developed or used to radically transform many business processes. Its significance is difficult to understate, and it could represent as significant a change from a technology perspective as the evolution from steam-based infrastructure to electricity-based infrastructure. Many banks, brokers, fintech companies, and market intermediaries are using or have projects underway to use blockchain. For example, the Depository Trust and Clearing Corp. (DTCC) has begun a project to use distributed ledger (blockchain) technology as the base technology to re-platform its trade information warehouse, which automates the recordkeeping, lifecycle events, and payment management of more than $11 trillion of credit derivatives. The DTCC plans to complete testing and start in "shadow mode" alongside its active solution in the first quarter of 2018.[8]

[5]Nathaniel Popper, "What Is Bitcoin, and How Does It Work?" *The New York Times*, Oct. 1, 2017.

[6]*See generally* Brett King, *Breaking Banks: The Innovators, Rogues and Strategists Rebooting Banking*, Ch. 5 (2014).

[7]Timothy B. Lee, "Five Years of Bitcoin in One Post," *The Washington Post*, Jan. 3, 2014.

[8]Michael del Castillo, "DTCC Milestone: $11 Trillion in Derivatives Gets Closer to the Blockchain," Coindesk.com, Oct. 20, 2017.



Bitcoin mine close-up (jure@Bigstock.com)

All blockchain systems, including those underlying cryptocurrencies, rely on a distributed ledger and network nodes to verify the authenticity of a specific block, such as a unique unit of cryptocurrency. The distributed ledger attempts to prevent fraud and counterfeiting through self-verification, effectively doing away with the need for oversight of the cryptocurrency by a central bank or administrator.[9]

Cryptocurrencies are completely electronic. New coins are created through a process called "mining": Computers are used to create a new block, which includes an algorithmic cryptographic hash that links the new block to the prior block (hence creating the blockchain) and a proof-of-work that includes a number referred to as a nonce. The proof-of-work requires the solutions to mathematical problems,[10] and the system readjusts periodically to raise the difficulty of these computations to effectively throttle the number of new bitcoins that can be created.[11] Because of how the blocks are all linked together, a corrupt or modified block would likely be rejected. This sort of security system embedded within each block of the chain is what technologists believe makes it so difficult to counterfeit bitcoin and other cryptocurrencies.

Miners receive both newly minted bitcoins and transaction fees for their efforts. This is processed through a transaction described as a coinbase.[12] The value of bitcoins is fundamentally based on their predesigned scarcity: The total number of the coins that can ever be created based on the related algorithms is limited to 21 million. Although it was originally expected that all 21 million bitcoins would be mined by 2140, the rapid changes in valuation and the continued building of large-scale bitcoin mining facilities could accelerate the exhaustion of the supply of bitcoins.[13] Of course, other cryptocurrencies have been and will likely continue to be created with new, artificially architected raw supplies available for mining across our technological world.[14]

The algorithms needed to link the coins and generate proof-of-work are major elements in what makes cryptocurrency mining so difficult. Large banks of dedicated computers and servers are used in massive, loud, heat-generating old warehouses and factories that have been repurposed as mining facilities. Concerns have been raised about energy consumption and the environmental effects of these activities.[15]

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[9] Shyam Shankar, "Centralized Ledgers vs. Distributed Ledgers (Layman Understanding)," Medium.com, July 12, 2017.

[10] Adding leading zeroes to the solution of the mathematical problem increases the difficulty exponentially. For example, the hash of the genesis block had 10 leading zeroes. In early days, the number of leading zeroes fell as low as eight, but it has increased dramatically to around 18. Kiran Viadya, "Decoding the Enigma of Bitcoin Mining — Part I: Mechanism," All Things Ledger, Dec. 14, 2016.

[11] Difficulty is generally expressed as the estimated number of hashes required divided by 2^{32} (approximately 4.3 billion). Between March 1, 2014, and March 1, 2015, the average number of hashes miners had to try before creating a new block increased from 16.4 quintillion to 200.5 quintillion, which could also be expressed as a difficulty change from approximately 3.8 billion to approximately 46 billion. Since the start of 2016, the difficulty has continued to increase precipitously: Difficulty as of December 24, 2017 was approximately 1.8 trillion (or requiring approximately 7.74×10^{21} attempted hashes).

[12] Jerome Morrow, "What Is a Coinbase Transaction?" Cex.io, Oct. 29, 2014.

[13] The year 2140 was an estimate. Given that each added block includes transaction fees for the successful miner and that successive blocks reward miners with fewer new bitcoins, by the time miners are close to 21 million bitcoins the transaction fees themselves may be a sufficient incentive to mine.

[14] Prableen Bajpai, "The 6 Most Important Cryptocurrencies Other Than Bitcoin," Investopedia, Dec. 7, 2017.

[15] Popper, "Into the Bitcoin Mines," *The New York Times*, Dec. 22, 2013.

B. Tracking Ownership: Keys and Wallets

Each bitcoin has a unique electronic address. Transfer of a bitcoin requires both a public and private key. The public key is on the blockchain, while the private key is only in a miner's digital wallet. It is virtually impossible to reverse-engineer a private key. In an exchange, the public key identifies the electronic address and the private key verifies the transaction, like a digital signature. Losing a private key is equivalent to losing cash, because the network does not recognize any method of ownership besides private keys. This point is emphasized by the story of a man who claims to have lost the private keys for 7,500 bitcoins in 2013 because he had accidentally thrown away a hard drive containing them (worth approximately $75 million, assuming a bitcoin value of $10,000 per coin).[16]

A software wallet holds the information needed to identify bitcoins, and it can be online (permitting ready access) or offline. It essentially stores a person's credentials that identify bitcoin holdings (the private and public key pairs).[17] Bitcoins can be stolen if the private keys are stolen, so security of this information is critical. A theft of this kind notably occurred in 2011 with Mt. Gox, a Tokyo-based bitcoin exchange.[18] Accordingly, to manage security risks, this information may sometimes be kept in a paper wallet (physically printed and stored) or a hardware wallet (the storage of the information electronically but offline, not connected to the internet).

A single bitcoin has often had a value of hundreds or thousands of dollars, but there are standardized fractions of bitcoins that can be held, bought, or sold. The smallest fractional amount recorded by the blockchain is a "satoshi," which represents one hundred millionth of a single bitcoin.[19] Accordingly, individuals could acquire small fractions of bitcoins at different times, with each fraction registered separately as part of the blockchain, potentially even segregated into discrete wallets, each with its own public and private keys.

Bitcoin can also be owned indirectly. Some entities may have restrictions on investment types that could prohibit direct investments in alternative assets like cryptocurrencies. Indirect investments in custodial arrangements offered by some market participants might avoid those restrictions.

C. Forks and Coin Creation

As a blockchain, each block of bitcoin transactions effectively links under prescribed rules to all others. When the rules for a blockchain are updated or changed, older blocks in the chain may no longer meet the newer requirements and may therefore no longer be linked to the blocks created after the update or change. This creates a fork (like a fork in the road), or the creation of two different potential paths: an existing path, which simply follows the old rules; and another potential path, on which new blocks are linked based on the updated or changed rules. Because bitcoin is not centrally managed, each of its participants has the ability to decide which path they want to take. The viability of each path depends on the mining power represented by the participant's choice. Presumably, a consensus will emerge based on values in the marketplace.

A hard fork can be an intentional result of newer rules that might be added to correct security risks or provide some other technological benefit.[20] A bitcoin hard fork took place in August 2017, arising because some participants wanted to change the one-megabyte standard size of a bitcoin block to eight megabytes to increase transaction processing speed. This hard fork created a split in the bitcoin blockchain, and for

[16] Aatif Sulleyman, "Man Who 'Threw Away' Bitcoin Haul Now Worth Over $80M Wants to Dig Up Landfill Site," *The Independent*, Dec. 4, 2017.

[17] "How to Choose the Best Bitcoin Wallet," www.bitcoin.com (Jan. 27, 2017).

[18] Robert McMillan, "The Inside Story of Mt. Gox, Bitcoin's $460 Million Disaster," *Wired*, Mar. 3, 2014.

[19] Popper, *supra* note 5.

[20] A soft fork differs in that the new blocks comply with all the old rules but are also subject to new rules. Soft forks rely on miners switching over to the new rules. This means that while nodes mining under the old rules will recognize the new blocks as valid, nodes mining under the new rules might not recognize blocks mined under the old rules after the fork. For example, if 75 percent of miners recognize the new rules, 25 percent of the new blocks generated might not follow the new rules. Nodes running the old rules will see them as valid, but new nodes will probably ignore them. Theoretically, this should result in speedy adoption once the majority of nodes follow the new rules, since miners do not want their nodes to be rejected.

pre-fork holders of bitcoin it essentially resulted in ownership of two separate sets of coins: bitcoin and bitcoin cash.[21] In practice, all holders of bitcoin as of the date of the hard fork (as referenced by a particular block in the bitcoin chain) received the right to an equal number of bitcoin cash units. After the hard fork, the relative ownership of bitcoin and bitcoin cash was expected to quickly diverge. Miners could prospectively mine either cryptocurrency, deciding on an ongoing basis whether bitcoin or bitcoin cash would result in better profitability to the miner. Similarly, investors could decide which cryptocurrency they would rather prospectively acquire: bitcoin or bitcoin cash.

In November 2017 another hard fork of bitcoin occurred, resulting in bitcoin gold. It was believed that the bitcoin mining algorithms tended to create a centralization of the mining environment. Bitcoin gold's algorithms were designed in a manner intended to provide better opportunities for smaller miners.[22] All holders of bitcoin as of the date of the November hard fork (as referenced by a particular block in the bitcoin chain) effectively received the right to an equal number of bitcoin gold units. Mining and investment of bitcoin and bitcoin gold was similarly expected to rapidly diverge. An investor holding a single bitcoin that was mined before either fork, before making any trades, theoretically holds a unit each of bitcoin, bitcoin cash, and bitcoin gold following the second fork.[23] After both forks, an investor who held a bitcoin before both forks can effectively sell the bitcoin three times: once under the bitcoin gold rules, once under the bitcoin cash rules, and once under the original bitcoin rules.[24]

D. Other Cryptocurrencies and Tokens

There are several cryptocurrencies other than bitcoin. Bitcoin cash and bitcoin gold have already been mentioned, but others of note include Litecoin and Ripple. Future cryptocurrencies are inevitable; in general, they are intended to function as a standardized and liquid medium of exchange that does not rely on a central banking system. Electronic currencies are often intended to provide global access to a currency that may be more stable than local currencies. The blockchain architecture and distributed record system is intended to facilitate lower fees for exchange transactions than those that typically arise with existing centralized-bank-supported currency exchange systems.[25]

Related but distinguishable from cryptocurrencies are tokens or smart contracts like Ethereum, Filecoin, Storj, and Blockstack.[26] Rather than serve as a medium of exchange, tokens or smart contracts use blockchain and a distributed record system to track ownership of assets and facilitate execution of promises and other agreements electronically in a manner that eliminates the need for access to centralized and stored records or existing signature verification protocols.[27]

E. Cryptocurrency Derivatives

"It is rare that you see something more volatile than bitcoin, but we found it: bitcoin

[21] Amy Castor, "Bitcoin Cash 101: What Users Need to Know Before the Fork," Coindesk.com, July 31, 2017.

