When Virtual Reality Becomes Real: Taxation of CryptoCurrencies

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Introduction

For ages, societies have used a recognized standard to exchange goods and services. From grain used by the Egyptians, cowrie shells used by the Chinese, to gold and precious metal used throughout the middle ages and beyond, members of different civilizations have understood the value of an accepted and reliable medium of exchange. The idea of using a standardized coinage as money is not a new concept. Within the last several years, however, tech-savvy citizens have begun to develop an entirely new form of currency; one that is based on nothing more than a computer algorithm. This currency, called “cryptocurrency,” has the potential to significantly affect the way transactions are conducted. This phenomenon raises interesting tax issues that the Internal Revenue Service must address. Part I of this paper describes the mechanics of this math-based currency, and Part II analyzes the current regulatory scheme used to govern the currency. Part III turns to the IRS’ current position on tax treatment of cryptocurrencies, Part IV explores alternative treatment options under the current tax code, and Part V considers the possibility of developing an entire new code section to deal with cryptocurrencies. Ultimately, this paper concludes that the IRS’ current position is not consistent with desirable tax policy, and therefore a new option should be considered.

I. What Are Cryptocurrencies, and Do We Need Them?

A cryptocurrency is a medium of exchange using cryptography to secure transactions and to control the creation of new units of cryptocurrency. While Bitcoin has emerged as the most pervasive and widely used cryptocurrency, 530 types of cryptocurrencies were in circulation as of November 2014. Two key features define cryptocurrencies: they are not issued by any central
authority or government, and they do not require a third party intermediary to transfer them between two users. Accordingly, governments theoretically cannot manipulate or interfere with the creation and transfer of cryptocurrencies.

To understand how users transact in cryptocurrencies, one should compare a unit of cryptocurrency to a unit of traditional currency, such as a dollar bill. For example, if one wishes to buy an item on Overstock.com, which accepts bitcoins, one must simply pay the number of bitcoins equal to the price of the item in dollars on the day that they purchase the item. If Overstock.com charges $1,000 for the item, and one bitcoin is worth $500 on the day the buyer purchases the item, then the buyer will pay two bitcoins to purchase the item.

To understand how cryptocurrencies are initially created, however, it is easier to imagine a unit of cryptocurrency as a nugget of a precious stone, such as gold. Bitcoins are created in a process called “mining.” Perhaps the most unique feature of cryptocurrencies is a public ledger, called the “blockchain,” that creates a decentralized recording system for all ownership and transfer of the cryptocurrency. For the Overstock bitcoin transaction to take place, it must be verified by a miner by solving a complex cryptographic algorithm which then records the transaction on the public blockchain. Every time a miner solves the algorithm, the blockchain software rewards the miner with a new batch of bitcoins. This process ensures that the transaction actually occurred and that it did not involve double spending of a particular bitcoin. Conceptually, one can imagine the process as high-tech computers that “dig” down into the computer code to solve the algorithm, which becomes more complex every time a new batch of bitcoins is rewarded, to discover the new set of bitcoins. Like mining for gold, miners compete with each other to solve the algorithm, with the first miner to solve the algorithm receiving the reward. Because it takes an immense amount of computing power to solve the algorithm, miners
will often pool their computing power and then split the reward when they successfully solve the algorithm.\textsuperscript{6}

Once miners create new bitcoins, the bitcoins can be used, sold, or transferred in a manner similar to that of traditional currency. Each bitcoin is uniquely identified by a computer code string and is stored in the owner’s “wallet.”\textsuperscript{7} Anyone can see a bitcoin user’s balance as it is associated with a public address, but to complete a transfer, the owner of the bitcoin must approve the transaction by using a private key.\textsuperscript{8} While the blockchain records all transactions that occur on a completely public ledger using the technology, the public ledger registers only IP addresses and is otherwise anonymous, like cash.\textsuperscript{9} Because the public ledger is anonymous, if a user loses the unique code strings that identify his or her bitcoins, the user loses the bitcoins.\textsuperscript{10} The transacting parties do not even need to know the other party’s identity to complete a transaction; they need to know only the public code string and the private keys associated with the bitcoins.\textsuperscript{11} These transactions can occur instantly from any location that has Internet access across the globe.

Users can store their bitcoin accounts in digital wallets on their desktop, in a paper file, using an app on their phone, or on an online wallet.\textsuperscript{12} Each method of storage faces potential risks. If stored on a desktop computer or in a paper file, bitcoins could be lost, destroyed, or stolen if the computer crashes, the paper file burns, or the computer or paper file is stolen. If stored in an online wallet, which is controlled by an online bitcoin exchange, the third party exchange could steal the bitcoin wallets or the exchange could be hacked, causing theft of the bitcoin wallets. Online bitcoin exchanges have in fact already been hacked multiple times, the most famous example being the Bitcoin Exchange MtGox. In late February of 2014, MtGox
exchange was closed after it was rendered insolvent due to a multi-year hack.\textsuperscript{13} Due to the hack, the exchange lost nearly 850,000 bitcoins worth approximately $450 million at the time.\textsuperscript{14}

The Bitcoin protocol, the blockchain, must not be confused with the individual unit of bitcoin, which is most analogous to a unit of currency. Bitcoin refers to the technology, while bitcoin indicates the virtual currency that is created and rewarded by the technology.\textsuperscript{15} The Bitcoin technology currently allows mining a new batch of bitcoins only every ten minutes, and the technology caps the total number of bitcoins that will be created at twenty-one million.\textsuperscript{16} This Bitcoin technology, however, potentially offers countless new applications in the future that do not involve the creation of bitcoins. The technology itself could be used for a range of financial tasks currently handled by banks, exchanges, e-commerce providers, and other middlemen.\textsuperscript{17} The technology could be used to hold digital title to property and create smart, automated contracts across borders, digital stocks and bonds, digital insurance, and many others.\textsuperscript{18} One commentator has stated that potential future uses of the blockchain technology will be limited only by the imaginations of the innovators.\textsuperscript{19} The blockchain, which allows for trustless transactions, could potentially replace anything that currently requires a third party intermediary.\textsuperscript{20}

