REAL TAXES ON VIRTUAL CURRENCIES: WHAT DOES THE I.R.S. SAY?

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This paper discusses the recent Internal Revenue Service (Service) guidelines on tax reporting for virtual currencies, such as Bitcoin, and argues that the Service should define convertible virtual currencies more narrowly to remove pure game experiences from the regulation. The author suggests that a more sensible definition can be developed based on the Government Accountability Office’s proposed classification of virtual currency systems. Virtual currencies in open-flow systems such as Bitcoin should be treated as foreign currency, those in hybrid systems such as Second Life or other game worlds permitting real money transactions should be treated as property, and the Service should decline to tax transactions in closed-flow systems such as World of Warcraft.

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I. INTRODUCTION

The certainty of death and taxes is overrated, at least for taxes on virtual currency transactions. For many years, scholars have fought over how to properly tax transactions in online games such as World of Warcraft and Second Life. Recently, the rise of Bitcoin, a virtual cryptocurrency,

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3 Cryptocurrency is “a medium of exchange designed around securely exchanging information which is a process made possible by certain principles of cryptography.” Cryptocurrency, WIKIPEDIA, http://en.wikipedia.org/wiki/Cryptocurrency (last visited Apr. 28, 2014). Wikipedia currently lists twelve existing cryptocurrencies, with Bitcoin having
spawned another wave of debates on real taxes in virtual economies. Cryptocurrencies, unlike virtual currencies used in game worlds, quickly became popular even among people who do not play online games. Today, the Bitcoin market is estimated to have capitalization of about $3.6 billion. Some scholars dubbed cryptocurrencies “the new tax haven” because of their pseudonymity, decentralized nature, and lack of government oversight.

The Internal Revenue Service (Service) began assessing tax compliance risks for virtual economies in 2007, and in 2009 posted information about the tax consequences of virtual economy transactions on its website. It took five more years after that to develop a short informal guidance on taxation of “convertible virtual currencies” that was finally released at the end of the 2013 filing season. Many practitioners praised the guidance and suggested that Service’s conclusions did not come as a surprise. However, the guidance brought some disappointment, too, because the reporting regime seems to impose significant burdens on users.


This paper argues that the Service should develop a narrower definition of what qualifies as a convertible virtual currency to remove pure game experiences from the regulation. A more sensible definition can be developed based on the Government Accountability Office’s (GAO) proposed classification of virtual currency systems. Virtual currencies in open-flow systems should be treated as foreign currency; those in hybrid systems should be treated as property; and the Service should decline to tax transactions in closed-flow systems. The difference in the proposed tax treatment reflects the difference in how virtual cash functions in those systems: while it is possible to buy a cup of coffee with Bitcoin, one would need to cash out one’s virtual earnings in a game like Second Life to use them similarly. Also, in games like World of Warcraft, players risk losing access to their virtual wallets altogether for real money trade because of end user license agreement violations. The design of most closed-flow and hybrid virtual worlds clearly reflects the vision of their creators to provide another means of recreation, not tax shelters. Open-flow currencies created as alternative means of payment should command the Service’s attention. Yet, the regime proposed in Notice 2014-21 seems to be designed to deter the use of virtual currencies altogether rather than to give taxpayers a convenient tool to assess their tax liabilities. Part II of the paper will give a brief background on virtual worlds, economies, and currencies. Part III of the paper will explore Notice 2014-21, major problems with the proposed property treatment for convertible virtual currencies, and policy reasons behind such treatment. Part IV will offer a new classification of virtual currencies and propose differential tax treatment for each currency type, as well as a brief discussion of enforcement concerns.

II. VIRTUAL WORLDS, ECONOMIES, AND CURRENCIES

The development of virtual economies and the rise of virtual currencies began with multi-player online games. Users of such games interact with other players through “avatars,” which are virtual alter egos created for game purposes. Some virtual worlds provide users with scripted scenarios or missions that they must accomplish to receive some virtual benefits or to

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11 GAO REPORT, supra note 7, at 3–6 (2013).

12 Chodorow, supra note 1, at 699.
develop their avatars. Other worlds are “unscripted” in a sense that users are given much more latitude to define and create their own virtual experiences. Virtual life in some worlds continues even when a user leaves the game for a while. With time, such virtual worlds have developed their own virtual economies where players can produce, find, or trade virtual goods and services and receive virtual currencies in exchange.

The development of Bitcoin, the first decentralized virtual currency, marked the beginning of the new era for virtual economies. Unlike most other virtual or real currencies, Bitcoin does not have a single issuer — a government or a company that owns an online game — and exists solely as a file on a user’s computer. Users can “mine” Bitcoins by verifying the block-chain identity of a Bitcoin used in an online transaction, acquire Bitcoins as gifts or as payment for goods and services from other users, or just purchase Bitcoins on third-party exchanges. Today, this is the most popular virtual currency with over 12.5 million Bitcoins in circulation. A growing number of merchants now accept Bitcoins in exchange for real goods and services. One can buy shoes, pay for food and drinks at a real

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13 Id.
14 Id.
15 Id. at n.18.
16 In 2006, one of the games, Second Life, reported its first real-life millionaire, whose business was based and operated entirely in the virtual world of the game. See Rob Hof, Second Life’s First Millionaire, BLOOMBERG BUSINESSWEEK (Nov. 26, 2006), http://www.businessweek.com/thethread/techbeat/archives/2006/11/second_lifes_fi.html. Today, there are reports that some students forgo traditional summer internship opportunities to make some money while playing videogames. Chodorow, supra note 1, at 703–04. One report states that a student can make as much as $35,000 over the summer, which is about the same amount a second-year law school student can earn in twelve weeks working as a summer associate at a big law firm. See id.
17 GAO REPORT, supra note 7, at 5.
18 See Akins et al., supra note 4, at 7–10 (providing extensive discussion of Bitcoin background and ways of obtaining it).
20 What Can You Buy with Bitcoins?, COINDESK, http://www.coindesk.com/information/what-can-you-buy-with-Bitcoins (last updated Mar. 6, 2014) (listing a number of websites accepting Bitcoin payments for real goods); see also Kashmir Hill, Living On Bitcoin A Year Later: Dropping Digital Dollars at a Strip Club, FORBES (May 11, 2014, 5:50AM), http://www.forbes.com/sites/kashmirhill/2014/05/11/living-on-bitcoin-a-year-later-all-grown-up-and-a-little-naughty/ (describing an experiment of only using Bitcoins for 5 days to pay for purchases and concluding that it had become much easier to get food, taxi, and some services using Bitcoin than it was one year ago). Links to her other posts on the topic are available at the bottom of the page. Id.
bar, donate to a charity,\textsuperscript{21} book a hotel,\textsuperscript{22} and even make a political contribution with Bitcoins.\textsuperscript{23}

III. I.R.S. NOTICE 2014-21: MORE QUESTIONS THAN ANSWERS

For many years, taxpayers were left in the dark on how, if at all, to pay taxes on their virtual assets. This year, the Service released a very short Notice on transactions using convertible virtual currencies.\textsuperscript{24} The main provisions of the Notice did not surprise anyone: the Service treats virtual currencies as property, not foreign currency, and taxation depends on whether such property constitutes a capital asset or ordinary income in the hands of a taxpayer.\textsuperscript{25} Importantly, transactions with virtual currencies are subject to the traditional information reporting and backup withholding requirements.\textsuperscript{26} Third-party settlement organizations dealing with virtual currency transactions are subject to information reporting requirements, too.\textsuperscript{27}

The Notice raises a number of important questions. First, although the scope of the Notice is limited to “convertible virtual currencies,” the suggested definition covers any virtual currencies having “equivalent value in real currency,” and can be used by the Service to tax any virtual economy transaction, including those in “closed-flow” currency systems.\textsuperscript{28} Second, the blanket treatment of all virtual currencies as property may be not the most sensible approach because property rights to virtual currencies are defined by state law and terms of use that vary significantly for different

\textsuperscript{21} What Can You Buy with Bitcoins?, supra note 20.

\textsuperscript{22} One of the largest travel websites, Expedia, started accepting Bitcoin as hotel payment on June 11, 2014. Pete Rizzo, Expedia Exec Says Bitcoin Spending Has Exceeded Estimates, COINDESK (July 2, 2014, 9:25 PM) http://www.coindesk.com/expedia-exec-bitcoin-payments-have-exceeded-estimates/. Company executives reported that the Bitcoin sales exceeded initial estimates. \textit{Id.}


\textsuperscript{24} I.R.S. Notice 2014-21, supra note 8.

\textsuperscript{25} \textit{Id.} at 2–3.

\textsuperscript{26} \textit{Id.} at 4–5.

\textsuperscript{27} \textit{Id.} at 6.

\textsuperscript{28} \textit{Id.} at 1–6. See infra Part IV.B–C.
currencies. Treating virtual currencies as property, not as foreign currency, ignores one of the most important functions of virtual currencies as units of exchange and essentially deprives them of fungibility. Finally, the proposed enforcement regime — information reporting and backup withholding, including reporting by third-party settling organizations — may not work that well with anonymity or pseudonymity, one of the major characteristics of many virtual currencies.