[22] The two major changes were shifting to a more memory-intensive and less processor-intensive mining algorithm, and adjusting mining difficulty after each block rather than approximately every two weeks. Aaron van Wirdum, "Bitcoin Gold Launches on November 12," *Bitcoin Magazine*, Nov. 11, 2017.

[23] Depending on the method of bitcoin storage, some bitcoin holders may not immediately be able to access the forked virtual currency. For example, the cryptocurrency exchange Coinbase did not initially permit users to withdraw the bitcoin cash they received because of the fork. "Bitcoin Cash — Frequently Asked Questions," coinbase.com, Dec. 19, 2017. Note substantial price variances can occur between the date of the fork and access to the forked virtual currency.

[24] For example, bitcoin cash nodes recognize bitcoin balances from before the fork but don't recognize spending transactions on the bitcoin chain after the fork, and bitcoin nodes likewise recognize bitcoin cash balances but don't recognize bitcoin cash spending transactions. Post-fork, a holder can dispose of the bitcoin he held before the fork twice — once with a bitcoin spend transaction, and once with a bitcoin cash spend transaction. Jim Calvin, "Adequately Identifying Bitcoin Dispositions for Federal Income Tax Purposes," 58 *Tax Mgmt. Memo.* 363, 366 (2017).

[25] Satoshi Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System," bitcoin.org, at 1 (undated) ("The cost of mediation increases transaction costs."). Satoshi Nakamoto is a pseudonym; the real identity of the author or authors is unknown.

[26] David J. Shakow, "The Tax Treatment of Tokens: What Does It Betoken?" *Tax Notes*, Sept. 11, 2017, p. 1387.

[27] *Id.*

futures," said Zennon Kapron, a consultant quoted by Bloomberg, on December 10, 2017 — the day bitcoin futures began trading on the Chicago Board Options Exchange (CBOE).[28]

Not surprisingly, derivatives for bitcoin and other cryptocurrency have emerged. These permit indirect investment in cryptocurrencies, facilitate shorting and potential arbitrage opportunities, and may offer different levels of liquidity and other benefits of exchange-traded investing. On December 10 and December 17, 2017, respectively, bitcoin futures were introduced by both of the Chicago-based futures exchanges: the CBOE and the Chicago Mercantile Exchange (CME).[29] Other financial derivatives also permit investors to indirectly take positions in cryptocurrencies. For example, Grayscale manages an investment trust that holds bitcoin (over-the-counter markets ticker GBTC), and investors can purchase shares that represent a portion of the trust's holdings.[30] In May 2015 issuer XBT Provider began offering exchange-traded notes (ETNs) in Europe that are intended to mirror the returns of bitcoin (one is based on the Swedish kroner and another is based on euros).

II. U.S. Taxation

A. Notice 2014-21

In March 2014 the IRS released Notice 2014-21, 2014-16 IRB 938, which provides the agency's conclusions on some basic tax principles concerning cryptocurrencies. Although notices do not have the force and effect of statutes or regulations, when they give specific direction or guidance (as opposed to being only announcements), notices are considered tax authority.[31] Given the lack of other guidance on cryptocurrencies and the specific direction and guidance in the notice, it is informative of the IRS's views. Notice 2014-21 provides its guidance in the form of answers to several frequently asked questions. Although many commentators concur with the conclusions in the notice, some have raised concerns that tax compliance with its positions, particularly for small transactions, is burdensome.[32]

B. Bitcoin: Currency or Property?

As is often discussed, U.S. income taxation of financial instruments is generally based on a schema premised on a particular financial instrument's tax classification. The applicable tax rules are generally determined by that tax classification. Subpart J (of Part III of subchapter N of the code) provides a set of tax rules that applies to transactions concerning currencies.[33] Notably, those rules do not include an explicit definition of currency. Thus, a threshold issue is whether cryptocurrencies are considered currencies or property for U.S. income tax purposes.

That issue was addressed by Notice 2014-21. The notice begins by defining a virtual currency as "a digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value," and further defines a convertible virtual currency as a subset of virtual currencies "that has an equivalent value in real

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[28] Yuji Nakamura, Camila Russo, and Rob Urban, "Bitcoin Futures Deliver Wild Ride as Debut Brings Rally, Halts," Bloomberg, Dec. 10, 2017.

[29] *See* CBOE XBT Bitcoin Futures, and CME Group Bitcoin Futures Key Information Document.

[30] The investment trust, formed in 2013, functions like a commodities investment trust. Each share represents approximately 0.09181239 bitcoin, as of January 3, 2018. Although a registration statement for the Bitcoin Investment Trust was filed with the SEC on May 4, 2017, it was withdrawn on October 25, 2017. Bitcoin Investment Trust, "Registration Statement" (Form S-1) (May 4, 2017).

[31] *See, e.g.*, reg. section 1.6662-3(b)(iii) (providing that for purposes of the penalty for underpayments attributable to negligence or disregard of rules or regulations, rules and regulations include code provisions, temporary or final Treasury regulations issued under the code, and revenue rulings or notices (other than notices of proposed rulemaking)). Reg. section 1.6662-3(b)(2). *See also* reg. section 1.6662-4(d)(3)(iii) (identifying notices as an authority concerning the substantial authority defense to the imposition of understatement penalties).

[32] William Hoffman, "After March IRS Notice, Bitcoin Users Await More Tax Guidance," *Tax Notes*, Sept. 8, 2014, p. 1128 (reporting that David Golden, director of the capital markets tax practice at EY, said "The IRS could provide a de minimis rule for taxpayers' administrative convenience for when bitcoin is used in a personal transaction as a medium of exchange."). *See also* Eric Kroh, "More Guidance Sought on Bitcoin and Other Virtual Currencies," *Tax Notes*, Apr. 7, 2014, p. 32.

[33] Sections 985 through 988. Note these provisions only apply to non-functional currencies. In general, this report does not discuss cross-border or other international tax issues, including those related to sourcing or withholding.

currency, or that acts as a substitute for real currency."[34] The notice provides that bitcoin is a convertible virtual currency, and it cross-references guidance issued by the Financial Crimes Enforcement Network for a comprehensive description of convertible virtual currencies.[35] The notice limits its scope of application to convertible virtual currencies and states that it does not provide guidance outside that scope. Accordingly, its guidance presumably does not apply to Ethereum or other token-based blockchain systems like smart contracts.[36]

Notice 2014-21 provides that virtual currency is treated as property for federal income tax purposes, not as currency that would be subject to rules applicable to currency transactions under subpart J.[37] The release of the notice and its conclusion regarding the treatment of virtual currencies like bitcoin was generally greeted with agreement and relief by tax practitioners and commentators.[38] However, some noted that property treatment would likely reduce the use of virtual currencies for payment because of the potential to recognize gain or loss on each disposition.[39] Some concerns have been raised regarding whether virtual currencies could still be considered currencies if facts become different than those posited in the notice, like the effect of participation by a central bank. For example, Venezuela is reportedly close to founding a cryptocurrency backed by its oil.[40] A report by the American Bar Association Section of Taxation on the notice raises the question whether a virtual currency is a currency subject to subpart J under similar circumstances.[41]

Despite the guidance of Notice 2014-21, important questions remain. The notice does not address the kind of property that virtual property should be regarded as for tax purposes.[42] For example, could it be considered a commodity or a security? The Commodity Futures Trading Commission has already ruled bitcoin a commodity for purposes of futures trading.[43] Could bitcoin therefore be considered a commodity for tax purposes?[44] Alternatively, could a virtual currency be classified as stock for federal income tax purposes?[45] A further complication is that the same terms can have different definitions under different tax provisions.[46] The lack of additional clarity is a major concern in trying to understand the potential tax consequences of virtual currencies in several contexts, as discussed later.

[34] Notice 2014-21 at 938.

[35] *Id*. FinCEN, "Guidance on the Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies," FIN-2013-G001 (Mar. 18, 2013).

[36] Presuming that there is a clear, understandable delineation between cryptocurrencies and other token-based systems. However, at least one commentator argues that the delineation is less than clear. *See* American Institute of CPAs, "Comments on Notice 2014-21: Virtual Currency Guidance" (June 10, 2016).

[37] Notice 2014-21, Q&A-1 and Q&A-2.

[38] Hoffman, *supra* note 32. William R. Davis, "Bitcoin Guidance Not Designed to Answer All Questions," *Tax Notes*, Mar. 30, 2015, p. 1603.

[39] Kroh, *supra* note 32 ("Victor Fleischer of the University of San Diego School of Law said the IRS guidance results in the correct tax treatment of virtual currencies but doesn't leave much room or accommodation to allow virtual coins to be functional currencies.").

[40] *See* "Venezuela Oil-Backed Cryptocurrency to Launch in Days, Government Says," CNBC (Dec. 29, 2017). Similarly, Israel is considering offering a national cryptocurrency. *See* Jon Buck, "Israel Government Considering National Cryptocurrency," Cointelegraph, Dec. 24, 2017.

[41] ABA tax section, "Comments on Notice 2014-21," at 3 (Mar. 24, 2015) (asking whether a virtual currency might be considered foreign currency subject to subpart J if adopted as legal tender by a foreign country. Note that this concern is far from purely speculative; Japan recognizes the bitcoin as legal tender). *See* Emiko Terazono, "Bitcoin Gets Official Blessing in Japan," *Financial Times*, Oct. 17, 2017.

[42] Hoffman, *supra* note 32 (quoting Golden as saying that the IRS "has not offered guidance on what type of property bitcoin is, which might determine how it can be taxed").

[43] *See In re Coinflip Inc., d/b/a Derivabit, and Francisco Riordan*, CFTC Dkt. No. 15-29, Comm. Fut. L. Rep. (CCH) para. 33,538 (CFTC Sept. 17, 2015) (consent order); and *In re TeraExchange LLC*, CFTC Dkt. No. 15-33 Comm. Fut. L. Rep. (CCH) para. 33,546 (CFTC Sept. 24, 2015) (consent order).

[44] At least one commentator believes the classification of bitcoin as a commodity for tax purposes is likely. *See* Calvin, *supra* note 24, at 367 n.45.

