Stock or Livestock? Hard Fork Basis Allocation

by Nelson C. Yates II

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In this article, Yates examines the still-uncertain tax treatment of cryptocurrency hard forks and methods that coin holders may use to arrive at a rational allocation of basis between the original forked coin and the resulting new coin.

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This article is provided as a general informational service, and it should not be construed as imparting legal advice on any specific matter.

Cryptocurrencies have caught the attention of Main Street and Wall Street, and with that comes the attention of government regulators, be it the SEC, the Commodity and Futures Trading Commission, or the IRS. The SEC and CFTC are actively engaging the cryptocurrency investor and issuer communities by publishing guidance, testifying before Congress, and in some instances pursuing enforcement actions. Unfortunately, the IRS has been unhelpfully silent. The result is that taxpayers are somewhat blindly navigating the consequences in the cryptocurrency/token landscape — a landscape that has become exponentially more complex since the IRS's last and only published formal guidance, in 2014.

I. Notice 2014-21

Four years ago the IRS published Notice 2014-21, 2014-16 IRB 938, which addressed *some* of the federal income tax treatment of virtual currencies (including bitcoin[1]) that the IRS had labeled "convertible virtual currencies." Any cryptocurrency that has "an equivalent value in real currency, or that acts as a substitute for real currency" appears to fall within the IRS's definition of convertible virtual currency.[2] In Notice 2014-21, the IRS concluded that convertible virtual currencies are not currency but are to be considered property for federal tax purposes, and that the "general tax principles applicable to property transactions" therefore apply to convertible virtual currency transactions. Unfortunately, one of the many issues left unaddressed in Notice 2014-21 was what happens if there's a permanent divergence from the current version of a convertible virtual currency's blockchain (a hard fork). Is it a realization event to the coin holder? And how should basis be allocated?

II. Urgent Need for Tax Guidance

The world of cryptocurrency has been in hyperdrive since the IRS published Notice 2014-21. For those who have been paying attention to cryptocurrencies only for the last year or so, allow me to put into context the world when Notice 2014-21 was issued:

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[1] The term "bitcoin" without capitalization is used when referring to a unit of account (also traded under the symbol of BTC); the term "Bitcoin" with capitalization is used when referring to the Bitcoin concept (*i.e.*, the entire ledger system, etc.). *See* Bitcoin.org, "Bitcoin."

[2] For a more comprehensive description of convertible virtual currencies, Notice 2014-21 refers readers to Financial Crimes Enforcement Network, "Guidance on the Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies," FIN-2013-G001 (Mar. 18, 2013).

- bitcoin was trading between $200 and $1,000;[3]
- ethereum was in its infancy;[4] and
- Ross Ulbricht, the founder-operator of Silk Road, the online black market that used bitcoins to help maintain anonymity of the users, had recently been arrested.[5]

Now fast-forward to late 2018:
- bitcoin is trading in the mid four figures after its end-of-2017 run-up to almost $20,000;[6]
- the Chicago Mercantile Exchange and the Chicago Board Options Exchange have bitcoin futures;
- the chairs of the CFTC and the SEC testified before the Senate Banking Committee on virtual currencies;[7]
- the IRS has stated that there are more than 1,500 known virtual currencies;[8] and
- a federal judge has held that cryptocurrencies are commodities.[9]

And yet, other than reminding taxpayers to report their virtual currency transactions, the IRS has remained silent. That silence is a multipart failing: (1) the IRS issued no guidance on the more complex tax issues arising from some cryptocurrencies being treated as property under Notice 2014-21; and (2) it hasn't addressed how cryptocurrencies/tokens that may fall outside the definition of convertible virtual currency in Notice 2014-21 should be characterized for federal income tax purposes.