The Notice’s scope is very limited, and the Service has barely scratched the surface of virtual economy taxation. The Notice does not address other transactions with virtual assets, such as having a business in Second Life, or selling one’s avatar or artifacts, but it is likely such transactions will be treated similarly to convertible virtual currencies as property transactions under the section 1001 of the Internal Revenue Code (Code). This paper will not discuss the broader questions on how to properly tax various events in game worlds because there is a substantial amount of scholarly works on point. Instead, the goals of this paper are to build on the existing research in light of the fast development of virtual currencies not related to any game worlds and to offer suggestions on where to draw the line for regulation and on the proper taxation regime for various types of virtual currencies.

A. The Definition of Convertible Virtual Currency Is Too Broad

Given the vast variety of virtual economies, developing a single definition and a set of easy-to-use criteria to determine the extent of appropriate government regulation has proven to be a very difficult task. So far, there is no single definition of virtual economy or virtual currency.

The Service limited the scope of the Notice to convertible virtual currencies, and stated that “[n]o inference should be drawn with respect to virtual currencies not described in this notice.” Most commenters opined

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29 For example, the World of Warcraft end user license agreement (EULA) states that the title and ownership rights to the game, characters, and objects belong to Blizzard, not to the users. WORLD OF WARCRAFT, End User License Agreement Art. 2(A), http://us.blizzard.com/en-us/company/legal/wow_eula.html (last updated Oct. 31, 2014). Leandra Lederman was one of the first scholars to point out that the way such licenses are treated under the laws of each state may be determinative of the way virtual assets are going to be taxed. See Lederman, supra note 1, at 1631–41.

30 Adam Levitin, Bitcoin Tax Ruling, CREDIT SLIPS (Mar. 26, 2014, 9:56 AM), http://www.creditslips.org/creditslips/2014/03/Bitcoin-tax-ruling.html (noting that Bitcoins are no longer fungible, and one would have to make complex calculations every time buying a coffee with Bitcoin).

31 See supra list of sources note 1.

exclusively on how the Notice would affect Bitcoin.\textsuperscript{33} However, Bitcoin is not the only virtual currency that meets the definition of “convertible.”

The Service broadly defined convertible virtual currency as a unit of exchange that “has an equivalent value in real currency, or that acts as a substitute for real currency.”\textsuperscript{34} This definition was adopted from a Financial Crimes Enforcement Network’s (FinCEN) report and contrasts convertible virtual currencies to “real” currencies saying, “‘[V]irtual’currency is a medium of exchange that operates like a currency in some environments, but does not have all the attributes of real currency.”\textsuperscript{35} This definition, however, is overly broad, as it may cover any number of virtual currencies for which the market may yet be thin or even unauthorized by the terms and conditions of service. For example, Blizzard, the company that created the World of Warcraft and many other popular games, strictly prohibits buying and selling World of Warcraft currency, artifacts, and avatars.\textsuperscript{36} Yet, all these items have “equivalent value” in U.S. dollars and can be traded on several online exchanges.\textsuperscript{37} Thus, even items within World of Warcraft, a

\textsuperscript{33} See, e.g., supra note 9 and accompanying text.

\textsuperscript{34} I.R.S. Notice 2014-21, supra note 8.

\textsuperscript{35} Financial Crimes Enforcement Network, FIN-2013-G001, Guidance on the Application of FinCEN’s Regulations to Persons Administering, Exchanging, or Using Virtual Currencies (2013), available at http://www.fincen.gov/statutes_regs/guidance/pdf/FIN-2013-G001.pdf. “Real” currency is defined 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.” 31 C.F.R. § 1010.100(m) (2012).

\textsuperscript{36} WORLD OF WARCRAFT, End User License Agreement art. 2(A)(vii), http://us.blizzard.com/en-us/company/legal/eula.html (last updated Oct. 31, 2014). World of Warcraft EULA prohibits using the game for any commercial purpose except those permitted by the EULA. Id. at art. 1(C)(iii). Gathering in-game currency, items or resources for sale outside the game, as well as provision of any services paid for outside of the game is strictly prohibited. Id. Article 2 also states that Blizzard retains title and all ownership rights in the Game, objects, character names, and character themselves, giving players only a limited transferrable license. Id. The reason for such a harsh treatment of real-money transactions is that Blizzard considers such dealings unethical and degrading the game experience for other users. The Consequences of Buying Gold, BATTLE.NET, http://us.battle.net/wow/en/shop/anti-gold/ (last visited Oct. 12. 2014) (“Buying gold supports unethical behavior that degrades the gameplay experience for our entire community. The overwhelming majority of purchased gold comes from stolen player accounts, in which character inventories are stripped of value, liquidated into gold and sent off to be sold.”).

\textsuperscript{37} PlayerAuctions is one of such online exchanges that allows for real-money transactions (RMT) with in-game items, including game money. PLAYERAUCTIONS.COM, http://www.playerauctions.com/ (Jan. 5, 2015). Another popular auction is EpicToon. EPICTOON.COM, http://www.epictoon.com/ (Jan. 5, 2015). There are many other similar websites facilitating exchanges of virtual currencies into real money and vice versa.
game designed to avoid and expressly prohibiting external trade of in-world items and currency, would still be within the Service's reach.

Another approach to classifying virtual currencies has been proposed by the GAO. The GAO suggests distinguishing between "closed-flow," "open-flow," and "hybrid" virtual currency systems. The GAO defines virtual currency as a "digital unit of exchange that is not backed by a government-issued legal tender." GAO classification may prove to be useful for the Service because it allows one to draw some clear boundaries of what should be taxable and what should remain free of Service regulations, based on a simple set of criteria to differentiate between the systems.

This paper argues that the GAO approach represents a more precise analytical instrument that allows one to distinguish between the virtual currencies that are at the early stages of their development or created exclusively for game use from truly "convertible" virtual currencies. Given the limited resources available to the Service to enforce taxation of virtual currency transactions, the Service should properly focus on open-flow and hybrid systems, leaving closed-flow currencies outside of its reach. Part IV.B suggests some additional policy considerations on what criteria to use to distinguish between different systems.

B. Treatment of All Virtual Currencies as Property Is Not Justified

The Notice proposes treatment of all convertible virtual currencies as property, not foreign currency. A taxpayer who receives virtual currency must include the fair market value of the virtual currency in computing

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38 GAO REPORT, supra note 7, at 4. Under GAO classification, "closed-flow" virtual currencies have no value outside of the virtual world, and a player cannot purchase the virtual currency with real money or pay for real goods and services with virtual currency. Id. However, within such worlds, players can trade virtual goods and services for virtual currencies. Id. Hybrid systems allow users to buy virtual currencies with real-world money, but the opportunities to cash out may be limited. Id. at 4–5. GAO suggests that to qualify as a hybrid system, virtual currency can be used to purchase virtual goods and services, and, in some cases, may even be used to buy real goods and services. Id. GAO uses World of Warcraft as an example of a hybrid system, but this may not necessarily be the correct classification because EULA expressly prohibits any outside transactions with World of Warcraft items. Id. at 5. Open-flow currency systems are the pinnacle of virtual money evolution, and may grow out of "unscripted" games, such as Second Life, or be specifically designed to be used as payment both in online and off-line transactions. Id. Open-flow systems allow the exchange of virtual currency for real currency, as well as for real and virtual goods and services. Id.

39 Id. at 3. This definition is very broad and includes virtual currencies used exclusively in virtual worlds — or "closed-flow" systems in GAO terminology.

gross income both if currency was received in exchange for goods and services, and if it was "mined" by a taxpayer.\footnote{Id. at 2, 4. The proposal to include the value of "mined" Bitcoins in gross income upon receipt essentially means that mining Bitcoins is viewed as a service to the community, not an act of producing property through personal effort. See Akins et al., supra note 4 at 14–15; see also William D. Lewis, Why the I.R.S. is Wrong on the Taxation of Bitcoin Mining, GLOBAL L. & BUS. PERSPECTIVE (Mar. 27, 2014), http://www.glbperspective.com/tax-law/why-the-I.R.S.-is-wrong-on-the-taxation-of-Bitcoin-mining/ (analogizing mining Bitcoins to baking bread, where bakers are taxed only when they sell bread, not when they bake it). If all Bitcoins mined in 2013 (approximately 1.5 million) were mined by U.S. taxpayers, the Service would raise $112.5 million in tax revenue without any subsequent realization events. Id.}

Fair market value must be determined as of the date of receipt.\footnote{I.R.S. Notice 2014-21, supra note 8, at 2. The Service suggests that fair market value can be determined either by looking at the exchange rate at which the currency is currently traded on the market, or any other reasonable manner that is consistently applied. Id. at 3. Thus, even currencies within markets or with markets, say, only in China, traded exclusively in Yuan, still must be valued on the date of receipt, and the value must be included in gross income.} Next, a taxpayer has to calculate gain or loss upon exchange or disposition of virtual currency.\footnote{Id. The Service suggests that if virtual currency is more similar to stocks, bonds, and other investment property, it should be treated as a capital asset. Id. If virtual currency is more similar to inventory held mainly for sale to customers in a trade or business, it should not be treated as a capital asset. Id.} The character of that gain or loss will depend on whether the virtual currency is a capital asset in the hands of the taxpayer.\footnote{Id. For definition of fair market value, see Treas. Reg. § 20.2031-1(b) (1965) ("Fair market value is the price at which the property would change hands on an open market between a willing buyer and a willing seller, neither being under any compulsion to buy or sell and both having reasonable knowledge of relevant facts.
)
outcome for cash method taxpayers. Indeed, Bitcoin is more like a check that has been delivered to a person but not yet deposited into his or her bank account. However, taxpayers can argue that lack of infrastructure allowing one to dispose of virtual currencies or exchange them for money or goods is a substantial barrier to actual possession, therefore barring the application of constructive receipt doctrine.

