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Report No. 1433
January 26, 2020

The Honorable David J. Kautter
Assistant Secretary (Tax Policy)
Department of the Treasury
1500 Pennsylvania Avenue, NW
Washington, DC 20220

The Honorable Charles P. Rettig
Commissioner
Internal Revenue Service
1111 Constitution Avenue, NW
Washington, DC 20224

The Honorable Michael J. Desmond
Chief Counsel
Internal Revenue Service
1111 Constitution Avenue, NW
Washington, DC 20224

Re: *Report No. 1433 – Report on the Taxation of Cryptocurrency*

Dear Messrs. Kautter, Rettig, and Desmond:

I am pleased to submit our Report No. 1433 commenting on the cryptocurrency guidance published by the Internal Revenue Service on October 9, 2019, including Revenue Ruling 2019-24 on the treatment of hard forks and the updated "Frequently Asked Questions". We commend the Service for providing much needed guidance in this area and understand that the Internal Revenue Service and the Department of the Treasury are planning to issue further guidance on cryptocurrency. This Report highlights certain technical aspects of cryptocurrency network structures and market operations covered under the Revenue Ruling and the related Frequently Asked Questions and requests that the guidance be clarified in

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light of the technical operations of these networks. The Report also identifies additional areas of U.S. federal income taxation in which we believe further specific guidance would be beneficial in the near term.

We appreciate your consideration of our Report. If you have any questions or comments, please feel free to contact us and we will be glad to assist in any way.

Respectfully submitted,



Deborah L. Paul
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NEW YORK STATE BAR ASSOCIATION TAX SECTION

REPORT ON THE TAXATION OF CRYPTOCURRENCY

January 26, 2020

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I. INTRODUCTION

This Report comments on the cryptocurrency guidance published by the Internal Revenue Service (the “Service”) on October 9, 2019, including Revenue Ruling 2019-24 (the “Ruling”) on the treatment of hard forks and the updated “Frequently Asked Questions” (“FAQs” together with the Ruling, the “Guidance”).¹ We commend the Service for providing much needed guidance in this area and understand that the Service and the Department of the Treasury (“Treasury”) are planning to issue further guidance on cryptocurrency. This Report highlights certain technical aspects of cryptocurrency network structures and market operations covered under the Ruling and the related FAQs and requests that the Guidance be clarified in light of the technical operations of these networks.² The Report also identifies additional areas of U.S. federal income taxation in which we believe further specific guidance would be beneficial in the near term.

A. Background Regarding Blockchain Technology

1. *Bitcoin and Blockchain Technology*

As background to our comments on the Guidance and in particular the Ruling, we believe it would be helpful to summarize the operation of blockchain technology and introduce certain concepts we refer to throughout this Report.

The Bitcoin network is the software protocol behind the first cryptocurrency and began operating on January 3, 2009. The Bitcoin network uses a distributed network of computers running the Bitcoin core algorithm. The Bitcoin network’s computer code is “open-source,” meaning that the creator and copyright holder grants users the rights to study, change and distribute the software to anyone for any purpose. The core code is therefore open for anyone to download, use, review and inspect, providing complete transparency as to its design and evolution. Importantly, this openness also means it can be copied costlessly by any individual or group with the technical ability and desire to try creating a different virtual currency system.

Bitcoin functions as a digital ledger of transactions recording the movement of its native virtual “currency” also called bitcoin (with a lower case “b”) through the use of public and private key cryptography. The Bitcoin network is pre-programmed with a limited supply of 21 million bitcoin currency units. The Bitcoin network’s supply of bitcoin is released according to a set deflationary schedule as payment to the operators of the computers providing the computational power required to process and verify transactions on the Bitcoin ledger. These computer operators are referred to as “miners.” When holders of bitcoin wish to transfer or otherwise transact in

¹ The principal drafter of this Report was Eschi Rahimi-Laridjani with helpful comments from Kim Blanchard, Andy Braiterman, Robert Cassanos, Justin Cohen, Peter Connors, Kianga Daverington, Daniel Dunn, Jason Factor, Michael Farber, Dominique Gallego, Jonathan Gifford, Ed Gonzalez, Benjamin Heller, Andrew Herman, John Lutz, Jeffrey Maddrey, Jim Mastracchio, Michael Meisler, David Miller, John Narducci, Richard Nugent, Deborah Paul, Richard Reinhold, Zuza Savoff, Robert Scarborough, Mike Schler, Michael Shulman, Bryan Skarlatos, Andrew Solomon, Corey Spector, Nathan Tasso and Shun Tosaka. This Report reflects solely the views of the Tax Section of the New York State Bar Association and not those of the Executive Committee or House of Delegates of the New York State Bar Association.

² The Service also could consider issuing guidance in a form that is not sub-regulatory and elevating the FAQs to a level that provides penalty protection to taxpayers.

bitcoin, transactions are broadcast to the network by users and collected by computers (referred to as “full nodes”) run by miners and other participants who choose to download and run the Bitcoin core protocol software connected to the Internet. In this process, computers running the protocol constantly scan the network for transactions waiting to be detected and processed. These computers check that submitted transactions are consistent with prior states of the distributed ledger, and, once a transaction is verified as valid (*i.e.* it is confirmed that the value being transferred is available for transfer), that transaction is posted to the “memory pool” from which miners choose transactions to add to the ledger. Transactions are then grouped together and published in sequential blocks. Grouping is done based on factors that include timing of the transaction and the transaction fees offered to miners by senders. Each “block” is fixed in size, which limits the number of transactions that can be confirmed and published together. Since different transactions contain varying amounts of data, the number of transactions that can fit in a block varies and will contribute to the determination of which transactions are grouped together in the confirmation process. This network structure has given rise to the term “blockchain” and its corresponding method for achieving agreement (or consensus) as to the state of the network (including the validity of transactions) is referred to as a “proof-of-work” system.

More generally, blockchain is a form of distributed ledger technology used to refer to the technology that underlies many cryptocurrencies, including but not limited to bitcoin. With respect to each cryptocurrency with a proof-of-work consensus mechanism, the miners, together with decentralized groups of voluntary developers, users, hobbyists, investors and traders of varying levels of sophistication form a global community of participants whose collective actions and behaviors determine the future development, adoption and success of the relevant network.

Today, www.coinmarketcap.com, a leading website that provides market information about cryptocurrencies lists information for nearly 5,000 different cryptocurrency assets, representing countless groups of developers, users, investors and traders from around the world. What started with Bitcoin a decade ago has led to experimentation and innovation around the world creating potential applications in areas beyond virtual currencies.³ However, these projects vary widely in terms of legitimacy, adoption, size and viability and the top ten cryptocurrencies account for about 85% of the quoted total market capitalization of approximately US\$200 billion as of the end of 2019.⁴

2. *Coins and Tokens*

The cryptocurrency associated with a particular public blockchain or other distributed ledger technology network is often referred to as a coin or token. While frequently used interchangeably, coins generally have been designed as a form of digital money for payments. Tokens, on the other hand, have additional embedded functionality in that they are necessary inputs for the internal operation of their related network, provide holders with access to products or

³ Sangeet Paul Choudary, Marshall W. Van Alstyne & Geoffrey G. Parker, *Platforms and Blockchain Will Transform Logistics*, HARVARD BUSINESS REVIEW, (Jun. 19, 2019), <https://hbr.org/2019/06/platforms-and-blockchain-will-transform-logistics>; Irving Wladawsky-Berger, *Blockchain Marks the Next Step in the Internet’s Evolution*, THE WALL STREET JOURNAL, (Aug. 2, 2019), <https://blogs.wsj.com/cio/2019/08/02/blockchain-marks-the-next-step-in-the-internets-evolution/>.

⁴ Cryptolization, <https://cryptolization.com/> (last visited Jan. 2, 2020).

services (in addition to storing value and permitting fast, secure and inexpensive transfer of value over the Internet), or may be consumed as a kind of natural resource required for third party programs to operate on that system (*e.g.*, the cryptocurrency ether on the Ethereum blockchain).

3. *Public and Private Keys*

The transfer of bitcoin (and other cryptocurrencies) requires the use of a public and a private key. The public key is associated with a publicly available address location on the network where balances are recorded and is used to receive funds. The private key is used to “sign” and approve the movement of a specified amount of currency associated with a particular public key and address.

What is colloquially referred to as “holding” coins or tokens or “owning” coins or tokens really translates to holding and controlling the use of private keys associated with addresses on the distributed ledger that contain stated amounts of coins or tokens. The coins and tokens themselves are not digitally held or transferred on devices – the coins and tokens stay on the network and move around to different addresses wherever they are sent according to the instructions of the private key holder, or multiple holders where a multi-signature requirement has been implemented.

4. *Wallets and Exchanges*

Use of cryptocurrencies and their networks requires customized software that, depending on the particular network, can be accessed with the assistance of a user interface that is online, downloaded locally onto a user’s computer or mobile device, managed with a purpose-built piece of hardware or even via a physical piece of paper, collectively referred to as “wallets.” Each of these methods assists the user in the management and use of private keys required to safeguard, send or move cryptocurrency from one address to another. Wallets that are not connected to the Internet are referred to as “cold wallets,” while wallets that are connected are referred to as “hot wallets.” Hot wallets provide the user interface and connectivity to be able to transact in the cryptocurrencies supported by a particular wallet.

Wallets can be “custodial” or “non-custodial.”⁵ With custodial wallets, the public and private keys are managed by a third-party service provider and are not directly available to the end user. With a non-custodial wallet, by contrast, the end user has direct access to the public and private keys associated with the wallet, and thus has more direct control over the cryptocurrency associated with that wallet. In the case of non-custodial wallets, the wallet provider is not supposed to have access to a wallet holder’s private keys.

Many users hold cryptocurrency balances on centralized platforms offering services for the purchase and exchange of cryptocurrency, commonly referred to as “exchanges.” When a user holds an account on an exchange (a type of custodial wallet) that user does not directly have access to the private keys associated with cryptocurrency balances reflected on the public ledger of a particular blockchain. Instead, the user relies on the exchange to manage all private keys, deposits

⁵ Jamie Readman, *The Difference Between Custodial and Noncustodial Services*, BITCOIN, (Nov. 29, 2018), <https://news.bitcoin.com/the-difference-between-custodial-and-noncustodial-cryptocurrency-services/>; Alvin Hagg, *Custodial and Non-Custodial Wallet Comparison*, FREEWALLET, (May 24, 2019), <https://freewallet.org/blog/custodial-vs-non-custodial-wallet>.

and withdrawals on behalf of the user. Accordingly, a user’s trading activity and account balances are recorded on private ledgers that are internal to the platform with only periodic batches of transactions representing groups of deposits and withdrawals of cryptocurrency being submitted and processed on the actual blockchain, or “on-chain”, by the relevant platform. Exchanges may not actually hold coins or tokens matching all coins and tokens credited to their customers’ accounts. Given limited regulation of exchanges in many jurisdictions, there is little transparency about how much cryptocurrency an exchange actually owns.

5. *Private Blockchains*

In addition to cryptocurrencies such as bitcoin and similar networks or “projects” that are considered to be “public” and “permissionless,” there is a separate world of “private” and “permissioned” blockchains that are created, and access to which is controlled, by private organizations, usually corporations or consortia of companies within an industry, for a specific purpose useful to a limited group of participants.

B. Forks

1. *Soft Forks*

As discussed above, cryptocurrency essentially is a software protocol that runs across a network of computers that create and maintain a shared ledger of transactions. The cryptocurrencies discussed in the Guidance are recorded on a distributed ledger that is open for participation and inspection by anyone with the right software tools or network user interface. Since the software is open source all interested parties with the requisite skills can duplicate and modify it. Modifications of the software that do not break compatibility across the network – allowing transactions to continue to be verified and added to the existing ledger using pre-fork versions of the software (a concept known as “backward compatibility”) - are referred to as soft forks.

2. *Hard Forks*

Modifications in the software that go to the core rules on which the entire network must agree can result in a new version of the software that is no longer compatible with the unmodified software.⁶ Modifications to the software that break compatibility between the unmodified version of the software and the modified version after the point in time such modifications are introduced give rise to hard forks. Each leg of the fork now applies different rules to reviewing and verifying transactions, so the blockchain splits into an original chain and a new chain.

There are essentially two varieties of hard forks: contentious and non-contentious. A non-contentious hard fork is a form of software update with similar intentions and outcomes as a soft fork, but depending on the nature of the changes it may require that alternative versions of the network protocol be incompatible with the upgrade (*i.e.* that there be no backward compatibility),

⁶ Peter Van Valkenburgh, *What Are Cryptocurrency Forks, Airdrops, and What’s the Difference?* COIN CENTER, (Oct. 17, 2019), <https://coincenter.org/entry/what-are-cryptocurrency-forks-airdrops-and-what-s-the-difference>.

thereby essentially requiring the entire community to adopt and use the new version.⁷ In cases where a hard fork is contentious, it means there is fundamental disagreement among significant parts of the community of project participants as to the future technical direction of the network such that at the time of the hard fork two incompatible versions of the network survive and continue their development along different road maps. The outcome of a contentious hard fork can lead to debates over which cryptocurrency is entitled to use the original name, logo and trading abbreviation.

In addition to contentious hard forks in which there is a rift in the community of project participants for an existing blockchain network, there are also hard forks created with the intention of establishing an entirely new cryptocurrency.⁸ Developers use hard forks as a technical method to jumpstart a new cryptocurrency and leverage name recognition, network effects as well as technical specifications of an existing blockchain for the benefit of a new project. Such “new project” hard forks operate in ways that are very similar to contentious hard forks and are intended to result in two chains going forward, similar to a contentious hard fork in which both the legacy and new chains survive. “New project” hard forks generally are more common than contentious hard forks. The discussion of contentious hard forks in Part II of the Report therefore addresses both contentious hard forks and hard forks intentionally used to create new projects.

Given the open source nature of the software underlying cryptocurrencies, hard forks can arise easily. Anyone with the requisite technical expertise and the desire to create a hard fork (whether as part of a disagreement about the direction of a given blockchain community or to create an entirely new project) can do so and hard forks are quite common. By way of example, based on research by Forkdrop.io there are currently 50 Bitcoin active fork projects and 20 historic fork projects.⁹ Many of those fork projects are or were deliberate attempts to create a new cryptocurrency. Contentious hard forks resulting from a rift within a community are relatively rare and those resulting in two independently viable, widely traded and actively developing projects are rarer. We understand that Bitcoin Cash is the only currently operating contentious hard fork of the original Bitcoin chain¹⁰ that meets the foregoing standard and that Ethereum

⁷ A non-contentious hard fork of the Ethereum network referred to as “Istanbul” occurred on December 7, 2019. Adrian Zmudzinski, *Ethereum Istanbul Hard Fork Get Support From Major Crypto Exchanges*, COINTELEGRAPH, (Dec. 9, 2019), <https://cointelegraph.com/news/ethereum-istanbul-hard-fork-get-support-from-major-crypto-exchanges>; Christine Vasileva, *Ethereum Istanbul Hard Fork Completed Successfully*, BITCOINIST, (Dec. 7, 2019), <https://bitcoinist.com/less-than-4-hours-ethereum-istanbul-hard-fork/>.

⁸ Two examples are Bitcoin Gold and Bitcoin Private. See Christina Comben, *The Real Story Behind Bitcoin Gold From One of Its Creators*, COIN RIVET, (Nov. 16, 2019), <https://coinrivet.com/the-real-story-behind-bitcoin-gold-from-one-of-its-creators/>; Nikolai Hushchak, *An Investment in Bitcoin Private. Why Should You?* GOOD AUDIENCE, (Jun. 3, 2018), <https://blog.goodaudience.com/an-investment-in-bitcoin-private-why-should-you-c3f571e737d1>.

⁹ Forkdrop, <http://www.forkdrop.io> (last visited Jan. 2, 2019).