It's unlikely that the IRS will make any real progress in addressing any of the many open issues regarding cryptocurrencies in the wake of the Tax Cuts and Job Acts (P.L. 115-97). James Beatty, a branch 5 attorney in the IRS Office of Associate Chief Counsel, said as much November 12 at the American Institute of CPAs National Tax Conference.[10] He stated that the recently released 2018-2019 priority guidance plan contains nothing on virtual currency. And in an almost ominous statement at that same conference, newly confirmed IRS Commissioner Charles Rettig advised attendants to "watch where we're headed" on guidance and remarked that "the IRS will have more information about [cryptocurrencies] than you could ever imagine."[11] Rettig went on to emphasize the value of to-be-released informal guidance: "Pay attention to the informal guidance as though it's formal guidance, because in the effort to try to get information posted and disseminated quickly, you're going to see as much informal guidance as we can give."

III. Overview of a Hard Fork

One of the many complex issues that arise from the application of property taxation to convertible virtual currencies, such as bitcoin, is how to handle basis allocation in the event of a hard fork. When Notice 2014-21 was issued, hard forks were likely not on the IRS's radar. But since 2017, the frequency of hard forks has been almost comical. For example, by mid-April 2018, bitcoin had forked almost 70 times.[12] And some of the new coins that resulted from the hard forks have themselves forked (for example, bitcoin cash).

Before moving further into the tax discussion, it's important to understand what a hard fork is. In general, it is a permanent divergence in a cryptocurrency's underlying blockchain.[13] It's a

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[3] *See* Coinbase Charts.

[4] *See* Ethereum Homestead, "What Is Ethereum?"

[5] *See* Ryan Mac, "Living With Ross Ulbricht: Housemates Say They Saw No Clues of Silk Road or the Dread Pirate Roberts," *Forbes*, Oct. 9, 2013.

[6] *See* Coinbase Charts.

[7] *See* Jay Clayton, "Chairman's Testimony on Virtual Currencies: The Roles of the SEC and CFTC" (Feb. 6, 2018).

[8] *See* IR-2018-71.

[9] *See* Adam Bergman and Great Speculations, "Cryptocurrencies Are Commodities, Says Federal Judge," *Forbes*, Mar. 9, 2018.

[10] *See* Kristen A. Parillo, "Virtual Currency Guidance a Casualty of TCJA Regulatory Rush" (Nov. 13, 2018). Interestingly, at that same meeting, Beatty encouraged taxpayers to submit comments during the open comment period for Notice 2014-21 because "it's very helpful for us to have taxpayers or people with insight into the cryptocurrency marketplace tell us what they see and alert us to any tax issues we should be aware of."

[11] *See* William Hoffman, "'Pay Attention to Informal Guidance,' Rettig Advises," *Tax Notes*, Nov. 19, 2018, p. 1006.

[12] *See* Bitcoin.com, "Bitcoin Has Now Forked Almost 70 Times," Apr. 14, 2018.

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

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term used to describe a major change in the blockchain protocol that results in the formation of a new, second cryptocurrency that shares its history up to the point of the fork with the first cryptocurrency — think bitcoin and bitcoin cash.[14] After the hard fork, there are two different coins, two different sets of code, and two different ledgers.[15]

At the time of a hard fork, a snapshot of the blockchain ledger is taken, and anyone who owns the original coin (the "forked" coin) at the time of that snapshot is entitled to receive the new coin. A snapshot of the ledger is a snapshot of the block number of the blockchain. A fork is tied to the block number, but often a calendar date is used to help approximate the block number of the fork.[16]

For a fork to become a hard fork, the alternative blockchain protocol will need to garner enough support in the miner community to continue to build on that initial forked block.[17] Once that happens, the split is permanent and the new cryptocurrency will have been formed. When a hard fork happens, the holders of the original cryptocurrency receive an allocation of the newly formed second cryptocurrency. For example, on January 13, 2018, bitcoin cash had a hard fork at block No. 512666 that created a new blockchain asset called bitcoin candy.[18] At that block 512666, those who held bitcoin cash received an allocation of bitcoin candy at a 1:1,000 ratio, meaning that for every bitcoin cash asset held, an allocation of 1,000 bitcoin candy assets would be received.[19] After the fork, bitcoin cash continued to trade, and bitcoin candy eventually became available to trade on some exchanges.[20]