On the other hand, for virtual currencies without a readily determinable fair market value, a different set of rules may provide better results with less hassle. For example, for nonstatutory options (NSOs) without readily determinable fair market value, there is no taxable event when the option is granted. Instead, the fair market value of the stock received on exercise, less the amount paid, is included in income when the option is exercised. Another good analogy would be casino chips treatment, where chips are taxed only at cash out, not at every single game of poker.

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46 Treas. Reg. § 1.451-2(a) (1979); see also Visco v. Commissioner, 281 F.3d 101 (3d Cir. 2002) (taxpayer constructively received back pay paid by checks she did not cash or refused to accept); Rev. Rul. 68-126, 1968-1 C.B. 194 (taxpayer constructively received income when retirement check was available for personal delivery on last working day of December, although mailed and delivered in January). The funds are considered available for a taxpayer to draw on only if there is notice that the funds are subject to his control. Furstenberg v. Commissioner, 83 T.C. 755, 792 (1984). However, if there was some barrier to actual possession, courts may refuse to apply the doctrine based on specific facts of a case. See, e.g., Baxter v. Commissioner, 816 F.2d 493, 495 (9th Cir. 1987) (holding there was no constructive receipt when a taxpayer would have to drive eighty miles round-trip on a nonbusiness day to pick up a check). Under the “all events” test, accrual method taxpayers would be required to include virtual currency in income when they are earned. Seto, supra note 1, at 1048. “All events” test is “whether all the events have occurred which fix the right to receive such income and the amount thereof can be determined with reasonable accuracy.” Treas. Reg. § 1.451-1(a) (1999).


49 Treas. Reg. § 1.83-7(a) (2004). Whether option’s fair market value can be readily determined for options not traded on an established market depends on meeting a four-factor test: (1) whether one can transfer the option; (2) whether it can be exercised immediately; (3) whether the option is subject to and condition or restriction undermining its fair market value; (4) whether the fair market value of the option can be otherwise readily determined. I.R.S. Pub. 525, Taxable and Nontaxable Income: For Use in Preparing 2013 Returns 11 (2013), available at http://www.irs.gov/uac/Publication-525,-Taxable-and-Nontaxable-Income—1. For options with readily determined fair market value, the full value is included as income upon receipt, but there is no tax on any gain or loss upon exercising such an option. Id. This approach can be used for hybrid currencies too. See infra Part IV.C.(ii).

also allowed to deduct gambling losses, to the extent they have offsetting gambling winnings.\textsuperscript{51} Any of these two approaches would reduce compliance costs for taxpayers and result in fewer disputes about valuation issues while not raising tax evasion concerns — virtual money still does not have much value outside of a game world. Both approaches would work well with hybrid currencies or with open-flow currencies at early stages of development.\textsuperscript{52}

Finally, the Service approach does not fully eliminate the potential for opportunistic behavior in which a taxpayer would report capital gains if a virtual currency appreciates but ordinary losses if it depreciates.\textsuperscript{53} Many miners can argue that they mine and hold Bitcoins primarily as inventory for future resale to interested buyers, not as a capital asset or an investment vehicle, when it would seem more advantageous to claim ordinary losses.

\textbf{C. Proposed Information Reporting and Enforcement Regime Is Impractical and Burdensome for Taxpayers}

The Service’s Notice 2014-21 imposes the same information reporting requirements on virtual currency owners as for other taxpayers.\textsuperscript{54} Thus, if a taxpayer pays another U.S. nonexempt recipient virtual currency valued at $600 or more in a given year, this taxpayer will have to file a Form 1099-MISC with the Service and send the same to the payee.\textsuperscript{55} In addition, the Service requires third-party settlement organizations that settle virtual currency transactions to file information reports if, for the calendar year, the number of settled transactions for a merchant exceeds 200 and the gross amount of payment for the merchant exceeds $20,000.\textsuperscript{56}

The proposed reporting scheme seems to be adequate if virtual currencies are viewed as an investment vehicle, something to hold on to until it sufficiently appreciates in value. However, practitioners remain skeptical of whether such a view is appropriate because the primary use of at least some of such currencies — for example, Bitcoin — is a means of

\begin{itemize}
\item[51] I.R.C. § 165(d); Treas. Reg. § 1.165-10 (2013); \textit{see also} Zarin v. Commissioner, 92 T.C. 1084, 1096 (1989), rev’d on other grounds, 916 F.2d 110 (3d Cir. 1990).
\item[52] \textit{See discussion infra} Part IV.C(ii).
\item[53] Fleischer, \textit{supra} note 9.
\item[54] I.R.S. Notice 2014-21, \textit{supra} note 8.
\item[55] \textit{Id.}
\item[56] \textit{Id.} at 5–6.
\end{itemize}
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payment for virtual and real goods and services.\textsuperscript{57}

The downsides of the proposed enforcement approach are potential difficulties in administration for the Service and high compliance costs for taxpayers. The need to constantly track the basis of every unit of virtual currency and gains and losses on every transaction, such as buying coffee, may turn into a nightmare both for taxpayers and Service auditors. Proposed information reporting requirements ignore the difference between centralized virtual currencies — currencies with a single issuer settling all the transactions — and fully decentralized currencies, where transactions are settled by users.\textsuperscript{58} For centralized currencies, it is feasible to impose a reporting duty on the issuer of the currency. For decentralized currencies like Bitcoin, the only stage where effective reporting requirements may be imposed is when a user sells the currency on an exchange. Although each Bitcoin has a record of ownership and can be eventually traced to the original miner,\textsuperscript{59} it is very difficult to imagine how this information can be used to identify the initial owner or force somebody to file an information return.\textsuperscript{60} For example, the true identity of Bitcoin creator Satoshi Nakamoto, who may have amassed a lot of Bitcoins at the early stages of the project, still remains unknown despite continuous attempts by

\textsuperscript{57} Johannes Schmidt et al., \textit{I.R.S. Says Bitcoin To Be Taxed as Gains; New Rule is Retroactive}, TAX FOUNDATION (March 28, 2014), http://taxfoundation.org/blog/irs-says-bitcoin-be-taxed-gains-new-rule-retroactive. Schmidt et al. points out that in November 2013, when Bitcoin traded at its peak, there were 93,000 various transactions daily. \textit{Id.} People used Bitcoins to pay for “everything from haircuts to hoagies and houses.” \textit{Id.}

\textsuperscript{58} For example, FinCEN distinguishes between centralized and decentralized virtual currencies. \textit{See generally} Financial Crimes Enforcement Network, FIN-2013-G001, \textit{supra} note 35 (distinguishing between the reporting schemes and requirements for centralized and decentralized virtual currency systems). Although proposed enforcement schemes may work well for centralized virtual currencies, like Linden Dollars in Second Life, it is not likely it will work well with decentralized ones, like Bitcoin.

\textsuperscript{59} \textit{See, e.g.}, Akins et al., \textit{supra} note 4, at 6–7.

journalists to solve the mystery.\textsuperscript{61}

\textit{D. Policies Behind the Notice 2014-21 Treatment of Virtual Currencies}

So far, it is not clear which policies the Service tried to advance with Notice 2014-21. To some extent, the Notice came as a relief for people who feared that Bitcoin and other virtual currencies might be completely illegal. However, many commenters noted that the reporting requirements and enforcement scheme may deter people from using virtual currencies altogether.\textsuperscript{62} The ambiguity of the “convertible virtual currency” definition and arduous record-keeping requirements imposed on virtual currency holders may as well serve as “nudges” for bona fide users of such currencies.\textsuperscript{63} Most importantly, such nudges, in the case of virtual currencies, may not be strong enough to deter existing illegal use but will instead drive away bona fide users, dooming virtual currencies to become the instrument of choice for illegal transactions. It will also prevent society from tapping into the many benefits virtual currencies have to offer: from lowering transaction costs to empowering the poor and financially distressed and stimulating financial innovation.\textsuperscript{64}

One of the reasons that the Service chose to treat convertible virtual currencies as property may be the distrust of such currencies because they


\textsuperscript{62} Fleischer, \textit{supra} note 9; Johannes Schmidt et al., \textit{supra} note 57.