[45] A recent article raises this possibility, turning largely on the difficult interpretive question of whether holders of cryptocurrencies are jointly participating in business profits. Shakow, *supra* note 26. Analysis of this question would examine whether participants in a cryptocurrency system could be considered a cohesive group and whether the token or coin generated could be considered a share in an enterprise, like a share of stock, certificate of participation, or other unit of representation that could be a stock or security under tax or securities law. Could the group be an association taxable as a corporation? Under section 7701 and its regulations, as well as the earlier case law, it appears difficult to combine cryptocurrency creators, miners, and/or holders as a partnership, de facto corporation, or any type of enterprise of persons contributing capital or acting together. *See* reg. section 301.7701-2(b)(2) (defining the term "corporation" to include an association as determined under reg. section 301.7701-3); *Commissioner v. Tower*, 327 U.S. 280 (1946); and *Commissioner v. Culbertson*, 337 U.S. 733 (1949).

[46] For example, securities can include stock or can be limited to specific debt instruments, depending on the particular application in the code.

C. Miners, Dealers, and More

The tax treatment of property can radically differ depending on a person's relationship to the property — that is, the purpose for which the taxpayer holds the property. For example, special tax rules and tax treatment typically apply to manufacturers and dealers. Those rules are usually very different from the tax rules and tax treatment that typically apply to persons that merely acquire and hold that created, manufactured, or sold property. As discussed above, there are miners of bitcoin and other cryptocurrencies. There are also dealers and issuers of related derivatives. Some merchants that do not mine may simply acquire or exchange cryptocurrencies in connection with their trades or businesses. Purchasers of cryptocurrencies and related derivatives may be dealers, traders, or investors from a tax perspective. And some holdings could be personal. The character and timing of income and the deductibility and timing of expenses related to cryptocurrencies may differ substantially depending on those relationships.[47] For example, one commentator noted that gains from cryptocurrencies held as personal property would generally be taxable, whereas losses would not.[48]

This report generally focuses on basic tax issues concerning investors and does not comprehensively address the potential tax consequences of miners' activities. It does, however, discuss the pronouncements of Notice 2014-21 regarding miners of cryptocurrencies.

D. Taxation of Mining and Payment

Notice 2014-21 provides that convertible virtual currencies (cryptocurrencies) received as payment for goods and services must be included in gross income for tax purposes based on the fair market value of those cryptocurrencies as of the date received.[49] The notice specifies that a taxpayer who mines virtual currency must include the FMV of the virtual currency received in gross income as of the date of receipt.[50] If the mining activity is carried on as a trade or business and the miner is not conducting those activities as an employee, the earnings from the mining activity (net of allowable business expense deductions) constitute self-employment income and would be subject to self-employment tax.[51] The notice further clarifies that an independent contractor who mines virtual currency has self-employment income.[52] Similarly, if a miner conducts mining activities and receives virtual currency as an employee, the value of the cryptocurrencies received are considered wages subject to federal income tax withholding by employers, according to the notice.[53] It further provides that FICA and FUTA taxes also apply and must be reported in connection with the receipt of virtual currency.[54]

E. Forms 1099 and Backup Withholding

In general, when a business pays $600 or more to an independent contractor for the performance of services, the payer must timely file a Form 1099-MISC with the IRS and provide a copy to the payee (a reportable payment).[55] Each payee must generally give the payer their tax ID and related information on Form W-9. If a tax ID is requested and the payee does not timely and properly provide it to the payer, the payer must withhold tax from the related payment (backup

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[47] Other relationships will continue to present themselves as blockchain technology's effects resonate through the financial sector. Some banks and credit card companies intend to use Ripple's blockchain-based method of clearing cross-border payments. *See* Martin Arnold, "Ripple Cryptocurrency Surges as Japanese Groups Agree to Use It," *Financial Times*, Dec. 29, 2017; and Ryan Brown, "American Express, Santander Team Up With Ripple for Cross-Border Payments Via Blockchain," CNBC (Nov. 16, 2017). Ripple also has an eponymous cryptocurrency. Note that income-sourcing concerns are beyond the scope of this report.

[48] David Stewart, "IRS Preps Bitcoin Investigators as Treatment Questions Remain," *Tax Notes*, Sept. 29, 2014, p. 1538 ("Steven M. Rosenthal of the Urban Institute said that given Treasury and the IRS's position, a person who uses bitcoin exclusively for consumption will be required to recognize gains, but would be denied deductions for any losses because the transaction was not entered into for profit as required by section 165(c)(2).").

[49] Notice 2014-21, at 938, Q&A-1.

[50] *Id.* at 939, Q&A-8.

[51] *Id.* at 939, Q&A-9.

[52] *Id.* at 939, Q&A-10.

[53] This is not limited to mining services performed by an employee; virtual currency paid by an employer as remuneration for any services generally constitutes wages. *Id.* at 939, Q&A-11.

[54] *Id.*

[55] *Id.* at 939, Q&A-13.

withholding).[56] Notice 2014-21 provides that payments made in connection with a trade or business in bitcoin or other virtual currencies are subject to backup withholding under those circumstances, just like other payments made in property.[57]

Credit card intermediaries are also subject to specific information reporting requirements under the tax law. They must generally report payments made to merchants on Form 1099-K if, for a calendar year, more than 200 transactions are settled for the merchant and gross payments made to the merchant exceed $20,000. The notice provides that payments made in bitcoin or other virtual currencies can be reportable on Form 1099-K.[58]

A miner may be considered as receiving virtual currencies in connection with the performance of services. However, investors and traders in virtual currencies may simply receive them in exchange for property or cash, and not in connection with services. Notably, Notice 2014-21 does not address the information reporting consequences of virtual currency transactions in exchange for property or cash that are not reportable on Form 1099-MISC or Form 1099-K.[59]

F. Each Bitcoin Has a Unique Basis

Notice 2014-21 provides that the cost basis of a unit of cryptocurrency received as a payment for goods or services is equal to the FMV of that unit in U.S. dollars on the date received.[60] The ABA tax section, in comments on the notice, requested that the meaning of the term "received" be clarified.[61] The group also asked whether bitcoin is deemed received on the date earned (presumably the date the benefits and burdens of ownership of the cryptocurrency unit are considered transferred for tax purposes under tax common law concepts of property ownership), or whether it is received when record ownership is transferred.

G. Uncertainty for Miners and Merchants

The ABA tax section has raised concerns about the reporting of fees for facilitating virtual currency transactions.[62] Both the ABA tax section and the American Institute of CPAs have recommended a de minimis rule for reporting virtual currency gains and losses (similar to the rule that applies to currency transactions under section 988(e)), even though legislation may be needed to authorize that treatment.[63] The ABA tax section has also requested guidance on the documentation that will be expected to establish cost, holding periods, and measures of value, particularly for exchanges that do not use the U.S. dollar for virtual currency valuations.[64] The AICPA has requested guidance on charitable contributions of virtual currency.[65]

The ABA tax section also asked for guidance on the tax treatment of mining costs and the timing and manner of related deductions, as well as guidance on the tax consequences of pooled mining activities.[66] For example, are the pools considered partnerships for tax purposes? Can a section 761 election be made? What would be the timing and character of pooled activity income? The tax treatment of pooled mining is of critical importance because many miners work collectively on a pooled basis due to the technology and power required to mine.

Even more fundamentally, the ABA tax section requested additional guidance on the tax consequences and nature of each of the steps constituting mining activities (as services or as mere investment). Could specific mining activities result in "prize income, earned income, or even in some instances capital assets"?[67]

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[56] *Id*. at 939, Q&A-14.

[57] *Id*.

[58] *Id*. at 939, Q&A-15.

[59] *Id*. at 939, Q&A-13 and Q&A-15. *But see* the discussion below of cost basis reporting regarding whether the definition of a commodity under reg. section 1.6045-1(a)(5) potentially triggers Form 1099-B reporting and related backup withholding obligations under sections 3406 and 6045.

[60] Notice 2014-21 at 941, Q&A-15.

[61] ABA tax section, *supra* note 41, at 4 ("When is virtual currency received?").

[62] *Id.* at 3 (If "third-party exchanges charged transaction fees for facilitating transactions, how would a merchant conducting business report such fees?").

[63] *Id.* at 4; and AICPA, *supra* note 36, at 4.

[64] ABA tax section, *supra* note 41, at 4. The AICPA has also raised concerns about how to measure the value of cryptocurrency, since different exchanges often report different values concurrently. AICPA, *supra* note 36, at 2.

[65] AICPA, *supra* note 36, at 4.

[66] ABA tax section, *supra* note 41, at 5.

[67] *Id.*

H. Taxation of Receipt and Disposition

Notice 2014-21 provides taxpayers can recognize taxable gain if they exchange virtual currency for property or cash. The amount of gain is the amount by which the FMV of property or the amount of cash received exceeds the taxpayer's adjusted basis of the virtual currency exchanged.[68] If the basis of the virtual currency disposed of exceeds the FMV of property or the amount of cash received, the taxpayer has a loss.[69] The notice provides that the deductibility of the loss depends on other factors, and it cross-references IRS Publication 544, "Sales and Other Dispositions of Assets."[70] In general, losses from the exchange or disposition of assets held for personal purposes are not deductible.[71]

The ABA tax section comment letter[72] requests guidance on how the FMV of property received is determined when one virtual currency is exchanged for another, and the AICPA comment letter[73] raises concerns about differing quoted values by different market makers. Questions also remain about nonrecognition or deferral of gain or loss under several other provisions.[74] And as discussed above, commentators have requested a de minimis rule to permit taxpayers to better manage the burden of calculating gain or loss for small transactions.[75]

[68] Notice 2014-21 at 938, Q&A-6.

[69] *Id.*

[70] *Id.*

[71] Hoffman, *supra* note 32 (quoting Rosenthal as saying, "That means that personal bitcoin gains can be taxed, but personal losses cannot be recognized or deducted.").

[72] ABA tax section, *supra* note 41, at 5.

[73] AICPA, *supra* note 36, at 2.

[74] For example, the ABA tax section specifically requested guidance regarding like-kind exchanges under section 1031. ABA tax section, *supra* note 41, at 5. We note that although section 13303(a) of the Tax Cuts and Jobs Act (P.L. 115-97) limits like-kind exchanges under section 1031 to exchanges of real property, questions may remain for transfers before its effective date. Further, sections 1091 and 1092 might apply to defer losses on the sale or exchange of financial instruments, and questions remain concerning whether installment sales provisions might apply to defer the timing of recognition of gain. AICPA, *supra* note 36, at 3.

[75] ABA tax section, *supra* note 41, at 4; and AICPA, *supra* note 36, at 4.