IV. Comments on the Taxability of Hard Forks

Hard forks are recognized by tax practitioners and even legislators as one of the pressing questions on which taxpayers need guidance. Both the American Bar Association Section of Taxation and the AICPA have issued comment letters that include recommended guidance on hard forks. The ABA tax section proposed a safe harbor for all hard forks that happened in 2017.[21] The ABA's safe harbor would mean that a hard fork is a realization event, but the fair market value and basis of the resulting new coin would be zero. However, the letter stops short of proposing a permanent solution. The AICPA took a different approach but reached the same result. The institute suggested that an election similar to section 83(b) be available to taxpayers.[22] Therefore, if a taxpayer chose to make this election, she would need to include in her gross income the excess of the property's FMV over its cost basis. Again, the argument is the new coin has a zero FMV and a zero basis, so no gain would be realized or recognized. Even a legislator weighed in on this matter, taking the idea of a safe harbor even further. Rep. Tom Emmer, R-Minn., proposed a bill in which a safe harbor would be available until the IRS issued complete guidance on the tax treatment of hard forks.

A. ABA Tax Section Request for Guidance

On March 19, the ABA tax section issued a letter requesting guidance on various cryptocurrency issues, including whether the holder of a cryptocurrency that experienced a hard fork had a realization event for federal income tax purposes.[23] The letter states that current law supports "reasonable analogies to both taxable and nontaxable events"; however, the tax section suggested that the IRS issue a safe harbor for taxpayers who held cryptocurrencies that had hard forks in 2017. The proposed safe harbor would work as follows:

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[14]*See* David Farmer, "What Is a Bitcoin Fork?" The Coinbase Blog, July 27, 2017; and CryptoCurrencyFacts.com, "Understanding Hard Forks in Cryptocurrency" (undated).

[15]*See* CryptoCurrencyFacts.com, *supra* note 14.

[16]*See id.*

[17]*See* Castor, *supra* note 13. A "soft fork" is a fork in the blockchain technology when only one of the blockchains will remain valid. *See* "Hard Fork," Investopedia.

[18]*See* CoinEx, "BCH Hard Fork — Bitcoin Candy Online for Trading on Jan 13th" (Jan. 9, 2018).

[19]*See id.*

[20]Interestingly, bitcoin candy hard forked at block 573123 (approximately Apr. 20, 2018). *See* Bitcoin Candy, "Help Bitcoin (Cash) Great Again."

[21]*See* ABA tax section, "Comments on the Tax Treatment of Hard Forks" (Mar. 19, 2018).

[22]*See* AICPA, "Updated Comments on Notice 2014-21: Virtual Currency Guidance" (May 30, 2018).

[23]*See* ABA tax section, *supra* note 21. The tax section's letter provides an excellent detailed overview of hard forks.

- taxpayers who owned a coin that was subject to a hard fork in 2017 would be treated as having realized the resulting new coin in a taxable event;
- the deemed value of the new coin at the time of the realization event would be zero, which would also be the taxpayer's basis in the new coin;
- the holding period in the new coin would start on the day of the hard fork;
- taxpayers choosing the safe harbor treatment would be required to disclose this on their tax returns;
- the IRS wouldn't assert that any taxpayer who used the safe harbor treatment had understated federal tax liability because of the receipt of a new coin in a 2017 hard fork; and
- the IRS, with input from the ABA tax section and other stakeholders, would continue to develop its position regarding the tax treatment for future hard forks, and that position might be different from the safe harbor treatment and apply prospectively.

However, as the tax section's letter points out, a reasonable basis exists for either position: that the hard fork is a realization event; or that it's not.