\textsuperscript{63} “Nudges” are transferless regulations aimed at changing people’s behavior. For example, making organ donation as a default choice and making people file separate waivers to change it would be an example of a nudge designed to increase organ donation. For a thorough discussion on what are nudges and why they may be preferential to plain taxation or prohibitions, see generally Brian Galle, \textit{Tax, Command… or Nudge?: Evaluating the New Regulation}, 92 Tex. L. Rev. 837 (2014).

\textsuperscript{64} Jerry Brito, \textit{Beyond Silk Road: Potential Risks, Threats, And Promises of Virtual Currencies} at 17, Testimony before the Senate Committee on Homeland Security and Governmental Affairs, 8-13, November 18, 2013.
lack the status of legal tender of traditional fiat currencies. Currency is defined 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." Virtual currencies do not fit this definition because they are not issued by other countries and do not have a legal tender status. The value of such currencies is purely speculative and is not backed up by a commodity such as gold or by the authority of the issuing state. Virtual currencies are still at the very early stages of their development, and many U.S. and state governmental agencies have issued cautionary press releases about the use of virtual currencies. So far, no court in the United States has recognized Bitcoin as currency.

Another reason to introduce such burdensome tax reporting requirements is the perceived potential of virtual currencies to facilitate tax evasion or illegal transactions. Given this concern, Notice 2014-21 missed the target. Take Bitcoin as an example. Bitcoin unit is not that different from a dollar bill: users pay directly to each other without using any intermediaries such as banks or payment processing systems. Moreover, cash allows for an even higher degree of anonymity than Bitcoin because there is no publicly available log for cash transactions. On the other hand, the specific Bitcoins used in a given transaction are recorded in a public log and are settled by users. Yet, just because one can use cash to pay for something illegal, we do not try to deter the use of dollar bills through the provisions of the Code. Instead, there are many other instruments to deter illegal activities such as anti-money laundering statutes. Similar

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65 31 C.F.R. § 1010.100(m) (2010). Currency includes foreign bank notes that are customarily used and accepted as a medium of exchange in a foreign country. Id.


68 See e.g., Marian, supra note 6, at 45–46.


70 One successful example of using anti-money laundering statutes is shutting down of the Liberty Reserve, a private centralized virtual currency system based in Costa Rica that was allegedly created with the express purpose of facilitating money laundering. See Brito, supra note 64, at 17; see also Liberty Reserve Indictment at 3–5, available at http://www.justice.gov/uso/oys/pressreleases/September14/MaximChukharevPleaPRLibert y%20Reserve,%20et%20al.%20Indictment%20-%20Redacted.pdf (stating that the founders of Liberty Reserve engaged in lying to Costa Rican officials on behalf of their clients about
arguments can be extended to most virtual currencies: the mere potential for abuse should not be the grounds for imposing costly tax compliance procedures in an attempt to deter use.

Because some virtual currencies are so similar in nature to cash — especially those that can be classified as open flow — voluntary information reporting to the Service for payments over $600 is not likely to work for the same reasons it does not work with cash transactions: filling in the forms is too burdensome for many taxpayers, while the risks of getting audited by the Service are very small. However, people are likely to fill in the necessary forms to get tax deductions for business expenses, charitable donations, and the like.

Admittedly, not all types of virtual currencies behave like Bitcoin, so the results of the considerations above may differ among cases. To the extent that some virtual currencies function similarly to cash, we should use the same rules that we use for cash transactions to give users an incentive to disclose their identities and report payments. There is one promising example in the Bitcoin world: the Federal Elections Committee recently allowed a political action committee (PAC) to collect Bitcoin donations on the condition that identities of donors are disclosed. For enthusiasts, however, the ability to do something with virtual currencies may far outweigh the necessity of disclosing their identities and income, and the Service should not underestimate this factor when designing compliance rules for virtual currencies. Notice 2014-21 was designed not only to inform taxpayers of their liabilities in the virtual trade, but also to introduce a very significant "nudge" — rather, some hoops to jump through — making people think twice before using virtual currency, and is not likely to achieve the goal of improved reporting of virtual currency income.

IV. PROPOSED CHANGES TO NOTICE 2014-21

This part of the paper will discuss proposed changes to Notice 2014-21. It will begin with the discussion of potential options for virtual currency tax treatment. Then it will propose a new classification of currencies based on the GAO system and discuss appropriate tax treatment options and underlying policies for different types of virtual currencies. Finally, the paper will propose some improvements to the enforcement regime.

the nature and scope of the transactions, helping to launder over $6 billion. in criminal proceeds in 2013). Brito distinguishes Bitcoin from Liberty Reserve because, although Bitcoin also allows anonymity, it maintains a public ledger of all transactions, and there is no way to alter that ledger for a fee, as was done by Liberty Reserve owners.

71 See Gold, supra note 23.
A. Tax Treatment Options

The Service has a wide choice of options in addition to the proposed Notice 2014-21 property treatment. This paper suggests considering the following taxation regimes as suitable for different types of virtual currencies: casino chips, NSOs, and foreign currency treatment.

Under the casino chips regime, a taxpayer is taxed when cashing out the chips and is allowed to deduct the corresponding gambling expenses. Although casino chips may be used to pay for food and drinks in a casino, their use as a medium of exchange is so limited as to significantly fall short of characterization as a cash equivalent. Under NSO regime, if a person receives an NSO with readily determinable fair market value, a taxpayer includes the full value of the option into gross income at the time of receipt and is not required to calculate additional gains or losses upon exercising the option. If, on the other hand, the NSO’s fair market value cannot be readily determined, it is included in gross income only upon exercise, not at the time of receipt.

Finally, Subpart J of the Code offers a separate taxation regime for transactions in foreign currency. United States taxpayers are required to report income in foreign currency on their tax returns at the dollar value of the spot rate of the foreign currency at the time it is received. The character of such income depends on the reason for its receipt: if the reason is, for example, a sale of a capital asset, the income will be taxed at a capital gains rate, while compensation for services will be treated as ordinary income. Any difference between the amounts reported as income and the dollar value of the foreign currency at the time it is collected will be treated as foreign currency gain or loss.

Before the 1986 tax law reform, judicial and administrative decisions required treating foreign currency as personal property — the kind of

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72 I.R.C. § 165(d).
73 See infra notes 141–144 and accompanying text. See also Zarin v. Commissioner, 916 F.2d 110, 114 (3rd Cir. 1990) (describing the chips as having no economic substance outside of a casino and little value except for facilitating the ability to gamble).
74 See Treas. Reg. § 1.83-7(a) (2004); supra note 49 and accompanying text.
75 See supra note 49 and accompanying text.
76 Id. It would also be appropriate to allow a deferral of the corresponding deduction similar to I.R.C. § 83(h).
78 See Chung, supra note 1, at 763.
79 Id.
80 Id. at 764 (citing Gillin v. United States, 423 F.2d 309, 311 (Ct. Cl. 1970) (“[Foreign
treatment currently proposed in Notice 2014-21.\textsuperscript{81} The treatment resulted in inconsistent judicial decisions and difficulties not only for taxpayers who were required to trace basis and match dollar values for every single transaction in foreign currency, but also for the Service when auditing such tax returns.\textsuperscript{82} Subpart J was enacted by Congress as a way to provide a consistent way to treat foreign currency transaction as part of the Tax Reform Act of 1986.\textsuperscript{83}

Subpart J is favorable for individuals. Any personal transactions\textsuperscript{84} in foreign currency do not require recognition of gain or loss under section 988 of the Code.\textsuperscript{85} Thus, if an individual goes on vacation and buys some souvenirs with foreign currency, such expenses do not require recognition of gains or losses under section 988.\textsuperscript{86} When that individual comes back to the United States and converts foreign currency into U.S. dollars, gains from such conversion less than $200 are not subject to tax or reporting either.\textsuperscript{87}

For businesses, Subpart J offers more complex provisions, but is still immensely more convenient than income taxation under property rules. If a business has a separate, clearly identified unit of a trade or business that maintains separate books and records, it may qualify as a Qualified Business Unit (QBU) under section 989.\textsuperscript{88} If that QBU’s functional currency is determined to be a foreign currency, it may use a simplified profit and loss method to calculate income and exchange gains and losses.

