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Cryptocurrency Taxation: Suggested Revisions on Current Treatment

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Cryptocurrency Taxation: Suggested Revisions on Current Treatment

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Abstract

The current tax regulations applied to cryptocurrencies are inappropriate. The initial purpose of Bitcoin, the most popular cryptocurrency, was to circumvent the fraud associated with using credit and debit cards for e-commerce. Simply put, cryptocurrencies can be thought of as cash for the internet. The Internal Service Revenue acknowledged its use as a unit of account, store of value, and medium of exchange (the definition of a currency). Despite its function as a currency, and the IRS’s acknowledgement of this function, the new asset has been designated as property for tax purposes. Property transactions are generally taxed on realized gains. One realizes a gain on a cryptocurrency transaction when converting it to an amount in legal tender that exceeds the amount it was purchased for. Considering the high volatility of Bitcoin and other cryptocurrencies, and the substantial gains that have been realized due to this volatility, property treatment is not entirely inappropriate. However, treating it exclusively as property presents a considerable amount of issues due to its currency-like nature. This paper seeks to provide solutions to the most pressing issues by exploring the nature of cryptocurrencies, as well as the current property tax regulations in the United States.
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Cryptocurrency Taxation: Suggested Revisions on Current Treatment

The Internal Service Revenue’s (IRS) decision to treat convertible cryptocurrencies as property is inadequate. Their lack of direction has led to mass confusion regarding the tax consequences of certain cryptocurrency transactions. The IRS’s initial guidance on cryptocurrency tax consequences was Notice 2014-21. This notice simply informed the public that tax regulations applicable to property also apply to cryptocurrency (Aqui, p. 2). Five years after Notice 2014-21, the IRS issued Revenue Ruling 2019-24. This Revenue Ruling provided details on the tax consequences of special cryptocurrency events that were omitted from Notice 2014-21. Despite the forward progress of Revenue Ruling 2019-24, the United States’ tax code for cryptocurrencies needs serious revisions. Although property treatment is appropriate in some circumstances, cryptocurrencies are a unique asset class that warrant special considerations. The following will provide an explanation of Bitcoin and Blockchain to show why property tax treatment is insufficient for tax reporting purposes. To further exemplify, a detailed description of property taxes will follow. The discussion will conclude with suggested revisions and amendments to the current cryptocurrency tax treatment.

Cryptocurrency Background

In order to gain a nuanced perspective on how cryptocurrencies are taxed, one must first understand how they function. The following sections will provide sufficient background to understand the nature of taxation currently enforced on cryptocurrency through the exploration of the purpose and functionality of Bitcoin and Blockchain, as well as special events such as chainsplits, airdrops, and giveaways—all of which produce special tax consequences.

Bitcoin’s initial purpose was to circumvent the need for third parties such as banks, creditors, and governments from transactions (Nakamoto, p.1). This innovative technology was
driven in part by the increase of fraud introduced by e-commerce. Online shoppers around the world collectively lost $2.7 billion in 2018 (Parsi, p. 7). Satoshi Nakamoto, the anonymous creator of Bitcoin, believed fraud could be eliminated if third party mediators were removed from online transactions (Nakamoto, p. 1).

Before Bitcoin, third parties such as credit card companies and banks mediated all online transactions. To purchase anything on the internet, one would have to enter a credit or debit card number. Due to the anonymity of internet transactions, merchants had to trust that these card numbers were not stolen. If the payment method is fraudulent, the reversible nature of online transactions leaves the merchant with a loss. For example, if fraud is detected by the true owner of a credit card, the owner of the stolen card gets reimbursed, the fraudster typically retains possession of the goods, and the merchant incurs a loss on the stolen goods.

Due to this risk, merchants require a substantial amount of sensitive information from buyers, and buyers have to trust that this sensitive information is safe in the hands of merchants (Nakamoto, p. 1). The current system of trust has resulted in a vicious cycle whereby merchants’ request of sensitive data enables more fraudulent activity to occur via data breaches. To remedy these intrinsic problems, Nakamoto created Bitcoin, a trustless platform that eliminates the need for banks and creditors to complete transactions, thus eliminating the need to provide sensitive data and minimizing the risk of fraudulent activity (Anatonic, p. 4). How Bitcoin positioned themselves to avoid these risks is discussed next.

**Bitcoin and Blockchain Functionality**

There are hundreds of virtual currencies in circulation around the world. All of which have similar functions, though some cannot be exchanged for legal tender. This paper explores the tax consequences of convertible virtual currencies—ones that can be exchanged for legal
tender. More specifically, convertible virtual currencies that are cryptocurrencies—virtual
currencies that use cryptography to secure and verify transactions (Beaton, p. 1). The most
popular convertible cryptocurrency is Bitcoin. Since convertible cryptocurrencies function in
many of the same ways, the following sections will use Bitcoin to exemplify how convertible
cryptocurrencies operate. This is the same scope the IRS addressed in Notice 2014-21 (Aqui, p.
1). To begin, explanations of Bitcoin and Blockchain will be provided. Lastly, special
cryptocurrency events such as chainsplits, airdrops, and giveaways will be detailed.