¹⁰ The Bitcoin Cash network subsequently split into two chains in a further contentious hard fork, Bitcoin ABC (which since has acquired the original name Bitcoin Cash) and Bitcoin SV (Satoshi Vision). While Bitcoin SV still has some support, it may eventually die out since most of the largest exchanges and wallet providers do not support it. See Sead Fadilpašić, *Is Bitcoin SV About to Sabotage Itself?* CRYPTO NEWS, (Dec. 18, 2019), <https://cryptonews.com/news/is-bitcoin-sv-about-to-sabotage-itself-5340.htm>; Christine Masters, *BitGo Wallet to Stop Bitcoin SV (BSC) Support in February*, CRYPTOVEST, (Dec. 18, 2019), <https://cryptovest.com/news/bitgo-wallet-to-stop-bitcoin-sv-bsv-support-in-february/>.

similarly has only had one surviving contentious hard fork that at this time meets the foregoing standard.

3. *Consequences of a Hard Fork*

When a contentious hard fork (or a new project fork) occurs, a new chain emerges that shares an identical history with the original, or legacy, chain up to the point of the split.¹¹ The historical record of coins or tokens on the legacy chain is shared by the forked copy creating an identical number of coins or tokens available for use on the new chain. Thus, the mere occurrence of the hard fork results in the creation of coins or tokens on a separate blockchain with new technical specifications that are available in identical quantity to holders of the original coins or tokens.

If the hard fork is implemented among participants in a single cryptocurrency community and the purpose of the hard fork is not contentious, *i.e.* there is universal agreement and adoption of the new version, the hard-forked version should inherit all the defining characteristics, network effects and market infrastructure support enjoyed by that network's coin or token prior to the hard fork. In that case, the legacy chain will be abandoned and cease to exist for all practical purposes. Coins or tokens associated with the legacy technology will cease to have any value or usability as all network infrastructure (miners, exchanges, etc.) will no longer support the legacy version. It will therefore not be possible in practice to transact on the legacy chain unless programmers and market participants take steps in the future to revive the legacy chain and build up a new infrastructure.¹²

Where a hard fork is contentious and two viable currencies survive, typically one of the groups will adopt a new name so that a new community can organize and develop along a different path.

Whether a hard fork within a single blockchain's community is contentious or non-contentious, no coins or tokens are airdropped in connection with the hard fork. Instead, the new coins or tokens come to exist by virtue of the transaction ledger of the legacy network being copied to create a new and separate blockchain. Owners of coins or tokens on the legacy chain cannot access new coins or tokens without technical upgrades to permit access to coins or tokens under the new protocol. The required upgrades may exceed the technical expertise of many owners holding through cold wallets or other wallets that are not supported by third party service providers. If coins or tokens are held through a wallet provider or an exchange, those service providers need to take the necessary steps to make new coins or tokens accessible to their customers. Modifying the software to be able to access new coins and tokens can be costly, in that holders or service

¹¹ Peter Van Valkenburgh, *What Are Cryptocurrency Forks, Airdrops, and What's the Difference?*, COIN CENTER, (Oct. 17, 2019), <https://coincenter.org/entry/what-are-cryptocurrency-forks-airdrops-and-what-s-the-difference>.

¹² An example of this phenomenon is Sia Classic where after a largely non-contentious hard fork some members of the community tried to keep the legacy chain alive. Scott Ellis, *SiaClassic: Declaration of Independence*, MEDIUM, (Oct. 13, 2018), <https://medium.com/siaclassic/siaclassic-declaration-of-independence-315284c56147>. However, Sia Classic is not listed on Coin Market Cap and does not otherwise have an active support network to date.

providers may need to hire specialized personnel to carry out the necessary upgrade. So access to new coins or tokens resulting from a hard fork is neither automatic nor costless.

4. *When Does a Hard Fork Occur?*

It is not crystal clear that there is a general consensus or standard to apply on when in time a hard fork can be confirmed to have occurred. A hard fork may be announced by the team launching it but not all announcements are followed by actual launches, let alone hard forks with discernable secondary market trading volumes or active development. Technically, when a hard fork occurs, it is measured from a particular “block” or location on the blockchain. At that time, operators of different versions of the protocol can broadcast their participation in a manner that is openly visible for programmers. Steps required by market participants to access new coins or tokens vary depending on the particular technical methods developers adopt to effect the operation of the new blockchain. The variety of feasible approaches raises the question of whether and when the hard fork can be said to occur: (x) at the time a “snapshot” of the old blockchain is taken to record the location on the blockchain from which the fork diverges, (y) at the time the new protocol begins running (without external network support) with a detectable threshold of computing power, which may be visible only to technically expert participants interacting directly with blockchain, or (z) at the later time when the first group of transactions is recorded on the new chain.¹³

C. **Airdrops (Giveaways)**

Airdrops (or giveaways) are common occurrences but as the terminology has emerged and been used in the industry, they are not connected to hard forks because they do not share a transaction history with another blockchain.¹⁴ Airdrops typically occur for marketing purposes or to promote a new coin or token.¹⁵ Promoters wishing to increase visibility of a new token may scan the Ethereum blockchain and automatically send new tokens to all wallets in relation to the amount of ether in each wallet. Exchange platforms may gift new tokens to account holders – perhaps in proportion to the amount of that exchange’s native token held. Thus, while not technically related to a particular legacy blockchain in the same way as a new coin or token that is obtained via a hard fork, holdings of a particular cryptocurrency may be a necessary qualification for obtaining a giveaway or airdrop.

¹³ An additional twist can be that an exchange working with the fork developers to support the new blockchain may credit persons holding legacy coins and tokens at the time of the snapshot with an instrument tradable on that platform (but which cannot be withdrawn from that platform) as a kind of future in the forked coin or token. We understand that this is a rare occurrence and will require further study. The discussion of token swaps in Part VI.D below is relevant to this analysis.

¹⁴ We note that there have been some instances of a hard fork combined with an airdrop. The first such transaction appears to have been the creation of a new cryptocurrency called Bitcore. However, such combinations remain rare. *See About Bitcore*, COINMARKETCAP, coinmarketcap.com/currencies/bitcore/ (last visited Dec 31, 2019); Jimmy Song, *Bitcoin Diamond / Super Bitcoin / Bitcore: What You Need To Know*, MEDIUM, (Jan. 3, 2018), <https://medium.com/@jimmysong/bitcoin-diamond-super-bitcoin-bitcore-what-you-need-to-know-f49c35688a39>; *BitCore FAQ*, BITCORE BTX, <https://bitcore.cc/faq> (last visited Dec. 31, 2019).

¹⁵ Some projects may refer to “giving away” coins or tokens to persons providing services or capital. We do not address those situations when we refer to “giveaways” here.

In many cases, giveaway coins or tokens are created before a functioning blockchain for the underlying project exists and the coins and tokens are given away as a way for projects to raise awareness and money to develop the project through secondary market liquidity if the coins or tokens can be listed on exchanges. The advertised utility usually is not available at the time of the giveaway, in which case the tokens would not be otherwise usable until the promised protocol goes live and the marketing tokens can be “swapped” for new native tokens.

In an airdrop/giveaway, the recipients do not provide consideration for the airdrop and have no control over whether they “receive” airdropped coins or tokens. Often, they may not even be aware of the airdrop/giveaway. If an airdrop/giveaway is received via accounting entries on the books and records of an exchange where the taxpayer has its trading account, the taxpayer may have no way of knowing whether the related blockchain is functioning or whether any transactions have been recorded. Moreover, often promotional airdrops/giveaways into a holder’s account on an exchange will not permit immediate withdrawals even if there are live and active order books for purchases and sales of the coins or tokens on that exchange. In some cases, a recipient will have to take actions to obtain the new coins or tokens, for example by signing up on a website or telegram and providing an Ethereum wallet address, or downloading the new product’s dedicated wallet and sharing an address unique to the new token. If a recipient does not take these steps it never obtains access to the airdropped coins or tokens.

II. SUMMARY OF RECOMMENDATIONS

1. We recommend that the Service clarify that airdrops as generally understood within the cryptocurrency community do not typically occur in connection with hard forks and that the Service revise the Ruling accordingly.
2. We recommend that the Service distinguish between contentious and non-contentious hard forks and treat a non-contentious hard fork as not resulting in a taxable event.
3. We recommend that the Service clarify how contentious hard forks (including, for this purpose, hard forks that are used to jumpstart new cryptocurrencies) as they actually occur (*i.e.* without an airdrop) should be taxed.
4. We recommend revising the Ruling to focus situation 1 on a non-contentious hard fork and situation 2 on a contentious hard fork (without an airdrop).
5. As discussed in Part III below, based on existing lines of authority, we believe there are four plausible ways of analyzing the consequences of a hard fork: (1) as an accession to wealth, (2) as a non-realization event followed by basis splitting, (3) as a non-realization event giving rise to an asset with a basis of zero and (4) as a taxable sale or exchange.
6. If the third approach listed in recommendation 5 above is chosen, we recommend that the Service provide that, in the case of a sale of the legacy coin or token at a loss, the loss be denied and the amount of the disallowed loss increase the basis of the new coin or token.

7. We recommend that the Service continue to study the taxation of airdrops/giveaways.
8. While we do not recommend a specific approach to the taxation of contentious hard forks and giveaways, we recommend that if Treasury and the Service treat contentious hard forks as giving rise to an “accession to wealth,” giveaways be analyzed and treated consistently.
9. As discussed in Part III.B.1.a. below, it is possible that an exchange or wallet provider chooses not to support a new cryptocurrency. We recommend that the Service provide further guidance on how taxpayers will be treated in these circumstances.
10. In light of the challenges in accurately determining fair market value, if Treasury and the Service decide to proceed with an approach to contentious hard forks that requires a determination of the current fair market value of new coins or tokens, we recommend that the Service study how best to develop criteria for identifying reliable pricing sources.
11. We recommend that the Service consider whether to allow reliance on an average price across multiple exchanges or on prevailing market conventions, such as the daily closing price.
12. As discussed in Part III.B.3 below, if the Service pursues the Accession to Wealth or Section 1001 approach to contentious hard forks, we recommend that it study whether a concept of “viability” of a contentious hard fork should be included.
13. In addition or as an alternative to recommendation 12, we recommend that the Service consider a *de minimis* rule establishing that taxpayers do not need to report income where new coins or tokens resulting from a contentious hard fork have a value below a specified threshold. Such a threshold could be based on the average prices on the top exchanges (by volume or liquidity) supporting those coins. We recommend that Treasury and the Service study how best to establish such a threshold.
14. If the Service takes an approach to giveaways that requires current taxation, we recommend a *de minimis* threshold below which no income needs to be reported. We also recommend that at least in situations where coins or tokens are forfeited unless specific actions are taken within the giveaway period, no income be recognized until those actions are taken and, if those actions are never taken within the giveaway period, no income be recognized at all.
15. We recommend that the Service study whether to require at least domestic exchanges and wallet providers to report to the Service the number of coins and tokens (with relevant identifying information) that become available to a taxpayer after a contentious hard fork or in a giveaway in order to facilitate compliant reporting upon receipt or at the time the coins or tokens are subsequently exchanged for cash, other property or services.

16. We recommend that the Service confirm that IRS Form 8300, titled “Report of Cash Payments Over \$10,000 Received in a Trade or Business,” does not apply to payments received in cryptocurrency.
17. For the reasons discussed in Part V.B below, we recommend that where a taxpayer holds the private keys to cryptocurrency directly the taxpayer’s jurisdiction of residence for U.S. federal income tax purposes be treated as the location of the cryptocurrency.
18. As discussed further in Part V.B below, where a taxpayer owns cryptocurrency in a manner in which it does not control the private keys associated with those coins or tokens, such as on an exchange, we recommend that the coins or tokens should be considered located where the service provider controlling the relevant private keys is located.
19. For the reasons discussed in Part V.B.1 below, we recommend that the Service require reporting of cryptocurrency held in accounts on non-U.S. exchanges on IRS Form 8938. We recommend that the Service impose this requirement for future tax years only or, as an alternative, provide a penalty-free extension period for taxpayers to file forms for prior years. We also recommend that the Service study whether cryptocurrency held in other types of custodial wallets supported by non-U.S. service providers be subject to this reporting requirement.
20. For the reasons discussed in Part V.B.2 below, we recommend that if the Service requires reporting on Form 8938, Treasury similarly require FBAR reporting (as defined below).
21. We recommend that Treasury and the Service study how to apply compliance requirements under FATCA (as defined below) to non-U.S. cryptocurrency exchanges.
22. We request that Treasury and the Service issue guidance in the near term with respect to the topics enumerated in Part VI below.
23. For the reasons discussed in Part VI.D below, we recommend that Treasury and the Service issue guidance confirming that token swaps are not taxable and providing that a holder who fails to take steps to exchange the old tokens and thus forfeits its right to receive the new token be entitled to a loss (insofar as the taxpayer had basis in the old token).
24. For the reasons discussed in Part V.G below, we recommend that Treasury and the Service further study “inflation payments” in staking networks.

Our recommendations are provided from the perspective of traditional tax concepts and doctrine.¹⁶ We recognize that the United States government may have a public policy interest in other areas relating to cryptocurrency, such as its environmental impact,¹⁷ its ability to facilitate unlawful transactions¹⁸ and its arguable similarity to gambling. We do not have the expertise to comment on those areas but acknowledge that the government’s views in those areas could affect the tax rules it chooses to adopt.

III. CLARIFICATION OF THE TAX TREATMENT OF HARD FORKS

The Ruling describes two situations. In situation 1 an existing cryptocurrency (crypto M) undergoes a hard fork resulting in the creation of a new cryptocurrency (crypto N). A taxpayer owns units of crypto M but is said not to “receive” units of crypto N where no crypto N is “airdropped or otherwise transferred to an account owned or controlled” by the taxpayer. The ruling concludes that under these circumstances the taxpayer does not have gross income. In situation 2 an existing cryptocurrency (crypto R) undergoes a hard fork resulting in the creation of a new cryptocurrency (crypto S). A taxpayer owns 50 units of crypto R. Upon the occurrence of the hard fork, 25 units of crypto S are said to be “airdropped” to the taxpayer’s address. As a result of the “airdrop” following the hard fork, the taxpayer is said to have had an accession to wealth and thus to recognize ordinary income. Q&A 23 makes clear that the amount of ordinary income is equal to the fair market value of the new cryptocurrency at the time it is received.

The Ruling concludes with respect to situation 1 that a hard fork that is not followed by an airdrop does not result in the recognition of gross income. As discussed above, hard forks generally are not followed by airdrops. In the paradigmatic case of a contentious hard fork, the split of Bitcoin into Bitcoin and Bitcoin Cash, two new viable blockchains were created, giving rise to separate cryptocurrencies that have become widely held and traded. However, technically, holders of bitcoin did not receive an airdrop of bitcoin cash. Instead, after the hard fork, holders of bitcoin could start transacting in bitcoin cash using the private keys to addresses that held bitcoin at the time of the hard fork to the extent additional technical support or “integration” was made available by third party wallet providers or exchanges which had started supporting bitcoin cash.

¹⁶ We have started from the premise that cryptocurrency is “property” for U.S. federal income tax purposes, as stated in Notice 2014-21, and have not considered whether there could be other valid tax paradigms, such as viewing cryptocurrency investments as akin to gambling.

¹⁷ See generally Christopher Bendixsen and Samuel Gibbons, *The Bitcoin Mining Network: Trends, Average Creation Cost, Electricity Consumption & Sources*, COINSHARES RESEARCH, (May 31, 2019), www.coinshares.co.uk; Alex Hern, *Bitcoin’s Energy Usage is Huge – We Can’t Afford to Ignore it*, THE GUARDIAN, (Jan. 17, 2018), <https://www.theguardian.com/technology/2018/jan/17/bitcoin-electricity-usage-huge-climate-cryptocurrency>; Niall McCarthy, *Bitcoin Devours More Electricity Than Switzerland*, FORBES, (July 8, 2019), <https://www.forbes.com/sites/niallmccarthy/2019/07/08/bitcoin-devours-more-electricity-than-switzerland-infographic/#680b3c5121c0>.