\textsuperscript{81}I.R.S. Notice 2014-21, supra note 8, at 2.
\textsuperscript{82}Chung, supra note 1, at 764–66.
\textsuperscript{83}Id. at 766.
\textsuperscript{84}I.R.C. § 988(e)(3) (“For purposes of this subsection, the term “personal transaction” means any transaction entered into by an individual, except that such term shall not include any transaction to the extent that expenses properly allocable to such transaction meet the requirements of — (A) section 162 (other than traveling expenses described in subsection (a)(2) thereof), or (B) section 212 (other than that part of section 212 dealing with expenses incurred in connection with taxes).”).
\textsuperscript{86}Id.
\textsuperscript{87}I.R.C. § 988(e)(2). Chung suggests that reconversion gain over $200 will be subject to capital gains treatment because foreign currency is not specifically excluded under I.R.C. § 1221. Chung, supra note 1, at 768. Exchange losses most likely will be treated as a nondeductible personal loss. Id. (citing I.R.C. § 165(c)).
\textsuperscript{88}I.R.C. § 989(a).
under Subpart J section 987. Instead of tracking basis and calculating gains and losses on every single transaction to determine income, the taxpayer must follow only three simple steps: (1) compute the taxable income or loss of the branch separately in its functional currency; (2) translate the income or loss from the functional currency to U.S. dollars using the weighted average exchange rate for the taxable year; and (3) make proper adjustments for transfers of property between QBUs having different functional currencies.\(^89\) The trade-off of such treatment is that any exchange gain or loss because of differences in currency rates is treated as ordinary income or loss.\(^90\)

If a company cannot qualify its division as a QBU, section 988 will govern most transactions if a taxpayer receives or pays an amount denominated in foreign currency or determined by reference to the value of one or more nonfunctional currencies.\(^91\) Any gain or loss on such transactions will be treated as ordinary gain or loss.\(^92\)

B. Criteria for Classifying Virtual Currency as Open-flow, Closed-flow, or Hybrid

As argued in previous parts of the paper, the Service’s definition of convertible currency is too ambiguous and broad to be a useful guide for taxpayers. This paper suggests that a different classification of virtual currencies must be developed to ensure the Service is not overreaching and taxpayers have easy-to-use tools to assess their tax liability. The GAO’s virtual currency systems classification serves as a good starting point for the discussion.\(^93\)

Scholars debated the nature and proper treatment of virtual currencies for a few years before the issuance of Notice 2014-21.\(^94\) Some virtual currencies behave like cash, allowing users to buy virtual and real goods and services without going through the exchange process. Some virtual currencies are more like commodities, and others are more like stocks or investment contracts. The Service’s treatment of various types of virtual currencies should reflect the differences in their nature and use.\(^95\)

The GAO’s classification of virtual currency systems reflects, to some extent, the evolution of virtual money — from closed-flow systems that do

\(^89\) I.R.C. § 987.
\(^90\) I.R.C. § 987(3)(b).
\(^91\) I.R.C. § 988(c)(1).
\(^92\) I.R.C. § 988(a)(1)(A).
\(^93\) See supra note 38 and accompanying text.
\(^94\) See Marian, supra note 6; supra note 2.
\(^95\) See supra Part III.A for discussion.
not have any relation to the real world to open-flow systems that allow
users to purchase real goods and services with virtual money.\textsuperscript{96} The GAO
suggests the following criteria for open-flow systems: (1) virtual currency
can be used to purchase both virtual and real goods and services and (2)
virtual currency is freely exchangeable with U.S. dollars.\textsuperscript{97} This paper
suggests an additional criterion: whether trading virtual currency for real
currency is expressly authorized by end user license agreements, because it
impacts the property rights analysis to virtual currencies.

To illustrate that point, consider the difference between the treatment
of virtual money in two popular games: Second Life and World of
Warcraft. In both games, a user gets a license to use in-game money. In
World of Warcraft, the end user license agreement expressly prohibits any
outside trade of in-game items, as well as payment with real money for in-
game goods and services.\textsuperscript{98} Moreover, Blizzard, the company that owns
World of Warcraft, considers the purchase of the game currency in outside
markets as degrading to the user experience and enforces the game rules.\textsuperscript{99}
Second Life, to the contrary, expressly authorizes exchange of in-world
currency for U.S. dollars through its LindeX exchange.\textsuperscript{100} At the same time,
Linden Lab, the company that owns Second Life, expressly states that
“Linden Dollars are not real currency or any type of financial instrument
and are not redeemable for any sum of money from Linden Lab at any
time . . . . Linden Lab makes no guarantee [as to] . . . the availability or

\textsuperscript{96} See supra note 38 and accompanying text.
\textsuperscript{97} See GAO REPORT, supra note 7, at 4 fig.1.
\textsuperscript{98} See supra note 29 and accompanying text.
\textsuperscript{99} The Consequences of Buying Gold, WORLD OF WARCRAFT,
Game Masters and account specialists who monitor compliance, and the company may even
remove the purchased “gold” from an account of a buyer to maintain the purity of the game
experience. \textit{Id.} Another game offered by Blizzard, Diablo III, allowed for real-money
trading through its Auction House. However, this feature was shut down in 2014 because
the company felt that the Auction House trading undermined Diablo’s game play and
ultimately lead to worse user experience. John Hight, Diablo III Auction House Update,
Lylirra, Diablo III Auction House Update FAQ, DIABLO III OFFICIAL GAME SITE (Mar. 13,
2014 3:47 PM), http://us.battle.net/d3/en/forum/topic/9972208129. Thus, the terms of
EULAs, even if not read by most of the users, are indicative of the intent of game creators to
restrict real-money transactions. Such restrictions are primarily driven by the effort to
provide gamers with better game experience rather than by tax considerations. See Diablo
/forum/topic/9972208129 (last visited Oct. 12, 2014). See also infra note 104 for discussion
on the role of EULAs in determining taxation principles for virtual worlds.

\textsuperscript{100} Terms of Service, § 4.6, LINDEN LAB, http://lindenlab.com/tos (last accessed Apr. 25,
2014).
supply of Linden Dollars.”101 Users cannot encumber, convey, or leave Linden Dollars to their heirs through a will.102 Even though Second Life users may be able to cash out their game winnings without violating terms of service, the use of Linden dollars is still confined to the realm of the game, and users get very limited rights and warranties as to the value of their virtual income.103

The differences in design and functionality of virtual currencies should not be ignored, and this paper proposes the following set of criteria to be used by the Service when determining what kind of virtual currency it deals with: (1) whether end user license agreement or terms of service authorize exchange of a virtual currency to any real currencies;104 (2) whether there is an easily accessible market/exchange that allows one to quickly convert a virtual currency into real currency;105 (3) whether a virtual currency is

101 Id.
102 Id. (“[T]he Linden Dollar License may not be sublicensed, encumbered, conveyed or made subject to any right of survivorship or other disposition by operation of law or otherwise . . . . Linden Lab may revoke the Linden Dollar License at any time without notice, refund, or compensation [if certain events occur].”)
103 The rights Second Life users get in Linden Dollars are very similar to the description of casino chips in the famous Zarin case: “The chips themselves were of little use to Zarin, other than as a means of facilitating gambling. They could not have been used outside the casino . . . . In short, the chips had no economic substance.” Zarin v. Commissioner, 916 F.2d 110, 114 (3rd Cir. 1990).
104 There is a lot of debate whether the Service should look to terms of service (TOS) or EULAs to determine if a virtual world is “closed” or “open”. Some scholars note that determining the nature of the world and its taxation exclusively based on formal rules would be incorrect and may lead to situations when game developers would intentionally put prohibitive provisions into TOS and EULAs to shield taxpayers from liability. Unless gaming companies enforce compliance and punish users who engage in outside trade of in-world items, this may lead to tax deferral and evasion concerns. At the same time, Chodorow recognizes that “[b]asing taxation on the existence of a grey market would require a difficult inquiry into the extent of such market and the ability of taxpayers to access it.” Thus, the best solution from the administrability standpoint is still to look primarily to the world’s rule regarding the ability to cash out. See Chodorow, supra note 1, at 745. Chodorow suggests that this rule is justified because the leisure nature of closed-world activities suggests the absence of a tax avoidance purpose. See id. at 746. However, this presumption should be rebuttable by the Service in cases when users engage in games primarily for profit-making motives. See infra Part IV.C.1.
105 One may argue that existence of extensive grey markets should be considered to properly classify a currency system as closed-flow or hybrid/open-flow. This argument is misguided because it would subject all users that comply with EULA and TOS prohibitions on outside trade at a disadvantage, regardless of their ability to access such markets. See Chodorow, supra note 1, at 745. Moreover, it is likely to lead to escalated real money trading because all game participants will be forced to seek ways to cash out to pay taxes. Id. at 761.
accepted as payment for real goods and services.

This paper proposes that virtual currency systems with end user license agreements similar to that of World of Warcraft should be classified as closed-flow systems. Users of such currencies can only generate virtual money through in-world experiences and are not allowed to exchange the currency for goods, services, or real currency outside of the game. Thus, the likelihood that such systems can be used for tax avoidance or deferral is low. Unauthorized transactions are more of an exception to the rule, and should be treated in the same way that the Service treats other illegal transactions, like bribes and kickbacks, by including them in gross income and taxing at ordinary income tax rates without allowing corresponding business expenses deductions.

Next, virtual currencies with end user license agreements similar to Linden Lab should be classified as hybrid virtual currency systems. Even though a Second Life user can cash out of the virtual earnings through the official exchange, LindenX, its terms of service clearly state that Linden Dollars are mere tokens allowing access to some in-game services, not currency or financial instruments of any kind. It is also not clear to what extent Linden Dollars are accepted anywhere in the United States outside of the game as a means of payment for real goods and services.