**Bitcoin.** It may be easy to think of bitcoins as digital cash. Like cash, bitcoins can be
used as a substitute to credit or debit cards for a direct payment. Cash represents immediate value
that does not need to be processed by a third-party creditor or bank, nor does any personal
information need to be transferred. These are the qualities Bitcoin sought to replicate in the
digital world. Although its intention was to become a cash-like currency, it does not have legal
tender status in any jurisdiction (Aqui, p. 1). Currencies must satisfy three criteria: a medium of
exchange, a store of value, and a unit of account (Anatonic, p. 5). Though the IRS recognized in
Notice 2014-21 that, “[Cryptocurrency] is a digital representation of value that functions as a
medium of exchange, unit of account, and/or store of value”, they have classified it as property
for tax purposes (Aqui, p. 1). Most likely due to its high volatility, Bitcoin as a currency has not
been legitimized by any government. It is likely the United States does not want to be the first
country to legitimize it as such, so the IRS has designated it as property for tax purposes. This
treatment is not entirely inappropriate due to its common use as an investment.

Millions invest in bitcoins because of its high volatility, which is caused by numerous
factors. Mass interest in Bitcoin peeked in 2017 when the price of one bitcoin rose to $10,000.
This surge in price was due in part to Donald Trump’s election into presidency (Warsh, 2018).
Trump’s administration proposed bolstering short-term American exports. Part of executing this plan was to devalue the US Dollar in order to garner a price appeal internationally (Warsh, 2018). Thus, the dollar lost 12 percent of its value during 2017 (Warsh, 2018). This caused investors to search for another store of value, and they found this in Bitcoin (Warsh, 2018). Political environments are just one of the causes of the volatility in Bitcoin. Multiple factors have caused the cryptocurrency to experience massive fluctuations. The dramatic swings in value encourage millions of consumers to hold it as an investment rather than to use it like a currency. To illustrate its appeal as a short-term investment, below is a graph demonstrating Bitcoin’s high volatility (“Bitcoin Price Index”, n.d.).

![Price of Bitcoin 2012-2019](image)

The high swinging valuation of bitcoin creates an incentive for fraud. The best way to steal a cryptocurrency is to double spend it (Muftic, p. 10). Double spending occurs when the digital code that represents cryptocurrency is copied and spent twice (Beaton, p. 6).
Cryptocurrencies can potentially be copied, pasted, and spent again with a few clicks of a mouse. This intrinsic problem prevented early cryptocurrencies from widespread use. Nakamoto solved this problem by creating Blockchain. Blockchain is a decentralized peer-to-peer network that verifies the legitimacy of every bitcoin transaction (Nakamoto, p.1).

**Blockchain.** All bitcoin transactions are recorded using Blockchain. Blockchain is a digital ledger that is nearly impenetrable to fraudsters. Blockchain uses cryptographic hashes that represent transactions (“How Blockchain Technology Works”, 2017). Hashes are generated from an input of text. Inputs include information on the current transaction, as well as the preceding cryptographic hash (i.e., the preceding transaction). Thus, each transaction is dependent on the last in order for it to be recorded and actualized (“How Blockchain Technology Works”, 2017). If someone wanted to tamper with the ledger and double-spend a coin, one would have to decrypt the current hash, as well as all preceding hashes in the entire blockchain—an extremely difficult task even for modern computers (“How Blockchain Technology Works”, 2017). It is not in the best interest of a fraudster to steal a bitcoin because the time and money spent decrypting an entire blockchain would outweigh any monetary gain. Furthermore, tampering with the blockchain would devalue bitcoin substantially. The verification system would be broken, so any stolen bitcoins would be worthless due to the fact that no one would know which token is legitimate. Therefore, the risk of double spending has been eliminated through the revolutionary hashing cryptography.

Again, hashes represent details of the transaction. Transaction records accumulate and eventually get consolidated into blocks after a certain limit has been reached (“How Blockchain Technology Works”, 2017). These blocks are shared with thousands of computers worldwide, each of which has access to all the transactions (i.e., the entire blockchain) (“How Blockchain
Technology Works”, 2017). Computers participating in the blockchain are referred to as nodes. When a transaction occurs, nodes must verify its legitimacy by considering the blockchain protocol all participants must abide by (“How Blockchain Technology Works”, 2017). The blockchain protocol defines transaction rules. The majority of nodes must find that the transaction block conforms to the protocol for it to be implemented into the blockchain (“How Blockchain Technology Works”, 2017). This verification process is what makes blockchain decentralized because the validation of the currency is not dependent on a single authority like a bank, but rather it is dependent on the consensus of the decentralized network of participants (nodes). When the decentralized network approves transactions, they are formed into a block. The block formation process is referred to as mining and is carried out by nodes referred to as miners. Miners compete to solve complex proof-of-work problems to consolidate the transaction records (hashes) into blocks (“How Blockchain Technology Works”, 2017). When the first miner successfully solves the problem, a block is formed and is later evaluated by the nodes for legitimacy. If the block of transactions receives the majority approval from the nodes, the miner is compensated with new bitcoins (“How Blockchain Technology Works”, 2017). Blockchain technology is not exclusive to Bitcoin. It is commonly used for a variety of convertible cryptocurrencies.