B. AICPA Request for Guidance

On May 30, the AICPA requested that the IRS update its written guidance on virtual currencies.[24] Much like the ABA tax section, the AICPA believed additional guidance was necessary on virtual currency events such as hard forks.[25]

The AICPA proposed that in such instances, taxpayers be allowed to elect to include a virtual currency event as ordinary income in the year of transfer (similar to the process of a section 83(b) election). The proposed election would be available to be made within 30 days from the virtual currency event. Taxpayers who made the election would take a zero basis in the new coin that resulted from the hard fork and recognize zero income at the time of the fork. The future

disposition of the new coin would result in recognition of gain, the characterization of which would depend entirely on whether the coin was a capital asset in the hands of the taxpayer.

C. Legislative Proposal

Some in Congress are beginning to recognize that the playing field is far from level regarding cryptocurrencies and taxation. Given the IRS's lack of guidance on the matter for the last several years — despite the agency's openness on the fact that virtual currency transactions are a focus of audit and enforcement[26] — alarm bells finally started sounding in Washington.[27] Emmer's proposed bill, H.R. 6973, is titled the Safe Harbor for Taxpayers With Forked Assets Act of 2018.

The act would do just that — provide a safe harbor from any penalties or taxes being imposed from understating or even failing to report any income (and thus, taxes due) from the receipt of a virtual currency as a result of a hard fork. Emmer's bill would provide that safe harbor until the IRS issued regulations or other guidance addressing: (1) the tax treatment of receiving a new[28] coin resulting from a hard fork; (2) rules for calculating and allocating basis of the new coin; (3) rules for calculating the FMV of the new coin; and (4) rules for determining the holding period of the new coin.

For taxpayers to use the safe harbor, the new coin must be received as the result of a hard fork, and the forked coin must be considered a convertible virtual currency. The proposed legislation defines a hard fork as "any material change in the shared digital ledger which is used to verify by consensus transactions in [convertible virtual] currency if such change results in the maintenance of independent shared digital ledgers with respect to such currency." It defines

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[24]*See* AICPA, *supra* note 22.

[25]The AICPA also considers soft forks, air drops, and giveaways as virtual currency events and addresses them in the proposed FAQ. *Id.*

[26]*See* Nelson Yates, "The IRS Gets Real About Virtual Currencies," *Law 360*, July 25, 2018.

[27]*See, e.g.,* letter from Republican members of the House Ways and Means Committee to the IRS (Sept. 19, 2018) (urging the agency to issue additional guidance clarifying taxpayers' obligations when using virtual currencies, as well as provide the committee with updates on the IRS's progress on issuing that additional guidance).

[28]The safe harbor act defines a forked convertible virtual currency as any convertible virtual currency to which the taxpayer becomes entitled because of a hard fork. However, I use the term "new coin" to denote the new coin resulting from a hard fork, and I use the term "forked coin" to denote the original coin that underwent the hard fork.

convertible virtual currency as "any digital representation of value that — (i) functions as a medium of exchange, a unit of account, or a store of value, (ii) does not have legal tender status, and (iii) has an ascertainable equivalent value in legal tender or is used as a substitute for legal tender."[29]

It will be interesting to see whether taxpayers receive any guidance — formal or otherwise — before the start of individual tax return filings for 2018. If not, there may be some contentious individual (especially global high-wealth) audits.

V. Basis Allocation — The Problem

We long ago learned that the basis of property is its cost.[30] So if Investor A buys bitcoin for $6,500, A has a cost basis of $6,500 for that bitcoin. And sale of that bitcoin will result in gain recognition to the extent that the sales price exceeds cost basis. Simple, right? Not so simple, however, after a hard fork, when the new coin or a forked coin is sold.

Example 1: Investor A purchased bitcoin on July 31, 2017, for $2,900. On August 1, 2017, at block 478558, bitcoin forked, resulting in the original bitcoin and the new forked coin, bitcoin cash.[31] As a result of owning her original bitcoin when the fork occurred, Investor A receives a 1:1 allocation of bitcoin cash (that is, she owned one bitcoin, so she is allocated one bitcoin cash coin). The owner of the original bitcoin at block 478558 had only ever purchased that original bitcoin. And, the original bitcoin and the new bitcoin cash share a transaction ledger and history up until block 478558.[32] However, A decides to sell her original bitcoin immediately after the hard fork and continues to hold the new bitcoin that resulted from the hard fork.