Finally, virtual currencies like Bitcoin, which are created for the purpose of providing an alternative mechanism and payment system for electronic transactions, should be properly characterized as open-flow virtual currency. The existence of Bitcoin independent of a game world distinguishes it from other virtual currencies in that does not need to be exchanged into real currency before making a payment for certain real goods and services. There are several online exchanges that trade Bitcoin.
for various currencies, including U.S. dollars.\textsuperscript{113} There are no known limitations on transferring Bitcoins from user to user.\textsuperscript{114} Theoretically, a person may transfer his or her Bitcoins by a will or bequest, or through statutory inheritance mechanisms by transferring private keys to his or her heirs.\textsuperscript{115}

All of the three discussed currencies fall under the "convertible currency definition" under Notice 2014-21 because they all have value in U.S. dollars and some can be used instead of regular money. Substantial differences in their design and functioning, however, warrant completely different tax treatment, which will be discussed in the next section of the paper.

C. Proposed Tax Treatment for Different Types of Virtual Currencies

This paper proposes differential treatment for different types of virtual currency systems. Closed-flow currencies should be categorically excluded from taxation based on imputed income and ability to pay arguments. The Service should adopt the cash-out rule similar to casino chips for hybrid systems. The alternative solution would be to treat hybrid currencies as NSOs, with outcomes depending on whether the virtual currency value in U.S. dollars is readily determinable at the time of receipt. Finally, open-flow currencies should be treated as foreign currency. Foreign currency treatment may alleviate administrative burdens on private users, but will result in the necessity to comply with Subpart J regulations for companies.

1. Closed-flow virtual currency systems should be excluded from taxation

Several authors advance arguments in favor of excluding from taxation transactions occurring within "closed" game worlds. Lederman proposes to exclude certain transactions because "pure consumption" should not be taxed and virtual income taxation would lead to a double tax on consumption.\textsuperscript{116} Camp, in turn, suggests that transactions in virtual worlds


\textsuperscript{114} Neither the original paper by Satoshi Nakamoto nor the Bitcoin software license provide for any such limitations. See Nakamoto, supra note 2.

\textsuperscript{115} Private keys are necessary to access one’s account and authorize a transaction. Private Key, supra note 60. Unlike public keys, private keys are not recorded in a publicly available ledger and act similar to PIN necessary to authorize a bank transaction. Id.

\textsuperscript{116} Lederman, supra note 1, at 1659. Lederman’s analysis in part relies on whether users have property rights in virtual items, including cash, as opposed to mere license to use. Id. at 1633–40. At the same time, there has been some discussion on how to properly value consumption and enjoyment from gambling for tax purposes. See Daniel Shaviro, The Man
constitute accession to wealth and should be taxable, but suggests that at least some activities should be considered imputed income — such as the value of virtual services a taxpayer provides for him or herself\(^\text{117}\) — and excluded from taxation.\(^\text{118}\) Seto suggests that worlds with nonredeemable, nonconvertible currencies should be taxed to cash method participants only in the event of real money transactions.\(^\text{119}\) Finally, Chodorow makes a persuasive argument that even though activities in worlds characterized in this paper as closed-flow may constitute accession to wealth, they should not be subject to taxation based on ability to pay arguments if the rules of the world prohibit cashing out.\(^\text{120}\) All the abovementioned policy arguments have significant limitations, but seem to lead to the same conclusion: as long as a game remains a game, it should not be taxable.\(^\text{121}\)

To illustrate, a

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\(^{117}\) A classic example of imputed income treatment would be allowing a taxpayer not to include in gross income living rent-free in one’s own house. Another instructive example is an artist making a painting. The value of the painting is not included in artist’s gross income when it is made. Instead, the artist is taxed only after selling a painting. Similarly, an item created by a taxpayer online, including mined currency, should be taxed only when sold, not at creation. Camp extensively discusses tax policy reasons for this deferral in taxation. See Camp, supra note 1, at 37-45.

\(^{118}\) Camp, supra note 1, at 44. Camp identifies three possible limitations that can affect whether an item should be considered income for federal tax purposes. They include: (1) difficulty of valuation, which he calls “Priceless”; (2) realization, which implicates timing and is often associated with liquidity concerns; and (3) imputed income, which is difficult to measure and suggests an unacceptable level of government intrusiveness. Id. at 25, 49–61. Camp concludes that “[i]t is the concept of imputed income that draws the proper line.” Id. at 61.

\(^{119}\) See Seto, supra note 1, at 1042. Seto suggests that “the consumption value of doing well in such a game should not be treated as taxable ‘consumption’ or ‘change in net worth’ for Haig-Simons purposes at all, at least for cash method taxpayers.” Id. at 15. This may not be true, however, for accrual method taxpayers. Id.

\(^{120}\) Chodorow, supra note 1, at 745–46.

\(^{121}\) A similar idea has been advanced by Seto by analogizing World of Warcraft to a game of Monopoly. It does not matter how much Monopoly cash one received during the game. When it is over, it does not have any effect on real life. See Seto, supra note 1, at
game user will not be able to buy a cup of coffee at Starbucks\textsuperscript{122} with World of Warcraft gold pieces, and would not be able to convert such gold pieces into real money without violating the game's terms of service, putting oneself in danger of losing the license to use one's virtual assets.

Generally, scholars writing about virtual worlds have made numerous stipulations to ensure that equity and efficiency considerations are properly taken into account when developing appropriate tax regulations. In the real world, however, one important consideration in developing approaches to taxation is administrability. This paper proposes that the Service adopt a rebuttable presumption that allows a currency to be classified as "closed-flow" based on the terms and conditions of use or end user license agreement terms that make a virtual currency non-redeemable or non-convertible. The effect of adopting such a presumption would be exclusion of games such as World of Warcraft from the scope of Notice 2014-21 convertible virtual currency provisions. This will allow regular users to continue their game experience without having to comply with the cumbersome reporting rules of Notice 2014-14. At the same time, because the presumption is rebuttable, the Service will have enough flexibility to determine tax deficiencies for gray market cash out transactions.\textsuperscript{123} After the Service sends a notice of deficiency to a taxpayer asserting nonpayment of income for, say, a sale of a World of Warcraft level 80 elf or gold pieces for U.S. dollars, the burden of proof should shift to a taxpayer to show that the Service was incorrect in assessing the deficiency.\textsuperscript{124}

The proposed approach also advances the neutrality of taxation. Tax neutrality is a well-established principle that favors taxation regimes that do not distort economic choices and generate deadweight losses simply because of tax considerations.\textsuperscript{125} Conversely, so-called Pigouvian taxes

\textsuperscript{122} A cup of coffee at Starbucks is used as an example of an everyday transaction in which a person may engage. Even though the author of this paper does not like, consume, or endorse Starbucks coffee, the commercial viability of this franchise and the sheer number of loyal customers make it an appropriate example of an everyday purchase.

\textsuperscript{123} Such transactions should be treated in the same manner as income derived from illegal activities in the real world: it should be includible in gross income at ordinary income rate, similar to bribes and kickbacks. See I.R.S. Publication 525, \textit{supra} note 49, at 28, 32. This approach may become an efficient deterrent for users engaging in real money transactions violating integrity of the game because they will not be able to use more favorable capital gains treatment.

\textsuperscript{124} See, \textit{e.g.}, United States v. Rexach, 482 F.2d 10, 17 (1st Cir. 1973); Chandler v. Commissioner, 142 T.C. No. 16 (2014) (explaining the burden shifting by the taxpayer and Commissioner in tax underpayment cases).

\textsuperscript{125} Jason Furman, \textit{The Concept of Neutrality in Tax Policy}, Testimony Before the U.S. Senate Committee on Finance Hearing on "Tax: Fundamentals in Advance of Reform" (Apr.
expressly alter behavior, and governments frequently use them to deter unwanted activities such as smoking or drinking alcohol. As discussed above, it seems that in Notice 2014-21, the Service is taking the position that virtual currencies are akin to tobacco and alcohol, and their use should somehow be impeded by very inconvenient and cumbersome tax reporting. Yet, it is not the place of the government to decide what is good or bad for the modern economy. This decision should be left to the market. Any concerns about potential abuses of virtual currencies should be addressed by a different set of instruments, not through the Code. The proposals in this article represent steps toward a more neutral treatment of virtual currencies that reflects the differences in their design and function. Additionally the approach advocated in this article is less likely to result in tax compliance costs that deter beneficial, efficient, personal use of virtual currencies.

The exclusion of closed-flow systems would also allow the Service to allocate its resources more efficiently to enforcing tax provisions that are more likely to bring in substantial revenues. While it is true that some users may amass significant amounts of virtual cash and other in-game items, tracking compliance for every virtual transaction would come at a significant cost to the Service under the section 1001 regime — suggested in Notice 2014-21 — and it is not clear that revenue gains would offset the costs of enforcement. Some may argue that categorically excluding closed-flow currencies from regulation may create some risk of tax evasion and even money laundering, but at this stage such considerations may be outweighed by leisure nature of game activities and clear intent of the currency creators for a virtual world to be treated as entertainment for the user rather than as a profit-making trade or business. The analysis outcome should not be affected by the accounting method chosen by a taxpayer. As with Monopoly, neither accrual nor cash method taxpayers have the ability to convert their in-game income into real currency without engaging in prohibited conduct.