To reiterate, nodes determine the legitimacy of a transaction by considering how it conforms to the blockchain protocol. Sometimes the protocol needs to be updated for enhanced security, new blockchain functionalities, or the reversal of a transaction (“What is Hard Fork”, 2018). Whatever the reason for the change, the new protocol creates a fork. Forks can be hard or soft. A soft fork is a protocol change that all future blocks of transactions must adhere to. The soft fork simply results in a continuation of the same blockchain, albeit the updated protocol
must be adhered to for all future transactions (Light, 2017). Soft forks do not generate any special tax consideration. A hard fork, on the other hand, results in a split in the chain. The blockchain diverges, one where the historical rules are continued, and another path where the new rules are followed (Light, 2017). The new path may create a new cryptocurrency that is distinct from its predecessor (Light, 2017). Owners of the former coin can choose to redeem these new coins, but they are not obligated to (Light, 2017).

Sometimes, airdrops occur after a hard fork. An airdrop is when new cryptocurrency tokens are distributed to a user’s digital wallet at no cost (Frankenfield, 2019). Digital wallets are akin to saving documents on a computer—it is simply a place where owners store the private keys necessary to spend a bitcoin (“Bitcoin Wallets”, 2017). On August 1, 2017, an airdrop occurred after a hard fork in the Bitcoin Blockchain and participants in the Bitcoin Blockchain received Bitcoin Cash tokens equal to the value of the original bitcoin that was currently stored in their wallets (Nellen, p. 8). This is slightly different than a giveaway. A giveaway is when a fixed amount of cryptocurrency is given to a taxpayer for joining the blockchain of a particular virtual currency (Nellen, p. 9). The difference between this and an airdrop is that a giveaway does require an individual to be a participant in a blockchain prior to the distribution. Despite the slight difference, airdrops and giveaways present a similar challenge in tax reporting.

**Property Tax Treatment in the United States**

Official tax reporting guidance for cryptocurrency is found in the IRS’s Notice 2014-21, which was issued by Keith A. Aqui of the Office of Associate Chief Counsel (Income Tax & Accounting). Notice 2014-21 is in the form of Frequently Asked Questions and Answers that specifies the tax treatment of convertible cryptocurrencies. The notice serves to educate cryptocurrency holders of existing tax principles that apply to the new asset. The following
applicable tax principles are relevant to this discussion: gains and losses from the sales of property, the inclusion of property in Gross Income, and the penalties for inconsistent treatment. Explanations will be supplemented with examples of how the tax code applies to cryptocurrencies. Again, property tax treatment is not entirely inappropriate, but the following regulations are insufficient for cryptocurrencies.

Due to the insufficiencies, the IRS is in the process of issuing new guidance on how cryptocurrencies are treated. For instance, two months into writing this paper, the IRS released Revenue Ruling 2019-24. The ruling answered some concerns regarding the consequences of hard forks and airdrops. A discussion of Revenue Ruling 2019-24 will be included in the discussion on including property in Gross Income. Keep in mind, due to the capricious nature of the IRS, there is a high probability the following regulations will not be entirely applicable in the reader’s current tax year.

**Gains and Losses from Property Transactions**

Consistent with all tax regulations, there are a plethora of caveats regarding how gains and losses from property are taxed. The central focus of the explanation will cover the basic mechanisms of the tax code as it pertains to property transactions. This includes the computation and reporting of gains and losses, deriving tax liabilities from those gains and losses, and the inclusion of gains and losses in the Gross Income of individuals and corporations.

**Computation of gains and losses.** Under IRC § 1001(a), “The gain from the sale or other disposition of property shall be the excess of the amount realized therefrom over the adjusted basis provided in Section 1011 for determining gain, and the loss shall be the excess of the adjusted basis provided in such section for determining loss over the amount realized”. What is meant by *amount realized* and *adjusted basis*?
According to IRC § 1001(b), the amount realized is the total amount of money received in addition to the fair market value of additional property received. For instance, if one receives $3,000 cash in addition to a bitcoin with a fair market value of $10,000, the amount realized on the transaction would be $13,000. Furthermore, assumptions of liabilities are included in the amount realized. For example, if Company A assumed Company B’s outstanding debt of $15,000 in exchange for property, Company B’s realized gain would be the $15,000 of debt relief. Essentially, anything of monetary value received in a transaction is included in the amount realized.

Adjusted basis, on the other hand, is defined under IRC § 1012 as the cost of acquiring property. Simply put, if one paid $3,000 for one bitcoin, then the adjusted basis would be $3,000. The taxpayer must assign the appropriate cost basis to each unit of cryptocurrency owned. Other considerations to adjusted cost basis apply to property that is not purchased directly, such gifts or inheritance. Regulations concerning these transactions are outside the scope of this paper but can be found in IRC § 1015.