¹⁸ See generally Sean Foley, Jonathan R. Karlsen and Talis J. Putnins, *Sex, Drugs, and Bitcoin: How Much Illegal Activity Is Financed Through Cryptocurrencies*, SSRN, (Jan. 17, 2018), <https://ssrn.com/abstract=3102645>; Rachel Wolfson, *Tracing Illegal Activity Through The Bitcoin Blockchain To Combat Cryptocurrency-Related Crimes*, FORBES, (Nov. 26, 2018), <https://www.forbes.com/sites/rachelwolfson/2018/11/26/tracing-illegal-activity-through-the-bitcoin-blockchain-to-combat-cryptocurrency-related-crimes/#1670a20b33a9>.

Situation 2 provides that a holder of 50 units of crypto R receives an airdrop of 25 units of crypto S after a hard fork. As discussed above, a typical hard fork results in the creation of an identical number of coins and tokens on the new blockchain. Thus, situation 2 does not describe what would happen as a result of a hard fork in and of itself.

In reaction to the Ruling, many articles and briefings seem to have assumed implicitly that situation 2 (even if not technically precise) was intended to describe the taxation of the Bitcoin-Bitcoin Cash or Ethereum-Ethereum Classic splits.¹⁹ However, upon a careful reading of the Ruling, we do not believe that this interpretation is clear. In fact, since situation 1 seems closest to describing how a contentious hard fork (including a new project hard fork) actually works, the opposite conclusion may be warranted, namely that no income is recognized upon the hard fork. Situation 2 seems closest to the hard fork-airdrop combination used in connection with the launch of Bitcore, which we understand to have been an unusual and rare combination.²⁰

We therefore recommend that the Service issue further guidance clarifying how contentious hard forks should be taxed and address airdrops separately. In particular, we recommend revising the Ruling to focus situation 1 on a non-contentious hard fork and situation 2 on a contentious hard fork (without an airdrop).

A. How Should Hard Forks Be Taxed (in the Absence of Airdrops)?

1. Non-Contentious Hard Forks

We recommend that the Service clarify the important distinction between contentious and non-contentious hard forks. The FAQs already provide that soft forks do not have tax consequences.²¹ Non-contentious hard forks represent software upgrades that are very similar to those resulting from soft forks, except that the modifications relate to core consensus rules on the network, making future transactions after the fork incompatible with transactions using the unmodified software. Where the entire network upgrades to the new system and the infrastructure supporting the unmodified version is dismantled, the effects of the non-contentious hard fork are the same as those of a soft fork.

¹⁹ Amy Lee Rosen, *IRS Clarifies Tax Treatment of Crypto Hard Forks, Airdrops*, LAW360 TAX, (Oct. 9, 2019), <https://www.law360.com/articles>; Robin Singh, *IRS Crypto Guidance Clarifies A Few Things for Investors*, LAW360 TAX, (Oct. 15, 2019), <https://www.law360.com/articles/1209442/irs-crypto-guidance-clarifies-a-few-things-for-investors>. Other commentators emphasized, however, that the Ruling does not match up with industry practice. See Michael Cohn, *IRS Continues Fight for Virtual Currency Information*, ACCOUNTING TODAY, (Dec. 3, 2019), <https://www.accountingtoday.com/news/irs-continues-fight-for-virtual-currency-information>; Kristen A. Parillo, *Cryptocurrency Needs Clarity, Lawmakers Say*, TAXNOTES, (Jan. 2, 2020), <https://www.taxnotes.com/tax-notes-today-federal/cryptocurrency/cryptocurrency-guidance-needs-clarity-lawmakers-say/2020/01/02/2bqwm>.

²⁰ See *supra* note 14. However, a recent article suggests that the Service may have used the term “airdrop” loosely and that the Ruling may reflect an endorsement of the Accession to Wealth approach outlined below. See David J. Shakow, *Taxing Bitcoin and Blockchains: What the IRS Told Us (and Didn't)*, TAXNOTES, (Jan. 13, 2020), at 249 n. 45, <https://www.taxnotes.com/tax-notes-today-federal/cryptocurrency/taxing-bitcoin-and-blockchains-what-irs-told-us-and-didnt/2020/01/13/2bpx8> (referencing a conversation with the author of the Ruling).

²¹ *Frequently Asked Questions on Virtual Currency Transactions*, Q29, IRS <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last updated Dec. 31, 2019).

With respect to non-contentious hard forks, we recommend treatment analogous to that of soft forks, since like soft forks such non-contentious hard forks represent an overall system upgrade and are not intended to result in two forked chains going forward.²² Before the hard fork a holder owns one coin or token and after the hard fork it owns what is technically a new coin or token but is supported by the entire network infrastructure of the original coin or token. While the original coin or token still exists on the legacy chain, it has become impossible to transact on the legacy chain because the community no longer will support the legacy chain. Essentially a holder goes from owning one coin or token to owning an upgraded version of that coin or token. This could be said to be analogous to an update to software owned under a “shrink wrap” license,²³ and there appears to be no authority treating such an update as a taxable event. A non-contentious hard fork can also be viewed as an exchange of an old coin or token for a new coin or token that is not materially different in kind or extent.²⁴ While the software has been upgraded, nothing else has changed in that the same community and network infrastructure are supporting what is essentially the same coin or token.²⁵

We would recommend that the coins on the new chain resulting from the non-contentious hard fork be treated as the continuation of the legacy coins (like coins after a soft fork) and thus retain the entire tax basis of the legacy coins. As a result, coins that remain on the legacy chain, in which it effectively becomes impossible to transact, should be treated as having a tax basis of zero. Should programmers in the future revive the legacy chain and create a new network infrastructure that makes transactions possible once again, a taxpayer retaining such legacy coins with a zero basis and subsequently transacting in them would then be taxed on any resulting gains to the full extent.

2. *Contentious Hard Forks*²⁶

Leaving aside airdrops, which should not be conflated with hard forks, the question arises of how contentious hard forks should be treated for U.S. federal income tax purposes. Based on

²² We note that this conclusion may already be consistent with the Guidance if one reads Q&A 21 to apply to non-contentious hard forks. *Frequently Asked Questions on Virtual Currency Transactions, Q21*, IRS <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last updated Dec. 31, 2019).

²³ A “shrink wrap” license is a common software license that contains language to the effect that the end user agrees to the terms by opening the package. *Shrink Wrap License*, USLEGAL.COM, <https://definitions.uslegal.com/s/shrink-wrap-license/> (last visited Jan. 21, 2020).

²⁴ Treasury Regulation Section 1.1001-1(a); *Cottage Sav. Ass’n v. Commissioner*, 499 U.S. 554 (1991).

²⁵ *Weiss v. Stearn*, 265 U.S. 242 (1924) (no sale or exchange where new corporation organized in same state acquired all assets and liabilities and continued business of old corporation with same management; “mere change in the technical ownership of an enterprise”). For a detailed discussion of *Weiss* as well as cases finding a sale or exchange on other facts (including *United States v. Phellis*, 257 U.S. 156 (1921) and *Marr v. United States*, 268 U.S. 536 (1925)), see New York State Bar Association Tax Section, *Report on Certain Corporate Reorganization Transactions Followed by “Same-State” Asset Drop-Downs*, (Report No. 1371, Jun. 5, 2017, available at https://www.nysba.org/Sections/Tax/Tax_Section_Reports/Tax_Reports_2017/Tax_Section_Report_1371.html).

²⁶ As noted in Part I.B.2 above, the following discussion of contentious hard forks applies equally to hard forks that are used intentionally to jumpstart new cryptocurrency projects.

existing lines of authority, we believe there are four plausible ways of analyzing the consequences of a contentious hard fork.²⁷

a. Accession to Wealth Approach

The first approach is to treat the split of the legacy chain (crypto M) into crypto M and crypto N and the resulting creation of an identical number of new units of crypto N on the new blockchain as an “accession to wealth, clearly realized”²⁸ once the taxpayer has complete dominion and control over new crypto N. As other commentators have noted,²⁹ this position finds support in the tax treatment of treasure trove and free samples, which generally give rise to taxable income upon discovery or receipt of an asset, however unexpected,³⁰ subject to the principle that a taxpayer must claim or exercise dominion and control over the asset.³¹ The taxation of prizes offers further support.³² The Service clearly adopted this position in connection with what it referred to as airdrops after hard forks, but it is not clear what position should be taken when the taxpayer or a service provider needs to take technically complex steps in order to make the new coins accessible. In the case of a hard fork, the taxpayer can use existing private keys to transact in the new coins but only after such steps are taken to make the new coins accessible. After hard forks, the taxpayer therefore does not have immediate access to, and control over, the asset in the account, as would be the case where cash is transferred to a bank account or securities are placed in a custodial account.

²⁷ Given the speed at which this technology is evolving, Treasury and the Service also could consider whether to permit taxpayers holding cryptocurrency to take any reasonable method consistently applied to questions of realization, timing, valuation and basis and requiring disclosure of the relevant method on the taxpayer’s return. Any changes to these methods could then be treated as changes in accounting methods. If a taxpayer fails to disclose or to apply consistent methods, the Service could then apply its own reasonable method.

²⁸ *Commissioner v. Glenshaw Glass Co.*, 348 U.S. 426 (1955).

²⁹ Omri Marian and Kerri Ryan, et al., *Comments on the Tax Treatment of Hard Forks*, ABA Section of Taxation (Mar. 19, 2018); Peter J. Connors, *Taxing a Moving Target: Tax Issues Involving Cryptocurrency*, TAX REVIEW, (Nov. 12, 2018) available at <https://media.orrick.com/Media%20Library/public/files/insights/taxing-a-moving-target.pdf>.

³⁰ *Cesarini v. United States*, 296 F. Supp. 3 (N.D. Ohio 1969) (cash found in old piano treated as income in year of discovery); *Haverly v. United States*, 513 F.2d 224 (7th Cir. 1975) (taxpayer required to include value of free samples in income where he donated free samples and claimed charitable deductions for their value; court did not address what consequences of mere receipt would have been).

³¹ *Haverly*, 513 F.2d at 226 (“intent to exercise complete dominion over unsolicited samples is demonstrated by donating those samples to a charitable institution. . . .”; donation of some samples occurred in tax year after receipt); GCM 36639 (Mar. 22, 1976) (“[I]t is clearly the position of the Service that the mere receipt of books does not constitute income. Rather, the inclusion of the value of the books in income is dependent on the taxpayer accepting them as his own. The taxpayer manifests this acceptance if he contributes the books to charity and claims a deduction therefor, sells them, or places the books in his own library.”).

³² See Section 74(a) & (b) (except for certain prizes and awards transferred to charities or received as a qualified scholarship, gross income includes amounts received as prizes and awards); Treasury Regulation Section 1.74-1(a)(1) (“prizes and awards which are includible in gross income include (but are not limited to) amounts received from radio and television giveaway shows, door prizes, and awards in contests of all types. . . .”); Rev. Rul. 58-127, 1958-1 C.B. 42 (ruling that a taxpayer’s gross income includes amounts received as prizes at the time the taxpayer has the power to procure the payment of such prize to another).

Under this approach, consistent with the Guidance as it relates to “hard forks followed by airdrops,” a holder of the original cryptocurrency would recognize income equal to the fair market value of the new cryptocurrency at the time the new cryptocurrency is received or such later time as the taxpayer has dominion and control over the new coins and tokens. This result seems to fit well with the case of the Bitcoin-Bitcoin Cash fork where a network infrastructure and support from exchanges and wallet providers for Bitcoin Cash were available relatively quickly and holders had a tradable asset with material value after the hard fork.³³ In that case, a taxpayer who originally held bitcoin ended up owning two valuable assets in which it could transact.

On the flipside, while arguably theoretically appealing to take the view that new coins represent an accession to wealth similar to finding cash in a taxpayer’s piano or receiving free samples, this approach does not fully take into consideration that the possibility of hard forks is intrinsic in public open source blockchain technology. The “new coins or tokens” become available at the time of the hard fork only to persons already owning the legacy coins or tokens. Implicit in the ownership of legacy coins or tokens is the possibility of owning new coins or tokens resulting from a hard fork. This necessary link to the original coin seems to distinguish new coins or tokens resulting from hard forks from unsolicited samples, treasure trove or prizes. Moreover, as discussed in Part III.B below, the Accession to Wealth approach raises a number of practical challenges in the context of many hard forks, which may make it difficult to administer and burdensome for taxpayers and the Service in a large number of cases.

Moreover, this approach can result in taxable income in excess of a taxpayer’s economic gain as illustrated by the following example:

Example 1. Taxpayer holds crypto X worth \$1,000 before the fork with a basis of \$500. After the fork, taxpayer holds the same crypto X (now with a value of only \$300) plus new crypto Y (value of \$800). On these facts, the aggregate value increased by \$100. However, under the Accession to Wealth approach, taxpayer would have ordinary income of \$800.

This result could be ameliorated by setting a cap on the income inclusion at an amount equal to the excess of the sum of the value of crypto X and crypto Y after the fork over the value of crypto X before the fork, or alternatively the excess of the sum of the value of crypto X and crypto Y after the fork over the taxpayer’s basis in crypto X.

b. Basis Splitting Approach

The second approach is to treat the contentious hard fork as a non-realization event but to allocate the basis of each original coin between that coin and the new “mirror” coin. Support for this approach can be found in authorities regarding the distribution of subscription rights on

³³ SFox, *From Hard Fork to \$4K: A Bitcoin Cash Price History*, MEDIUM, (Dec. 26, 2017), <https://blog.sfox.com/from-hard-fork-to-4k-a-bitcoin-cash-price-history-31f88b3908f0>; Jake Smith, *The Bitcoin Cash Hard Fork Will Show Us Which Coin Is Best*, FORTUNE, (Aug. 11, 2017), <https://fortune.com/2017/08/11/bitcoin-cash-hard-fork-price-date-why/>.

common stock³⁴ and authorities concluding that when property rights are subdivided, basis is allocated between the separate rights.³⁵ More generally, where multiple assets are acquired together but disposed of separately, basis is allocated based on fair market value at the time of purchase.³⁶ A line of authorities allocating the purchase price paid for a pregnant cow or mare between the animal and its offspring may also support treating a contentious hard fork as requiring a basis split between the original coin and the new coin, though this analogy may only be apt where a coin or token is acquired in anticipation of a contentious hard fork.³⁷ The foregoing authorities look to all facts and circumstances and generally would require a taxpayer to demonstrate which portion of its purchase price for the original coin or token was attributable to the new coin or token, which in practice may not be possible where a particular right or asset was not contemplated at the time of the original investment. At the time the original coin or token was purchased, any specific hard fork typically will not have been contemplated. An alternative principle for splitting basis would be to allocate basis based on relative fair market values at the time of the fork, such as in the case of stock dividends and spin offs under current law, though such an approach could require legislation.³⁸

A further question arises as to when the basis allocation should occur. As in the case of the Accession to Wealth approach discussed above, the correct time for a basis allocation may be once the taxpayer has dominion and control over the new coins or tokens, such that the new coins or tokens have become an investment that is separate from the legacy coins or tokens.³⁹ However, it may also be appropriate to allocate basis only at the time when a taxpayer disposes of the coins or tokens either on the basis that the taxpayer only has dominion and control once it exercises dominion and control by disposing of the coin or token⁴⁰ or based on principles similar to basis

³⁴ *Miles v. Safe Deposit & Trust Co. of Baltimore*, 259 U.S. 247 (1922) (basis allocated between stock and subscription rights based on cost basis in stock).

³⁵ *Gladden v. Commissioner*, 262 F.3d 851 (9th Cir. 2001) (at time of purchase land had no separately alienable water rights but subsequent change in law permitted separate sale of water rights; court concluded that basis should be allocated based on value of subdivided rights at time of original purchase; where taxpayer cannot demonstrate value of separate right, value and basis determined to be zero). See also *Reuben v. Comm’r*, No. 2:11-cv-09448-SJO-PJW, 2013 WL 656864 (C.D. Cal. 2013), *aff’d*, 628 Fed. Appx. 509 (9th Cir. 2016) (taxpayer receiving stock in demutualized insurance company in respect of insurance policy had zero basis because taxpayer did not establish amount “paid” for stock when acquiring policy).