126 Furman supra note 125, at 7.
127 Chodorow, supra note 1, at 747.
128 Seto, supra note 1, at 1041.
129 Note that this conclusion is contrary to the treatment proposed by Seto, who suggested that accrual method taxpayers may have Haig-Simons income or loss from in-game transactions. See Seto, supra note 1, at 1042. Even if there is some possibility of accession to wealth in such cases, the element of realization would still be missing from the Glenshaw Glass test.
2. Hybrid virtual currency systems should be taxed on cash out similar to
casino chips or as nonstatutory options

As discussed in Part IV.A, hybrid virtual currencies allow users to
convert virtual currency into real currency through some mechanism
authorized by the terms of service or end user license agreement. Thus, one
can convert one's game earnings into U.S. dollars or other real currency and
buy a cup of coffee at Starbucks, but it is still impossible to pay for one's
coffee with virtual currency. This paper argues that hybrid currencies
should be treated as property for taxation purposes, but the tax regime
should be one of either casino chips or NSOs.

So far, most scholars argued that transactions with virtual currencies
that can be converted to real money should be taxed based on the same
principles as real-world transactions, the same approach as in Notice 2014-21. There are several strong policy arguments supporting this approach.
First, in hybrid currency systems, payments received for virtual goods and
services are more likely to be considered as Haig-Simons income because
the possibility of conversion into real currency makes it more likely to
represent a change in taxpayer’s net worth even before cashing out. Thus, such income would clearly fit into the standard Glenshaw Glass
framework of accession to wealth, and the option to cash out would
likely make it includible in taxpayer’s gross income upon receipt either
under the “all events” test for accrual method taxpayers or under the
“constructive receipt” doctrine for cash method taxpayers.

Second, the ability to convert virtual currency into real currency
supports the ability to pay rationale for taxing virtual currency income in
the real world. Unlike conversions in closed-flow worlds, taxpayers are
not required to engage in any prohibited transactions to cash out a portion

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131 See Seto, supra note 1, at 1042 (arguing that one of Second Life’s millionaires, Ailin Graef “was wealthier in a very real sense before she withdrew anything from Second Life — wealthy enough to make the cover of Business Week.”).
134 Treas. Reg. § 1.451-2(a) (1979) (“Income although not actually reduced to a taxpayer’s possession is constructively received by him in the taxable year in which it is credited to his account, set apart for him, or otherwise made available so that he may draw upon it at any time . . . . However, income is not constructively received if the taxpayer’s control of its receipt is subject to substantial limitations or restrictions.”).
135 Chodorow, supra note 1, at 697–98.
of their virtual earnings to pay income taxes. Instead, a strong argument can be made that if a taxpayer prefers not to cash out at a certain point, it is just a matter of personal choice.  

Finally, Professor Lederman suggests that the act of cashing out allows distinction between profit-seeking conduct for pure entertainment and profit-seeking conduct for consumption. Indeed, if one engages in a massive online business using virtual currency, sooner or later it will be necessary to exchange some of the virtual profits into real money to cover real-world expenses. After all, virtual currencies are not widely accepted as means of payment yet.

Both Lederman and Chodorow suggest using the transactional approach to tax virtual income in hybrid virtual currency systems. This would result in a system very much like what is proposed in Notice 2014-21, with an exception for taxation of self-created virtual assets that, under Chodorow, should be excluded from gross income.

This paper, however, proposes that the use of the transactional approach and application of traditional tax principles to transactions with virtual currencies will inevitably result in an unwieldy and inefficient system. Unless the Service opens a virtual office in Second Life — and all other major hybrid virtual currency systems — and accepts tax payments in virtual money while spending very real resources on virtual tax enforcement, taxpayers are likely to ignore complex accounting and reporting requirements imposed both by the transactional approach and Notice 2014-21. The questionable legal status of many hybrid virtual currencies may also warrant an entirely different tax treatment.

One of the available options for taxing transactions with hybrid virtual currencies is treating them like casino chips. Virtual currencies function as a “medium of exchange” in a virtual economy, but they fall short of being treated as cash, similar to casino chips. Camp argues that units of virtual currency are “merely representative of whatever had been given to acquire

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136 Seto, supra note 1, at 1049.
137 Lederman, supra note 1, at 1663.
138 Chodorow, supra note 1, at 746-47. Chodorow suggests to impose a floor of $600 annually derived from virtual activity that would not be taxed, arguing that if a taxpayer’s primary purpose is just to enjoy the game, not to profit from virtual world activities, it is not likely virtual income will exceed this number. Id.
139 Id. at 743; for discussion why self-created assets, including “mined” virtual currency, should not be taxed at receipt, only on disposition, see supra note 117 and accompanying text.
140 See, e.g., supra notes 99–104 and related text for more discussion.
141 Zarin v. Commissioner, 92 T.C. 1084, 1100 (1989), rev’d on other grounds, 916 F.2d 110 (3d Cir. 1990); Camp, supra note 1, at 64.
them and that will be either cash or play (a successful bet).”142 Sometimes casino chips act similarly to currency when a player takes chips from one casino to play at another, or to buy food and drinks in a casino.143 However, what one can buy with casino chips is so limited that they still fall short of qualifying as currency.144 Hybrid virtual currencies have the same limitations as casino chips: in most cases they do not have value outside of the game and have questionable legal status to be treated as property in the hands of a taxpayer. In most cases they merely represent tokens to access and use in the game. Thus, hybrid virtual currencies should be taxed the same as casino chips: on cash out, not for every single bet made.145

Treating hybrid virtual currencies as casino chips is easy to administer. Taxpayers will be relieved from the necessity to keep detailed records of their in-game activities, and the Service will have a simple tool allowing it to tax anything that is converted into real money. The Service should impose a duty on game developers or virtual currency exchanges to report any cashing out if the annual amount of transactions exceed a certain threshold, similar to its treatment of casinos.146 This approach also resolves the user privacy concerns: it is much easier to collect taxpayer details at the time of cashing out than when one decides to sign up for a game.

At the same time, the Service may have a legitimate concern that casino chips treatment may lead to tax evasion and indefinite deferral of taxation by some taxpayers through the use of hybrid virtual currencies. After all, some virtual economies are bigger than economies of some countries.147 However, because the opportunities to use hybrid currencies outside of a virtual economy are very limited, a person engaging in a game for profit-making motives will have to cash out sooner or later. Unlike an entrepreneur who can take a loan secured by business assets, a player cannot encumber his or her virtual assets and will not be able to defer paying the tax indefinitely because they will likely need money to cover

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142 Camp, supra note 1, at 64.
143 Seto, supra note 50, at 1761, 1783.
145 Camp, supra note 1, at 63–64.
146 I.R.S. Notice 2014-21 A-12, (stating that currently, information reporting is imposed when annual payments for goods and services exceed $600.).
147 Peter Diamandis, Second Life: How a Virtual World Became a Reality, HUFFINGTON POST BLOG (Mar. 7, 2013 3:40 PM), http://www.huffingtonpost.com/peter-diamandis/second-life-how-a-virtual_b_2831270.html. (noting that Second Life’s GDP is estimated to be about $700,000,000 a year). This figure is higher than the GDP of Dominica or Micronesia, and is in the range of St. Kitts and Nevis and Vanuatu. See GDP (Current US$), DATA.WORLDBANK.ORG, http://data.worldbank.org/indicator/NY.GDP.MKTP.CD (last visited Nov. 29, 2014).
real-world expenses.\textsuperscript{148} Even if the initial motive may be tax evasion or deferral, the current state of most hybrid virtual currencies simply would not allow that strategy in the long-term.\textsuperscript{149}

Another option would be to treat the receipt of hybrid virtual currencies in the same way the Service currently treats NSOs.\textsuperscript{150} The NSO approach has a number of advantages over the transactional approach and casino chips approach. First, it is equally applicable to thinly traded hybrid currencies and those having an established market. Second, the record-keeping requirements on taxpayers under this approach are minimal. Third, since NSOs are treated as compensation, there will be no room left for wiggling to take advantage of opportunistic characterization if a virtual currency exchange rate is unstable. Finally, this approach limits any potential valuation disputes because fair market value is determined either on the basis of the current price on an established market — like LindeX in Second Life — or on the basis of exercising the option. This regime would be easily administrable for centralized virtual currencies, but in decentralized systems the Service would have to rely on self-reporting by taxpayers.\textsuperscript{151}

3. Open-flow virtual currency systems should be taxed under Subpart J provisions as foreign currency

Open-flow virtual currencies allow their users not only to exchange virtual money for real cash and virtual goods and services, but also to use virtual money to pay directly for real world goods and services. Theoretically, a user could go and buy a cup of coffee at Starbucks using Bitcoin in the same seamless way as if a person had a bank account in Euro.\textsuperscript{152} Because open-flow virtual currencies resemble foreign currencies in the way they operate as a medium of exchange, it is appropriate to treat open-flow currencies under Subpart J of the Code governing foreign currency transactions.

\textsuperscript{148} See supra notes 100–102.