Assume the IRS maintains that a hard fork and the receipt of the new coin are a realization event. What is A's basis in the new bitcoin cash? We know she paid $2,900 for her original bitcoin. What portion of that cost basis should be allocated

to the new bitcoin cash? All of it? None? Half? Some other fractional amount?

That is the basis allocation problem. Luckily, there are some creative, if imperfect, analogous situations from which we can glean guidance. Thus, the question: stock or livestock?

VI. Basis Allocation — Proposed Methods

In situations in which the IRS has failed (or refused) to provide helpful guidance, we can only look to what the agency has said to date, and to other guidance and law that apply the same principles if not to the same areas. We know that the IRS considers the general principles of property taxation applicable to at least some cryptocurrencies. Thus, we can look to guidance and law found in analogous property situations, such as stock[33] and livestock. What is similar in the basis allocation methods used in stock and livestock is that both apply the general principles of equitable apportionment. Equitable apportionment requires the consideration of the relative values of the properties in determining the allocation of cost basis.

A. Equitable Apportionment

Equitable apportionment is often thought of as a property "subdivision" method.[34] It is found in reg. section 1.61-6(a):

> When a part of a larger property is sold, the cost or other basis of the entire property shall be equitably apportioned among the several parts, and the gain realized or loss sustained on the part of the entire property sold is the difference between the selling price and the cost or other basis allocated to such part. The sale of each part is treated as a separate transaction and gain or loss shall be computed separately on each part. Thus, gain or loss shall be determined at the time of sale of each part and not deferred until the entire property has been disposed of.

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[29]This is nearly identical to the definition of convertible virtual currency in Notice 2014-21.

[30]*See* section 1012(a).

[31]*See* bitcoincash.org, "Bitcoin Cash."

[32]*See* Bitcoin.com, "What Is Bitcoin Cash?"

[33]This article doesn't consider whether any given virtual currency or token should be treated as stock or a security for federal income tax purposes.

[34]*See* reg. section 1.61-6(a).

When determining *how* to allocate the appropriate basis to each part, equitable apportionment requires consideration of the relative value of the assets after the division. This differs from ratable apportionment, a much more basic concept that ignores the relative values of an individual subdivided piece.[35]

An easy example of this is within the context of subdividing a multi-acre plot of land.

Example 2: Assume the taxpayer owns a 100-acre plot for which she paid $100,000. On the surface that land all looks the same: green pasture for grazing. However, oil has been detected under one of the four 25-acre subdivided parcels. Applying a ratable apportionment method to that 100-acre plot would result in each parcel having an allocation of $25,000 (or one-fourth) of the $100,000 original purchase price. Assume that the taxpayer sells all four parcels. The three parcels with no oil were sold for $50,000 each, which means the taxpayer recognized a $25,000 gain on each of those three parcels. But the parcel with oil commands a much higher sales price, and the taxpayer sells it for $250,000, which results in a $225,000 gain to her, and a total gain of $300,000.

If the taxpayer instead applied an equitable apportionment method to her $100,000 purchase price for the four subdivided 25-acre parcels, she would take into consideration that one of those parcels has oil below grade that will significantly increase its value relative to the three other parcels. When she sells all four parcels for a total of $400,000 ($50,000 x 3 + $250,000), she allocates her $100,000 original cost to the parcels relative to their respective values. This mean that the parcel with oil receives a basis allocation of $62,500 ($250,000/$400,000) x $100,000), and the remaining original cost basis of $37,500 ($100,000 - $62,500) is divided over the remaining three parcels.[36]

The basis allocation methods for stock are found elsewhere within the code and Treasury regulations; however, they are rooted in the principles of equitable apportionment.