Another important term to consider in the computations of gain or loss is realized gain or loss, which is the difference between the adjusted cost basis and the amount realized per IRC § 1001(a). Recognized gain or loss is ultimately the amount a taxpayer reports to the IRS. For example, a bitcoin transaction where the amount realized is $13,000 and the adjusted cost basis of the bitcoin transferred is $3,000 would result in a realized gain of $10,000 ($13,000 Realized Gain - $10,000 Adjusted Cost Basis). Conversely, a bitcoin transaction where the amount realized is $10,000 and the adjusted cost basis of the property transferred is $13,000 would result in a realized loss of $3,000 ($10,000 Realized Gain - $13,000 Adjusted Basis). That is the
general process for calculating gains and losses on property transactions, and thus bitcoin transactions.

**Deriving the tax liability from gains and losses.** Once recognized gain or loss is computed, the taxpayer begins a multistep process to determine the tax liability on the transaction. The steps of doing so are summarized as follows: (1) determine the character of the gain or loss and classify it as short-term or long-term; (2) follow netting process of all gains and losses incurred during tax year; and (3) report gains and losses on appropriate tax files. Again, this process contains many caveats and special considerations. The discussion will be focused on the general applicability of the current tax code to cryptocurrencies.

When the recognized gain or loss is known, the taxpayer must determine its character as capital or ordinary. Capital gains result from the sale of capital assets. According to IRC § 1221, capital assets are all assets except for a list of six that are classified as ordinary. Suffice it to say, cryptocurrencies are not included on this list and therefore are capital assets. Once it is determined that the gain or loss resulted from a capital asset transaction, the taxpayer must determine whether there is a **long-term** or **short-term** capital gain or loss. According to IRC § 1222, long-term capital gains (LTCG) or losses (LTCL) result from transactions where the capital asset exchanged was held for over one year, and short-term capital gains (STCG) or losses (STCL) result from transactions where the capital asset exchanged was held for one year or less.

Once the taxpayer classifies his/her capital asset transactions as LTCG, LTCL, STCG, or STCL, he/she begins a netting process. The steps of the netting process are as follows: (1) add and net all STCG and STCL together; (2) add and net all LTCG and LTCL together; and (3) if results from step 1 and 2 are opposite (i.e., one is a gain, the other a loss), then net the two
together (Internal Revenue Service, 2018). These rules are illustrated through the following example.

*Example 1:*
Imagine at year end, Tilda has a STCG of $5,000 and a STCL of $11,000. Per step 1, Tilda nets the two together and arrives at a $6,000 STCL ($5,000 - $11,000). Continuing to step 2, Tilda nets any LTCG against any LTCL. Tilda also has a LTCG of $7,000 and no LTCL. Since the results from steps 1 and 2 are opposite, Tilda proceeds to step 3 and nets the two together and arrives at a LTCG of $1,000 ($7,000 - $6,000).

Notice that the $1,000 is a long-term capital gain. This is because the LTCG was greater than the STCL. If the STCL was greater than the LTCG, the taxpayer would have a STCL. These are the basic steps of the netting process for capital gains and losses.

*Tax liability for flow-through entities and individuals.* The tax treatment for capital gains and losses varies between entity types (e.g. flow through entities, individuals, and C corporations). Flow-through entities are business formations whose Net Income is apportioned to the individual owners for taxation. Entities such as sole proprietorships, partnerships, limited liability companies (LLCs), and S corporations do not directly pay taxes on their Net Income. Instead, they pass the burden to the individual owners in proportion to their share of the company, hence the name flow-through entity (Rupert et al., p. 1-16). These flow-through entities follow the netting process described earlier and pass any LTCG, STCG, STCL, or STCG to the individual owners on a K-1 form (Rupert et al., p. 23-4). The individual owners then take any gain or loss from the K-1 and go through same netting process again with any other capital
gains or losses they incurred from other activities. Once this is complete, the appropriate tax rate can be determined.

Tax rates are determined by Taxable Income. Taxable Income, according to IRC § 63, is Gross Income minus allowable deductions (e.g., standard or itemized deductions). According to IRC § 61(a)(3), Gross Income means all income from whatever source derived, including gains from dealings in property. Therefore, net short-term capital gains are included in Gross Income, which is taxed at marginal rates after allowable deductions. However, net long-term capital gains from cryptocurrency transactions are separated from Gross Income and are taxed at preferential rates. A summary of marginal and preferential tax rates for single individuals is shown on the following table (Rupert et al., p. Q-1).