\textsuperscript{149} Although it is true that some virtual currencies can now be used for real world trades on certain items, it is too early to say that they are widely accepted as payment for goods or services. Relatively undeveloped infrastructure and legal status make virtual currency payments less convenient for many people than regular bank transfers or cash payments.

\textsuperscript{150} For a discussion on NSO treatment, see supra note 49 and the accompanying text.

\textsuperscript{151} This is not such a bad option because the U.S. tax compliance system is based on self-reporting. Government has a number of instruments, including audits and information returns, to track compliance.

\textsuperscript{152} See Hill, supra note 20.
Treatment of open-flow currencies under Subpart J clearly could not have been contemplated by Congress in 1986. Nevertheless, it does not mean that the reasons that lead to adopting Subpart J do not apply to the new economic situation, where virtual currencies like Bitcoin are widely used by businesses and individuals alike in day-to-day transactions. Chung made a persuasive argument that at least for virtual worlds with commoditized economies — what this paper calls “hybrid virtual currency system” — Subpart J treatment should be allowed because virtual currencies in such worlds function essentially like real money in real world. Taking his argument a step further, this paper argues that Subpart J treatment for open-flow currencies will result in “harmoniz[ing] the law with the way most people actually use digital currencies.”

Proposed foreign currency treatment will allow individual enthusiasts to benefit from personal transaction exemption under Subpart J. At the same time, any income received in Bitcoins will remain includible in tax returns.

For businesses, the Service should allow choosing virtual currency as a functional currency even if the company-taxpayer resides in the United States and produces income or loss that is effectively connected with the conduct of a U.S. trade or business if such a company conducts its activities primarily in Bitcoins and keeps separate records of such transactions or has a separate legal entity for such purposes. Many companies that primarily conduct transactions in virtual economies may be incorporated in the United States, but maintain minimal real-world presence and extensive virtual operations. Some U.S. citizens engage in extensive virtual world business transactions that could qualify them as QBUs, but they may not

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153 Chung characterized tax regime resulting from property treatment as “administrative nightmare.” Chung, supra note 1, at 764–65; see also supra notes 80–82 and accompanying text.

154 Johannes Schmidt et al., supra note 57 (noting that the high number of daily transactions involving purchases of a wide range of services such as haircuts, houses, hoagies indicate that some virtual currencies behave as real money, not as property).

155 Chung, supra note 1, at 769–72.

156 Santori, supra note 10. Santori states that the amount and types of Bitcoin transactions on any given day evidences that people treat it similar to cash to pay for all sorts of goods and services. Id.

157 Currently, an organization that resides in the United States is required to use the U.S. dollar as its functional currency regardless of the economic environment. Treas. Reg. § 1.985-1(b) (2014). However, a limited exception should be allowed for companies that use virtual currencies because virtual currencies, by definition, are not backed up by any government. One cannot register a legal entity in Bitcoinistan to get the benefit under the U.S. tax law of using Bitcoin as a functional currency.

158 If an individual engages in activities that constitute a trade or business, such
be able to benefit from choosing Bitcoin as a functional currency under the
current regime. The result is that section 988 would govern most
transactions in which a taxpayer receives or pays an amount denominated in
foreign currency or determined by reference to the value of one or more
nonfunctional currencies. Thus, the Service should consider adapting the
existing Subpart J rules to allow companies and individuals with extensive
virtual currency operations to fully benefit from simplified tax procedures.

4. Creation of virtual currency: a common problem for all three virtual
currency types

Another question the Service should address in more detail is the tax
treatment of earned or “mined” virtual currencies. In game worlds, users
often can earn in-game money for performing certain tasks, like completing
a mission. Bitcoin users can generate virtual money by “mining,”
essentially helping to settle transactions between other users. Under
Notice 2014-21, such mined virtual currency is includible in gross income
at the moment a coin is mined, at its fair market value. As discussed
above, Notice 2014-21 effectively treats mining (and the creation of a
virtual currency unit generally) as a service to the community, potentially
leading to self-employment taxes.

Mining or creating virtual currency has no direct analogy under either
the casino chips regime or Subpart J. Numerous arguments can be made
that users should have considered the risks of being potentially liable for
self-employment taxes when they initially engaged in earning virtual cash.
Yet, it seems unfair to impose such liability retroactively, especially when it
took the Service over five years to come up with the very brief guidance on
the issue. At the very least, it would be reasonable to introduce a transition
period beginning at the time a specific unit of currency was created or
mined to the adoption of official regulations on virtual currencies allowing
taxpayers to treat mining as self-produced property taxable only upon
disposition. Going forward, taxpayers should adjust their planning

individual’s activities can be considered a QBU if an individual maintains a separate set of

159 I.R.C. § 988(c)(1). This is very similar to what is currently proposed in Notice 2014-
21 because foreign currencies are generally treated as property, with some adjustments.

160 See Alek Felstiner, Regulating In-game Work, 16 J. INTERNET L. 3, 4 (2012)
describing various types of work one can perform in-game).

161 Mining, BITCOIN WIKI, https://en.bitcoin.it/wiki/Mining (last modified Oct. 10,
2014) (mining is the process of adding transaction records to Bitcoin’s public ledger of past
transactions).


163 See supra note 41 and accompanying text.
accordingly to account for the need to pay self-employment or wages taxes on amounts received as compensation for services.

D. Enforcement Concerns

The proposed options for tax treatment of different types of virtual currency systems effectively deal with issues of equity and efficiency both for taxpayers and the Service. Taxpayers get to benefit from the proposed simplified procedures for handling hybrid and open-flow transactions while taking into consideration ability to pay and possibility of tax evasion arguments. The Service will benefit because it will be able to collect income on virtual currency transactions and efficiently allocate its limited resources to monitoring other major issues — whether a taxpayer is engaged in a virtual business or just plays a game — instead of dealing with transaction-by-transaction gain or loss computation and characterization.

The proposed solution is also relatively easy to administer. It does not require the Service to engage in complex case-by-case factual analysis but offers a set of easy-to-use criteria to classify virtual currencies as closed-flow, hybrid, and open-flow. The Service should keep a list of known virtual currencies and their classifications to make compliance easier for taxpayers. Virtual world owners, in the case of centralized currencies, or users, in the case of decentralized currencies, should be allowed to petition the Service to be included in the classification or moved to a different subclass based on changed circumstances. Most virtual world owners are likely to welcome this initiative because it would enable them to better inform users of potential tax consequences.

Finally, the Service should carefully consider the nature of most virtual currencies when imposing information reporting requirements. While the most obvious solution for centralized systems would be to require the world “owner” to file information reports with the Service in the same manner as a third-party settlement organization, there is no obvious solution for closed-flow virtual currency systems where users engage in real money trade contrary to terms of service or for decentralized virtual currencies. Because many virtual currency systems are anonymous or pseudonymous, the only point where the Service can reliably track receipt of income by a taxpayer is when such a taxpayer cashes out — sells one’s virtual currency at an exchange. However, it would be difficult to impose any reporting requirements on exchanges that are not subject to U.S. tax jurisdiction. A FATCA-like self-reporting regime may work for such situations.164

164 For a more thorough discussion of FATCA-like regime for Bitcoin, see Marian, supra note 6, at 45–46.
V. CONCLUSION

The Service’s Notice 2014-21 raises a more questions than it answers. Its overly broad definition of convertible virtual currency allows the Service effectively to reach game worlds that exist purely for user recreation. The income tax treatment of virtual currency as property in Notice 2014-21 is cumbersome for taxpayers and is likely to result in administrative difficulties for the Service. The information reporting requirements are not likely to be enforceable considering the nature of most virtual currency systems that protect user privacy and anonymity.

This paper proposed the use of three simple criteria — authorization of trading virtual currency for real currency by terms of service or license agreements; existence of markets allowing to quickly exchange virtual currency into real currency; and the ability to pay for real goods and services with virtual currency — to classify virtual currency systems as closed-flow, hybrid, and open-flow systems.

The paper proposes different tax treatment for these systems. Closed-flow virtual currency systems should be generally out of the Service’s reach because such worlds are usually mere games, and virtual income in such games cannot be properly characterized as Haig-Simons income. A limited exception should be made for cases in which specific users cash out despite express terms of end user license agreement. Hybrid systems, on the other hand, should be treated either similar to casino chips or NSOs because in most cases users of such systems have an opportunity to legally cash out their earnings. Tax evasion and avoidance are still not likely to be prevailing motives for most users of such currencies, while excessively complicated record-keeping and reporting requirements are likely to be ignored because of pseudonymity or anonymity of such systems. Open-flow virtual currency systems should be treated under Subpart J provisions for foreign currency transactions. Such treatment reflects the way taxpayers use such currencies, and will allow both the taxpayers and the Service to avoid significant expenses inherent to Notice 2014-21 taxation regime.

Finally, this paper proposes the Service keep a list of virtual currencies and their classification to give taxpayers a clear message regarding tax consequences of using major virtual currencies. Proposed information reporting options for centralized and decentralized virtual currency systems would allow the Service to effectively monitor the level of virtual economic activity and allocate its enforcement efforts accordingly.