³⁶ Treasury Regulation Section 1.61-6(a), Example 2.

³⁷ *Gamble v. Commissioner*, 68 T.C. 800 (1977) (allocating portion of purchase price of pregnant broodmare between broodmare and foal); Rev. Rul. 86-24, 1986-1 C.B. 80 (at birth calf takes basis equal to premium paid for cow being pregnant). See also *Metz v. United States*, 10 A.F.T.R. 2d 5443 (E.D. Ky. 1962) (where parties attributed no value to unborn foal when acquiring brood mare, no basis allocated to foal).

³⁸ See Section 307(a); Treasury Regulation Section 1.307-1(a); Section 358(b)(2); Treasury Regulation Section 1.358-2(a)(2)(i). We would note that such an approach would introduce many of the challenges regarding determination of fair market value discussed in Part III.B.2 below. However, those concerns could be mitigated with a rule similar to the rule in Section 307(b) and Treasury Regulations Section 1.307-2 providing for a basis of zero in a stock right that is worth less than 15% of the value of the old stock unless the taxpayer elects proportional allocation.

³⁹ See *DeCoppet v. Helvering*, 108 F.2d 787 (2d Cir. 1940) (taxpayer not permitted to take loss on subsidiary stock as long as such stock was stapled to parent stock).

⁴⁰ *Haverly*, 513 F.2d at 226 (taxable income in year taxpayer exercised dominion and control by donating books, not in year of receipt).

allocation in connection with bond stripping transactions.⁴¹ Even then the question arises whether the basis split should be based on relative fair market values at the time the original coin or token is purchased, the time of the fork or the time of disposition.

We expect that in most cases the Basis Splitting approach under existing authorities would result in the new coin or token having a basis of zero because the taxpayer would be unable to demonstrate a basis for any other allocation. However, a different result may be obtained in situations where a taxpayer acquires a coin or token after a hard fork has been announced or based on its knowledge of and interest in a fork project. Those cases would then raise complex factual questions about how much of a premium is attributable to the expectation of a successful launch giving rise to new coins or tokens with material market value or other utility.

A conceptual weakness of the Basis Splitting approach is that the subdivision of property rights into land and separate water rights or the allocation of basis between a pregnant cow and its offspring upon birth by definition relates to a one-time event that lends itself to basis splitting. Hard forks, on the other hand, can and do occur repeatedly and, unlike the birth of offspring in connection with the purchase of a pregnant animal, often are not anticipated. Furthermore, in contentious hard forks within a single blockchain community, like the August 1, 2017 split of the Bitcoin blockchain, a drop in price of the original coin might be merely temporary, which seems to undercut the logic underlying basis splitting.⁴² Similarly, where a hard fork is intended to jumpstart a new cryptocurrency, the creation of the new currency may have no effect on the value of the original coin and is intended to be unrelated to the original coins or tokens.

A virtue of the Basis Splitting approach, however, may be that it could provide a consistent basis for the taxation of contentious and non-contentious hard forks since upon a non-contentious hard fork the basis split (at least if made on the basis of current fair market values) should result in the allocation of the entire historic basis to the new coins or tokens, which represent the continuation of the original investment.

c. Zero Basis Asset Approach

The third approach would be to treat the contentious hard fork as a non-realization event and to treat the new coins or tokens as having a basis of zero.⁴³ This approach finds support in authorities treating the birth of livestock as not constituting a taxable event. When a taxpayer owns

⁴¹ See Section 1286(b)(3) (basis allocation based on fair market value immediately before stripping transaction). Unless based on the principles of *Haverly*, such an approach could require legislation.

⁴² On August 1, 2017, the opening price of bitcoin was \$2,871.30 USD and the closing price was \$2,718.26 USD while on August 2, 2017, the opening price was \$2,727.13 USD and the closing price was \$2,710.67 USD. *About Bitcoin*, COINMARKETCAP, coinmarketcap.com/currencies/bitcoin (last visited Jan. 3, 2020). On August 1, 2017, the opening price of Bitcoin Cash was \$294.60 USD and the closing price was \$380.01 while on August 2, 2017, the opening price was \$382.38 USD and the closing price was \$452.66 USD. *About Bitcoin Cash*, COINMARKETCAP, coinmarketcap.com/currencies/bitcoincash (last visited Jan. 7, 2020).

⁴³ A variant of this approach would be to treat the hard fork as giving rise to an open transaction. See generally *Burnet v. Logan*, 283 U.S. 404 (1931); Rev. Rul. 58-234, 1958-1 C.B. 279, *clarified by* Rev. Rul. 68-151, 1968 C.B. 363). A holder would then only be taxed upon a disposition of the new coins or tokens. Unlike the Zero Basis Asset approach described above, however, this approach might result in ordinary income if it is treated as an “accession to wealth” equal to the fair market value of the new coin or token immediately before its disposition.

a cow or broodmare and has her bred, the taxpayer does not have taxable income upon the birth of the calf or foal and has a zero basis in the calf or foal (except to the extent it capitalizes breeding fees).⁴⁴ This approach finds further support in authorities applying non-realization treatment in other contexts where a taxpayer receives an item of some value based on its ownership or acquisition of another asset. For example, authorities conclude that the receipt of rights to purchase stock and debentures of one corporation based on a taxpayer's ownership of stock in a second corporation was not a taxable event and that the stock and debentures received had a basis of zero⁴⁵ and that discount coupons received in connection with purchases of airline tickets do not give rise to taxable income and have a basis of zero.⁴⁶

As in the case of the foregoing authorities, the new coin or token can be obtained at inception of the hard fork only if the holder owns or acquires the original coin or token. The new coin or token is created out of the original coin or token. The birth of offspring from a taxpayer's existing herd of cattle or broodmares is a fitting analogy. The taxpayer owns the "parent" coin, which can be said to give birth to the new "baby" coin. Like breeding of livestock, multiple contentious hard forks (including in particular "new project" hard forks) can happen over time giving rise to different "baby" coins from the same "parent" coin and these hard forks do not necessarily diminish the value of the "parent."⁴⁷

We would expect that this approach would be more easily administrable than the Accession to Wealth or the Section 1001 approach for the reasons discussed further in Part III.B below. Simplifying the recordkeeping and reporting process for taxpayers is likely to increase compliance, a key goal of the Service in this area. We would also expect this approach to be more administrable than the Basis Splitting approach, which could create uncertainty as to the proper allocation of basis for many years after the fork. Moreover, in practice, the Basis Splitting approach would lead to the allocation of zero basis to the new coin or token in many instances anyway. Holding an asset with a basis of zero would ensure that taxpayers are taxed in full at the time of a sale or exchange of the coins or tokens for cash, other property or services. At that time, the relevant value may be more easily ascertained. We recognize, however, that this approach would allow for the deferral of income – potentially for long periods of time.

Moreover, it is possible that, after a contentious hard fork, the original chain withers. In such a case, a taxpayer would have a zero basis in the new coin or token, which then would have significant built-in gain, and a cost basis in its legacy coin or token, which then would have a significant built-in loss. The taxpayer could seek to recognize the loss on the legacy coin or token and defer income indefinitely on the new coin or token. We view this as an undesirable outcome

⁴⁴ I.R.S., Market Segment Specialization Program Audit Techniques Guides: Farmers (2011); *cf. Gamble, supra* note 37; *Metz, supra* note 37.

⁴⁵ Rev. Rul. 63-225, 1963-2 C.B. 339.

⁴⁶ Rev Rul. 79-431, 1979-2 C.B. 108. The Service similarly has concluded that receipt of the right to sell a designated amount of milk at a premium price (where that right was based on the prior milk production record) and the receipt of a gas ration coupon was not taxable. *See* GCM 37971 (Jun. 1, 1979).

⁴⁷ Amy Lee Rosen, *IRS Cryptocurrency Guidance Leaves Unanswered Questions*, LAW360 TAX, (Oct. 11, 2019), <https://www.law360.com/articles/1208248/irs-cryptocurrency-guidance-leaves-unanswered-questions>; Pete Rizzo, *Will Bitcoin Cash Impact the Bitcoin Price? Traders Split on Possible Fork*, COINDESK, (Jul. 31, 2017), <https://www.coindesk.com/will-bitcoin-cash-impact-bitcoin-price-traders-split-possible-fork>. *See also supra* note 44.

and would recommend that, if the Zero Basis Asset approach is taken, the Service provide that in the case of a sale of the legacy coin or token at a loss, the loss be denied and the amount of the disallowed loss increase the basis of the new coin or token. We note that legislation may be required to achieve this result. The Service may wish to provide for a limited loss disallowance period (such as five years) to simplify recordkeeping burdens, though we note that limiting the loss disallowance period in this way could permit taxpayers to recognize what are essentially artificial losses after the end of whatever period is chosen.

d. Section 1001 Approach

The fourth approach to the taxation of contentious hard forks may be to treat the hard fork as a sale or exchange of the original coin or token for both a deemed modified original coin or token and a new coin or token. The argument for sale or exchange treatment would be that, even though the original coin or token itself is exactly the same before and after the fork, the network infrastructure and community around the legacy chain and thus a kind of penumbra around the original coin or token that makes up part of the relevant “asset” has changed, such that the original coin or token as it functions in the relevant community is now different in a material way. It might be that the legacy chain has diminished support from miners, exchanges and wallet providers that migrate to or support the new chain over the legacy chain or it might be that the community around the legacy chain is stronger once disgruntled community members have started a new community around the new chain, but in either case, the original coin may be said to be different.

If this approach is taken, there would be a taxable sale or exchange at the time of the hard fork, resulting both in the recognition of gain or loss on the original coin or token and the allocation of the new fair market value basis between the original coin or token and the new coin or token. This approach would raise all the same practical concerns around timing of the taxable event and fair market value discussed in Part III.B below as are raised by the Accession to Wealth approach and certain Basis Splitting approaches. Moreover, since forks are easily created and holders may have limited visibility about impending contentious hard forks, triggering gain on the original coin or token may be a punitive result. However, this approach avoids the concerns relating to income deferral and misallocation of basis that arise under the Zero Basis Asset approach and provides a coherent basis for taxing both contentious and non-contentious hard forks.

Finding a sale or exchange in the context of a contentious hard fork, in which a taxpayer starts with one asset and ends up with what is technically the same asset and an additional asset, depends upon viewing the asset represented by a coin or token as including various externalities (such as community support, mining infrastructure, support from service providers) beyond the technical specifications of the coin or token itself. It is not clear that such an approach is correct. Moreover, the case law regarding sales and exchanges focuses on whether the legal entitlements of the holders are different in kind or extent,⁴⁸ and the legal entitlements of a holder with respect to the original coin have not changed.⁴⁹ In addition, a contentious hard fork is triggered by developers making changes to the software protocol and does not require any consent from holders

⁴⁸ See *Cottage Sav.*, 499 U.S. 554.

⁴⁹ It may be said that unlike shares of stock, bonds or other types of assets there are no “legal entitlements” embodied in a coin or token since it is merely code that exists on a blockchain. However, the holder’s legal rights vis-à-vis use of the private keys to transfer the original coin or token have not changed either.

of coins or tokens whose only remedy to avoid the hard fork would be to sell the original coin or token. A contentious hard fork therefore functions more like a unilateral option on the part of the developers, which arguably should not give rise to a sale or exchange for the holders.⁵⁰ Moreover, given that hard forks are intrinsic features of the open source protocol underlying a cryptocurrency, each hard fork could be said to be pursuant to the terms of the original coin.⁵¹

Adopting the Section 1001 approach to hard forks could also lead to distortive results.

Example 2. Taxpayer owns crypto X with a basis of \$500 and a value of \$1000 just before a hard fork. After the hard fork crypto X is worth \$800 and crypto Y is worth \$300. Under the Section 1001 approach, taxpayer has taxable gain of \$600 (received value of \$1100 minus basis of \$500), even though its economic gain arising from the hard fork is arguably only \$100.

Example 3. The facts are the same as in Example 2 except that taxpayer has a basis in crypto X that is \$1000. Under the Section 1001 approach, taxpayer has gain of only \$100, which is less than the income inclusion that would be required under the Accession to Wealth approach.

The result in Example 2 could be ameliorated by setting a cap on the recognized gain at the value of the new coins received, or alternatively at the excess of the sum of the value of crypto X and crypto Y after the hard fork over the value of crypto X before the hard fork, but such a rule could require additional legislation.

B. Practical Challenges with Valuation and Dominion and Control

If the Service follows either the Accession to Wealth or Section 1001 approach outlined above and treats a contentious hard fork as giving rise to an accession to wealth that results in current taxable income or a taxable exchange (or adopts a basis split methodology based on current fair market values), it is critical to properly establish (1) the fair market value of the new coin or token at the relevant time and (2) when the taxpayer has complete “dominion and control” over the new coin or token. In the case of cryptocurrency, establishing both of these facts can be fraught with difficulty. Since the income inclusion or other taxable event (and thus the need to determine fair market value) would occur at the time the taxpayer is said to have complete dominion and control over the new asset, we will examine “dominion and control” first.

⁵⁰ Cf. Treasury Regulation Section 1.1001-3(c)(3)(ii) (with respect to debt instruments, a unilateral option that does not require consent of the other party, a related person under Section 267(b) or Section 707(b)(1), or a court or arbitrator does not constitute a modification); Rev. Rul. 57-535, 1957-2 C.B. 513 (no exchange where holder exercises unilateral option to change terms of instruments). This may distinguish a contentious hard fork from a non-contentious hard fork where there is more generalized support from the overall community, including holders. But while a non-contentious hard fork may feel more consensual, actual holder consent is not required.

⁵¹ Cf. Treasury Regulation Section 1.1001-3(c)(1)(ii) (with respect to debt instruments, alterations pursuant to the terms of the instrument generally are not modifications); Rev. Rul. 87-19, 1987-1 C.B. 249 (change in interest rate pursuant to adjustment clause would not result in Section 1001 exchange).

1. *Dominion and Control*

With respect to new cryptocurrency received in an “airdrop after a hard fork” the Guidance states that a taxpayer has “dominion and control” over the new cryptocurrency at the time it “can transfer, sell, exchange or otherwise dispose of” the cryptocurrency,” which is said generally to be “the date and time the airdrop is recorded on the distributed ledger.”⁵² If the Service follows the Accession to Wealth or Section 1001 approach, we expect it would apply the same principle to contentious hard forks more generally. We also note that the Guidance seems to go beyond the conclusion in *Haverly*, where the court found dominion and control at the time the taxpayer actually donated the free samples rather than at the time of receipt when it could have “transacted” in them.⁵³ Given the nature of cryptocurrency, the timing at which a taxpayer obtains the requisite control will depend upon the manner in which the taxpayer holds the cryptocurrency.

a. Exchanges or Other Hot Wallets

If a taxpayer holds the original cryptocurrency on an exchange or in another hot wallet supported by a third party service provider, generally the earliest time at which it can be said to obtain “dominion and control” over the new cryptocurrency is when the wallet provider or exchange takes the necessary technical steps to support the new cryptocurrency. Even then it may not be possible for a taxpayer actually to transact in the new coins or tokens since the taxpayer still may not be able to send or receive the new coins or tokens on the same platform. All the exchange or wallet may “support” is moving the new coins out of the exchange or wallet and another exchange or platform may not be readily available to the taxpayer. This raises the question of what affirmative steps a taxpayer needs to take to obtain “dominion and control,” a topic we discuss in Part III.B.1.c below. In some instances all that may be required is to download new software, while in other cases a taxpayer may need to move the new coins or tokens to an exchange somewhere in the world that would permit transactions in that new coin or token.