### Exhibit 2

<table>
<thead>
<tr>
<th>Marginal Rate</th>
<th>Taxable Income</th>
<th>Preferential Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>39.6%</td>
<td>More than $406,750</td>
<td>20%</td>
</tr>
<tr>
<td>35%</td>
<td>Over $405,105 and up to $406,750</td>
<td></td>
</tr>
<tr>
<td>33%</td>
<td>Over $186,350 and up to $405,100</td>
<td>15%</td>
</tr>
<tr>
<td>28%</td>
<td>Over $89,350 and up to $186,350</td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td>Over $36,900 and up to $89,350</td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td>Over $9,075 and up to $36,900</td>
<td></td>
</tr>
<tr>
<td>10%</td>
<td>Up to $9,075</td>
<td>10%</td>
</tr>
</tbody>
</table>

An individual’s Taxable Income is affected by net losses. Net short-term and net long-term losses may be deducted from an individual’s gross income, but the deduction is limited to $3,000 per tax year (IRC § 1211). Per IRC § 1212(b)(1), any excess loss is carried over to the
next year. It is vital taxpayers keep record of the classification of the loss deducted, i.e. short-
term or long-term. The classification of the loss will affect next year’s netting process. Carryover
STCL are first netted against any current STCG, while carryover LTCL are first netted against
any current LTCG (Internal Revenue Service, 2018). Capital gains and losses are reported on
Schedule D for all entities, along with form 8949. Ordinary gains and losses are generally
reported on Form 4797 for all entity types.

**Tax liability for corporations.** Although the netting process is the same, capital gain and
loss tax treatment for C corporations is different than the treatment for individuals and flow-
through entities. The main tax difference is this: Net Income of a C Corporation is taxed first at
the corporate level, and then again at the individual level when the income is distributed to
owners. This is commonly referred to as *double taxation*. Additionally, C Corporations do not
have the benefit of using preferential rates for LTCGs: all income is taxed at a flat 21 percent
(“Forming a Corporation”, 2019). The last tax treatment difference related to capital gains and
losses can be found in IRC § 1212(a)(1), which states that C corporations cannot deduct any net
capital losses from Gross Income—they may only offset capital losses against capital gains. Any
unused losses can be carried back three years or forward five years to offset capital gains. If a
loss is carried back, the C Corporation requests a refund from the IRS for that tax year. Pursuant
to IRC § 1212(a)(1)(A)(ii), carry-backs cannot create an operating loss in a prior period (nor can
any capital loss). Capital gains and losses are reported on Corporate Schedule D attached to
Form 1120; ordinary gains and losses are generally reported on Form 4797 for C Corporations.

**Reporting Property Earned from Goods and Services**

Notice 2014-21 also covers the tax implications of receiving cryptocurrencies for goods
or services (Aqui, p. 3). If cryptocurrency is received in exchange for goods or services, it is
included in Gross Income on Form 1040 and is taxed at marginal rates. Notice 2014-21 states that the amount to report in Gross Income should be the fair market value of the cryptocurrency on the date it was received (Aqu, p. 3). Notice 2014-21 advised taxpayers to determine the fair market value of virtual currencies by using the exchange rate listed on an exchange site that is established by market supply and demand (Aqu, p. 3). There are several exchange sites available, and it is the taxpayer’s burden to find a reasonable and consistent method in determining the fair market value in USD (Aqu, p. 3).

The most common way one earns cryptocurrency as compensation for services is through mining. Mining can be done as an individual, or as an employee. According to Notice 2014-21, if the mining is done at the individual level, the net earnings are subject to the self-employment tax of 15.3% in addition to income tax. The 15.3% self-employment tax is made up of Social Security (12.4%) and Medicare (2.9%) (Rupert et al., p. 14-8). Generally, self-employed taxpayers may take a deduction equal to 7.65% (half of 15.3%) (Rupert et al., p. 14-8) from their self-employment income before calculating their self-employment tax liability. Consider the following example:

**Example 2:**

Gwyneth is a self-employed bitcoin miner. On November 13, 2019, she earned 1 bitcoin for recording a transaction. Gwyneth determined the fair market value of this bitcoin on November 13\textsuperscript{th}, 2019 be $8,735 by using Coindex, an exchange site based on market supply and demand. Gwyneth must report the $8,735 as business revenue. For 2019, her marginal tax rate is 28%. Thus, for the $8,735 earned on November 13, she must pay $2,446 ($8,735 \times 28\%) in income taxes. Gwyneth must also pay an additional self-
employment tax approximately equal to $1,234 \[15.3\% \times (8,735 - (8,735 \times 7.65\%))\].

Gwyneth’s total tax liability on the $8,735 bitcoin is roughly $3,682 ($1,960 + $1,234).

If the mining occurs through employment, then any cryptocurrency earned as wages is subject to federal income tax withholding and must be reported on Form W-2 (Aqui, p. 4). Social Security and Medicare are withheld from an employee’s wages and paid by the employer, so employees do not need to calculate the Self-Employment tax described in the previous example (Rupert et al., p. 14-8).