I. Character of Gain or Loss Recognized

Notice 2014-21 provides that the character of gain or loss on the disposition or exchange of virtual currency depends on the nature of the holdings in the hands of the taxpayer.[76] As discussed above, a miner, dealer, or issuer might hold bitcoins or other virtual currencies as inventory for sale in that person's trade or business. Alternatively, bitcoin or other virtual currencies could be held by a trader or investor. And some holdings could be personal. The tax consequences and character of gain or loss could be very different depending on the nature of a person's holdings. The notice cross-references Publication 544 for additional information.[77]

For investors, the notice indicates that gain or loss on the sale or exchange of virtual currencies will likely be capital gain or loss. Capital gains and losses are segmented depending on whether they are long term (for assets held for at least one year) or short term (held for less than a year) based on a disposed asset's holding period at the time of sale, exchange, or other taxable disposition. Long-term capital gains can be eligible for favorable tax treatment and lower tax rates than other types of income.[78] Capital losses are typically limited under the tax law so that only $3,000 per year can be recognized, and any losses exceeding $3,000 for individuals (and zero for corporations) are carried forward under special carryforward rules and limitations.[79] Generally, an asset's holding period begins on the day after it is acquired and ends on the date of sale or disposition.[80]

If significant losses in market value occur, holders of virtual currencies may argue that they are not investors but rather traders who can elect

[76] Notice 2014-21 at 938, Q&A-7.

[77] *Id.*

[78] Section 1(h).

[79] Section 1211.

[80] Section 1223.

mark-to-market tax treatment of those holdings under section 475.[81] Eligibility for mark-to-market treatment depends on virtual cryptocurrencies constituting either a commodity or a security under section 475.[82] This would permit ordinary (rather than capital) losses without a $3,000-per-year limitation but would also result in recognition of mark-to-market ordinary income (rather than capital gains) on any appreciation in holdings occurring during each applicable tax year (rather than the recognition of gain or loss strictly at the later time of disposition).[83]

There is substantial litigation between the IRS and taxpayers regarding the availability and timing of eligibility for the mark-to-market election, so careful planning is critical if the election is contemplated.[84] Commentators and the ABA tax section have noted that merchants could be harmed if cryptocurrency gains and losses are treated as capital while their other business activities are not, resulting in a risk of capital losses that cannot offset ordinary income.[85]

J. Adjusted Basis Upon Sale or Exchange

Notice 2014-21 provides that the amount of income or loss realized in connection with the sale, exchange, or disposition of virtual currencies is based on the difference between the FMV of the property (and, implicitly, the amount of cash) received on that transaction and the adjusted basis of the virtual currency exchanged.[86]

Two important issues are apparent. First, the adjusted basis at the time of the sale of the virtual currency must be determined. Second, if more than one tax lot of virtual currency was acquired by the taxpayer, it must be determined which specific lot was considered sold.

Section 1012 generally provides that a taxpayer's basis in property is its cost. Section 1016 sets forth rules regarding adjustments to cost. Commissions on the acquisition of property are an example of costs that brokers must add to basis when reporting.[87] Section 1016 includes other adjustments that can apply depending on the classification of property as stock. For example, stock splits, reverse splits, stock dividends, and corporate reorganizations can each have significant consequences on the cost basis of related stocks exchanged or received. In determining the basis at time of sale, one must always consider whether basis allocations or similar adjustments could apply to virtual currencies.

Similarly, the application of special rules that apply to stocks and securities (including contracts or options to acquire stocks or securities) can also have significant consequences on cost basis.[88] The wash sale rules, which can substantially affect basis and holding period calculations of tax lots, may not apply to direct holdings in virtual currencies and would not apply to section 1256 contracts such as CME and CBOE bitcoin futures. However, they could apply to other virtual

[81] Section 475(f) permits traders in securities or commodities to make the election. Section 475 does not apply to securities held for investment. *See* section 475(b)(1). That restriction also applies to commodities held for investment. *See* section 475(e)(1). *See* Allyson Versprille, "Should Bitcoin Investors Become 'Traders' for Tax Purposes?" *DTR*, Jan. 18, 2018. Attorneys cited in the article have noted that although the new tax law causes the loss of itemized deductions for investment-related expenses — including specialized computer equipment and website subscriptions — for traders under section 475, those expenses would be fully deductible. Other concerns include some important downsides to trader status: the loss of long-term capital gains, and self-employment tax on net gains. The article notes opposing views on whether cryptocurrency could be a security under section 475, but it does not address possible classification as a commodity.

[82] *See* section 475(e)(2) regarding the definition of a commodity and section 475(c)(1) regarding the definition of security for purposes of this election.

[83] Section 475(b)(3).

[84] *See, e.g.*, *Poppe v. Commissioner*, T.C. Memo. 2015-205; and *Spicko v. Commissioner*, T.C. Memo. 2016-41 (taxpayers failed to make valid section 475 mark-to-market elections).

[85] Davis, "Bitcoin Is Property, Not Currency, IRS Says," *Tax Notes*, Mar. 31, 2014, p. 1399 ("David S. Miller of Cadwalader, Wickersham & Taft LLP provided a hypothetical situation in which a merchant accepts $100 worth of virtual currency for merchandise and then sells the currency for $90. In that scenario, the merchant would net only $90, but unless it had capital gains from other sources to offset the capital loss, the merchant would be taxed on $100.").

[86] Notice 2014-21 at 938, Q&A-6.

[87] Reg. section 1.6045-1(d)(6)(i). Similarly, brokers must subtract commissions or transfer taxes for sales of securities when reporting. Reg. section 1.6045-1(d)(5).

[88] Reg. section 1.6045-1(d)(6)(iii).

currency derivatives. The straddle rules could apply to virtual currencies and virtual currency derivatives.[89] These issues are discussed in more detail below.

In general, under section 1012, the basis of each item of property is separately tracked and must be used to compute gain or loss upon the disposal of property.[90] This method for determining the basis upon disposition is generally referred to as specific identification. Because ownership of cryptocurrencies is established through private keys, at first blush each specific purchase can be readily identified. However, tracking could be more challenging or artificial if an investor holds positions in cryptocurrencies through a third-party wallet or other intermediary. Under some circumstances, it might be difficult to demonstrate which specific cryptocurrency tax lot was sold.

To the extent basis allocations arise in connection with cryptocurrencies, or the straddle rules apply, related basis (and holding period) adjustments (or loss deferrals[91]) may apply or relate to only a portion of a tax lot, thereby creating two separate tax lots (one position that was subject to the adjustments, and one that was not). We often refer to these resulting tax lots as "sublots." For stocks and securities, it can be challenging as an operations matter to specifically track these sublots. Similar challenges could arise in identifying sublots in connection with cryptocurrencies or cryptocurrency derivatives.

The cost basis regulations also provide specific guidance on determining the basis when stock is sold.[92] Under those specific rules, the basis of stock sold is generally determined on a first-in, first-out method. Specific ID is available on the disposition of stock only if the taxpayer can adequately identify (in a manner specified in the regulations) which particular lots were sold.[93] An average cost method (averaging) is also available under the regulations for stock if various requirements are met.[94] Related rules also permit the use of those three methods for bonds and book-entry securities.[95]

The regulations' special rules for stocks, bonds, and book-entry securities make sense because individual certificates or book-entry records of the same stocks or securities are generally treated as fungible. Because these methods are used to manage the tracking of gains and losses from individual lots or blocks of stocks or securities acquired and held, they are generally referred to as lot relief methods. The use of FIFO, specific ID, or averaging lot relief methods provides efficiencies to both investors and intermediaries in managing the tracking of positions in stocks or securities and computing deemed gain or loss on dispositions. Specific guidance in the regulations also benefits the fisc by providing clear rules to reduce gamesmanship and inconsistent reporting.

Does it make sense that the three different lot relief methods also potentially apply to measure gains and losses on dispositions of virtual currencies? Should the availability of those methods be determined based strictly on whether virtual currencies are or should be considered stocks or securities rather than commodities (or

[89] As a technical matter, the straddle rules do not provide for basis adjustments related to deferred losses similar to the wash sale rules. Instead, the applicable temporary regulations provide that disallowed losses related to dispositions of positions comprised in a straddle are deferred and are not allowed unless the positions that resulted in the deferral are disposed of during the tax year (and the straddle rules do not trigger further disallowance). Reg. section 1.1092-1T(b). Separately tracking those loss deferrals for allowance later, in lieu of mechanically adjusting the basis of related positions, could create additional accounting and operations challenges. There may be little practical difference between basis adjustments to deferral-triggering tax lots under the wash sale rule and separately tracking and maintaining a pending deferral ledger.

[90] Reg. section 1.1012-1(a).

[91] Rather than explicit basis adjustments for straddles.

[92] Reg. section 1.1012-1(c).

[93] Reg. section 1.1012-1(c)(1)-(3). Under these regulations, adequate confirmation is made if at "the time of the sale or transfer, the taxpayer specifies to such broker or other agent having custody of the stock the particular stock to be sold or transferred, and . . . [w]ithin a reasonable time thereafter, confirmation of such specification is set forth in a written document from such broker or other agent." Concerns have been raised regarding the ability to satisfy these requirements in the context of cryptocurrencies. *See* Calvin, *supra* note 24, at 369.

[94] Reg. section 1.1012-1(e) (election to use average basis method).

[95] Reg. section 1.1012-1(c)(6) and (7).

something else) for purposes of the regulations? The ABA tax section comment letter requests guidance.[96] That guidance would be beneficial to investors, intermediaries, and the fisc for the same reasons that such rules have been useful in connection with stock, bonds, and book-entry securities.

Because of the growing investment in and expanded availability of cryptocurrency and related derivatives, it is important to determine whether virtual currency will simply be considered one more type of investment asset in a person's portfolio. There has been much discussion about investment in virtual currency,[97] and for many years there has been a focus on the differing tax treatment for different forms and types of investments. Should investments in virtual currency be treated substantially differently from investments in stocks or securities for tax purposes? For example, the Senate amendment to the Tax Cuts and Jobs Act (P.L. 115-97) included a provision that would have prevented taxpayers from using the specific ID method for sales of "specified securities" (stocks, debt, and some options and securities futures contracts).[98] Although that provision was not included in the enacted bill, it could have led to a notable divergence in the comparative tax treatment of dispositions of virtual currency (specific ID) and stocks and securities (mandatory FIFO or averaging under some circumstances).[99]

Given the notice's lack of specific guidance on the determination of basis, it might be prudent to assume that the specific ID method applies in measuring gains or losses on all dispositions. Under that assumption, it is critical for an investor to track and identify specific lots or positions in bitcoins or other cryptocurrencies to manage gains and losses recognized from their disposition. That makes the management of private key records and the association with acquisition cost and date data significant. Unfortunately, the assumption also does not address practical or tax-driven complications in determining which specific lots are sold.