Despite the MtGox security scandal and regulatory uncertainty, bitcoin remains a global phenomenon.\textsuperscript{21} In 2013, bitcoin rose from a value of $13 to over $1,000.\textsuperscript{22} The bitcoin price index has hovered between $300-$400 between April and November of 2014.\textsuperscript{23} The Bitcoin technology has been touted as revolutionary as the Internet in the 1990s.\textsuperscript{24} While people unfamiliar with cryptocurrencies often do not comprehend initially how cryptocurrencies can have any value given that they are not backed by any government, the answer as given by any valuation expert is that value is determined for almost any item based solely on a person’s perception of the item. A vintage, original edition baseball card of Jackie Robinson may be
worth a fortune to an avid collector but worth almost nothing to a disinterested individual. Certainly, a cryptocurrency poses increased risks because it is not backed by any government, but so long as potential users view it favorably as a medium of exchange, a unit of account, or a store of value, then it will continue to remain a valuable asset. However, it is distinct from the baseball card in one key aspect regarding value: the baseball card still contains some amount of intrinsic value, however small, while a unit of bitcoin has no intrinsic value whatsoever and derives its value solely from its use to pay for things (i.e. act as a medium of exchange) or to store value that investors have placed in it.

One valid question that many skeptics currently pose concerns whether cryptocurrencies are necessary at all. This discussion is outside the scope of this paper, as this paper largely assumes that cryptocurrencies are helpful and will promote economic development. Given the novelty of cryptocurrencies, it is impossible at this point to definitively conclude whether cryptocurrencies are valuable. However, the general consensus seems to be that, while cryptocurrencies need continued refinement, they have a bright future full of new and exciting applications.25

II. Brief Note on Regulation and Enforcement of Cryptocurrencies

While not primarily the focus of this paper, one must understand the current regulatory schemes that monitor cryptocurrency systems to understand how they may influence the appropriate tax treatment of cryptocurrencies. The Financial Crimes Enforcement Network (FinCEN) has taken the lead on the initial regulation of cryptocurrencies. FinCEN regulations define “currency” as “the coin and paper money of the United States or of any other country that is designated as legal tender and that circulates and is customarily used and accepted as a medium of exchange in the country of issuance.”26 In March 2013, FinCEN issued FIN-2013-
G001, interpretive guidance on the application of FinCEN’s regulations to persons administering, exchanging, or using virtual currencies. While FinCEN uses the term “virtual currency,” this term encapsulates cryptocurrencies. Virtual currency is defined as “a medium of exchange that operates like a currency in some environments, but does not have all the attributes of real currency.” The interpretive guidance attempts to clarify the application of the Bank Secrecy Act to virtual currencies by defining three categories of persons dealing with virtual currencies: users, administrators, and exchangers. A user is “a person that obtains virtual currency to purchase goods or services.” An exchanger is “a person engaged as a business in the exchange of virtual currency for real currency, funds, or other virtual currency.” An administrator is “a person engaged as a business in issuing (putting into circulation) a virtual currency, and who has the authority to redeem (to withdraw from circulation) such virtual currency.”

Under the FinCEN regulations of the Bank Secrecy Act, any person or entity that constitutes a “money services business” (MSB) is subject to registration, reporting, and record-keeping requirements that have been designated as having a high degree of usefulness in criminal, tax, or regulatory investigations or proceedings. Any use of virtual currencies that the regulations classify as “money transmission services” falls under the definition of an MSB. According to the interpretive guidance, an administrator or exchanger qualifies as an MSB, while a user who obtains virtual currency and uses it to purchase real goods or services does not. Importantly, the interpretive guidance also states that “[v]irtual currency does not meet the criteria to be considered ‘currency’ under the [Bank Secrecy Act], because it is not legal tender.” Further, in two recent FinCEN rulings, FinCEN has declared that a company planning to set up a convertible virtual currency payment system and a company planning to set up a
convertible virtual currency trading and booking platform would be considered “money transmitters” and therefore would be MSBs subject to FinCEN regulations and fees.\textsuperscript{38} Several commentators have discussed the potential use of cryptocurrencies in money laundering and tax evasion.\textsuperscript{39} Specifically, a cryptocurrency’s pseudo-anonymous nature, its lack of any tie to a government or third party intermediary, and the ease of transfer across borders may appeal to those wanting to use cryptocurrencies for illegal activity. One possible response would be subjecting cryptocurrencies to the Foreign Account Tax Compliance Act (FATCA).\textsuperscript{40} Under FATCA, foreign financial institutions must identify their U.S. account holders to the IRS or risk facing a thirty percent tax on some payments from U.S. sources.\textsuperscript{41} However, without a third party intermediary to report cryptocurrency transactions, cryptocurrencies may be more difficult to track under the current regulatory scheme, despite FinCEN’s efforts to increase reporting.

The government has not published a position on whether virtual currency exchanges should be considered foreign financial institutions subject to FATCA. A recent court ruling in the Northern District of California held that certain online cryptocurrency accounts must be reported on the Report of Foreign Bank and Financial Accounts (FBAR) form,\textsuperscript{42} which could in turn suggest that online exchanges are subject to FATCA. While the IRS announced in a webinar that taxpayers would not have to report cryptocurrencies on the FBAR form for 2013, it cautioned that cryptocurrencies would likely be reportable on the FBAR form in the future.\textsuperscript{43}

Law enforcement agencies have recognized that cryptocurrencies can under some circumstances be traced more easily than cash. Because each transaction is recorded on the blockchain, a public ledger, officials can trace the IP addresses related to each transaction.\textsuperscript{44} Rebecca Sparkman, Director of Operations Policy and Support, IRS Criminal Investigation
division, stated, “It is not really anonymous, and we actually have suspicious activity reports being filed on these and we are able to trace them back to the inception of the bitcoin.”