**Revenue Ruling 2019-24.** Further guidance on including cryptocurrencies in Gross Income was provided on October 9, 2019. On this date, the IRS clarified its stance on airdrops and hard forks in Revenue Ruling 2019-24. In the ruling, the IRS answered the following questions: (1) Does a taxpayer have Gross Income as a result of a hard fork of a cryptocurrency the taxpayer owns if the taxpayer does not receive units of a new cryptocurrency? (2) Does a taxpayer have Gross Income as a result of an airdrop of a new cryptocurrency following a hard fork if the taxpayer receives units of new cryptocurrency? The Revenue Ruling 2019-24 considers the two following situations to illustrate the application of the law:

**Situation 1:** [Taxpayer] A holds 50 units of Crypto M, a cryptocurrency. On Date 1, the distributed ledger for Crypto M experiences a hard fork, resulting in the creation of Crypto N. Crypto N is not airdropped or otherwise transferred to an account owned or controlled by [Taxpayer] A.
Situation 2: [Taxpayer] B holds 50 units of Crypto R, a cryptocurrency. On Date 2, the distributed ledger for Crypto R experiences a hard fork, resulting in the creation of Crypto S. On that date, 25 units of Crypto S are airdropped to [Taxpayer] B’s distributed ledger address and [Taxpayer] B has the ability to dispose of Crypto S immediately following the airdrop. [Taxpayer] B now holds 50 units of Crypto R and 25 units of Crypto S. The airdrop of Crypto S is recorded on the distributed ledger on Date 2 at Time 1 and, at that date and time, the fair market value of [Taxpayer] B’s 25 units of Crypto S is $50. [Taxpayer] B receives the Crypto S solely because [Taxpayer] B owns Crypto R at the time of the hard fork. After the airdrop, transactions involving Crypto S are recorded on the new distributed ledger and transactions involving Crypto R continue to be recorded on the legacy distributed ledger.

Per Situation 1, the applicable rule of law is IRC § 61(a)(3), which states that Gross Income means all income from whatever source derived, including gains from dealings in property. Revenue Ruling 2019-24 states, “Under § 61, all gains or undeniable accessions to wealth, clearly realized, over which a taxpayer has complete dominion, are included in Gross Income”. In Situation 1, Taxpayer A does not have undeniable accessions to Crypto N because it was not airdropped into Taxpayer A’s account. Therefore, Taxpayer A does not have Gross Income to report as a result of this event. Per Situation 2, Taxpayer B does have accession to wealth and thus has ordinary income in the taxable year in which the Crypto S is received. Per IRC § 1012, since Taxpayer B did not purchase Crypto S, the amount included in Gross Income should be its fair market value of $50. Though giveaways were not explicitly mentioned in Revenue Ruling 2019-24, it can be inferred from IRC § 61 that giveaways would also be
included in Gross Income in an amount equal to the Fair Market Value as of the date the taxpayer has complete dominion over it.

**Penalties**

If the taxpayer underreports or uses an inconsistent method to record virtual currency transactions, then the taxpayer is subject to penalties. Notice 2014-21 warned that underpayment on cryptocurrency transactions based on inaccurate reporting is subject to penalties under IRC § 6662, which adds 20 percent of the portion of the underpayment to the tax liability (Aqui, p. 6). Additionally, if cryptocurrency transactions are not reported in a timely manner (i.e., past the taxpayer’s due date), then the taxpayer incurs a penalty of $250 pursuant to IRC § 6721. The IRS has been pursuing potential taxpayers for these penalties. On July 26, 2019, the IRS sent out 10,000 warning letters to suspected bitcoin-tax-evaders (Saunders, 2019).

**Suggested Revisions**

Such penalties and warning letters are excessive because the tax treatment previously described does not provide sufficient guidance to cryptocurrency holders, or their tax professionals. The IRS needs to consider both the property and currency characteristics of cryptocurrency in order provide a better infrastructure for reporting. Though cryptocurrencies are used as investments, they are also (by the IRS’s own admission) a medium of exchange, unit of account, and/or store of value—the exact definition of a currency. Therefore, strictly classifying convertible cryptocurrencies as property will cause significant confusion when holders report taxes.

The issues that warrant immediate attention are as follows: realization of immaterial gains and losses; specific identification of each cryptocurrency token; and the ambiguity of reasonable methods of determining fair market value. Countries with comparable tax codes have
considered problems that arise in day-to-day transactions when implementing tax guidance for virtual currency. Tax consequences previously described but not addressed in this section are considered adequate. Additionally, the American Institute of Public Accountants have sent the IRS suggestions on how to address all the proceeding issues. The following section will suggest revisions to the current treatment based on the practices of the United Kingdom and Australia, as well as the comments from the AICPA.

**Immaterial Gains and Losses**

Though millions of people around the world hold cryptocurrencies for investment, an increasing amount of businesses are accepting them as a valid payment method for small transactions. According to Forbes magazine, several businesses have officially accepted bitcoin and other popular cryptocurrencies as valid payment methods. Some of these businesses, as of May 13, 2019, include: Barnes & Noble, Baskin Robbins, Bed Bath & Beyond, Caribou Coffee, Crate & Barrel, Express, GameStop, Jamba Juice, Lowe’s, Nordstrom, Office Depot & OfficeMax, Petco, Regal Cinemas, Ulta Beauty, Starbucks, and Whole Foods (Castillo, 2019). This widespread acceptance might lead to the further use of bitcoins and other cryptocurrencies in day-to-day transactions, which presents a taxation issue because gains and losses must be calculated on every transaction due to the IRS’s decision to classify cryptocurrencies as property.