B. Cryptocurrencies as Stock

Stock and securities jump out as possible analogous situations for a variety of reasons. Many people view the trading (or maybe, speculating) of cryptocurrencies itself as analogous to the trading of securities. However, that's not the reason the treatment of stock is a potential source of guidance for basis allocations of cryptocurrency. A shareholder or security holder may receive a distribution of the same or of a different stock/security because of that taxpayer's ownership of the original share or security. This is comparable to a taxpayer who holds a cryptocurrency that undergoes a hard fork — that taxpayer receives an allocation of that new coin because of that taxpayer's ownership of the original forked coin. Two such instances in stock and securities offer possible guidance: a stock dividend and a section 355 distribution.

1. Stock dividend.

In general, section 305 permits a shareholder to receive a corporation's stock (or stock rights) paid as a dividend on that corporation's stock without any tax to be owed. So an existing shareholder in a corporation receives an additional share (or share rights) because of that existing shareholder's ownership in the original shares. In that instance, how does the shareholder allocate basis to the distributed stock? Section 307 and its regulations say that the shareholder should allocate the basis it has in the existing corporate stock (the old share) and the share received as a dividend (the new share) in proportion to the FMVs of each on the date of the distribution.

Of course, there are many problems with this approach. Ignoring whether a given virtual currency is a security, let alone comparable to stock, the FMV of the new coin is needed to establish the amount of basis from the forked coin that should be allocated to the new coin. This can be a challenge if the new coin isn't immediately being traded on an exchange. Thus, for this method to be appropriate (again, ignoring whether a given virtual currency is a stock for federal income tax purposes), the following must happen: (1) the new coin is immediately traded on an exchange, or (2) any guidance provides a grace period for the taxpayer to determine the FMV of

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[35]*See Beaver Dam Coal Co. v. United States*, 370 F.2d 414 (6th Cir. 1966).

[36]This results in each of the three remaining parcels, which were identical and didn't contain oil, receiving an allocation of $12,500 of the taxpayer's original purchase price as its basis.

the new coin. For example, that grace period could be until the close of the taxpayer's tax year or as of the filing date of the taxpayer's return.

2. Section 355 spinoff.

Another imperfect stock analogy is a shareholder's receipt of shares in a section 355 spinoff. Section 358 and its regulations say that in a distribution to which section 355 applies and in which only nonrecognition property is received, a shareholder's basis in both (1) the stock and securities on which the distribution is made, and (2) the basis of all the stock and securities that are distributed is limited to his basis in (1) immediately before the distribution. In other words, the taxpayer must divide the total basis of his old stocks and securities and apply some of that basis to the stock and securities that were just distributed. In general, that old basis is allocated between each of the old shares and new shares in proportion to the respective FMVs of the shares.[37] The regulations provide an example:

> J, an individual, acquired 5 shares of CorpX stock on Date 1 for $4 each and 5 shares of CorpX stock on Date 2 for $8 each. CorpX owns all of the outstanding stock of CorpY. The FMV of the stock of CorpX is $1,800. The FMV of the stock of CorpY is $900. In a distribution to which section 355 applies, CorpX distributes all of the stock of CorpY pro rata to its shareholders. No stock of CorpX is surrendered in connection with the distribution. In the distribution, J receives 2 shares of CorpY stock with respect to each share of CorpX stock. Pursuant to section 355, J recognizes no gain or loss on the receipt of the shares of CorpY stock. J is not able to identify which share of CorpY stock is received in respect to each share of CorpX stock.