K. Cost Basis Reporting

The cost basis reporting law was enacted in 2008 to raise tax revenue as a partial offset to the anticipated cost of bailing out banks and other institutions in the wake of the global financial crisis.[100] It requires "brokers" (as the term is broadly defined under applicable law) to annually report the adjusted cost basis of covered securities sold for cash during the calendar year in connection with the reporting of the proceeds received. That information is reported to the IRS on Form 1099-B, and investors receive copies of the form.[101] The definition of covered securities is based in part on the related defined term "specified securities," which includes stock, debt, and options and securities futures contracts on stock or debt.[102]

The purpose of cost basis reporting was to increase the accuracy of tax reporting of gains and losses in connection with sales of stocks, bonds, and such options.[103] There were concerns that calculation complexities created risks of

[96] ABA tax section, *supra* note 41, at 4. At least two writers have taken the position that, analogous to stock, FIFO should apply when adequate identification has not been made. *See* Calvin, *supra* note 24, at 369; and Andrea S. Kramer, *Financial Products: Taxation, Regulation and Design*, at section 61A.02 ("Taxpayers with convertible virtual currency should be able to rely on the identification conventions used with respect to securities and commodities. They should be able to specify which positions they intend to close out" [citations omitted].). Kramer and Calvin cite *Perlin v. Commissioner*, 86 T.C. 388 (1986). Section 1012 and regulations on averaging for regulated investment company and dividend reinvestment plan stock, specific identification, or FIFO when specific identification is not available, apply to stocks and bonds. Reg. section 1.6045-1(d)(2)(ii), governing broker reporting of sales of specified securities, provides lot relief rules. Application of those rules by analogy to cryptocurrencies could necessitate complicated and time-consuming IRS rulemaking in coordination with SEC, CFTC, and other agency rulemaking.

[97] Lee A. Sheppard, "Is Bitcoin Going Out of Style?" *Tax Notes*, Sept. 11, 2017, p. 1329.

[98] Section 13533 of engrossed Senate amendment to H.R. 1 (Dec. 2, 2017).

[99] As discussed later in connection with cost basis reporting, this turns on whether bitcoin or other cryptocurrencies are "specified securities" as defined in section 6045.

[100] Section 403 of the Emergency Economic Stabilization Act of 2008, P.L. 110-343.

[101] Reg. section 1.6045-1(d).

[102] Section 6045(g)(3)(A) and (B). Reg. section 1.6045-1(a)(14) and (15).

[103] *See* 152 *Cong. Rec*. S2196 (Mar. 15, 2006) (remarks of Sen. Bayh on the Simplification Through Additional Reporting Tax Act, S. 601, 110th Cong. (2007), and the Simplification Through Additional Reporting Tax Act, H.R. 878, 110th Cong. (2007)).

inaccuracies in tax reporting by investors and that the lack of third-party reporting of that information (by brokers) made it easier for investors to avoid tax.[104]

Cost basis reporting was added to the long-standing information reporting rules for gross proceeds by brokers.[105] Those rules generally require brokers to report the amounts of sales transactions on Form 1099-B to the IRS (and give copies to the related taxpayers). They often apply to transactions involving sales of specific types of intangible personal property: stocks, securities, and similar types of financial investment interests.

Section 6045(a) grants the IRS regulatory power to implement the broad Form 1099-B reporting obligation imposed on brokers for gross proceeds. Reg. section 1.6045-1 provides key definitions that detail who is a broker and what triggers cost basis reporting.[106] Sales of securities, commodities, options, regulated futures contracts, securities futures contracts or forward contracts (including stock redemptions and retirements of debt instruments), and short sales for cash are generally reportable by brokers.[107] If virtual currencies are not considered to be among those types of assets, Form 1099-B reporting does not apply.

However, the question remains: Should virtual currency transactions that are not for services or reportable on Form 1099-K be subject to information reporting? Should cost basis reporting apply?

Under the Form 1099-B reporting regulations, the term "commodity" has a specific definition: "Any type of personal property or an interest therein (other than securities as defined in paragraph (a)(3)), the trading of regulated futures contracts in which has been approved by the Commodity Futures Trading Commission."[108]

The CFTC approved the trading of regulated futures contracts on bitcoin in connection with the introduction of bitcoin futures contracts by the CME and CBOE.[109] 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, presumably on or after the date of the CFTC approval.[110] Brokers could also be liable for backup withholding for Form 1099-B reporting.[111] Of course, a critical related issue is whether particular intermediaries fall within the definition of a broker in the Form 1099-B reporting regulations.

Note that bitcoin or another cryptocurrency, if characterized as a commodity rather than as a stock, debt instrument, option, or securities futures contract, would not be a specified security and therefore would not be subject to cost basis reporting unless the IRS designates it as such.[112] Still, cryptocurrency derivatives sales for cash by brokers should in many cases be reported on Form 1099-B because of the broad definition of sale under the regulations.

L. FBAR, FATCA, and Cash Reporting

Persons with a financial interest or signing authority over various types of foreign financial accounts that exceed specified thresholds must annually file a foreign bank and financial account report to Treasury.[113] In their comment letters, the ABA tax section and the AICPA request guidance

[104] Stevie Conlon, "Re: Proposed Regulations for Cost Basis Reporting for Debt and Options," Wolters Kluwer, at n.2 (Feb. 23, 2012) (citing Government Accountability Office, "Capital Gains Tax Gap: Requiring Brokers to Report Securities Cost Basis Would Improve Compliance if Related Challenges Are Addressed," GAO-06-603 (June 13, 2006)).

[105] Gross proceeds reporting was originally added to the code in 1954. Cost basis reporting under section 6045B was added to the code in section 403 of the Energy Improvement and Extension Act of 2008, P.L. 110-343 (Oct. 3, 2008).

[106] Reg. section 1.6045-1(a).

[107] Reg. section 1.6045-1(a)(9).

[108] Reg. section 1.6045-1(a)(5)(i).

[109] Commodity Futures Law Reporter, "CFTC Backgrounder on Self-Certified Contracts for Bitcoin Products," at 158, section 34. We leave it to others to debate whether this constitutes "approved."

[110] This is because the regulations generally require reporting by brokers of sales for cash. *See* the definition of sale at reg. section 1.6045-1(a)(9) and of broker at reg. section 1.6045-1(a)(1).

[111] *See generally* section 3406.

[112] *See* the definition of specified security in section 6045(g)(3)(B) and reg. section 1.6045-1(a)(14).

[113] 31 CFR section 1010.350. The FBAR is filed on FinCEN Form 114. Because of a change in law, FBAR reporting is now due annually on April 15. The IRS hosts instructions for the form.

on whether virtual currency accounts could be subject to that reporting.[114] Some commentators have recommended reporting those accounts on the foreign bank account report because there is no penalty for overreporting.[115]

The Foreign Account Tax Compliance Act[116] imposes substantial compliance burdens on financial intermediaries, including withholding tax obligations and liabilities.[117] FATCA also requires individual taxpayers to report financial assets held outside the United States that exceed a specified threshold on Form 8938, which is attached to the individual's tax return.[118] The ABA tax section and AICPA comment letters request guidance on whether virtual currency holdings are reportable for FATCA purposes. Guidance has also been requested on whether virtual currency intermediaries are subject to FATCA compliance and withholding obligations.[119]

Federal law also requires taxpayers to report cash payments exceeding $10,000 received in a trade or business on Form 8300.[120] Cash is defined to include U.S. currency, currency of any other country, cashier's checks, money orders, and similar instruments.[121] Consistent with the conclusion of Notice 2014-21 that virtual currencies are not currency, an IRS attorney has said that he did not believe Form 8300 reporting applied to virtual currency.[122]

[114]*See* AICPA, *supra* note 36, at 5; and ABA tax section, *supra* note 41, at 5.

[115]Andrew Velarde, "Open Questions About Bitcoin Examined by Official, Practitioners," *Tax Notes*, May 22, 2017, p. 1095.

[116]Sections 1471 through 1474 of the code, enacted by section 501 of the Hiring Incentives to Restore Employment Act of 2010 Hiring Incentives to Restore Employment Act of 2010, P.L. 111-147 (Mar. 18, 2010).

[117]Section 1471; reg. section 1.1471-2.

[118]Conlon and Marietta Probst, "New IRS FATCA Reporting Requirements for Holders of Foreign Stock" Wolters Kluwer (Feb. 15, 2013).

[119]ABA tax section, *supra* note 41, at 5; and AICPA, *supra* note 36, at 5.

[120]Section 6050I(a) and (g), and related regulations.

[121]Section 6060I(d); reg. section 1.6050I-1(c)(1).

[122]Davis, *supra* note 38 (reporting that Andrew Keyso Jr., IRS associate chief counsel (income tax and accounting) "said he believes that virtual currencies don't fit the definition of currency for purposes of the regime, and that receipt of virtual currencies in a trade or business therefore isn't subject to Form 8300 reporting").

M. IRS Subpoena of Bitcoin-Related Transactions

The popularity of bitcoin and other cryptocurrencies continues to grow, but there has apparently been little taxpayer reporting of virtual currency transactions. An IRS attorney noted that only 800 taxpayers reported bitcoin transactions on Schedule D of their tax returns in 2015.[123] And although many may believe virtual currency transactions can be hidden from the IRS, an IRS Criminal Investigation division director cautioned that the activity "is not really anonymous, and we actually have suspicious activity reports being filed on these and we are able to trace them back to the inception of the bitcoin — every place it has ever touched."[124]

The recent decision in *Coinbase* further calls into question the public perception of anonymity in the virtual currency market, particularly for cryptocurrencies held with large digital currency exchanges.[125] The case involves a November 2016 John Doe summons served by the Justice Department on bitcoin exchange Coinbase, seeking its customer and transaction records. Coinbase did not comply, and the IRS filed a petition in district court to enforce the summons. After oral argument, the IRS narrowed the scope of the summons. On November 28, 2017, the court partially granted the petition to enforce the further narrowed summons on the basis that it "serves the IRS's legitimate purpose of investigating Coinbase account holders who may not have paid federal taxes on their virtual currency profits."

The narrowed summons requires Coinbase to provide information for accounts with at least $20,000 in any one transaction type — buy, sell, send, or receive — in any one year from 2013 to 2015. It would not apply to accounts that bought and held bitcoin only during that period or for which Coinbase filed Form 1099-K. The required information includes account name, address, tax ID, date of birth, records of account activity

[123]Velarde, *supra* note 115 (reporting that Donna Welsh, branch 4 senior technician reviewer, IRS Office of Associate Chief Counsel (Income Tax and Accounting) "said that only 800 taxpayers had reported bitcoin transactions to the IRS . . . before the Justice Department sought a John Doe summons").

[124]Stewart, *supra* note 48.

[125]*Coinbase*, No. 17-cv-01431.