For taxpayers that hold their original coins on an exchange or in another kind of supported hot wallet, the further question arises of what happens if an exchange or wallet provider never supports the new cryptocurrency for its customers. This could happen if the exchange or wallet provider fails to take any technical steps required to obtain access to the new cryptocurrency, for example because it decides that it is not worth the effort to incur the expense necessary to obtain access to a new coin or it determines that the disclosure provided by the new cryptocurrency’s development team is below industry standards of security and competence. In that case, it would seem that there should never be an income event for the customers since they never obtain “dominion and control.” Moreover, an exchange or other custodial wallet provider could make the necessary upgrades but decide not to make the new cryptocurrency available to its customers and to use the new cryptocurrency for its own purposes, using its control over private keys to the

⁵² *Frequently Asked Questions on Virtual Currency Transactions, Q24*, IRS <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last updated Dec. 31, 2019).

⁵³ *Haverly*, 513 F.2d at 227 (“To decide the case before us we need only hold, as we do, that when a tax deduction is taken for the donation of unsolicited samples the value of the samples must be included in the taxpayer’s gross income,” requiring income inclusion in 1968 despite taxpayer receiving some samples in 1967).

legacy coins held by the exchange or wallet provider to achieve that end.⁵⁴ We would recommend that the Service provide further guidance on how taxpayers will be treated in these circumstances.

b. Other Types of Wallets

For taxpayers that do not hold their cryptocurrency through an exchange or software wallet provider, the discussion of airdrops in the Guidance states that a taxpayer generally has dominion and control when the transaction (in this case, the hard fork) is recorded on the distributed ledger, provided the taxpayer has the ability to transact in the coins or tokens.⁵⁵ As discussed in Part I.B.4 above, it is not entirely clear when the hard fork can be said to have occurred even if the location, date and time can be observed on the distributed ledger after the fact: at the time the “snapshot” of the legacy chain is taken, upon the first visibility of the new protocol on the network or upon the first block being mined creating the beginning of the actual new chain. The latter may be most consistent with the Guidance, which seems to focus on the time a transaction is recorded on the distributed ledger, but raises some uncertainty about how to treat the transactions in the first block. Of potentially greater practical relevance is the question of when a taxpayer holding its legacy coins in a cold wallet or in another manner that is not supported by a third party can be said to be able to transact in the new coins after the hard fork. Unless such taxpayers are programmers themselves or a trustworthy software application is made available by a wallet provider, they may need to hire programmers to perform the necessary upgrades to give them access to the new coins, thereby incurring costs and potentially running the risk that the programmers they hire could abscond with their private keys.

c. What Steps Do Taxpayers Need To Take?

As discussed above, taxpayers do not “receive” new coins after a hard fork. Instead, they or the service providers through which they hold their legacy coins need to take certain steps to obtain access to these new coins. This raises the question of when a taxpayer using the cash method of accounting would be considered in “constructive receipt” of the new coins. Under the doctrine of “constructive receipt” a taxpayer cannot turn its back on an asset or income stream to avoid taxation.⁵⁶ For example, receipt of a salary check is taxable whether it is cashed or not.⁵⁷ A

⁵⁴ Taking the new coins in this manner may be a breach of the exchange’s agreement with its customers but technically there is nothing to prevent an exchange from doing so. In that case, should the customers be said to recognize income followed by an immediate theft of the new coins or tokens if the exchange uses them for its own account contrary to its agreement with the customers?

⁵⁵ *Frequently Asked Questions on Virtual Currency Transactions, Q23 & Q24*, IRS <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last updated Dec. 31, 2019).

⁵⁶ Treasury Regulation Section 1.451-2(a) (constructive receipt requires a mature right including the power to collect upon demand); *Ross v. Commissioner*, 169 F.2d 483, 492 n.6 (1st Cir. 1948) (“The doctrine of constructive receipt treats as taxable income which is unqualifiedly subject to the demand of a taxpayer on the cash receipts and disbursements method of accounting, whether or not such income has actually been received in cash.”); *United States v. Fletcher*, 562 F.3d 839 (7th Cir. 2009) (holding that a taxpayer is in constructive receipt of restricted stock held in escrow on date of deposit because she received full economic benefit at that time). *But see* Treasury Regulation Section 1.451-2(a) (“[I]f a corporation credits its employees with bonus stock, but the stock is not available to such employees until some future date, the mere crediting on the books of the corporation does not constitute receipt.”).

⁵⁷ *E.g.*, *Walter v. United States*, 148 F.3d 1027 (8th Cir. 1998) (a check received in 1986 but lost before it was negotiated is taxable income in 1986 even though taxpayer did not deposit funds until 1988); *Bright v. United*

taxpayer is not in constructive receipt, however, if there are substantial restrictions and limitations on its ability to receive the income.⁵⁸ Similarly, where a cash basis taxpayer receives a note in payment for property, it is only taxed to the extent the note is a “cash equivalent,” *i.e.* is assignable and marketable and thus has ascertainable value.⁵⁹ For accrual method taxpayers, income recognition occurs when “all the events have occurred which fix the right to receive such income and the amount thereof can be determined with reasonable accuracy.”⁶⁰ Assuming reasonable accuracy is not at issue, an accrual taxpayer’s right to income is fixed when it is paid, due or earned, whichever occurs first.⁶¹ However, certain conditions precedent⁶² and the uncertainty of payment may prevent the taxpayer’s right from becoming “fixed.”⁶³

As noted above, in most instances a taxpayer will need to take some affirmative steps to obtain dominion and control over new coins, even if it holds legacy coins on an exchange or in a software wallet. To the extent those steps are ministerial, like downloading a software upgrade made available by the exchange or wallet provider, we do not see those steps as representing substantial restrictions or conditions that ought to stand in the way of finding current dominion and control and thus concluding, under the Accession to Wealth approach, that the taxpayer should recognize income at the time it could take those steps.⁶⁴ But at what point do the required steps cease to be ministerial? For taxpayers on exchanges or using wallets that only support withdrawal of the new coins, is such a taxpayer in constructive receipt if it would be able to find, and obtain access to, an exchange that permits trading in the new coins even if the taxpayer does not do so? And if so, would the taxpayer be in constructive receipt if the only available exchange is

States, 926 F.2d 383 (5th Cir. 1991) (a check does not fail to qualify as cash equivalent simply because it is large in amount and, allegedly, less marketable); *Fong v. Commissioner*, 48 T.C.M. 689 (1984) (date of actual or constructive receipt controlled, not date of deposit), *aff’d without opin.*, 816 F.2d 684 (9th Cir. 1987); *Kahler v. Commissioner*, 18 T.C. 31 (1952) (holding that a taxpayer was taxable in the present year upon receipt of a check on December 31 even though received after banking hour).

⁵⁸ Treasury Regulation Section 1.451-2(a); *see Nesbitt v. Commissioner*, 43 T.C. 629 (1965); *Bizzack Bros. Construction Corp. v. Commissioner*, 41 T.C.M. 173 (1980); PLR 8151114 (requirement of securing the other firm’s consent was a substantial limitation); Rev. Rul. 80-300, 1980-2 C.B. 165 (“a requirement of surrender or forfeiture of a valuable right is a sufficient restriction to make inapplicable the doctrine of constructive receipt”).

⁵⁹ *See, e.g., Joyner Family LP v. Commissioner*, T.C. Memo 2019-159 (2019).

⁶⁰ Section 451(b)(1)(C).

⁶¹ *See Schlude v. Commissioner*, 372 U.S. 128 (1963); Rev. Rul. 84-31, 1984-1 C.B. 127 .

⁶² *See, e.g., Standard Lumber Co. v. Commissioner*, 35 T.C. 192 (1960) (conditional right to receive interest or principal on debentures was conditional on payment of revolver requiring payment on revolver before accrual).

⁶³ *See Koehring Co. v. United States*, 421 F.2d 715 (Ct. Cl. 1970) (holding that at the time the royalties accrued, the taxpayer has a “reasonable expectancy” of payment); *Harmont Plaza v. Commissioner*, 64 T.C. 632, 649 (1975) (stating that ‘cash flow and priority provisions countenance the possibility of delay in actual receipt but ... in no way diminish [the taxpayer’s] underlying right to receive. The law is clear that postponement of payment alone does not defer accrual,’ and that the question was ‘whether the cash flow and priority schedule factors rendered payment sufficiently doubtful so as to warrant nonaccrual,’ distinguishing the situation of a ‘specific condition precedent’ to the right to receive”).

⁶⁴ Similarly, that would seem to be the correct time to treat the exchange as taking place under the Section 1001 approach or to split basis based on current fair market value (if that approach to basis splitting were chosen).

unregulated and based in a foreign jurisdiction?⁶⁵ For taxpayers holding legacy coins in a cold wallet that is not supported by a third party, is the taxpayer in constructive receipt if it would be required to hire programmers to perform the necessary upgrades in order to gain access or would the costs and risks involved constitute “substantial restrictions and limitations” or make the coins and tokens not assignable or marketable?

We believe that, if Treasury and the Service opt for the Accession to Wealth or Section 1001 approach (or even the Basis Splitting approach) to taxing contentious hard forks, these questions should be addressed. We recognize that beyond obviously ministerial steps (such as downloading software available to all account holders on a particular exchange or wallet holders using a particular software wallet), it may be difficult to delineate what steps would be considered sufficiently substantial such that a taxpayer’s failure to take them would not be considered to be turning the taxpayer’s back on new coins available after a hard fork. Any bright-line rule may be open to manipulation. But taxpayers would benefit from greater clarity about what steps constitute a sufficient burden that current taxation does not apply.

We also note that a rule based on “dominion and control” will result in different taxpayers recognizing income from the same contentious hard fork at different times. It can also cause a single taxpayer holding coins and tokens in multiple wallets on different exchanges as well as off-line to recognize income from the same contentious hard fork at different times in its different wallets. The former result seems inevitable and not necessarily problematic. The latter, however, will likely complicate a taxpayer’s recordkeeping requirements and as a result make the movement of cryptocurrency between wallets, which the FAQs confirm is tax-free,⁶⁶ more cumbersome.

2. *Determination of Fair Market Value*

The Guidance provides that when a taxpayer “receive[s] cryptocurrency from an airdrop following a hard fork” it recognizes ordinary income equal to the fair market value of the new cryptocurrency at the time the transaction is recorded on the distributed ledger, provided the taxpayer has dominion and control over the cryptocurrency.⁶⁷ Ignoring the reference to airdrops after hard forks (for the reasons discussed above), the same principle presumably would apply if

⁶⁵ Many participants in cryptocurrency markets are wary of exchanges and similar platforms and concerned about the safety of assets held there given well-publicized cases raising questions about the integrity and security of various platforms. Erica Alini, *Founder of Crypto Exchange Quadriga Moved Users’ Funds to Personal Accounts: Ernst & Young*, GLOBAL NEWS, (Jun. 20, 2019), <https://globalnews.ca/news/5411298/quadriga-cotten-customer-funds-personal-accounts-ernst-young/> (founder, 30, died suddenly in India being the only one with access to the passwords to \$188 million worth of cryptocurrency); Daniel Cawrey & Sina Nader, *Want Understand Bitfinex? Understand Mt. Gox*, COINDESK, (Apr. 30, 2019), <https://www.coindesk.com/want-to-understand-bitfinex-understand-mt-gox> (a leak in an online cryptocurrency wallet turned the largest cryptocurrency exchange bankrupt); Daniel Z. Morris, *Bitgrail Cryptocurrency Exchange Claims \$195 Million Lost to Hackers*, FORTUNE, (Feb. 11, 2018), <https://fortune.com/2018/02/11/bitgrail-cryptocurrency-claims-hack/> (following suspicious moves by the founder of the exchange, there was widespread skepticism behind an alleged hack claimed to have occurred).

⁶⁶ *Frequently Asked Questions on Virtual Currency Transactions, Q37*, IRS <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last updated Dec. 31, 2019).

⁶⁷ *Frequently Asked Questions on Virtual Currency Transactions, Q23*, IRS <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last updated Dec. 31, 2019).

Treasury and the Service take the Accession to Wealth or Section 1001 approach to contentious hard forks (or were to implement a basis split based on current fair market values). Given the need for someone to take affirmative steps to access new coins after a hard fork, fair market value, in practice, likely would be determined once a taxpayer has (or is deemed to have) dominion and control over the new coins – rather than at the time of first detectability of the hard fork.

The Guidance suggests that a taxpayer is required to report the value reported on the exchange where its account is located since it presumably could try to realize that value by selling on that exchange.⁶⁸ More generally, if a transaction is facilitated by an exchange but not recorded on the distributed ledger or is otherwise off-chain, the fair market value is the trading price on the exchange at the date and time the transaction would have been recorded on the ledger if it had been on-chain.⁶⁹ With respect to holdings of cryptocurrency outside of an exchange, the FAQs state that fair market value is determined at the date and time the transaction is recorded on the distributed ledger⁷⁰ and go on to say that fair market values are determined based on cryptocurrency or blockchain “explorers” that analyze worldwide indices and calculate values for an exact date and time.⁷¹

While the foregoing rules regarding determination of fair market value appear simple, an accurate determination of fair market value for cryptocurrencies, and in particular new coins and tokens, is very challenging, in part because of a lack of support by credible established marketplaces. Different exchanges routinely report different values for the same cryptocurrency due to liquidity and other conditions internal to a particular exchange.⁷² For a given U.S. taxpayer, this can be exacerbated by the fact that exchanges in many jurisdictions report prices in currencies other than the U.S. dollar, so that U.S. taxpayers with access to foreign cryptocurrency marketplaces may be able to simultaneously transact in a particular cryptocurrency at significantly different U.S. dollar values because of inflation and other conditions relating to the local jurisdiction’s currency. Moreover, given low trading volumes on many exchanges, especially for

⁶⁸ *Frequently Asked Questions on Virtual Currency Transactions, Q25*, IRS <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last updated Dec. 31, 2019). We would note that given low liquidity on many exchanges, especially for new coins, it is unclear whether a taxpayer could in fact realize that price upon an actual sale.

⁶⁹ *Frequently Asked Questions on Virtual Currency Transactions, Q25*, IRS <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last updated Dec. 31, 2019). It is important to note that generally only deposits with and withdrawals from an exchange are on-chain transactions, whereas all trading on the exchange is reflected only on the books and records of the exchange and does not correspond to transactions on the actual blockchain.

⁷⁰ *Frequently Asked Questions on Virtual Currency Transactions, Q24*, IRS <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last updated Dec. 31, 2019). For hard forks, it is unclear when precisely that occurs and, moreover, that point in time is likely well before the time when a taxpayer actually has dominion and control over the new coin or token.

⁷¹ *Frequently Asked Questions on Virtual Currency Transactions, Q26*, IRS <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last updated Dec. 31, 2019).

⁷² As of January 2, 2020 at 2:31pm, Bitcoin is valued at a price of \$7,344.76 on BitMart but at a price of \$7,313.55 on Fatbtc. *About BitMart*, COINMARKETCAP, <https://coinmarketcap.com/exchanges/bitmart/> (last visited Jan. 3, 2020, 2:31 PM), *see also Fatbtc*, COINMARKETCAP, <https://coinmarketcap.com/exchanges/fatbtc/> (last visited Jan. 3, 2020, 2:31 PM).

newly supported coins and tokens, even one relatively small transaction may significantly impact the trading price, calling into question whether the quoted price actually represents fair market value.⁷³ There are also widespread concerns with respect to many exchanges about whether prices reflect real transactions or whether trading volumes are faked.⁷⁴ Finally, while trading in cryptocurrencies occurs globally, individual market participants' access can be fractured depending upon which platforms and service providers are available locally for regulatory and other reasons.⁷⁵ All of these factors raise questions about how to determine a single fair value for a given coin or token.