> In Example 12 of reg. section 1.358-2(c), because J receives 2 shares of CorpY stock with respect to each share of CorpX stock, the basis of each share of CorpX stock is allocated between such share of CorpX stock and two shares of CorpY stock in

proportion to the fair market value of those shares. Therefore, each of the 5 shares of CorpX stock acquired on Date 1 will have a basis of $2 and each of the 10 shares of CorpY stock received with respect to those shares will have a basis of $1. In addition, each of the 5 shares of CorpX stock acquired on Date 2 will have a basis of $4 and each of the 10 shares of CorpY stock received with respect to those shares will have a basis of $2. Under paragraph (a)(2)(vii) of this section, on or before the date on which the basis of a share of CorpY stock received becomes relevant, J may designate which of the shares of CorpY stock have a basis of $1 and which have a basis of $2.[38]

Similar to the stock dividend basis allocation method, the section 355 basis allocation also relies on the FMV of the new coin to allocate basis. And, as mentioned earlier, that FMV of the new coin may simply be impossible to determine. For those reasons, using guidance from the world of stock and securities to allocate basis of a forked coin to a new coin usually will not be plausible. What's the alternative? Livestock.

C. Cryptocurrencies as Livestock

Since long before hard forks existed, there have been events in property tax law that didn't neatly fit within the rules of equitable apportionment as set out in reg. section 1.61-6(a). In those instances, the courts and the IRS have used a basis allocation method sometimes called the "purchase price premium method." That method is useful when a taxpayer pays a premium above the FMV of property because of the expectation of a right not yet vested (for example, water rights and unborn animals). Rev. Rul. 86-24, 1986-1 C.B. 80, provides an excellent example.

In Rev. Rul. 86-24, the IRS concluded that the "purchaser of cows that are pregnant with transplanted embryos, who subsequently sells the cows and the calves separately, must allocate the original purchase price between the cows and the calves." After hormone treatments, purebred

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[37]*See* reg. section 1.358-2(a)(2)(iv).

[38]Reg. section 1.358-2(c), Example 12.

cows owned by a corporation were artificially inseminated with semen from a purebred bull. Those purebred embryos were surgically removed from the purebred cows and implanted in non-purebred cows. After pregnancy tests verified the transfers were successful, the impregnated non-purebred cows were sold to the public. The FMV of those impregnated non-purebred cows was $25x, whereas a non-pregnant non-purebred cow was $8x (it's typical that the cows are resold after they have given birth to the purebred calves, and the sales price of the impregnated non-purebred cow post-birth was also $8x).

The taxpayer purchased 10 non-purebred cows impregnated with purebred embryos. It allocated the entire purchase price of $250x to the cows and none to the embryos. After the cows gave birth to the purebred calves, the taxpayer sold the cows for $80x and claimed an ordinary loss of $170x ($250x - $80x). The IRS ruled that the basis must be allocated based on the FMV of each, and it looked to the delta of $170x between the impregnated cow and the non-pregnant cow to determine the cost basis allocable to the purebred calves that resulted from the embryos.[39]

What makes this method so appealing for use in situations involving hard forks of cryptocurrency is the focus on the FMV of the non-purebred cow to determine the basis of the embryo-calf. In cryptocurrency, this equates to focusing on the FMV of the original forked coin to determine the basis of the new coin. The original forked coin immediately before the hard fork is analogous to the impregnated non-purebred cow, which has a determinable value from observing bid prices on an exchange. Immediately after the hard fork, the original forked coin is the non-impregnated, non-purebred cow, which has a determinable value from observing bid prices on an exchange. The delta between the two is the premium that should be allocated to the new coin (that is, the calf resulting from the embryo) as its basis.

Example 3: Assume that the taxpayer purchased a single coin of Cryptocurrency X at block 1 of the blockchain for $100. Coin X is traded on at least one exchange. Approximately one week later, Cryptocurrency X had a hard fork at block 4. As a result of the hard fork, all holders of Coin X at block 4 receive a 1-for-1 allocation of the new coin, Coin Y. Coin Y is not immediately listed on any exchange. Even so, the taxpayer believes that Coin Y is the future and wants to sell his original forked coin, Coin X, and does so immediately after the hard fork for $98. Applying the principles of the purchase price premium method, the taxpayer had paid a $2 premium for the Coin Y and thus takes a basis of $2 in Coin Y and allocates $98 to Coin X.