Nevertheless, given the limited budget of the IRS and the sophistication of online tax evaders using technologies such as Virtual Private Networks (VPNs), enforcement will remain difficult. Indeed, law enforcement agents have already investigated and arrested multiple individuals who allegedly operated illegal drug trading, money laundering, and other offenses using bitcoin. For example, Ross Ulbricht, the alleged creator of a billion-dollar online drug bazaar called the “Silk Road” that exchanged bitcoin, faces criminal charges for narcotics trafficking, computer hacking conspiracy, money laundering, and other charges. In his criminal case, the court initially had to deal with the issue of defining a cryptocurrency. Ulbricht argued in a motion to dismiss that, because all transactions occurred through bitcoin, there was no legally cognizable “financial transaction” and thus he could not have engaged in money laundering. Ulbricht cited IRS Notice 2014-21, discussed infra, and the FinCEN guidance on virtual currencies, discussed supra, for support that bitcoin is not currency. Judge Katherine B. Forrest rejected this argument in her fifty-one page opinion, concluding that the money laundering statute is broad enough to encompass use of bitcoins in financial transactions. She stated, “Bitcoins can be either used directly to pay for certain things or can act as a medium of exchange and be converted into a currency which can pay for things. . . Indeed, the only value for Bitcoin lies in its ability to pay for things . . .”

III. IRS Notice 2014-21

In May of 2014, the Internal Revenue Service issued a statement regarding how it will treat transactions in cryptocurrencies. For tax purposes, the IRS chose to treat users, administrators, and exchangers of convertible cryptocurrencies equally. According to Notice
2014-21, the IRS will treat cryptocurrencies as property, subject to the taxation rules for property.\textsuperscript{50} The Notice explicitly states that virtual currency will not be treated as currency that could generate foreign currency gain or loss for U.S. federal tax purposes.\textsuperscript{51} A U.S. taxpayer who receives payment for goods or services in the form of virtual currency must include in income the fair market value of the virtual currency as of the date that the virtual currency was received, and the basis of the virtual currency is also its fair market value on the date received.\textsuperscript{52} Every time a taxpayer exchanges virtual currency, the taxpayer must compute gain or loss by comparing the fair market value of property received to the taxpayer’s adjusted basis in the virtual currency.\textsuperscript{53} As with other property, the character of the gain or loss will depend on whether the virtual currency is a capital asset in the hands of the taxpayer.\textsuperscript{54} Any taxpayer who mines virtual currency realizes gross income upon receipt,\textsuperscript{55} while the deductibility of expenses related to mining will depend on whether the taxpayer’s mining activities constitute a trade or business.

Notice 2014-21 is merely a statement of the IRS’ position and does not bind any court. Courts give deference to IRS Notices that provide “consistent and reasonable” interpretations of the existing regulatory framework.\textsuperscript{56} Deference, however, will be tempered by “inconsistent views over time and by the IRS’s failure to adopt [a] notice as a formal revenue ruling.”\textsuperscript{57} Commentators who have considered alternative treatments for convertible virtual currencies have primarily considered whether the IRS should treat them as property or as a “foreign currency” under section 988 of the tax code.\textsuperscript{58} Part IV discusses in detail the ramifications of such treatment. However, Andrew Keyso Jr., IRS associate chief counsel, opined, “I think we just were not able to [treat bitcoin as foreign currency under section 988] under current law. It is not
legal tender, it is not a widely circulated or widely used medium of exchange, at least at this point, and the office just was not comfortable treating it as a currency at this point in time.”

Under current law, however, the IRS position likely conforms to court decisions and general scholarly consensus. Several key court cases provide support for the IRS position that convertible virtual currencies are not “foreign currencies.” In *AMP, Inc. and Consolidated Subsidiaries v. United States*, the court considered persuasive the fact that Obrigacoes Reajustaveis de Tesouro National (ORTN) was not the claimed official currency of the Brazilian government in ruling that AMP, Inc. was entitled to calculate its foreign tax credit on the basis of the Brazilian currency, the “cruzeiro,” rather than calculating its tax liability on the basis of the ORTN.

AMP, Inc. is a United States corporation that owned 100% of the stock of AMP Brasil. During the tax years at issue, the Brazilian economy was in hyperinflationary conditions that decreased the purchasing power of the Brazilian cruzeiro, so Brazil adopted a decree that established an indexing system for the payment of Brazilian income taxes. Brazil based the index on the value of the ORTN treasury bonds, adjusted monthly as a function of the change in purchasing power of the cruzeiro. Brazil required companies to make tax payments in cruzeiros, but it used the ORTN index to determine how many cruzeiros must be paid to satisfy the tax liability. AMP United States claimed a foreign tax credit deemed paid for the Brazilian taxes using AMP Brasil’s accrued cruzeiro tax liabilities. AMP later filed amended returns claiming refunds by recalculating Brazilian deemed paid tax credits using the actual amount of cruzeiros that AMP Brasil paid to satisfy its tax liability under the indexing system. The IRS claimed, and the Court of Federal Claims agreed, that the tax liability should be calculated in
ORTN, not cruzeiros, because the ORTN was the “functional currency” for Brazilian tax law, and therefore there was no need for a tax liability determination. 67