To summarize the current property treatment, if the basis of the cryptocurrency used in a transaction is less than the fair market value of goods received, then the taxpayer must report a gain at the end of the year. The same is true for any losses, if the basis of the cryptocurrency exchanged was less than the fair market value of the goods received. Keeping track of every immaterial gain or loss is cumbersome for taxpayers. Example 3 below illustrates this issue:
Example 3:

Owen purchases a cup of coffee from Starbucks worth $5 with a fraction of a bitcoin worth the same amount. Owen purchased this portion of the bitcoin two years ago for $2. Owen is receiving $5 worth of goods (coffee) for bitcoin with an adjusted basis of $2, so he has a taxable gain of $3. Under current tax law, Owen is obligated to report this gain at the tax year end.

Every time Owen makes a purchase with bitcoin, he must determine whether he realized a gain or loss. This is as absurd as recognizing immaterial gains and losses on foreign currency exchanges. To illustrate, consider the example below:

Example 4:

Luke must travel from the United States to the United Kingdom for a business trip. When Luke arrives, the exchange rate is $1.29 per £1.00. He goes to an ATM in the United Kingdom and converts $129 to £100. Luke ends up spending all his time in meetings and does not spend any of the £100 he purchased. When Luke travels back to the United States, the exchange rate fluctuates to $1.35 per £1.00. Luke converts his £100 back to US Dollars and receives $135. Thus, Luke realized a gain of $6 ($135 Proceeds - $129 Cost Basis).

According to IRC § 988(a)(1)(A), in general, any gain or loss realized from a foreign currency transaction is treated as ordinary income. The IRS understands this is impractical legislation when it comes to immaterial gains realized from foreign currency transactions, such as Luke’s $6
gain in the previous example. To accommodate taxpayers, the *de minimis* election was created. The *de minimis* election is found under IRC § 988(e), which dictates that no gain shall be recognized on a foreign currency transaction if the amount that would be recognized is less than $200. If this rule did not exist, Luke’s $6 gain would be included in ordinary income, subject to marginal tax rates.

Notice 2014-21 explicitly states that cryptocurrency is not treated as currency that could generate a foreign currency gain or loss, thus the *de minimis* election does not apply (Aquí, p. 2). Considering the increased acceptance of bitcoin as a medium of exchange for small purchases, such as buying Starbucks coffee, there will be an increase in immaterial gains realized amongst the growing cryptocurrency community. Expecting taxpayers to keep record of and report these gains is unrealistic and infeasible in the same way it is to expect taxpayers to keep record of and report small gains from foreign currency exchanges. Due the similar nature of this situation to gains realized on foreign currency fluctuations, the IRS should allow the same *de minimis* rule for cryptocurrencies as it currently applies to foreign currencies. It is suggested that a *de minimis* rule be created for cryptocurrencies.

In their 2018 letter to the IRS, the AICPA made a recommendation to implement a *de minimis* election (Nellen, p. 5). Their reasoning for the suggestion was the same as previously exemplified: some taxpayers use small amounts of cryptocurrencies for day-to-day purchases (Nellen, p. 5). As further support, countries with comparable tax codes (United Kingdom and Australia) have made allowances for immaterial gains.

**Other countries.** The United Kingdom is currently working towards a practical tax framework for cryptocurrencies. Like the United States, residents in the United Kingdom pay taxes on capital gains recognized; they also pay income taxes on cryptocurrency received from
mining, or from selling goods/services (Johnson, 2018). Unlike the United States, the United Kingdom allows a \textit{de minimis} election on cryptocurrency transactions that are less than £11,700 (Clark, p. 74). This election is limited if the taxpayer sells up to four times the annual allowance of cryptocurrency, even if the profit made is less than £11,700 (Johnson, 2018). In other words, if a taxpayer sells £46,800 (£11,700 x 4) worth of bitcoin, the taxpayer must report the transaction even if the cost basis results in a realized gain less than £11,700. This \textit{de minimis} allowance is quite generous, considering the United States tax code expects taxpayers to report foreign currency gains over $200 in ordinary income.

Australia also has a generous allowance for reporting gains realized on cryptocurrency transactions. Australia allows a tax reporting exception for gains realized on \textit{personal use assets}. A personal use asset is any asset that is not kept or used: as an investment, in a profit-making scheme, or in the course of carrying on a business (Vangapally, 2018). If Owen was an Australian resident in Example 3, he would not have to recognize any gain or loss because the coffee he purchased was not being used as investment, was not used in a profit-making scheme, nor was it used in the course of carrying on a business. This is extremely flexible compared to the current tax code in the United States.