(including transaction logs or other records), and all periodic account statements or invoices.[126]

Because the court further narrowed an already narrowed summons, Coinbase considered the decision a partial victory because it reduced the number of affected customers by 97 percent — to "only" about 14,000 customers.[127] However, it has also been noted that the enforcement decision means the IRS can issue summonses to other virtual currency exchanges.[128] It also means that miners, investors, and others who use or exchange virtual currencies should be mindful that the IRS can obtain information that could be used to enforce compliance of tax reporting and tax payments concerning virtual currency. One commentator has raised the concern that the Coinbase subpoena could lead to changes in law that would impose more reporting requirements on virtual currencies in the same way that noncompliance in the reporting of foreign investments led to FBAR and FATCA reporting.[129]

N. Applicability of Tax Penalties

Notice 2014-21 warns that taxpayers may be subject to penalties for failing to comply with tax laws. What may be troubling for some is that it provides no safe harbor or penalty relief for transactions in virtual currencies that occurred or were reported before March 25, 2014 — the date the notice was released.[130] The notice infers that underpayments on taxes for virtual currency transactions could be subject to accuracy-related penalties under section 6662, and that failure to timely comply with the information reporting requirements for those transactions (like on Form 1099-MISC or Form 1099-K) could give rise to penalties under section 6721 or section 6722. The notice says relief from information reporting penalties could be available if taxpayers demonstrate reasonable cause,[131] but that is a statement of existing law.[132]

The notice's lack of assurance that reporting or underpayment penalties will not apply may be particularly concerning in light of the *Coinbase* decision.

O. Taxation of Forks

In the fork events for bitcoin cash and bitcoin gold described earlier, bitcoin holders essentially received a right to or ownership of a new cryptocurrency as of a specified date. A fundamental tax question is whether that receipt resulted in taxable income to those recipients based on the value of the new cryptocurrency received. A related tax question is whether an event constituted a material modification of the holders' rights in the bitcoin held on the date of the event such that taxable gain or loss should be recognized based on the value of the bitcoin on that date relative to the holders' basis in the coins.[133] Character of any gain or loss recognized and the basis in the new cryptocurrency received are other considerations.

Although there has been no guidance on the taxation of the fork events,[134] some aspects of those

[126] Emily Foster, "Judge Vastly Narrows Summons on Coinbase Bitcoin Exchange Users," *Tax Notes*, Dec. 4, 2017, p. 1374.

[127] *Id.*

[128] *Id.* ("Josh O. Ungerman of Meadows, Collier, Reed, Cousins, Crouch & Ungerman LLP agreed that Coinbase triumphed in this case, but he said the enforcement of the John Doe summons 'is incredibly important to the IRS as it sets the stage for the agency to repeat the requests to other virtual currency exchanges.'").

[129] Dashiell C. Shapiro, "IRS Targets Bitcoin Users, but Is Coinbase the Next UBS?" *Tax Notes*, Apr. 3, 2017, p. 129.

[130] IR-2014-36.

[131] Notice 2014-21 at 938, Q&A-16.

[132] Section 6724(a).

[133] The timing and amount of taxable income arising from a fork is an unresolved question. There may not be an adequate method of valuing the forked cryptocurrency, and the holder may not have immediate access to it. In some cases, if the holders keep their bitcoin on an online exchange, they may never be able to withdraw the cryptocurrency. Tyson Cross, "Yes, the Bitcoin Hard Fork Really Is Taxable Income. Here's What You Need to Know," *Forbes*, Oct. 17, 2017.

[134] *See, e.g.*, Calvin, *supra* note 24, at 365 ("The Bitcoin chain-split has no obvious analogy for federal income tax purposes.").

events are relatively certain: Bitcoin was not exchanged for bitcoin cash, and bitcoin cash was received as a result of holding bitcoin.[135] In contrast, there is comparatively clear guidance under subchapter C regarding the taxation of corporate actions.[136]

Is the receipt of the rights to bitcoin cash or bitcoin gold a kind of income to the recipients? The answer appears to be yes. Federal income tax law broadly defines items constituting taxable income.[137] The recipients of rights to bitcoin cash or bitcoin gold obtain them because of their preexisting ownership in the bitcoin blockchain before the related forks.[138] They were not obtained as gifts or simply found.[139] The right to the new cryptocurrency has measurable value.[140]

What is the timing of the recognition of income for the receipt of rights to bitcoin cash or bitcoin gold? It depends on when dominion and control over the rights is deemed to occur. Could dominion and control be deemed to arise when adequate information is provided to holders to allow them to separately sell those rights? Or does it arise later, when holders take some other act?[141] Could the amount of taxable income vary between holders based on the valuations on the dates those respective holders exercise dominion and control? Are there any Form 1099-MISC implications given the conclusions of Notice 2014-21? Consistent approaches and guidance would likely benefit holders, intermediaries, and the fisc.

A related question that often arises in the transformation of financial instruments is whether an event triggers the recognition of gain or loss on the intangible property previously held. Does either fork (or both) analogously give rise to the recognition of any taxable gain or loss regarding the appreciation of bitcoin previously acquired? Gain or loss is generally recognized under the tax law on the sale or other disposition of property.[142] There is IRS guidance on when the modification of debt instruments gives rise to a taxable exchange,[143] but there is little guidance and great uncertainty about whether specific modifications of nondebt financial instruments trigger the recognition of gain or loss as an "other disposition of property."[144]

Another question is whether there should be an allocation of basis from the bitcoin previously purchased to the rights received.[145] Generally, allocations or adjustments of basis are based on specific tax law guidance. Unfortunately, there is no specific guidance on virtual currencies.

[135] *Id*. "While the conclusion may not be certain, the following can be said: There was no exchange of bitcoin for bitcoin cash; and, the receipt of bitcoin cash was a consequence of holding bitcoin" [internal citations omitted].

[136] Subchapter C provides explicit rules regarding the tax treatment of events like stock splits, stock dividends, mergers, and spinoffs. In general, specific rules and requirements provide nontaxable treatment in some cases, but only if various conditions are met. There are important differences between a cryptocurrency fork and a stock split. *See* Ash Bennington, "Why a Bitcoin Fork Is Not a 'Stock Split,'" Coindesk.com, Aug. 2, 2017.

[137] *See*, *e.g.*, *Commissioner v. Glenshaw Glass Co.*, 348 U.S. 426 (1955). *See also* Rev. Rul. 70-498, 1970-2 C.B. 6, which ruled that the value of books accepted by a book reviewer constituted taxable income to the reviewer.

[138] Under some authority, the knowing purchaser of a pregnant cow or racehorse should allocate basis to the unborn calf or foal, based on comparative fair market values at time of purchase. *See*, *e.g.*, Rev. Rul. 86-24, 1986-1 C.B. 80, and *Launce E. Gamble v. Commissioner*, 68 T.C. 800 (1977). The general applicability of these cases to argue that all holders of forked cryptocurrency are not taxed on forks seems a stretch given that holders of cryptocurrency generally aren't aware of potential future forks as of the time the cryptocurrency is acquired.

[139] *See* discussion by Calvin, "When (and if) Income Is Realized From Bitcoin Chain-Splits," *DTR*, Jan. 4, 2018.

[140] Because of the decentralized nature of cryptocurrencies, different sources (CoinMarketCap, Coinalyze) may provide different valuations, even for the same cryptocurrency at the same time.

[141] Exercise of dominion and control can be further muddied by the various ways holders of bitcoin actually hold their bitcoins. Some may hold through a service like Coinbase. Those services may delay or even prevent a holder's ability to access the new property received in the fork. "Bitcoin Cash — Frequently Asked Questions," coinbase.com, Dec. 19, 2017. Similarly, a holder who never upgrades the software controlling their own electronic wallet might never actually notice the new coins (although they probably should have known of them). Finally, some holders may unintentionally destroy the bitcoin cash they received by accidentally sending it to an address on the original bitcoin blockchain. Jordan Pearson, "People Are Losing Bitcoin Cash by Accidentally Sending It to Bitcoin Addresses," motherboard.vice.com, Sept. 12, 2017. The destination doesn't accept it, and the transfer can't be undone, so the bitcoin cash is simply lost (barring specific recoverable circumstances, which might require the assistance of miners). Kai Sedgwick, "Someone Just Helped Themselves to $600K of Bitcoin Cash From Segwit Addresses," news.bitcoin.com, Nov. 21, 2017.

[142] Section 1001(a).

[143] *See*, *e.g.*, reg. section 1.1001-3.

[144] *See*, *e.g.*, James M. Peaslee, "Modifications of Nondebt Financial Instruments as Deemed Exchanges," *Tax Notes*, Apr. 29, 2002, p. 727.

[145] Calvin, *supra* note 24.

If any income or loss is recognized in connection with the forks, the character of that income or loss must be considered. In other words, is it ordinary income or loss, or capital gain or loss? Capital gain or loss usually arises with sales of property or under specific tax laws mandating capital gain or loss treatment. Thus, in the absence of any such provisions, income arising from the receipt of the rights to bitcoin cash or bitcoin gold under the forks appears to constitute ordinary income for tax purposes. Each recipient presumably has a corresponding tax basis in the rights that would equal their value when subject to tax (adjusted for any applicable fees), and the holding period of those rights received as property would begin the date after the receipt.

Obviously, it would be prudent for affected taxpayers to carefully review Notice 2014-21 with their tax advisers. One possible conclusion is that the receipt of additional cryptocurrencies is taxable to the holders and that the basis of that property as of the date received should be tracked for purposes of computing gain or loss on later dispositions. It is also necessary to consider whether any income recognized is properly characterized as ordinary income or capital gain.

Other transactions involving cryptocurrencies could raise similar issues.

For exchanges of cryptocurrencies after 2017, the like-kind exchange rules are generally unavailable to defer the recognition of taxable gain. Similarly, the like-kind exchange rules are generally unavailable to defer the recognition of taxable gain on cryptocurrency derivatives. Because these changes were made by the Tax Cuts and Jobs Act, section 1031 might apply to prevent the recognition of gain or loss for exchanges made before 2018 if the exchanges meet applicable requirements.[146]

P. Taxation of Bitcoin Derivatives

All financial derivatives must be carefully scrutinized under federal income tax law because the tax treatment of a financial derivative may differ significantly from the treatment of the related underlying property. We have already discussed various aspects of the tax treatment of cryptocurrencies when owned directly. This section raises some of the issues that investors should consider when assessing the tax treatment of indirect investments through financial derivatives of bitcoin and other cryptocurrencies. There are (possibly many) other issues concerning the tax treatment of financial derivatives and structured products that are not addressed here.