The Federal Circuit reversed, stating the “Court of Federal Claims, despite finding that the ORTN was Brazil's “functional currency,” recognized that AMP's monthly tax payments were, ‘as a matter of fact, necessarily made in the common currency, cruzeiros.’ 68 Even though the Brazilian cruzeiro was fluctuating significantly, the “Brazilian Supreme Court in 1986 and 1987 specifically held that Brazil’s national currency was the cruzeiro, not the ORTN.” 69

Accordingly, the court found dispositive the fact that the cruzeiro was the official currency of a foreign government to determine the functional currency of AMP Brazil. If this case were analogized to convertible virtual currencies, an entity that claimed that the virtual currency was its functional currency would likely lose under the AMP, Inc. requirement that a functional currency be the official currency of a foreign government. However, the court did define “currency” as a “medium of exchange,” which leaves open the possibility that another court could rule that convertible virtual currencies fit this broad definition if the court doesn’t consider the primary reasoning of the AMP, Inc. court. 70

One commentator has found bitcoin to be analogous to trade units in Barter Systems of Wichita v. Commissioner, 71 which treated the trade units as property. 72 Barter Systems was a barter exchange system that issued trade units to acquire property from members. 73 Trade units were credited to members at a ratio of one trade unit per dollar of fair market value of property. 74 Barter Systems then sold property to its members for trade units, at the same price in trade units paid to the original seller of the property plus a ten percent commission. 75 Goods and services were sometimes exchanged directly between members, with a ten percent commission on those exchanges, and on occasion Barter Systems accepted cash for trade units. 76 Barter Systems
reported income in dollars only for the number of trade units received for commissions.\(^77\) The Tax Court held that this treatment was incorrect, and that even though it used trade units as its medium of exchange, the fair market value of goods received from members in exchange for trade units should have been included in Barter System’s gross income.\(^78\)

Finally, the fluctuating nature of convertible virtual currencies poses a hurdle to their treatment as a foreign currency under the amended tax code that was not in place during the years at issue in the AMP., Inc. case. Under Section 986, foreign subsidiaries operating in hyperinflationary economies must use the United States dollar as their functional currency.\(^79\) “For taxable years beginning after August 24, 1994, except as otherwise provided . . . any [qualified business unit (QBU)] that otherwise would be required to use a hyperinflationary currency as its functional currency must use the dollar as its functional currency.”\(^80\)

Hyperinflationary currency means “the currency of a country in which there is cumulative inflation during [the thirty-six calendar months immediately preceding the first day of the current calendar year] of at least 100 percent.”\(^81\)

Current law, however, does provide limited support for defining cryptocurrencies as foreign currencies rather than property. In Sec. & Exch. Comm’n v. Shavers, the Securities and Exchange Commission brought an action against Trendon Shavers, the founder of Bitcoin Savings and Trust, for defrauding investors.\(^82\) Shavers argued that the SEC lacked subject matter jurisdiction.\(^83\) In concluding that the SEC did have jurisdiction, the court stated:

It is clear that Bitcoin can be used as money. It can be used to purchase goods or services, and as Shavers stated, used to pay for individual living expenses. The only limitation of Bitcoin is that it is limited to those places that accept it as currency. However, it can also be exchanged for conventional currencies, such as the U.S. dollar, Euro, Yen, and Yuan. Therefore, Bitcoin is a currency or form of money, and investors wishing to invest in BTCST provided an investment of money.\(^84\)
IV. Alternative Treatment Options

Section A of this Part discusses foreign currency treatment under the current tax code as the primary alternative to treating cryptocurrencies as property. Section B then considers whether alternative options are available.

A. Foreign Currency

Prior to the Tax Reform Act of 1986, the tax code treated all transactions in foreign currencies as property transactions. The Tax Reform Act included Sections 985–988 of the tax code, which governs the tax treatment of foreign currencies. This Section of this paper cannot begin to describe fully and explain the requirements for foreign currency tax treatment, and an entire course could be taught on this subject. However, it will attempt to provide an overview sufficient for the reader to understand the difficulties of applying the foreign currency tax treatment provisions as currently written to cryptocurrency transactions.

Sections 985–988 do not define “currency” or “foreign currency.” IRS Revenue Ruling 74-218, issued prior to Sections 985–988, states “currency in its usual and ordinary acceptation means gold, silver, other metals or paper used as a circulating medium of exchange, and does not embrace bonds, evidences of debt, or other personal property or real estate.” Of course, the IRS was not contemplating the possibility of digital currencies in 1974. As discussed supra Part III, however, cryptocurrencies likely do not fit the current definition of a foreign currency as interpreted by the courts. Congress could amend the current code to include cryptocurrencies under foreign currency treatment. This Section discusses the tax ramifications and treatment of a foreign currency under sections 985-988 of the tax code, while Part V infra discusses policy considerations that favor treatment of transactions in cryptocurrencies as 988 transactions or
alternatively argues for the consideration of new tax treatment options for convertible cryptocurrencies.

Translation into U.S. dollars constitutes the basic principle behind tax treatment of foreign currencies. All U.S. tax liabilities must be determined and paid in U.S. dollars, and businesses that transact in foreign currencies must translate these transactions into U.S. dollars and determine foreign currency gains and losses.\textsuperscript{88} A taxpayer accounts for transactions in its “functional currency.”\textsuperscript{89} In the case of AMP Brasil, its functional currency was the Brazilian cruzeiro. For U.S. citizens, residents, and domestic corporations, the functional currency is usually the U.S. dollar.\textsuperscript{90} However, a U.S. taxpayer may use an alternative functional currency if the taxpayer has a QBU in which case the functional currency is “the currency of the economic environment in which a significant part of such unit’s activities are conducted and which is used by such unit in keeping its books and records.”\textsuperscript{91} A qualified business unit means “any separate and clearly identified unit of a trade or business of a taxpayer which maintains separate books and records.”\textsuperscript{92}

A “trade or business” under the QBU definition means a “specific unified group of activities that constitutes (or could constitute) an independent economic enterprise carried on for profit, the expenses related to which are deductible under section 162 or 212.”\textsuperscript{93} An individual’s personal transactions cannot qualify as a QBU.\textsuperscript{94} If an individual’s activities or branch of a business qualifies as a QBU, it keeps its records in its functional currency, and the transactions are not personal transactions, then it can use the tax code provisions for transactions in foreign currencies.