The United Kingdom and Australia have proven the feasibility of a flexible tax code when it comes to immaterial gains realized from cryptocurrency transactions. It is not unreasonable to suggest a $200 \textit{de minimis} election to the IRS when a £11,700 \textit{de minimis} is effect in the United Kingdom, and the broad nonrecognition rule for personal use assets is allowed in Australia. It is simply impractical to enforce capital gain treatment on transactions that result in gains that are less than $200. The allowance of a \textit{de minimis} election for cryptocurrencies requires the immediate attention of the IRS.
Issues with Specific Identification

Another issue that requires immediate attention is the requirement to specifically identify the basis of each cryptocurrency. This is due to the somewhat homogeneous nature of cryptocurrencies. Bitcoins, for example, are similar to banknotes. Banknotes all look the same but have unique serial numbers (Stroukal, p. 45). Bitcoins all look the same, but the transaction details recorded in blockchain enable users to specifically identify each one. Although it is possible to specifically identify a bitcoin, it is particularly cumbersome because taxpayers would have to take the time to decipher the transaction information to identify the particular bitcoin one is spending.

**FIFO Method.** The same problem exists in stock exchanges. Stocks of the same company are also homogeneous in nature. Although it is possible to specifically identify a particular stock, the procedure is cumbersome. To cope with this issue for the sale of securities, Reg. Se. 1.1012-1(c)(1) allows the First in First Out (FIFO) method. The FIFO method simply assigns the cost basis of the oldest purchase to the newest transfer. For example, if a taxpayer owns sixty shares of Microsoft and decides to sell one but does not identify the cost basis associated with that specific share, then the adjusted cost basis for the first share the taxpayer purchased is assumed.

The AICPA mentioned this issue in their letter to the IRS (Nellen, p. 4). Their recommendation was to allow the FIFO method for cryptocurrency transactions. Considering the support of the AICPA, and the fact that this method is allowed for the sale of securities, it is suggested that the IRS apply the same FIFO method allowed for securities under Regulation § 1.1012-1(c)(1) to cryptocurrencies. By doing this, the IRS will create a framework that will
allow cryptocurrency holders to report their transactions with greater ease than what is currently required of taxpayers—specific identification.

**Consistent Valuation Method**

Consider the tax consequences of Gwyneth from Example 2. According to Notice 2014-21, the bitcoin should be reported as income at an amount equal to the fair market value as of the date received, November 13, 2019. There are several exchange sites established on market supply and demand available to Gwyneth. In Example 2, Gwyneth used Coindex and determined the fair market value to be $8,735. Gwyneth could have used any number of exchange sites to determine the value, so long as she consistently uses the same method of determination for all bitcoins earned as income. As seen in the figure below, all exchange sites record different exchange rates.

**Exhibit 3**
The IRS has not provided any guidance for a reasonable valuation method; they place this burden on the taxpayer. Acknowledging the differences in valuation only ranges from $8,735 to $8,760 in the figure above, these small differences will have a major impact on tax revenue when spread over the mining community. The exact number of miners is unknown, but there are an estimated 1,000,000 Bitcoin miners currently earning the cryptocurrency as income ("How Many Bitcoins", 2019). Considering this projected number of miners is substantial enough to make an impact for minor differences, the IRS needs to provide guidance as to what they mean by reasonable. It is unwise to leave this responsibility to the interpretation of 1,000,000 individuals. The lack of structure in this area dilutes the importance of reporting cryptocurrency as income. Furthermore, tax compliant miners are likely to consistently apply different reasonable manners from one another. This will increase the difficulty in determining the accuracy of tax returns. For these reasons, the IRS should issue detailed guidance as to what constitutes a reasonable manner. In this guidance, the use of averages should be required.

The AICPA advocates that taxpayers should be allowed to use an average of different exchanges, so long as the method for calculating the average is consistent (Nellen, p. 2). They also suggested allowing taxpayers to use the average rate for the date of exchange (Nellen, p. 2). This eliminates the issues in determining fair market value when the price of cryptocurrencies suddenly fluctuate, which has occurred as recently as July 18, 2019 when the price of one bitcoin surged 13 percent in one hour (Bovaird, 2019). It is agreed that this daily average be included in future guidance from the IRS.

**Conclusion**

The dual nature of cryptocurrency demands special tax treatment. Bitcoin’s original intent was to become a digital-cash system. However, its volatility has inspired many to use it as
an investment, which has forced the IRS to classify it as property for tax purposes. The basic property treatment for large gains and losses are appropriately applicable to cryptocurrencies, though special considerations such as a de minimis election, FIFO method, and consistent valuation methods need to be developed to accommodate the unique nature of the new asset. Though the future of the most popular cryptocurrency (Bitcoin) is uncertain, its revolutionary blockchain technology has provided an infrastructure for future developments in digital cash. Therefore, it is imperative these suggestions are heeded so a consistent and reliable tax code for reporting cryptocurrency transactions can be developed.
Works Cited


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