Where a taxpayer does not hold cryptocurrency on an exchange, the Guidance's method for determining fair market value presents the further concern that blockchain explorers primarily provide transaction information in the native currency of a given blockchain. Information about prices in a government-issued, or "fiat", currency,⁷⁶ is imported from third party pricing sources.⁷⁷ It is unclear whether prices reported in this way constitute a fair or accurate representation of value. Many (if not most) exchanges and pricing sources that would be picked up by an explorer are unregulated and, as noted above, price manipulation and fraudulent trading practices are widely suspected to occur on certain exchanges. Importantly, participants in the industry do not rely on such an "explorer value." Instead, a widely used price source for portfolio valuation by U.S. market participants, such as hedge funds, other asset managers and their auditors, is the daily closing price reported by www.coinmarketcap.com. The prevailing global market convention is to use midnight UTC time as the beginning of each trading day. Using the "date and time" of a transaction, as suggested by the Guidance, therefore is not consistent with market practice. Moreover blockchain explorers that import pricing information generally provide current trading prices rather than minute-by-minute historic pricing information.⁷⁸

The degree of difficulty in determining an accurate fair market value of new coins or tokens will depend in significant part upon what standards Treasury and the Service apply to determine when a taxpayer has dominion and control over new coins or tokens. If, subject to taking only simple steps like downloading broadly available software, a taxpayer has dominion and control

⁷³ Mariia Rousey, *Best Bitcoin & Crypto Liquidity Providers 2019*, CHANGELLY, (Oct. 24, 2019), <http://changelly.com/blog/best-bitcoin-crypto-liquidity-providers-2019/>.

⁷⁴ Anna Irrera, *Cryptocurrency Exchanges At Risk of Manipulation: Report*, REUTERS, (Sep. 18, 2018), <https://www.reuters.com/article/us-cryptocurrency-exchanges/cryptocurrency-exchanges-at-risk-of-manipulation-report-idUSKCN1LY2UG>; Paul Vigna and Alexander Osipovich, *Bots Are Manipulating Price of Bitcoin in 'Wild West of Crypto'*, THE WALL STREET JOURNAL, (Oct. 2, 2018), <https://www.wsj.com/articles/the-bots-manipulating-bitcoins-price-1538481600>.

⁷⁵ For example, based on the law of an exchange's home jurisdiction, an exchange may limit access to persons who are based in specific jurisdictions. A number of large non-U.S. exchanges ban U.S. persons from transacting so as not to potentially become subject to U.S. law.

⁷⁶ The term "fiat currency" is commonly used in the cryptocurrency industry and is generally defined as "[a] government-issued currency that is not backed by a physical commodity with intrinsic value, such as gold or silver." See James Chen, *Fiat Money*, INVESTOPEDIA, (Sep. 2, 2019), <https://www.investopedia.com/terms/f/fiatmoney.asp>.

⁷⁷ Examples of blockchain explorers that import third party pricing information include <https://etherscan.io> and <https://ethplorer.io> for the Ethereum blockchain and <https://www.cryptocompare.com/> for the Bitcoin blockchain explorer (<https://www.blockchain.com/explorer>).

⁷⁸ Services provide minute-by-minute historic pricing information, such as <https://www.tradingview.com/symbols/BTCUSD/> or <https://cryptowat.ch>.

only when it can actually transact in the new coins or tokens, it is likely that the determination of fair market value will occur at a time when there is already significant network support for the new coin or token. At that point in time, multiple pricing sources may be available and a taxpayer may have better access to a price at which it could actually transact. If, on the other hand, the threshold for constructive receipt is lower (for example deeming a taxpayer to have dominion and control and thus income recognition at a time when it could take more technically advanced steps like compiling its own software where the underlying code is available), then investors holding cryptocurrency in a cold wallet or another manner not supported by third party service providers could end up being taxed at a time when limited network infrastructure is available and potentially the only quoted value is on a foreign exchange where the taxpayer may be unable to transact in practice. We also note, that if a taxpayer has multiple accounts on multiple exchanges, different fair market values would often apply under this approach, making record keeping more burdensome.

In light of the challenges in accurately determining fair market value, if Treasury and the Service decide to proceed with an approach to contentious hard forks that requires a determination of the current fair market value of new coins, we would recommend that the Service study how best to develop criteria for identifying reliable pricing sources.⁷⁹ We would also recommend that the Service consider whether to allow reliance on an average price across multiple exchanges or on prevailing market conventions, such as the daily closing price. We further note that determining fair market value of cryptocurrency is relevant in many areas beyond valuing new coins after a contentious hard fork and thus merits continued study regardless of what approach is ultimately taken to contentious hard forks.

3. *Viability of Hard Forks and/or De Minimis Rule*

If the Service pursues the Accession to Wealth or Section 1001 approach to contentious hard forks, we would recommend that it study whether a concept of “viability” of a contentious hard fork should be included. Income recognition would then occur no earlier than when a new fork is considered “viable.” To minimize abuse, this should be an objective measure, such as a set time period from the occurrence of the hard fork (measured from the point of the “snapshot” of the legacy chain, from the point of first detectability on the blockchain or from the first mined block on the new chain) or a specified number of blocks having been mined on the new chain. The Service should study this concept and consult with technical experts to determine the appropriate measure for viability.

How significant a concept of “viability” would be will depend in part upon how low the threshold for finding dominion and control is. In practice, the point of viability may occur once a significant number of exchanges and wallet providers start supporting the new coin or token, which, depending on the test for dominion and control, might coincide with the time at which persons with accounts on those exchanges or using those wallets generally would have dominion and control. Thus, a viability test could result in a more uniform timing for the inclusion of taxable income, as persons holding cryptocurrency in cold or otherwise unsupported wallets would be

⁷⁹ Such guidance could take an approach similar to Treasury Regulations Section 1.1273-2(f) for “publicly traded” debt instruments. It could also provide that certain categories of exchanges, such as those subject to regulation at a national, state or provincial level, are per se considered reliable.

required to include income only at the time of viability and those holding cryptocurrency in supported hot wallets (including exchange wallets) would be required to include income at the time their wallets or exchanges permit them to transact in the new coins or tokens.

In addition or as an alternative, the Service should consider a *de minimis* rule establishing that taxpayers do not need to report income where new coins or tokens resulting from a contentious hard fork have a value below a specified threshold. Such a threshold could be based on the average prices on the top exchanges (by volume or liquidity) supporting those coins. We recommend that Treasury and the Service study how best to establish such a threshold. In order to prevent taxpayers from failing to report subsequent transactions in those coins if and when their value increases, the Service could require at least domestic exchanges and wallet providers to information report the number of coins or tokens owned by U.S. persons once the exchange or wallet provider supports such new coins or tokens.

IV. TREATMENT OF MARKETING AIRDROPS / GIVEAWAYS

As discussed above, airdrops are not generally associated with hard forks. However, airdrops (or giveaways) are relatively common occurrences and guidance on the tax consequences of airdrops (or giveaways) is needed. In the following discussion, we will refer to these kinds of transactions as “giveaways” to avoid confusion with the Ruling’s use of the term “airdrop.” As described in Part I.C above, giveaways usually occur for marketing purposes and recipients of coins and tokens in a giveaway might not have control over whether they receive the new coins or tokens. In some cases, the coins and tokens can be used immediately, but often an exchange wallet will not permit immediate withdrawals or recipients need to take specified actions to obtain the new coins or tokens. Moreover, while not technically related to a particular legacy blockchain in the same way as a new coin or token that is obtained via a hard fork, holdings of a particular cryptocurrency may be a necessary qualification for obtaining a giveaway of a new and different coin or token.

In November, representatives of the Service stated publicly that Treasury and the Service have not yet determined how to treat giveaways.⁸⁰ We commend the Treasury and the Service for continuing to study giveaways. However, based on the logic of the Ruling, we believe it is difficult to distinguish typical marketing giveaways from what the Ruling refers to as “airdrops” after hard forks since in both instances a new asset is “received.” Following the approach of the Ruling, coins and tokens distributed in a giveaway should give rise to ordinary income equal to their fair market value upon receipt, provided the taxpayer has “dominion and control” over the giveaway coins and tokens. Applying this approach to giveaways would raise many of the same challenges we discussed in Part III.B above regarding the determination of fair market value of the coins or tokens as well as whether a taxpayer has “dominion and control” over the coins or tokens. If Treasury and the Service take this approach, we recommend a *de minimis* threshold below which no income needs to be reported. We also recommend that at least in situations where coins or

⁸⁰ Lydia O’Neal, *IRS Still Undecided on Taxation of Promotional Crypto Airdrops*, BLOOMBERG TAX, (Dec. 12, 2019), https://www.bloomberglaw.com/product/tax/document/X510PKHK000000?bna_news_filter=daily-tax-report&jcsearch=BNA%25200000016efb5cdc3ead6efbfd44900001#jcite; Allyson Versprille, *IRS Official Says Pre-2018 Crypto Exchanges Aren’t ‘Like-Kind’*, BLOOMBERG TAX, (Nov. 13, 2019), <https://news.bloombergtax.com/daily-tax-report/irs-official-says-pre-2018-crypto-exchanges-arent-like-kind>.

tokens are forfeited unless specific actions are taken within the giveaway period, no income be recognized until those actions are taken and, if those actions are never taken within the giveaway period, no income be recognized at all.⁸¹

Alternatively, Treasury and the Service could treat coins or tokens distributed in a giveaway as not giving rise to ordinary income upon “receipt” and instead treat those coins as having a zero basis.⁸² That position could be based upon the fact that a taxpayer generally will only receive coins or tokens in a giveaway if it already owns other coins or tokens and upon the authorities discussed in Part III.A.2.c in connection with the Zero Basis Asset approach to contentious hard forks, though the analogies appear more tenuous in connection with giveaways.

In either case, the Service could require persons facilitating the distribution of coins or tokens in a giveaway, such as domestic exchanges or other service providers with access to “know your customer” information about customers,⁸³ to report the distribution of coins and tokens to the Service to create a record of the giveaway and help ensure that tax is reported either upon receipt or upon a subsequent sale or exchange of the coins or tokens for cash, other property or services.

While we do not recommend a specific approach to the taxation of giveaways, we recommend that if Treasury and the Service treat coins available after a contentious hard fork as “accessions to wealth,” they also treat coins received in giveaways as accessions to wealth.

V. REPORTING OF CRYPTOCURRENCY ASSETS

A. General Reporting Requirements

The Service continues to be concerned about underreporting of cryptocurrency transactions.⁸⁴ We agree that additional guidance on reporting obligations is urgently needed. We commend the Service on releasing updated Schedule 1 to Form 1040 asking taxpayers whether

⁸¹ Such a rule would be consistent with guidance that taxpayers are taxed on unsolicited receipts of property or treasure troves only if they keep the asset received or found. See Treas. Reg. 1.61-14(a) (treasure trove, to the extent of its value in United States currency, constitutes gross income for the taxable year in which it is reduced to undisputed possession); *Glenshaw Glass Co.*, 348 U.S. 426; *Haverly*, 513 F.2d 224; GCM 36639; see also I.R.S. Publication 525 (“Found property. If you find and keep property that doesn't belong to you that has been lost or abandoned (treasure trove), it's taxable to you at its FMV in the first year it's your undisputed possession.”).

⁸² We note that the United Kingdom treats giveaways as resulting in new assets with a basis of zero and treats hard forks as non-taxable events requiring a fair and equitable basis split. *Cryptoassets: Tax For Business* (section on Blockchain Forks), GOV. UK (updated Dec. 20, 2019), <https://www.gov.uk/government/publications/tax-on-cryptoassets/cryptoassets-tax-for-businesses#contents>.

⁸³ The blockchain developers giving away coins and tokens generally only have access to blockchain data that does not include identifying information regarding the owners of recipient addresses, which would make it impossible for them to information report.

⁸⁴ Alan Winston Granwell, *Virtual Currency: The Taxman Is Coming*, HOLLAND & KNIGHT, (Dec. 4, 2019), <https://www.hklaw.com/en/insights/publications/2019/12/virtual-currency-the-taxman-is-coming>.

they received, sold, sent, exchanged or otherwise acquired a financial interest in any virtual currency. This step should enhance compliance by individual taxpayers.⁸⁵

We understand that Treasury and the Service are working on additional guidance on information reporting under Section 6045.⁸⁶ While we do not address Section 6045 reporting here, we are supportive of this project. It would seem that the broad authority with respect to “financial instruments” set forth in Section 6045(g)(3)(B)(iv) provides Treasury and the Service authority to require basis reporting with respect to cryptocurrency.

In addition, regardless of which approach is taken to contentious hard forks and giveaways, we recommend that the Service study whether to require at least domestic exchanges and wallet providers⁸⁷ to report to the Service the number of coins and tokens (with relevant identifying information) that become available to a taxpayer in such cases in order to facilitate compliant reporting upon receipt or at the time the coins or tokens are subsequently exchanged for cash, other property or services.

We also recommend that the Service confirm that IRS Form 8300, titled “Report of Cash Payments Over \$10,000 Received in a Trade or Business,” does not apply to payments received in cryptocurrency since cryptocurrency is not cash for U.S. federal income tax purposes.⁸⁸ We would, however, suggest that the Service consider whether a new reporting requirement similar to IRS Form 8300 on which businesses would report receipt of cryptocurrency with a value in excess of a specified U.S. dollar threshold would be a valuable tool to enhance compliance. If so, the Treasury and the IRS should seek any necessary legislation.⁸⁹

B. Foreign Asset Reporting

Offshore tax avoidance has been a long-standing concern of the Service and, as noted above, over the last few years tax avoidance with respect to cryptocurrency transactions has become a focus as well. We therefore believe that guidance in the area of foreign asset reporting with respect to cryptocurrency is urgently needed.

⁸⁵ Form 1040/1040SR: *Additional Income and Adjustments to Income*, 2019, IRS <http://www.irs.gov/pub/irs-pdf/f1040s1.pdf> (last visited Dec. 24, 2019).

⁸⁶ Joshua Rosenberg, *Crypto Compliance Guidance In The Works, Top IRS Atty Says*, LAW360, (Oct. 17, 2019), <https://www.law360.com/articles/1210498/crypto-compliance-guidance-in-the-works-top-irs-atty-says>; Allyson Versprille, *IRS Hopes to Tackle Information Reporting in Next Crypto Guidance*, BLOOMBERG TAX, (Oct. 17, 2019), <https://news.bloombergtax.com/daily-tax-report/irs-hopes-to-tackle-information-reporting-in-next-crypto-guidance>.

⁸⁷ Subject to the discussion of FATCA (as defined below) in Part V.B.3 below, the Service would have to consider whether it has jurisdiction to require non-U.S. service providers to perform any reporting functions. The reporting contemplated here generally would be different from standard FATCA reporting.

⁸⁸ Notice 2014-21, 2014-16 I.R.B. 938, Q1 (providing that cryptocurrency is property and not cash for U.S. federal income tax purposes).

⁸⁹ Existing Section 6050I might provide authority for requiring reporting of cryptocurrency transactions below \$10,000 on the basis that Section 6050I treats a “monetary instrument” with a face amount of not more than \$10,000 as cash and cryptocurrency might be so characterized within the meaning of Section 6050I(d)(2). However, in that case the statutory threshold for reporting of \$10,000 may not be met and one could debate whether cryptocurrency is a “monetary instrument”. Moreover, transactions below \$10,000 are likely of less interest to the Service.

Before discussing the application of existing rules on foreign asset reporting to cryptocurrencies, we will provide some background on when cryptocurrency may be said to be held outside the United States as well as why cryptocurrency may be held outside the United States. For an asset that by definition does not exist in physical form and exists on a distributed ledger copies of which are held on computers all over the world, it is difficult to determine physical location in a meaningful way. Moreover, as discussed above, coins and tokens only exist on the blockchain, so an investor never actually holds the coins or tokens themselves. All an investor, trader or other market participant owns are rights to control, transact in and move the coins or tokens from one address on the blockchain to another through its control of the private keys. As discussed above, taxpayers that hold cryptocurrency on an exchange do not have control of the private keys associated with their balances of cryptocurrency. All private keys to cryptocurrency held by the exchange are controlled by the exchange and taxpayers merely have claims against the exchange.