Taxable income or loss is computed separately for each QBU, using a profit and loss method.\textsuperscript{95} Under this method, taxable income or loss is calculated annually by translating the
income from the functional currency to U.S. dollars at the average exchange rate for the year.\textsuperscript{96} Gains and losses from exchange rate fluctuations are not recognized until a QBU branch makes a “remittance” back to the home office.\textsuperscript{97} Thus, if the QBU’s activities and earnings remain in the functional currency, then exchange rate fluctuations are never recognized.

As applied to convertible cryptocurrencies, if an individual or business kept separate books and records in the cryptocurrency, such as bitcoin, and the activity could constitute a QBU, then the cryptocurrency would be its functional currency. Any receipt of the cryptocurrency, including receipt for sale of goods or receipt through mining, would be a taxable accession of wealth. Using the cryptocurrency to purchase goods or services, however, would not be a taxable event. If the cryptocurrency were converted back into U.S. dollars, the taxpayer would need to calculate the exchange gain or loss using the profit and loss method in section 987. If the cryptocurrency were never converted back into U.S. dollars, however, then no exchange gain or loss would ever be recognized. Rather, taxable income would be calculated in the cryptocurrency, then translated into U.S. dollars using the average exchange rate.\textsuperscript{98}

Special rules apply to personal transactions in foreign currencies. Under Section 988(e)(2), gains and losses attributable to personal transactions are recognized only if in excess of $200, while no losses on personal transactions are allowed. Gains on personal transactions in excess of $200 are treated as capital gains.\textsuperscript{99}

\textbf{B. Alternative Options}

Lee Sheppard, contributing editor to Tax Analysts’ Tax Notes, opined that “tax practitioners have an annoying propensity to want to fit new financial innovations into existing boxes, like debt and equity.”\textsuperscript{100} Thus far, the current debate on tax treatment of convertible cryptocurrencies has largely been one of a potential false dichotomy, namely a consideration of
whether cryptocurrencies are property or currency. Alternatively, the answer could be that

cryptocurrencies possess characteristics of both property and currency and do not fit neatly into
either definition. Thus, it may be appropriate to develop new tax code provisions that balance the
interests of users, investors, and administrators of cryptocurrencies while comporting with tax
policy considerations of equity, economic efficiency, and administerability. One commentator
has analyzed virtual currencies generated in online games such as World of Warcraft, Second
Life, and others, and has opined that these virtual-world transactions should be taxed under the
foreign currency rules of the Internal Revenue Code, rather than drafting new rules and
regulations.101

However, these in-game virtual economies have many characteristics that distinguish
them from cryptocurrencies. Generally, they are not nearly as easily exchanged into “real world”
currency as converting a cryptocurrency into a U.S. dollar. Cryptocurrencies can already be used
to purchase “real world” goods and services, while virtual game currencies generally must first
be converted into actual currency before they can be used to purchase goods and services. Virtual
in-game currencies do not offer the transactional ease of cross-border purchases that
cryptocurrencies provide due to a secure, trustless transaction system using a public ledger that
doesn’t require a third party intermediary. Currently, the investment function of the
cryptocurrency dominates as cryptocurrencies are still in the early stages of acceptance and
development. Over time, however, it is likely that the use as a medium of exchange will expand
significantly, given the unique characteristics of convertible cryptocurrencies and the investment
purpose will become significantly less valuable as cryptocurrencies stabilize.

V. How Should Cryptocurrencies be Treated?

Ultimately, the question this essay poses is simple: how should the tax code treat
convertible cryptocurrencies? Specifically, do the characteristics of cryptocurrencies make them more like property, more like currency, or are they so unlike anything existing to date that the tax code should create a new category of pseudo-property, pseudo-currency instruments with their own tax implications? To answer this question, one must consider the underlying policy considerations that will help determine how cryptocurrencies should be treated to best comport with our understanding of horizontal and vertical equity, economic efficiency, and administerability. “In general, a tax system or provision should be equitable, result in minimal deadweight loss, and be possible for the government to implement and enforce.” While liquidity or the ability-to-pay principle may sometimes influence policy considerations, given that cryptocurrencies are generally easily exchangeable for real currency, this policy consideration does not play an important role in the analysis. This Part will argue in Section A that policy considerations weigh against treatment of cryptocurrencies as property and in Section B that treatment as foreign currency would address some but not all of the policy concerns. Section C will conclude that the current foreign currency rules should be amended or a new code provision developed and will provide suggestions regarding important components of a new code section.

A. Why Tax Policy Considerations Disfavor Treatment as Property

Currently, cryptocurrencies are purchased, sold, mined, or used largely for investment purposes. The average person is not using cryptocurrencies to purchase goods and services. Only a limited number of merchants currently accept cryptocurrency as a form of payment. Due to the current fluctuating nature of cryptocurrencies and their limited use as a medium of exchange to date, the IRS has determined that their current characteristics support treatment as property. Additional support for this position is provided by case law and currency definitions that require
government backing to be considered currency under the theory that a currency must be legal
tender for purposes of the tax code to get treatment as a foreign currency. However, this Section
argues that the investment purpose should not dominate the tax policy discussion when
considering treatment of cryptocurrencies, that economic and administerability considerations
disfavor treatment as property, and that critics’ economic arguments against currency-like
treatment can and have already begun to be alleviated as bitcoin continues to stabilize and
become more widely accepted.