1. Mark-to-market taxation of some financial instruments under section 1256.

Taxpayers are required to recognize taxable gain and loss on section 1256 contracts on a mark-to-market basis at the end of each tax year (usually the calendar year for individual taxpayers).[147] By statute, mark-to-market gain or loss recognized during a tax year — either from actual realization during that year connected with exchanges of contracts held during the tax year, or from current-tax-year mark-to-market gain or loss from contracts held at the end of the year — is treated as 60 percent long-term and 40 percent short-term capital gain or loss.[148]

Section 1256 contracts include regulated futures contracts, foreign currency contracts, nonequity options, dealer equity options, and

[146] Generally, section 1031 provides that neither gain nor loss is recognized on exchange of like-kind property either used in a trade or business or held for investment, but it does not apply to stock, bonds, notes, and some other financial instruments. Section 1031(a)(1) and (2). The section's purpose is to delay recognition of gain or loss while investment remains tied up in property that is of a similar kind, until converted into cash, marketable securities, or property of a different kind. H.R. Rep. No. 73-704, at 13 (1934). Coins exchanged as bullion were considered like-kind, whereas coins exchanged for their numismatic value were not. *Compare* Rev. Rul. 76-214, 1976-1 C.B. 218, *with* Rev. Rul. 79-143, 1974-1 C.B. 202. Those rulings provide guidance regarding tangible personal property. Thus, it is determined whether cryptocurrencies will be considered like-kind and whether nonrecognition of gain or loss under section 1031 is available for pre-2018 exchanges.

[147] Section 1256(a)(1).

[148] Section 1256(a)(3).

dealer securities futures contracts.[149] Section 1256 has several special rules and important exceptions, including the hedging transaction exception.[150] A regulated futures contract is defined in section 1256 as a contract "with respect to which the amount required to be deposited and the amount which may be withdrawn depends on a system of marking to market," and that is "traded on or subject to the rules of a qualified board or exchange."[151] All futures contracts traded on U.S. exchanges fall within the definition of a regulated futures contract.[152]

Futures contracts traded on U.S. exchanges, including the CBOE and CME bitcoin futures contracts, qualify as section 1256 contracts.[153] Therefore, investors who purchase bitcoin futures contracts and other cryptocurrency futures contracts traded on those exchanges will be taxed on a mark-to-market basis on gains and losses on contracts held at the end of the calendar year.[154] In other words, unlike direct investments in cryptocurrencies (in which gains and losses will generally be recognized only when the coins are disposed of or exchanged), those cryptocurrency-related futures contracts will be taxed differently, and gains and losses will also be recognized on any unsold positions held at the end of the calendar year.[155] Adjustments are tracked so that gains and losses recognized under section 1256 in prior tax years are accounted for and not double-counted when the related positions are disposed in later years.[156] Section 1256 applies selectively, so other cryptocurrency derivatives are not and may not be subject to it.

2. Pooled investments in cryptocurrencies.

Several funds invest in bitcoin or other cryptocurrencies on a pooled basis. The tax treatment of those investments could differ significantly. Some of the funds could be structured and taxed as partnerships for federal income tax purposes. Others could be taxed as regulated investment companies or grantor trusts. Those differences can affect the structure of the investment vehicle as well as the timing and character of income recognized by investors.

In general, partners are taxed on their allocable share of taxable income, capital gains and losses, etc., without regard to the timing of cash distributions on their investment. Holders of RIC shares are treated as holding stock for tax purposes and are generally taxed on actual and deemed distributions concerning their stock. Short-term gains recognized within a RIC that are distributed to shareholders are generally treated as ordinary dividend income (rather than short-term capital gain) upon distribution. Capital losses are typically trapped inside RICs and can be offset only by later capital gains.[157] Holders of interests in investment entities taxed as grantor trusts are treated as directly holding a proportionate share of assets, and they recognize gains, losses, income, and expenses at the same time and character as if the assets were held directly.[158] These different rules could affect the comparative tax treatment of indirect investments in cryptocurrencies.

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[149] Section 1256(b)(1). Note that section 1256(b)(2) specifically excludes some types of contracts from the definition of a section 1256 contract, including securities futures contracts or options (other than dealer securities futures contracts) and some swaps, caps, and floors. Section 1256(b)(2).

[150] Those rules and exceptions are beyond the scope of this report. The hedging exception will not apply to most investors because the hedging transaction must be entered into by the taxpayer in the normal course of the taxpayer's trade or business. Section 1256(e)(2); section 1221(b)(2)(A).

[151] Section 1256(g)(1).

[152] A qualified board or exchange means: "(A) a national securities exchange which is registered with the Securities and Exchange Commission; (B) a domestic board of trade designated as a contract market by the Commodity Futures Trading Commission; or (C) any other exchange, board of trade, or other market which the Secretary determines has rules adequate to carry out the purposes of this section." Section 1256(g)(7). Foreign exchanges have been recognized as qualified in various revenue rulings. *See, e.g.*, Rev. Rul. 2007-26, 2007-1 C.B. 970 (ICE Futures Europe); Rev. Rul. 2009-24, 2009-36 IRB 306 (ICE Futures Canada); and Rev. Rul. 2013-5, 2013-9 IRB 525 (Eurex).

[153] *See, e.g.*, Proshares Trust II, "Pre-Effective Amendment No. 1 to Form S-1 Registration Statement (Form S-1A)," at 50 (Dec. 27, 2017) ("The Sponsor expects that each Fund will invest in Bitcoin Futures Contracts on either the CFE or CME or both through the life of each Fund and thus, the Sponsor expects substantially all of each Fund's futures contracts and foreign currency forward contracts to qualify as Section 1256 Contracts.").

[154] Section 1256(a)(1).

[155] *Id.*

[156] Section 1256(a)(2).

[157] Section 1212(a)(3).

[158] *See* reg. section 1.671-3(a); and Rev. Rul. 88-103, 1988-2 C.B. 304 (citing Rev. Rul. 85-13, 1985-1 C.B. 184).

3. Exchange-traded notes and structured debt.

ETNs are a comparatively new form of financial derivative. For tax purposes, they are generally structured as a cash deposit coupled with a forward contract. The forward contract is linked to a rate, an index, a stock, or a commodity. The cash deposit is essentially used to fund the holder's commitment under the ETN when the contract is exercised, terminated, or disposed of. Presumably, holders of ETNs are generally taxed at maturity or earlier termination or exercise of the contract, and income is characterized as capital gain or loss.[159]

Structured debt instruments can provide for interest or principal payouts linked to rates, indices, stocks, or commodities. If the interest payments are linked to rates, indices, or commodities, two different sets of rules may govern the tax treatment of those payments: the variable rate debt instrument (VRDI) rules or the contingent payment debt instrument (CPDI) rules. The tax treatment of payments and the consequences of secondary market purchases at various purchase prices are very different under these two sets of rules. In general, if applicable, the CPDI rules provide for the recognition of income in advance of payments based on projected payments. Although interest on VRDIs is ordinarily recognized when the rates are determined rather than accelerated, special rules can apply.[160]

Derivatives of bitcoin or other cryptocurrencies can be structured as ETNs or as structured debt subject to either the VRDI or CPDI rules. The tax consequences to holders can differ greatly depending on the tax treatment, so careful review before investment is important.

4. The wash sale and straddle rules of sections 1091 and 1092.

The wash sale and straddle rules defer a taxpayer's recognition of losses, not gains. The wash sale rules of section 1091 are much older, having been originally enacted in 1921.[161] The straddle rules are newer (though still more than 30 years old) and broader in their potential application.[162]

a. Wash sales.

The wash sale rules apply to defer the recognition of loss on the disposition of shares of stock or securities if the taxpayer acquires substantially identical stock or securities or has "entered into a contract or option so to acquire" within the 61-day period beginning 30 days before the date of the disposition at a loss and ending 30 days after that date.[163] The loss is merely deferred because the basis of the new stock or securities acquired is increased to account for the deferred loss, but later wash sales can occur, which would further delay when the losses are ultimately recognized.[164]

The critical issue here is whether particular bitcoin or other cryptocurrency derivatives are considered stock or securities for purposes of the wash sale rules.

In Rev. Rul. 74-218, 1974-1 C.B. 202, the IRS considered whether foreign currencies are securities for purposes of the wash sale rules. It concluded that "currency in its usual and ordinary acceptation means gold, silver, other metals or paper used as a circulating medium of exchange," and are distinguishable from securities for this purpose. Therefore, foreign currencies were not securities, and the wash sale rules should not apply.

Similarly, it must be considered whether cryptocurrency derivatives are securities for purposes of the wash sales rules. Could or should that definition of a security be interpreted broadly

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[159] Typically an ETN registration statement contains information regarding possible tax treatments, and a supplemental registration for a specific product backed by the ETN contains an opinion specific to that product, usually characterizing it as a prepaid forward contract. Rev. Rul. 2008-1, 2008-1 C.B. 248, ruled that an instrument, issued and redeemed for U.S. dollars, that provided a return based on the euro was a euro-denominated debt instrument under section 988, the return being based on a nonfunctional currency. Notice 2008-2, 2008-1 C.B. 252, requested comments on the treatment of prepaid forward contracts or ETNs, *e.g.*, whether they are exchange traded, and whether the tax treatment should vary depending on the underlying asset (*e.g.*, stock versus commodity).

[160] Reg. section 1.1275-5(e).

[161] Revenue Act of 1921, section 214(a)(5); section 113(a)(1) of 1939 code.

[162] Economic Recovery Tax Act of 1981, P.L. 97-34, sections 501-509. For a general discussion concerning the straddle rules, see James N. Calvin et al., "Examining the Straddle Rules After 25 Years," *Tax Notes*, Dec. 21, 2009, p. 1301.

[163] Section 1091(a).

[164] *See* section 1091, reg. section 1.1091-2.

so that it would apply to cryptocurrency derivatives?[165]

Thus, the question is twofold. First, are cryptocurrencies not securities based on reasoning similar to that set forth in Rev. Rul. 74-218? Second, are specific cryptocurrency derivatives securities for purposes of the wash sale rules?

b. Straddles.

The straddle rules defer the recognition of losses and can transform the character of losses from short-term to long-term, and gains from long-term to short-term.[166] A straddle is defined for tax purposes as offsetting positions in personal property.[167] Offsetting positions are present when "there is a substantial diminution of the taxpayer's risk of loss from holding any position with respect to personal property by reason of his holding 1 or more other positions with respect to personal property (whether or not of the same kind)."[168] Personal property is generally defined as any personal property of a type that is actively traded.[169] Tax practitioners and commentators often focus on assessing whether particular types of property are considered actively traded for this purpose.[170]

The breadth of the definition of personal property and active cryptocurrency trading raises the likelihood that some or many transactions involving or relating to cryptocurrencies or related derivatives could be subject to the straddle rules. Of course, straddles require offsetting of both long and short positions. The introduction of cryptocurrency derivatives facilitates shorting of cryptocurrencies, which raises concerns that straddles could routinely arise.

The application and effect of the straddle rules on cryptocurrency and cryptocurrency derivative positions is beyond the scope of this discussion. However, it is a concern with many types of financial transactions, and there appears to be a risk that the straddle rules could adversely affect the tax consequences of cryptocurrency and cryptocurrency derivative transactions.