Given the significance of the private keys, the “physical location” of a coin or token could be considered to be where a particular taxpayer’s private key controlling a specified quantity of coins or tokens is located. However, because private keys can be held in portable form (such as on a piece of paper or a USB stick), can be held in multiple places (either because a multi-signature key is used or because a taxpayer holds duplicates of its private keys in multiple locations) and/or can be memorized by the taxpayer, such a rule could lead to results that make little sense in practice. We therefore would generally recommend that the location of cryptocurrency to which a taxpayer holds the private keys directly should be that taxpayer’s jurisdiction of residence for U.S. federal income tax purposes. However, where a taxpayer owns cryptocurrency in a manner in which it does not control the private keys associated with those coins or tokens, such as on an exchange, we believe that the coins or tokens should be considered located where the service provider controlling the relevant private keys is located.

Programmers, entrepreneurs, investors, traders and other market participants based in the United States hold coins and tokens on foreign exchanges or through non-U.S. wallet providers for many reasons. A number of non-U.S. jurisdictions have progressed further in terms of providing greater non-tax legal certainty to service providers, projects and investors than the United States.⁹⁰ For example, Japan and Korea have established robust regulatory frameworks for exchanges.⁹¹ Other jurisdictions like Malta are updating their legislation to provide rules for new types of assets and arrangements, giving greater legal certainty to developers and service providers than legal systems that are trying to fit cryptocurrency and related arrangements into categories originally created for physical assets and centrally controlled entities.⁹² Finally, projects

⁹⁰ There is currently a bill before Congress that would provide a broader framework for regulation of cryptocurrency. See Paul Gosar, *Crypto-Currency Act of 2020*, 116th Cong., Discussion Draft to be Referred to the Committee (2019).

⁹¹ Stephen O’Neal, *South Korea Is Hoping for Regulatory Clarity as Crypto Laws Toughen*, COINTELEGRAPH, (Oct. 6, 2019), <https://cointelegraph.com/news/south-korea-is-hoping-for-regulatory-clarity-as-crypto-laws-toughen>; William Suberg, *Japan: Regulators Approve Start’s Bitcoin Sidechain Trial for Exchanges*, COINTELEGRAPH, (Jan. 21, 2019), <https://cointelegraph.com/news/japan-regulators-approve-startups-bitcoin-sidechain-trial-for-exchanges>; Wirex Team, *Cryptocurrency in Japan: A Regulatory Overview*, WIREX, (Aug. 15, 2019), <https://wirexapp.com/blog/post/cryptocurrency-in-japan-a-regulatory-overview-0159>.

⁹² *Virtual Financial Assets Act, 2018* (Act XXX) (Malta) <https://parlament.mt/media/94209/bill-44-virtual-financial-assets-bill.pdf>; *Malta Digital Innovation Authority Act, 2018* (Act XXXI) (Malta) <https://parlament.mt/media/95199/act-xxx-i-malta-digital-innovation-authority-act.pdf>; *Innovative Technology*

developing the open source software underlying a new coin or token may establish non-profit foundations in jurisdictions like Switzerland that provide clear frameworks of operation for such foundations. As a result, many coins and tokens created by newer projects are only available on non-U.S. exchanges or only supported by other network infrastructure outside the United States. Moreover, often non-U.S. exchanges have higher trading volumes and liquidity⁹³ in certain coins and tokens and therefore pricing may be less vulnerable to manipulation than on certain U.S. exchanges. “Anti-money laundering” and “know your customer” requirements are becoming widespread around the world and exchanges and service providers are implementing these rules, so anonymous third party services are increasingly unavailable, including outside the United States.⁹⁴

While there are thus legitimate reasons for U.S. taxpayers to hold cryptocurrency through third parties located outside the United States, we are sympathetic to the Service’s need to obtain information about transactions by U.S. taxpayers in international cryptocurrency markets and projects. This development is consistent with a push to obtain “anti-money laundering” and “know your customer” as well as tax information regarding cryptocurrency holders in a number of jurisdictions.⁹⁵ However, as this remains an evolving field with many uses beyond exchangeable virtual currency, we would suggest that Treasury and the Service consider how to balance the need for comprehensive and accurate information about the activities of U.S. taxpayers against the risk that access by U.S. participants to this developing field of technology may be limited as a result.

Arrangement and Services Act, 2018 (Act XXXIII) (Malta)
<http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lp&itemid=29078&l=1>.

⁹³ For example, the Bilaxy exchange based in the Seychelles has some of the highest reported trading volumes based on CoinMarketCap. *About Bilaxy*, COINMARKETCAP, <https://coinmarketcap.com/exchanges/bilaxy/> (last visited Dec. 20, 2019, 12:16 PM).

⁹⁴ Ana Alexandre, *Binance Integrates Coinfirm’s AML Platform to Comply With FATF Rules*, COINTELEGRAPH, (Oct. 3, 2019), <https://cointelegraph.com/news/binance-integrates-coinfirms-aml-platform-to-comply-with-fatf-rules>; Kenneth A. Blanco, *Prepared Remarks of FinCEN Director Kenneth A. Blanco at Chainalysis Blockchain Symposium*, FINCEN, (Nov. 15, 2019), <https://www.fincen.gov/news/speeches/prepared-remarks-fincen-director-kenneth-blanco-chainalysis-blockchain-symposium>; Pedro Gonçalves, *Cayman Tells Crypto Services to Comply with AML Rules*, INTERNATIONAL INVESTMENT, (Nov. 25, 2019), <https://www.internationalinvestment.net/news/4007308/cayman-tells-crypto-services-comply-aml-rules>; Graham Smith, *Coinbase Patents AI Compliance System to Monitor and Flag Accounts*, BITCOIN, (Nov. 29, 2019), <https://news.bitcoin.com/coinbase-patents-ai-compliance-system-to-automatically-flag-accounts/>; Arian Zmudzinski, *After BottlePay, Two More Crypto Firms Shut Down Due to Upcoming EU Rules*, COINTELEGRAPH, (Dec. 16, 2019), <https://cointelegraph.com/news/after-bottlepay-two-more-crypto-firms-shut-down-due-to-upcoming-eu-rules>.

⁹⁵ Tax authorities in countries such as Denmark and Norway have already begun to do so. Ana Alexandre, *Report: Denmark’s Tax Agency Is Sending Tax Compliance Letters to Crypto Users*, COINTELEGRAPH, (Dec. 10, 2019), <https://cointelegraph.com/news/report-denmarks-tax-agency-is-sending-tax-compliance-letters-to-crypto-users>; Kevin Helms, *Norway Establishes New Rules for Crypto Service Providers*, BITCOIN, (Oct. 6, 2018), <https://news.bitcoin.com/norway-establishes-crypto-service-providers/>.

1. Form 8938

Section 6038D requires certain U.S. taxpayers to report holdings of “specified foreign financial assets” in excess of certain thresholds.⁹⁶ The question therefore arises whether accounts on foreign exchanges or wallets supported by a foreign wallet provider are “foreign accounts” maintained by a “foreign financial institution” within the meaning of Section 6038D(b)(1). While there are some domestic exchanges, most exchanges have been established abroad. As discussed above, many investors and traders hold their cryptocurrency through accounts on exchanges. Even more expert market participants that generally hold their private keys in private wallets outside of exchanges generally need to temporarily move cryptocurrency into accounts on exchanges in order to exchange or sell that cryptocurrency for another cryptoasset or a fiat currency. So exchanges and other types of intermediaries, many of them foreign, play a role in many (or most) transactions.

A “financial account” for purposes of Section 6038D includes a “custodial account” which in turn is defined as “an arrangement for holding a financial instrument, contract or investment.”⁹⁷ Financial instruments, contracts or investments include but are not limited to stocks, debt obligations, currency or commodity transactions and swaps.⁹⁸ This definition appears to be sufficiently broad to include “virtual currency” within the meaning of the Guidance as a financial contract or investment. Given that exchanges are in the business of providing accounts through which their customers can invest and trade in cryptocurrency, holding private keys to coins and tokens that are credited to their customers’ accounts and facilitating transactions by the account holders on the books and records of the exchange, it would seem that such exchanges hold “financial assets for the account of others as a substantial portion of their business,”⁹⁹ making them “custodial entities” for purposes of these rules.¹⁰⁰

The case for treating a foreign wallet provider as a “foreign financial entity” appears to be less clear where all the wallet provider does is provide a software interface through which U.S. market participants can transact in a given coin or token from their computer or phone. We would note, however, that to the extent a wallet provider may hold or access a U.S. taxpayer’s private keys such a “custodial” wallet provider should fall within the definition of a “custodial institution.” We would recommend that the Service study the extent to which non-U.S. parties other than exchanges (including but not limited to certain types of wallet providers) might qualify as “custodial institutions” or otherwise fall within the ambit of these rules.¹⁰¹

⁹⁶ If the aggregate of such assets exceeds \$50,000 on the last day of the taxable year or \$75,000 at any time during the taxable year, then certain taxpayers must report. See Section 6038D(a) and Treasury Regulation Section 1.6038D-2(a)(1).

⁹⁷ Section 6038D(b)(1); Section 1471(d)(2)(B); Treasury Regulation Section 1.1471-5(b)(3)(ii).

⁹⁸ Section 1471(d)(2)(B); Treasury Regulation Section 1.1471-5(b)(3)(ii).

⁹⁹ Section 1471(d)(5)(B); Treasury Regulation Section 1.1471-5(e)(3).

¹⁰⁰ An exchange’s ability to transact for its own account using the private keys of its account holders is similar to a bank’s ability to use funds deposited by its depositors. So the operations of an exchange may be akin to those of a depository institution, but we do not believe exchanges otherwise satisfy the definition of “depository institution”. See Section 1471(d)(5)(A); Treasury Regulation Section 1.1471-5(e)(1)(i), (e)(2).

¹⁰¹ While outside the realm of “foreign financial institutions,” some platforms and technologies enable users to hold private keys and transact directly against an orderbook. Also, there is a large over-the-counter (“OTC”) market

Based on the foregoing we believe there is a strong argument that virtual currency held in an account on a non-U.S. exchange is a “specified foreign financial asset” reportable on IRS Form 8938 if the value exceeds the specified U.S. dollar thresholds, and we recommend that the IRS so confirm. We do not recommend, however, that the Service apply the filing requirement retroactively and impose penalties for failure to file Form 8938 prior to the issuance of future guidance. Given that the Service has been studying cryptocurrencies for a number of years but has not previously advised taxpayers of the need to file IRS Form 8938 with respect to holdings of cryptocurrency, we recommend that the Service impose this requirement for future tax years only or, as an alternative, provide a penalty-free extension period for taxpayers to file forms for prior years.¹⁰²

2. *FBAR*

In addition to providing guidance under Section 6038D, we encourage Treasury (through FinCEN) to provide guidance on whether reporting on FinCEN Form 114, Report of Foreign Bank and Financial Accounts (“FBAR”) is required with respect to cryptocurrency held outside the United States. Until now, we understand that the informal position is that FBAR reporting is not currently required.¹⁰³ In order to maintain consistency with other “foreign” assets, we would recommend that, if Form 8938 is required with respect to holdings of cryptocurrencies on non-U.S. exchanges, guidance be issued applying FBAR reporting to virtual currencies held in accounts on non-U.S. exchanges for future reporting years.

Even if the FBAR filing requirement is not extended in this manner, we would suggest guidance be issued to alert U.S. persons that any foreign bank account linked to a cryptocurrency account on a foreign exchange¹⁰⁴ is itself reportable (provided the FBAR threshold is met). We are concerned that smaller market participants may not appreciate the distinction between a cryptocurrency account on an exchange and a linked bank account and may not have reported the bank account based on pronouncements by FinCEN officials that no reporting of cryptocurrency accounts was required.

ecosystem. Mechanics vary, but essentially sales are arranged privately off-chain and off-exchange, and then coins are moved peer-to-peer – usually after fiat currency funds have been deposited with a trusted escrow agent or OTC desk. The escrow agent could be anyone the buyer and seller trust, including an attorney or “broker”. These transactions involve some kind of “middleman” but not necessarily a “financial institution” operating in the middle. We suggest that the Service study these kinds of arrangements, including when developing rules under Section 6045.

¹⁰² In November of 2019, representatives of the Service recommended that taxpayers err on the side of filing IRS Form 8938 while acknowledging that the Service has not yet reached a definite position on whether such filing is required. They also expressed the view that the Service probably would not pursue penalties for failure to file IRS Form 8938 if taxpayers have reported taxable cryptocurrency transactions in prior years. Kristen A. Parillo, *IRS Explains Foreign Asset Reporting Rules for Cryptocurrency*, TAXNOTES, (Nov. 20, 2019), <https://www.taxnotes.com/tax-notes-today-international/cryptocurrency/irs-explains-foreign-asset-reporting-rules-cryptocurrency/2019/11/20/2b4w4?highlight=foreign-held%20cryptocurrency>.

¹⁰³ Kristen A. Parillo, *Cryptocurrency Isn’t Subject to FBAR Filing Rules*, TAXNOTES, (Nov. 14, 2019), <https://www.taxnotes.com/tax-notes-today-federal/cryptocurrency/cryptocurrency-isnt-subject-fbar-filing-rules/2019/11/14/2b48g>.

¹⁰⁴ We understand that accounts on some (but not all) non-U.S. cryptocurrency exchanges are linked to local bank accounts.

3. FATCA Reporting

Based on our analysis in Part V.B.1 above concluding that non-U.S. exchanges likely are “foreign financial institutions” in the category of “custodial institutions”, these exchanges should also be subjected to the reporting regime applicable to “foreign financial institutions”¹⁰⁵ pursuant to Sections 1471 to 1474 (and the Treasury regulations promulgated thereunder) (commonly referred to as “FATCA”). We recommend that Treasury and the Service study how to apply FATCA compliance requirements to non-U.S. cryptocurrency exchanges. We note, in particular, that since these exchanges are much less likely than traditional financial institutions to receive material amounts of “withholdable payments,”¹⁰⁶ the threat of a 30% withholding tax is a much weaker incentive for compliance. The process of applying FATCA compliance to non-U.S. exchanges may require negotiations with partner jurisdictions around the world to clarify that cryptocurrency exchanges fall under applicable intergovernmental agreements relating to FATCA and may require legislative action from partner jurisdictions. While many exchanges are already complying with (or adapting their procedures to comply with) “anti-money laundering” and “know your customer” requirements more generally,¹⁰⁷ FATCA compliance may be more complex. Treasury and the Service may also wish to consider whether and how to tailor FATCA requirements for non-U.S. cryptocurrency exchanges, as they are generally smaller operations than most traditional non-U.S. financial institutions.

VI. OTHER AREAS WHERE GUIDANCE IS NEEDED

We believe there are numerous other areas in which further guidance from Treasury and the Service is needed.

A. Is Cryptocurrency a Commodity or a Security?

The Commodities Future Trading Commission (the “CFTC”) views bitcoin and ether as commodities and the U.S. Securities and Exchange Commission (the “SEC”) has treated many tokens and coins offered in “initial coin offerings” as securities. The SEC has also expressed views that bitcoin and ether are not securities.¹⁰⁸ The Service has historically deferred to the CFTC and its predecessor agencies as to what constitutes a “commodity” for U.S. federal income tax purposes,¹⁰⁹ leading some market participants to take the view that bitcoin and similar

¹⁰⁵ Section 1471(b).

¹⁰⁶ Section 1473(1) (defining “withholdable payment”); Proposed Treasury Regulation Section 1.1473-1(a).

¹⁰⁷ Craig Adeyanju, *What Crypto Exchanges Do to Comply With KYC, AML and CFT Regulations*, COINTELEGRAPH, (May 17, 2019), <https://cointelegraph.com/news/what-crypto-exchanges-do-to-comply-with-kyc-aml-and-cft-regulations>.

¹⁰⁸ *Chairman Tarbert Comments on Cryptocurrency Regulation at Yahoo! Finance All Markets Summit*, CFTC RELEASE No. 8051-19, (Oct. 10, 2019), <https://www.cftc.gov/PressRoom/PressReleases/8051-19>; Tim Fries, *Key Takeaways: The SEC Says Bitcoin Is Not A Security*, THE TOKENIST, (Oct. 7, 2019), <https://thetokenist.io/key-takeaways-the-sec-says-bitcoin-is-not-a-security/>; William Hinman, *Digital Asset Transactions: When Howey Met Gary (Plastic)*, U.S. SECURITIES AND EXCHANGE COMMISSION, (Jun. 14, 2018), <https://www.sec.gov/news/speech/speech-hinman-061418>; Louise Matsakis, *Rest Easy, Cryptocurrency Fans: Ether and Bitcoin Aren't Securities*, WIRED, (Jun. 14, 2018), <https://www.wired.com/story/sec-ether-bitcoin-not-securities/>.