If cryptocurrencies were merely another new investment instrument, taxation as property
may be appropriate. However, their future economic value derives primarily from the potential
use as a medium of exchange to facilitate fast, cross-border transactions with low transaction
costs. If cryptocurrencies did not have this use as a medium of exchange, they would essentially
have no real economic value, and encouraging investment in them would be merely a diversion
from more productive uses of funds. Without a cryptocurrency’s use as an efficient medium of
exchange, investors are merely investing in a string of computer code. The Bitcoin technology
itself has potential economic value, but an investor is not investing in the technology when he or
she purchases bitcoins; he or she is investing in the digital currency. Investments in the
technology can already be easily handled under current taxation laws of securities. Thus, the
investment purpose should not drive policy considerations of taxation.

Further, it is entirely conceivable that, over time, cryptocurrencies will become less
valuable as investments as they begin to stabilize in price. If cryptocurrency prices were
relatively stable, then investors would have little incentive to invest in cryptocurrencies, as
currently the attractiveness of investing in cryptocurrencies rests on the possibility of high
returns on investment. Given that they are not and never will be backed by any government,
Cryptocurrencies will always remain a higher risk investment than traditional currency backed by stable governments, so dwindling rates of return due to reduced fluctuations in price will significantly undermine their value as investments as the return/risk ratio continues to decrease.

To the maximum extent possible, income tax laws should promote economic efficiency and promote productive uses of scarce resources to increase the total economic output of an economy. Any regulatory framework regarding cryptocurrencies, including tax treatment that is a significant form of regulation, should target negative traits of cryptocurrencies while allowing positive traits to flourish. Treating cryptocurrencies as property for tax purposes violates this principle. The primary positive traits of cryptocurrencies include potential use as an efficient medium of exchange with low transaction costs, the immunity from central reserve bank price manipulation, and the ability to conduct transactions without revealing identity or knowing the other party, due to the trustworthiness of the computer algorithm verification system. Investment in cryptocurrencies merely to take advantage of price fluctuations does not contribute significantly to increasing total economic output. Thus, tax considerations should reflect and promote its use as a medium of exchange while controlling its somewhat arbitrary investment value.

Specifically, property treatment subjects every single cryptocurrency transaction to reporting and recordkeeping to calculate gain or loss on each transaction. Therefore, the everyday user who decides to make all purchases in bitcoin for groceries, clothing, and other items, will have to report each transaction on his or her tax return. Further, the user presumably purchases or otherwise acquires bitcoins in his or her wallet at different times. Thus, the user will have to establish an inventory method, such as LIFO, FIFO, or a weighted average method, to determine which bitcoins were spent on a particular transaction to determine the user’s basis.
If cryptocurrencies were instead treated as a foreign currency, the personal transaction treatment that ignores any transaction resulting in a gain less than $200 would greatly reduce the administrative burden on the average user. Valuation may also be a concern, as different exchanges list different fair market values for bitcoins. Further, newly created cryptocurrencies other than bitcoin that are not actively traded on exchanges could be difficult if not impossible to establish a basis. These tax administration issues can greatly increase the transaction costs of a cryptocurrency’s use as a medium of exchange, and therefore directly negate one of the key positive traits of cryptocurrencies as a low transaction cost exchange system.

Due to what has been described as an “accounting nightmare,” companies have begun to develop software to automate the accounting process using the public bitcoin address. While such software may do some good to reduce the economic inefficiencies created by treating cryptocurrencies as property, it does not alleviate all concerns. Requiring users to purchase software could disenfranchise them and add to transaction costs. Average users likely will not understand why they should have to pay income tax on every purchase made and will be frustrated by the recordkeeping requirements. The software also requires uploading all of your transaction history, creating another avenue for hacking and theft and eliminating transaction privacy. It may also contribute to a sense of unfairness; why should the user who purchases from overstock.com using bitcoin have to pay an additional capital gains tax while the purchaser who uses U.S. dollars does not?

Jake Benson, CEO of LibraTax, the leading software for Bitcoin accounting, disagrees, stating “Treating Bitcoin as a property is really the easiest way to deal with the transactions, and the most financially beneficial as well . . . the tax rate for profits and capital gain is less than
gains you make on a foreign currency. That's almost the best tax treatment you could ask for.”

Mr. Benson, however, is mostly incorrect in his knowledge of tax treatment under the foreign currency rules. Under the exception to the foreign currency rules for personal transactions, gains on a personal transaction of less than $200 are tax free, and any gain on a personal transaction of over $200 is taxed at the capital gains rate. Thus, personal cryptocurrency transactions would receive more favorable treatment under foreign currency rules, as many gains would be excluded. When used in the ordinary course of business as a QBU, exchange rate gains and losses potentially may never be recognized so long as the cryptocurrency is not converted into U.S. dollars, which is a huge potential benefit to cryptocurrency users. Investors do, however, lose the possibility of treating gains as long-term capital gains because all non-personal transactions are treated as ordinary income under the foreign currency rules. Thus, treating cryptocurrencies as property rather than currency actually favors investors over users: investors get long-term capital gain treatment, while users likely have short term capital gains resulting in ordinary income while not getting the benefit of personal transaction treatment under the foreign currency rules.

Finally, the administrative difficulties that the IRS will face strongly weigh against treatment of cryptocurrencies as property for tax purposes. As previously discussed, the IRS faces significant hurdles to enforcement of taxation on cryptocurrency transactions given their pseudo-anonymous nature. The IRS often relies in other contexts on individuals and entities voluntarily reporting. Individuals and entities, however, likely will be strongly disincentivized to voluntarily report when the burden on them is great and the likelihood of detection is small. While this is also true of cash, cash cannot be transferred instantaneously across the world and is bulky to transport in large quantities. Thus, the IRS faces a more significant threat of significant
lost revenue due to untraceable cryptocurrency transactions. Because treatment of cryptocurrencies as property increases the burden on individuals and entities, they will be less likely to voluntarily report. Decreased voluntariness, in turn, requires that the IRS increase its enforcement efforts, thus significantly diminishing the value of taxing cryptocurrency transactions. A system that reduces the administrative burden on the individual, while not affecting the IRS enforcement difficulties, could at least encourage more voluntary reporting and thus increase administerability for the IRS as a whole.