In a hard fork situation, the purchase price premium method allows a taxpayer to determine the basis of the new coin by reference to that of the forked coin. This method seems to have more application in the world of cryptocurrency if determining the FMV of the new coin is impractical (or even impossible). But this is still an imperfect analogy because the courts and the IRS have used the purchase price premium method when the taxpayer has expected to receive some additional property. For example, in *Gladden*[40] the court found that the taxpayers had a realistic expectation of water rights attaching to the land purchased, which was why the taxpayer paid a premium for that land. In *Gamble* and in Rev. Rul. 86-24, the taxpayers were purchasing pregnant animals explicitly for the unborn offspring.

With cryptocurrency, it may be possible to claim that when coins are purchased there is an expectation of a potential hard fork. But if a facts and circumstances type of test applies, how attenuated is that argument if the original forked coin was purchased one day before the hard fork? And what about a coin purchased three months before the hard fork? Six months? Two years?

Example 4: Assume the same facts as Example 3, except that instead of the hard fork of

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[39]Rev. Rul. 86-24 was modified by Rev. Rul. 87-105, 1987-2 C.B. 46 (stating that the requirement to capitalize the amount of property allocable to the cost of the cow embryo as set out in Rev. Rul. 86-24 will not be applied if before February 24, 1986, the taxpayer purchased the cow that was pregnant or was subject to a binding agreement to do so).

[40]*Gladden v. Commissioner*, 262 F.3d 851 (9th Cir. 2001). Relying on Rev. Rul. 86-24, the court concluded that "where a purchaser pays a premium for land based on a realistic expectation that water rights will attach to that land in the future, the purchaser may, upon sale of the later-acquired water rights, claim a cost basis equal to the premium paid." *See also Gamble v. Commissioner*, 68 T.C. 800 (1977) (holding that whatever portion of the $60,000 purchase price the taxpayer paid was for the unborn colt became the his cost basis under section 1012).

Cryptocurrency X happening at block 4 one week after the purchase date, it happens two years later at block 1500. Immediately before the hard fork, Coin X was trading at $500. Immediately after the hard fork, Coin X was trading at $390. Here, applying an unadjusted version of the purchase price premium method would yield an impractical answer. Recall that the taxpayer paid $100 for Coin X. The delta between the pre-hard-fork Coin X and the post-hard-fork Coin X was $110. That delta is greater than the initial purchase price the taxpayer paid for Coin X two years ago, so allocating that delta to Coin Y as its basis is irrational.

That scenario is more closely aligned with what happens in reality, and it's the scenario for which we need to solve. One possible solution is to apply a hybrid approach that relies on the principles of the purchase price premium method to determine the FMV of the non-traded new Coin Y and then applies the principles of equitable apportionment to arrive at a reasonable allocation of cost basis to new Coin Y.

Example 5: Assume the same facts as Example 4. The delta between Coin X immediately before the hard fork and Coin X immediately after the hard fork is $110. That $110 is the FMV of new Coin Y. Now that we've solved for the FMV of the new coin, we can apply the principles of equitable apportionment. Coin Y, the new coin, would receive a basis allocation of $22 ($100 x ($110/ $500)). Coin X, the original forked coin, would receive a basis allocation of $78 ($100 - $22).

VII. Conclusion

Hard forks are just one of the many difficult questions that need to be addressed by formal IRS guidance. And although the IRS is acutely aware of taxpayers' need for guidance, any formal guidance on cryptocurrencies seems to be far removed from the agency's priority list in the wake of the TCJA. Of course, this doesn't prevent the IRS from taking action against those who fail to report (or incorrectly report) cryptocurrency transactions. To any observer, this is a greenfield of revenue for Treasury — limited guidance for taxpayers combined with an announced enforcement priority of the IRS. To mitigate exposure, taxpayers must be proactive in their compliance: reporting transactions, applying

Notice 2014-21 when directly applicable, and taking reasonable positions based on the principles of property taxation when Notice 2014-21 doesn't directly address the cryptocurrency transaction or event. And if that situation is a hard fork, consider *livestock*, not stock. ∎