¹⁰⁹ Rev. Rul. 73-158, 1973-1 C.B. 337.

cryptocurrencies are commodities for U.S. federal income tax purposes. Market participants would benefit greatly from certainty as to whether and when cryptocurrency is a commodity or security. Guidance in this area would answer questions relevant to persons dealing and trading in cryptocurrencies, including (1) the application of the mark-to-market rules of Section 475 to dealers and traders, (2) the availability of the securities and commodities trading safe harbors under Section 864(b) to non-U.S. investors (and funds with such investors), (3) the application of the wash sale rules under Section 1091, (4) the treatment of cryptocurrency for purposes of determining whether an entity is an “investment company” under Section 351(e) (and Section 721(b)), (5) the application of section 1256 to certain contracts involving cryptocurrency and (6) whether income from transactions involving cryptocurrencies constitutes “qualifying income” under Section 7704(d).

Guidance on the application of the straddle rules under Section 1092 would also be welcome. Given the broad scope of the definition of “personal property” under those rules and active trading in many cryptocurrencies, the straddle rules may already apply (irrespective of whether a cryptocurrency is a commodity or a security).¹¹⁰ However, a clear pronouncement on the topic by Treasury and the Service would be helpful, especially now that the existence of cryptocurrency derivatives makes the creation of offsetting short and long positions in cryptocurrencies relatively easy.

We do not make any specific recommendation as to whether specified types of cryptocurrency should be classified as commodities or securities for U.S. federal income tax purposes but encourage Treasury and the Service to issue guidance on this important question.

B. Cryptocurrency Loans

Loans of cryptocurrency and loans denominated in cryptocurrency are an evolving field, and the tax treatment of such loans is unclear. Taxpayers borrow cryptocurrency to sell short or to cover short sales as well as to trade the borrowed coins or tokens for other cryptocurrencies. These transactions may resemble traditional securities lending transactions. We understand that taxpayers also lend coins and tokens through online platforms and earn an investment return colloquially referred to as “interest.”¹¹¹ We recommend that Treasury and the Service study the different forms in which cryptocurrency is borrowed and lent and develop guidance on how such loans (or different versions thereof) are to be treated.

Given the volatility of cryptocurrencies as measured by fiat currencies, both the “principal” amount of such a loan and the amount denominated as “interest” are entirely contingent. The classic hallmark of a debt instrument, an unconditional promise to pay a sum certain,¹¹² thus seems

¹¹⁰ Section 1092(d)(1).

¹¹¹ Some of these arrangements may resemble traditional deposit accounts in that an investor deposits cryptocurrency with a company and receives a return. See BlockFi.com. As well, emerging online platforms representing automated decentralized systems executing contracts through pre-set computer programs allow investors to deposit and lend cryptocurrency. See *Zero to DeFi – A Beginner’s Guide to Earning Passive Income Via Compound Finance*, DEFI PULSE, (Sept. 18, 2019), defipulse.com/blog/zero-to-defi-cdai/.

¹¹² See, e.g., *Roth Steel Tube v. Commissioner*, 800 F.2d 625 (6th Cir. 1986); *Fin Hay Realty v. United States*, 398 F.2d 694 (9th Cir. 1984); Notice 94-47, 1994-1 C.B. 357.

to be absent. Moreover, given the potential fluctuation in value of “interest” amounts calculated in cryptocurrency (which, given volatility against fiat currencies, could go to zero), stated interest in practice is unlikely to reflect time value of money and does not resemble a conventional payment for the use or forbearance of money.¹¹³ While these general features, in principle, could be said to be shared by foreign currency denominated debt instruments that are subject to currency fluctuations (though volatility there tends to be much lower), those instruments involve currency rather than property and are also governed by the specific rules of Section 988 and the Treasury regulations promulgated thereunder. In light of the foregoing features of cryptocurrency loans, debt characterization of cryptocurrency loans does not seem inevitable or even appropriate.

Guidance is needed to clarify how these loans should be treated for U.S. federal income tax purposes. Many cryptocurrency loans may be best analogized to securities loans that fall outside the scope of Section 1058,¹¹⁴ but they may also bear resemblance to notional principal contracts with upfront payments,¹¹⁵ or to leases.¹¹⁶ Since the Section 988 rules are not applicable to loans of, or denominated in, cryptocurrencies,¹¹⁷ the question also arises whether rules based on principles similar to Section 988 should apply under any such characterization. Guidance in this area is important, because it implicates whether the initial transfer and subsequent return of cryptocurrency are taxable transactions (and, if so, how gain or loss is determined) and because the characterization of income as interest or some other kind of ordinary income (*e.g.* securities lending fees) has many collateral effects on a U.S. taxpayer under the federal income tax laws as well as on the withholding tax consequences for payments to non-U.S. persons.

C. Coins and Tokens Beyond Virtual Currency Exchangeable for Cash

Guidance issued by the Service to-date has been limited to virtual currency that is convertible to fiat currency and functions as a substitute for cash, with bitcoin as the paradigm case. No guidance has been provided for tokens that function as “machine currency,” that is, tokens that can be used to access certain services, or other uses, of a blockchain that does more than function as digital money. We recommend that Treasury and the Service study how best to craft tax rules appropriate for these emerging technologies.

D. Token Swaps

Guidance is needed in the treatment of so-called “token swaps.” Swapping is the process of sending old (fundraising) tokens (received in a giveaway or acquired at the inception of a particular project) to an address controlled by the project developers. The original tokens are then

¹¹³ See, *e.g.*, *Old Colony R. Co. v. Commissioner*, 284 U.S. 552 (1932); Rev. Rul. 69-188, 1969-1 C.B. 54.

¹¹⁴ Given the restrictive definition of “security” for purposes Section 1058, classifying certain coins and tokens as “securities” would not necessarily bring those coins and tokens within the scope of existing Section 1058. See Section 1058(a); Section 1236(c).

¹¹⁵ Because cryptocurrency is transferred back and forth at inception and termination, such a loan should not qualify as a notional principal contract, but rules for the taxation of cryptocurrency loans could be developed by analogy to the rules for notional principal contracts. Treasury Regulation Section 1.446-3(c)(3).

¹¹⁶ Lease characterization seems questionable since the borrower will not return the identical coins or tokens.

¹¹⁷ Notice 2014-21, 2014-16 I.R.B. 938, Q2 (providing that cryptocurrency is not foreign currency).

destroyed or “burned” and exchanged in a one-to-one ratio for new tokens that are sent automatically to a new wallet address provided by the swapping holder. Exchanges often provide support for and handle this process for tokens held on their platform, though there is usually also a method by which persons who hold private keys outside an exchange can manually perform the swap. If a holder fails to swap its old tokens within a specified period of time, its old tokens will likely become worthless and it may forfeit its right to exchange them for new tokens after the expiration of the set period of time.

Prima facie, the exchange of an old token for a new token appears to be a taxable sale or exchange.¹¹⁸ However, in context, the new tokens reflect a continuation of the original investment and in fact represent the asset (i.e. the “machine currency” that provides access to certain services or uses of the blockchain) the holder wanted to acquire at the outset of the project but that was not yet “ready” at that time. Receipt of the new token thus merely provides the asset the holder of the marketing token wanted to receive from the outset. We therefore believe that, for U.S. federal income tax purposes, such a token swap can be appropriately analogized to receipt of stock upon the exchange of a convertible debt instrument¹¹⁹ or of an asset received upon physical settlement of a prepaid forward contract,¹²⁰ so that the holder of the original token would not have a taxable sale or exchange upon receipt of the new token. Alternatively, if viewed as a sale or exchange, we do not believe that the new token would “[differ] materially either in kind or extent” from the original marketing token” since the new token simply embodies the asset that was always the purpose of the original investment.¹²¹ We recommend that Treasury and the Service issue guidance confirming this result in the context of fundraising tokens and providing that a holder who fails to take steps to exchange the old tokens and thus forfeits its right to receive the new token be entitled to a loss (insofar as the taxpayer had basis in the old token).¹²²

E. Stable Coins

Stable coins are cryptocurrencies backed by holdings of fiat currency, whether the U.S. dollar or otherwise, or one or more financial assets that have a stable value or maintain a relatively stable value when issued through an automated decentralized system controlled by a pre-set

¹¹⁸ Section 1001.

¹¹⁹ Rev. Rul. 72-265, 1972-1 C.B. 222 (no gain realized upon exchange of convertible debt instrument into stock of obligor corporation).

¹²⁰ Here the asset to be delivered does not exist at the time the forward is entered into. *See Anschutz Co. v. Commissioner*, 135 T.C. 78 (2010), *aff'd*, 664 F.3d 313 (10th Cir. 2011) (defining forward contract as executory contract for delivery of property at future date); *Lucas v. North Texas Lumber Co.*, 281 U.S. 11 (1930) (executory contract not taxable event until settlement); CCA 201501012 (Jan. 2, 2015); Rev. Rul. 2003-7, 2003-5 I.R.B. 363 (prepaid forward contract does not result in current sale where certain conditions met). Upon settlement of a forward contract, the buyer takes basis in the asset.

¹²¹ Treasury Regulation Section 1.1001-1(a). *See also* Rev. Rul. 90-7, 1990-1 C.B. 153 (exchanging trust certificates in investment trust for underlying assets not taxable sale or exchange).

¹²² Where a token swap occurs outside the context of fundraising tokens being exchanged for tokens representing the originally intended asset, such as where a cryptocurrency migrates from one blockchain to another, we believe the swap should be analyzed under the general principles of Treasury Regulation Section 1.1001-1(a). If the token swap is merely part of a technical upgrade (for example, a migration to a new blockchain with certain enhanced features) the new token may not “differ materially in kind or extent.”

computer program.¹²³ Because transactions involving stable coins backed by fiat currencies other than the U.S. dollar could be said to be “denominated in terms of a nonfunctional currency or [be] determined by reference to the value of one or more nonfunctional currencies,”¹²⁴ the question arises whether holdings of such stable coins and transactions in (or denominated in) such stable coins fall within the scope of Section 988. We urge Treasury and the Service to consider the potential interaction between Section 988 and the existing guidance on cryptocurrencies and to issue guidance addressing the taxation of stable coins backed by fiat currencies other than the U.S. dollar.

F. Private Coins

All guidance regarding cryptocurrency issued by the Service to-date has been focused on public open-source blockchains or distributed ledger systems. However, there is a separate and growing world of private blockchains or consortia of entities that create private currencies used for specific purposes. As these kinds of private coins become more prevalent, taxpayers will require guidance on whether the principles developed for public distributed ledger systems apply here as well. We urge Treasury and the Service to study this area, including but not limited to addressing whether existing guidance applies equally to private blockchains and related currencies that may be traded on secondary markets.¹²⁵

G. Staking

To date many of the most established public blockchains rely on “proof of work” algorithms as a method for validating transactions and “mining” new blocks. While it was originally intended that “mining” would be a dispersed activity accessible to anyone with relatively standard computer equipment, “mining” of long established blockchains (like Bitcoin) now requires very significant hardware resources and large amounts of energy both to power the computers running the calculations and to cool the facilities housing the computers. Miners receive new coins as rewards for their efforts as well as transaction fees for confirming transactions. In reaction to the concentration of mining resources and the related energy consumption, there is now a movement towards “proof of stake” as an alternative consensus algorithm in parts of the cryptocurrency community.¹²⁶ Benefits of “proof of stake” include reduced costs and energy consumption, encouraging broader participation from members of the community to sustain a given blockchain and enhanced scalability.

“Proof of stake” requires computers (nodes) that wish to participate in the process of “forging” new blocks to lock up a portion of their coins or tokens as “stakes.” Some staking activity is also tied to governance, giving stakers the right to vote on governance of a particular

¹²³ An example of this includes Stasis EURS which is tied to the value of the euro. Elena Perez, *Fiat-Backed Stablecoins – Attempt to Take the Best of Both Worlds*, COINTELEGRAPH, (Oct. 6, 2019), <https://cointelegraph.com/news/fiat-backed-stablecoins-attempt-to-take-the-best-of-both-worlds>.

¹²⁴ Treasury Regulation Section 1.988-1(a)(1)(ii).

¹²⁵ We note that the concept of a contentious hard fork should not be applicable in this context because the underlying code is privately developed and fully controlled by centralized parties.

¹²⁶ For example, Ethereum plans to switch from “proof of work” to “proof of stake” with Ethereum Casper likely in the course of 2020.

project (e.g. changes to the protocol or funding of future project development). Exchanges often participate in staking by using their customers' coins and may share staking rewards with their customers. Investors holding private keys outside of exchanges may be able to participate in staking via an interface provided by a wallet. Alternatively, they would need to take other direct steps to be able to stake (requiring greater technical expertise). Generally, the bigger the stake, the higher the likelihood that a node will be selected to forge the next block, though randomization features are built in to reduce domination by the "wealthiest" nodes. "Coin age," which measures how long coins have been staked, can be another relevant factor in selecting a node that will be selected to forge.

When a node is selected to forge a new block, it validates the transactions and receives transaction fees with respect to transactions in that block. Staking networks also typically provide an annual return (ranging from 0.5% to 15%) for all stakers (commonly referred to as "inflation payments") to encourage more participants to lock up some of their coins and support the network. Some networks require the operation of so-called "Master Nodes," which must pledge a specified minimum number of coins in order for the holder to receive a set distribution of additional coins from the network. Payments in staking networks tend to be smaller but more predictable than mining rewards in "proof of work" networks. Payments can be made at frequent intervals (even multiple times a day).¹²⁷

Notice 2014-21 provided that mining rewards constitute gross income.¹²⁸ We believe that payments received as transaction fees for forging new blocks in a "proof of stake" network should similarly be treated as giving rise to gross income. However, the correct tax treatment of inflation payments made to all stakers in a "proof of stake" network is less clear. The issuance of additional coins or tokens could be treated as a return on a staker's investment that constitutes an accession to wealth. On the other hand, given that increasing the coin supply may dilute the value of existing coins and that staking participation may be very high in certain "proof of stake" networks, inflation payments also could be viewed as analogous to stock dividends and thus not be taxable currently.¹²⁹ We recommend that Treasury and the Service further study inflation payments. As discussed in Part III.B.2 above, valuation can be difficult, especially with the newer, less established coins and tokens that may be received in many "proof of stake" networks.

H. Virtual Currency Not Held As a Capital Asset

Except to the limited extent set forth therein, the FAQs as well as Notice 2014-21 only address taxpayers that hold cryptocurrency as capital assets.¹³⁰ Guidance is needed for persons

¹²⁷ Harsh Agrawal, *10 Most Profitable Proof Of Stake (POS) Cryptocurrencies*, COINSUTRA, (Dec. 4, 2019), <https://coinsutra.com/proof-of-stake-cryptocurrencies/>.

¹²⁸ Notice 2014-21, 2014-16 I.R.B. 938, Q8.

¹²⁹ *Eisner v. Macomber*, 252 U.S. 189 (1920). Unlike pro rata stock dividends, however, there is no guarantee that inflation payments will be made to all holders on a pro rata basis since not all coin or token holders may participate in staking and different holders may stake different proportions of their holdings.

¹³⁰ See *Frequently Asked Questions on Virtual Currency Transactions*, IRS <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last updated Dec. 31, 2019) (including statement that "except as otherwise noted, these FAQs apply only to taxpayers who hold virtual currency as a capital asset").

that hold and use cryptocurrency in inventory (e.g. as dealers) or otherwise in connection with a trade or business (rather than as an investment asset), including in connection with service or utility tokens and other emerging technological applications.