Critics give three primary arguments that cryptocurrencies cannot function as a currency or currency-like item. First, cryptocurrencies operate as a poor unit of account and store of value due to their extreme fluctuations, and therefore they can be considered only for their investment value. This may be true currently. Price fluctuations, however, likely will reduce over time as cryptocurrencies increase in acceptance. A recent economic study conducted by two researchers from Poland’s Nicolaus Copernicus University’s finance department indicated that the key drivers of current price fluctuations of cryptocurrencies are popularity and publicity. While the authors acknowledge that bitcoin has not yet reached a critical mass of usage, they state, “the network of entities that accept bitcoin is expanding rapidly and there is a burgeoning technical infrastructure that can ameliorate the problem of exchange rate volatility.” In the meantime, exchange rate volatility can likely be addressed using financial hedging, option instruments, and publicly traded funds. While hedging is not necessarily a long-term solution as it encourages investment in non-real world economic activity, it can at least provide a temporary fix. Further, many merchants who currently accept bitcoin manage their exchange risk by converting bitcoin to cash upon receipt, thus transferring the risk to eager investors.

Second, critics contend that cryptocurrencies lack characteristics of a normal currency in
that they cannot be deposited in a bank and are vulnerable to thieves and hackers, and there is nothing comparable to deposit insurance relied on by banking customers. At first glance, it seems very strange that one of the key positive traits of cryptocurrencies would be used as an argument against more favorable tax treatment. Eliminating the need to deposit funds into a bank significantly reduces transaction costs. Certainly there is a risk involved with thieving and hacking, but thievery has been a risk of all currencies for all time. To address lack of FDIC protection, private insurance policies could be developed to protect against any hacking risk. Banks also face security risks, and cryptocurrency security risks can be handled similarly to bank security risks.

Finally, bitcoin is a fixed economy, given that only 21 million units can be issued, and therefore critics opine that bitcoin is incompatible with a growing economy. In fact, bitcoin is a fixed economy, but that is one of its key benefits that encourages use of the virtual currency. The U.S. dollar also was once a fixed economy, back in the era of the gold standard. The fixed nature of bitcoin will not limit future economic growth as many other currencies and cryptocurrencies exist.

B. Why Foreign Currency Treatment Does Not Address All Concerns

As discussed in Section A supra, tax policy considerations do not favor treating cryptocurrencies as property for tax purposes. In fact, such treatment may actually detract from the positive traits of cryptocurrencies while enhancing their less macro-economically valuable aspects. Treatment of cryptocurrencies as foreign currency would alleviate many of the concerns discussed. However, some concerns would still remain.

The foreign currency tax rules were drafted and implemented as part of the Tax Reform Act of 1986, a time when the idea of cryptocurrencies could not have been on the minds of
legislators. Congress did not even define “currency,” likely because it did not anticipate that a definition was necessary. The only currencies available at the time were currencies that were produced by governments, and this limitation undoubtedly influenced policy makers’ decisions and considerations with respect to the language of the code provisions. The foreign currency provisions, therefore, do not adequately address the issues with respect to cryptocurrencies in several respects. While this Section does not completely address issues that may need to be resolved in the tax code before treating convertible cryptocurrencies as foreign currencies, it suggests that a reconsideration of the tax code provisions on foreign currencies is necessary.

First, a working definition of cryptocurrency must be developed. There are currently hundreds of cryptocurrencies in force, and conceivably this number could continue to grow indefinitely. Perhaps, over time, market forces will identify clear winners and losers as some cryptocurrencies gain in popularity and acceptance among merchants while others fade away. However, if that is not the case, one must assess whether the creation of thousands of new types of currencies would actually create more difficulties than efficiencies. At some point, innovation may actually become stifling and overwhelming. On the flip side, the definition also should not capture unintended virtual currencies: for example, Facebook has begun to develop an internal credits system, which perhaps should not be taxed at all.118

Second, the personal transaction provisions need to be reconsidered with respect to cryptocurrencies. Users of cryptocurrencies potentially face the same administrative hassle in accounting for cryptocurrency transactions under the foreign currency rules as they would under treatment as property. The personal transaction provisions of the tax code allow gain exclusions up to $200. But, if a user doesn’t keep records, he or she cannot know whether their transaction resulted in over a $200 gain. This record-keeping issue was not a problem when Congress had to
consider only the user who made an occasional trip to a foreign country and engaged in limited foreign currency transactions, as the administrative burden in such a case is minimal. However, for the user of cryptocurrencies who engages in potentially thousands of transactions per year, the same administrative hassles may exist.

The foreign currency rules also require recognition when a functional currency is exchanged for nonfunctional currency or when a nonfunctional currency is exchanged for another nonfunctional currency. Therefore, if a QBU exchanged its functional currency bitcoin for dogecoin, this transaction would result in exchange gain or loss. Alternatively, an individual could conceivably develop a hundred different qualified business units, each with a different cryptocurrency as its functional currency, but such a structure would require separate recordkeeping for each QBU.

In short, the foreign currency tax provisions likely could apply to cryptocurrencies in many different and unintended ways. Thoroughly delineating and exploring all possibilities of application of foreign currency provisions to cryptocurrencies would require an analysis far more extensive than this paper can provide and would require an author to anticipate and imagine the incredible amount of possibilities for future uses of cryptocurrencies. Such a discussion is left for future consideration.