III. Conclusion

The IRS has concluded that the receipt of bitcoins and similar cryptocurrencies is taxable. Miners and others who receive cryptocurrencies for services have ordinary income with both reporting and withholding tax consequences.

The IRS has also concluded that cryptocurrency is property and not currency for tax purposes. Unfortunately, it did not specify what type of property cryptocurrency is — commodity, stock, security, etc. The exchange of cryptocurrency as consideration for property or services generates gains or losses based on the difference between the value of the property received (which should generally equal the value of the transferor's cryptocurrency exchanged) and the adjusted basis in that cryptocurrency. This creates a burden on holders because the basis of each lot of cryptocurrency must be separately tracked so that it can be properly applied in computing gain or loss when disposed of. Basis in each lot will likely depend on the initial cost or value of the cryptocurrency at the time of receipt and would have to take into account any further applicable adjustments. The character of gain or loss on disposition will depend on the nature of the holding as inventory, for use in a trade or business, for trading, for investing, or for personal use. If personal, a holder would likely be unable to recognize any losses.

Notice 2014-21 specifies that some virtual currency transactions can give rise to reporting and potential withholding obligations in various contexts involving Forms W-2, 1099-MISC, and 1099-K. Moreover, cryptocurrency derivatives could give rise to Form 1099-B reporting obligations for cash sales by brokers. And the definition of commodity under the Form 1099-B

[165]In Rev. Rul. 74-218, in distinguishing currency from securities and other real or personal property, the IRS placed currency in a narrow category that excluded other intangible and tangible property. The IRS has excluded the direct application of Rev. Rul. 74-218 to cryptocurrency by stating that it is property, not currency, leaving open the possibility that cryptocurrency may be categorized as a security. Although cryptocurrency does not appear to clearly fit in the definition of security in section 1236(c), bitcoin exists in intangible form and could perhaps be compared to property like street name stocks, or debt in book-entry form. Reg. section 1.1012-1(c)(7). *See* Rev. Proc. 2011-35, 2011-25 IRB 890, discussing the difficulty of transferred basis determination in nontaxable stock acquisitions because of the shift to holding stock in street name.

[166]Calvin et al., *supra* note 162.

[167]Section 1092(c)(1).

[168]Section 1092(c)(2)(A).

[169]Section 1092(d)(1).

[170]*See*, *e.g.*, New York State Bar Association Tax Section, "Report on the Discussion Draft of the Modernization of Derivatives Tax Act of 2016" (Feb. 23, 2017).

reporting regulations raises new risks concerning Form 1099-B reporting of (and potential backup withholding in connection with) bitcoin or other cryptocurrency sales for cash by brokers.

The subpoena issued to Coinbase indicates that the IRS is likely actively investigating whether taxpayers are underreporting income associated with cryptocurrency activities. There is concern that more subpoenas could follow. Remember that Notice 2014-21 did not provide retroactive penalty relief for cryptocurrency activity that occurred before the release of the notice.

The 2017 bitcoin forks raise important new issues concerning the tax consequences for bitcoin holders who received rights in bitcoin cash and bitcoin gold. The broad definition of taxable income suggests that those recipients will recognize taxable income. However, there are murky questions of fact that could substantially affect assessments of a holder's dominion and control over rights in bitcoin cash and bitcoin gold. The outcome of those assessments could affect the timing, amount, and potential reporting of that income. This analysis could also affect the determination of basis in the rights received based on applicable valuations. However, once a holder sells the coins, dominion and control has clearly been exercised and the receipt of cash is potentially identifiable by the IRS.

For post-2017 exchanges of cryptocurrencies or cryptocurrency derivatives, the like-kind exchange rule is unavailable. Substantial losses in cryptocurrencies resulting from significant valuation fluctuations could cause taxpayers to argue that ordinary mark-to-market losses under a section 475 election should be available. However, taxpayers who make that argument would have to maintain that they are traders rather than mere investors, and elections would have to be timely and properly made — requirements that have historically led to substantial litigation with the IRS in other areas.

Cryptocurrency derivatives could be taxed differently from actual investments in cryptocurrencies. For example, new U.S. futures contracts on cryptocurrencies are marked to market under section 1256, and market gains and losses on positions held would be taxed at the end of each calendar year. The taxation of other types of cryptocurrency derivatives will depend on the details but also might differ from direct investment.

Cryptocurrency derivatives also help the shorting of investments in cryptocurrencies. This raises new concerns about potential application of the straddle rules, possible loss deferrals, and possible recharacterization of gains and losses as short-term and long-term. Loss deferrals and gain-loss recharacterization may also arise through the application of wash sale rules.

Regardless of what tomorrow holds, there are significant federal income tax issues regarding cryptocurrencies and their derivatives. Miners, merchants, holders, and investors need to be prepared. ■

McDermott Will & Emery

Cryptocurrencies & State Tax: Transactions with Virtual Currency

April 18, 2018

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Summary

To date, limited guidance on the taxation of cryptocurrencies has been released by tax authorities. Usage of cryptocurrencies in transactions creates significant ramifications concerning the determination of federal and state and local tax liabilities. While questions surround the tax treatment of the purchase and sale of cryptocurrencies for US dollars or other government-backed currencies, this article focuses on the state tax treatment of transactions where cryptocurrencies are used to pay for goods and services.

IN DEPTH

Recently, there has been much discussion regarding cryptocurrencies, particularly given their significant fluctuations in value and the increased level of governmental scrutiny. Uncertainties notwithstanding, usage of cryptocurrencies in transactions creates significant ramifications concerning the determination of federal and state and local tax liabilities. While questions surround the tax treatment of the purchase and sale of cryptocurrencies for US dollars or other government-backed currencies, this article focuses on the state tax treatment of transactions where cryptocurrencies are used to pay for goods and services.

To date, limited guidance on the taxation of cryptocurrencies has been released by tax authorities. At the federal level, the IRS published a six-page Notice in March 2014 (Notice 2014-21). The Notice generally provides that cryptocurrencies that are designed to be used as a means of exchange are treated as property and not "currency" for US federal income tax purposes. The significant consequence of this treatment is that the use of cryptocurrency in purchasing an item is treated as a sale or exchange of the cryptocurrency, resulting in taxable gain or loss to the purchaser. This article does not discuss whether pre-Tax Cuts and Jobs Act, exchanges of cryptocurrency for another cryptocurrency could potentially be treated as tax-free like-kind exchanges under Code section 1031.

In addition to the IRS guidance that has been issued, several states have opined on the sales tax treatment of cryptocurrencies. For instance, in March 2014, New York State (NYS) declared that purchases of taxable goods and services using cryptocurrencies should be treated as barter transactions, with the cryptocurrencies considered intangible property (*New York Technical Service Bureau Memorandum* No. TSB-M-14(5)C, 12/05/2014).

Ordinarily, for NYS sales tax purposes a barter transaction between two parties is treated as two separate sale transactions. Each party is considered a seller and required to collect sales tax from the counterparty—who is considered a buyer—based on the value of the property or services received from the counterparty. However, a seller is not required to collect sales tax on the provision of intangible property to a counterparty (20 NYCRR 526.7(d)). Because NYS considers cryptocurrencies to be intangible property, there would be no sales tax collection requirement from the party exchanging cryptocurrencies in exchange for goods or services.

Consider this example. Suppose an individual provides a pen to an associate, in exchange for which the associate provides a notebook to the individual. NYS considers the initiating individual to have sold the pen to his associate and requires the individual to collect sales tax on the "sale" of the pen. NYS also considers the associate to have sold the notebook to the individual and requires him to collect sales tax on the "sale" of the notebook. (In a traditional buyer-seller relationship where goods or services are exchanged for cash, only the seller of goods or services is required to collect sales tax; the cash-paying buyer has no requirement to collect sales tax on the money provided to the seller).

In a deemed barter transaction, however, if the associate were to provide cryptocurrency to the seller in exchange for the seller's pen, only the seller and not the associate would be required to collect and remit sales tax on the transaction because the sale of the cryptocurrency would be considered the sale of an intangible asset that is not subject to sales tax.

Considering the issue from a sales tax compliance perspective, NYS requires a seller that makes sales in NYS and accepts cryptocurrencies in lieu of cash to:

- Register for sales tax purposes;
- Record the value of the cryptocurrency accepted at the time of each transaction, in US dollars;
- Record the amount of sales tax collected at the time of each transaction, in US dollars; and
- Report such sales and remit any sales tax due in US dollars when filing its periodic sales tax returns

While the federal income tax and state sales tax consequences described above appear to be relatively straightforward, there remain many tax-related concerns regarding transactions involving cryptocurrencies.

First, a business that decides to accept cryptocurrencies as payment for products will likely need to review its sales and use tax collection procedures and processes. In a typical cash-based transaction, sales and use tax is collected as cash and deposited into a bank account from which it is later withdrawn and remitted to the state or locality.

Where cryptocurrency is accepted in a transaction, the seller must consider the intermediate step of converting the cryptocurrency to cash (or making sure that the company has enough cash to cover its tax liabilities if there is no conversion or if conversion cannot happen quickly enough) to enable it to remit the sales tax. Sellers must be able to assess the value of the cryptocurrency at the time of the transaction for sales and income tax purposes. Sellers must also maintain records reflecting the dollar value of the amount of tax collected for purposes of determining the appropriate amount of tax remitted. It is important to note that conversion of a cryptocurrency into cash in order to pay sales taxes would be viewed as a sale of the cryptocurrency for income tax purposes, producing taxable gain or loss. The passage of time between a sale and the remittance of the tax due could cause significant financial implications to sellers if the value of that cryptocurrency fluctuates during that time period.

Second, businesses that accept cryptocurrencies as payment will need to determine how to refund purchase amounts to customers. Presumably, refunds would be expected to be based on the dollar value of the cryptocurrencies as of the time of the initial sale. But if refunds are expected to be given in cryptocurrency, is the refund treated as a new barter transaction resulting in additional tax consequences?

Third, companies generating receipts from holding or transacting in cryptocurrency will need to review how to characterize those receipts for state income tax purposes, as business or non-business receipts. Similar issues have been raised in other industries where assets have been held to hedge against fluctuations in materials used in the business (*See General Mills, Inc. et. al. v. Franchise Tax Board*, 1st District Appellate Court, Dkt. A 131477, August 31, 2012).

Finally, outside of the tax arena, businesses that accept and retain cryptocurrencies as payment should review any obligations that they may have as money transmitters, or as businesses engaged in the business of buying and selling cryptocurrencies, in addition to other legal or regulatory requirements. Visit McDermott's Fintech and Blockchain page to see how our Firm has assisted clients with cryptocurrency issues and with blockchain technology.