C. What Should A New Code Section Look Like?

It may be possible to simply amend a few of the foreign currency code provisions to satisfy policy concerns with respect to cryptocurrencies. However, drafters must consider whether any amendments would adversely affect tax treatment of foreign currencies actually backed by foreign governments and whether such changes are desirable. When drafting new
provisions, a drafter would need to consider (a) how to define “cryptocurrency” for tax purposes, (b) how to draft provisions that balance the promotion of the economically valuable uses and positive traits of cryptocurrencies with the government’s need for revenues, and (c) how such provisions can be administered efficiently and equitably. Such a task is not without difficulty given the uncertain nature and future of cryptocurrencies and the uncertainties that exist with future technological advancements.

The Texas CPA Society has recommended that treatment of cryptocurrencies be bifurcated depending on its purpose to the particular taxpayer. It recommended that they be treated as property when held for investment and as currency when used as a medium of exchange. Two possible approaches could potentially distinguish cryptocurrencies as more like currency or more like property. First, the tax code could introduce an intent-based test where the determination of whether the cryptocurrency is property or currency depends on the purpose of the individual or entity that accepts and transacts in cryptocurrency. While ascertaining intent certainly can be difficult and a person’s intent could change over time, the tax code already encompasses intent-based tests for other tax treatment determinations, such as capital gains treatment.

Second, other commentators from KPMG’s national tax practice have suggested that the tax code could introduce a “common acceptance” test to determine whether the cryptocurrency is property or currency. Under this test, a cryptocurrency that is commonly accepted in exchange for goods and services would be considered currency. Under this approach, it may be unlikely that even bitcoin would currently satisfy the definition as a currency, although it may well satisfy the common acceptance test in the future as a growing number of merchants begin to accept bitcoins as payment. This test would also help ensure that tax treatment of cryptocurrencies as
“currency” wouldn’t lead to the creation of thousands of new cryptocurrencies, which would be a regulatory nightmare, given that most if not all-new cryptocurrencies would not satisfy the common acceptance test.

An entirely new section of the tax code would likely include treatment aspects of property, currency, securities, as well as introduce new concepts and tests. It may include elements of an intent-based or a “common acceptance” test. It should attempt to treat convertible cryptocurrencies in a way conducive to maximizing the economically beneficial aspects of convertible cryptocurrencies.

**Conclusion**

Currently, given the uncertain technological landscape, it remains unclear whether the foreign currency tax rules could be slightly modified to accommodate cryptocurrencies or whether an entirely new code section is necessary. One thing, however, is certain; tax issues with respect to cryptocurrencies warrant serious Congressional consideration. Current rules controlling taxation of personal property do not satisfy the underlying tax policy considerations. One should never be too hasty in recommending legislative change to the tax code, given that each change results in additional complexities, additional lobbying and deal-making, and additional government time and resources that could potentially be better spent elsewhere. However, given that the last major tax code overhaul occurred prior to the introduction of the first web browser in late 1990, it is time to reconsider how the tax code should best address a modern, digital economy.

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3 Cryptocurrency, supra note 1.


5 Id.


8 *How Does Bitcoin Work?*, supra note 4.


11 *Bitcoin for Individuals*, supra note 9.


14 Id.


18 Id.


20 Id.


31 C.F.R. § 1010.100(m) (2014).


Id.


FIN-2013-G001, supra note 27.

Id.

Id.

Id.


FIN-2013-G001, supra note 27.

Id.

Id.


41 Marian, supra note 39, at 38.


43 No FBAR Reporting Requirement in 2013 for Bitcoin!, THE TAX TIMES (June 17, 2014),

44 David D. Stewart, IRS Preps Bitcoin Investigators as Treatment Questions Remain, TAX NOTES, Sept. 29, 2014, at 1538.

45 Id.


48 Id. at 50.

49 Id. at 49.


51 Id.

52 Id.

53 Id.

54 Id.

55 Id.

56 Esden v. Bank of Boston, 229 F.3d 154, 169 (2d Cir. 2000).

57 Morehouse v. Comm’r, 769 F.3d 616, 624 (8th Cir. 2014).


59 Stewart, supra note 44, at 1539.

60 AMP, Inc. & Consol. Subsidiaries v. United States, 185 F.3d 1333 (Fed. Cir. 1999).

61 Id. at 1335.

62 Id.

63 Id.

64 Id.
The concept of “functional currency” is discussed in detail in Part IV, supra.

In ruling, the court rejected the interpretation of an IRS Revenue Ruling, concluding that the Revenue Ruling was self-serving.


Barter Sys., Inc., 59 T.C.M. (CCH) 72.

Treas. Reg. § 1.985-1.

For a more exhaustive analysis of Sections 985 through 988, see Boris I. Bittker & Lawrence Lokken, Fundamentals of International Taxation: U.S. Taxation of Foreign Income and Foreign Taxpayers ¶ 74 (2001).
90 Bittker & Lokken, supra note 86, at ¶ 74.2.


92 I.R.C. § 989(a).

93 Treas. Reg. § 1.989(a)-1.


95 Bittker & Lokken, supra note 86, at ¶ 74.3.

96 Id.

97 Id.

98 I.R.C. § 989(b)(4).


100 Sheppard, supra note 72, at 897.


102 Lederman, supra note 101, at 1650.


104 See Bitcoin Price Index Chart, supra note 23.

105 Alison Bennett, Bitcoin Accounts May Be Subject to FBAR, FATCA Reporting as IRS Focus Sharpens, 219 Daily Tax Report GG-1 (Nov. 13, 2014).


109 See Cross, supra note 99.

110 Yermack, supra note 22, at 12.


112 Id. at 26.


116 Yermack, supra note 22, at 12.


